



HISTORY

OF



ARIZONA TERRITORY



WITH

ILLUSTRATIONS.

1884





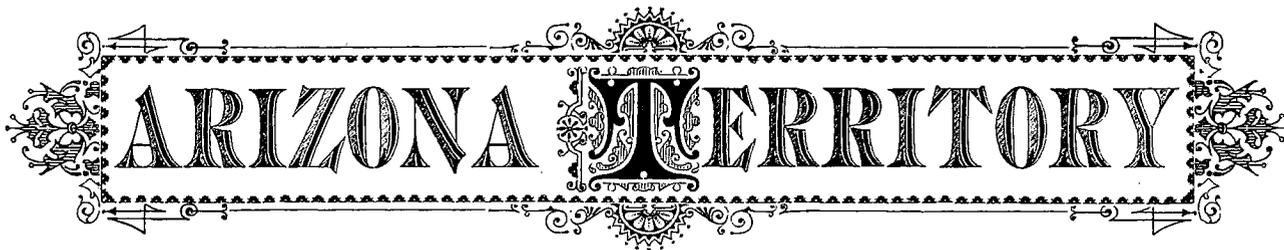
BIG CAÑON AT MOUTH OF DIAMOND RIVER, ARIZONA.

W. W. ELLIOTT, LITH. 421 MARKET ST. N.Y.



# HISTORIA

OF



## ARIZONA TERRITORY

SHOWING ITS

RESOURCES AND ADVANTAGES;

WITH

# ILLUSTRATIONS

DESCRIPTIVE OF ITS

SCENERY, RESIDENCES, FARMS, MINES, MILLS,

*Hotels, Business Houses, Schools, Churches, &c.*

FROM ORIGINAL DRAWINGS.



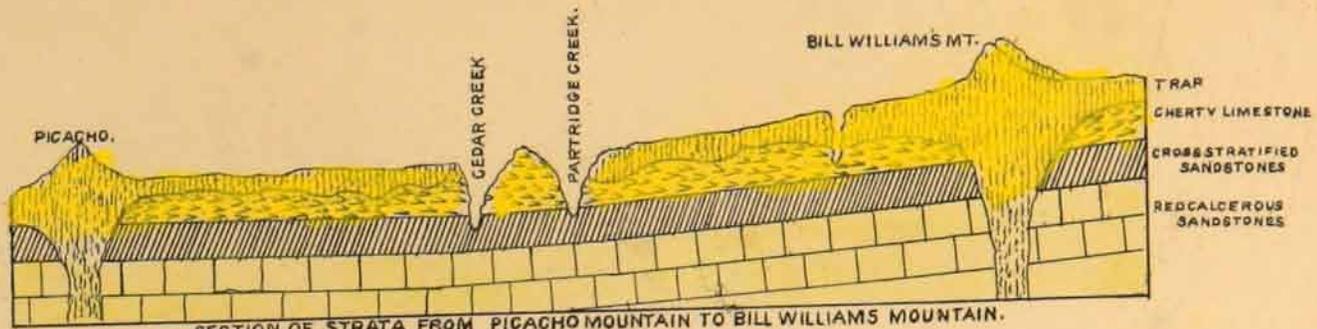
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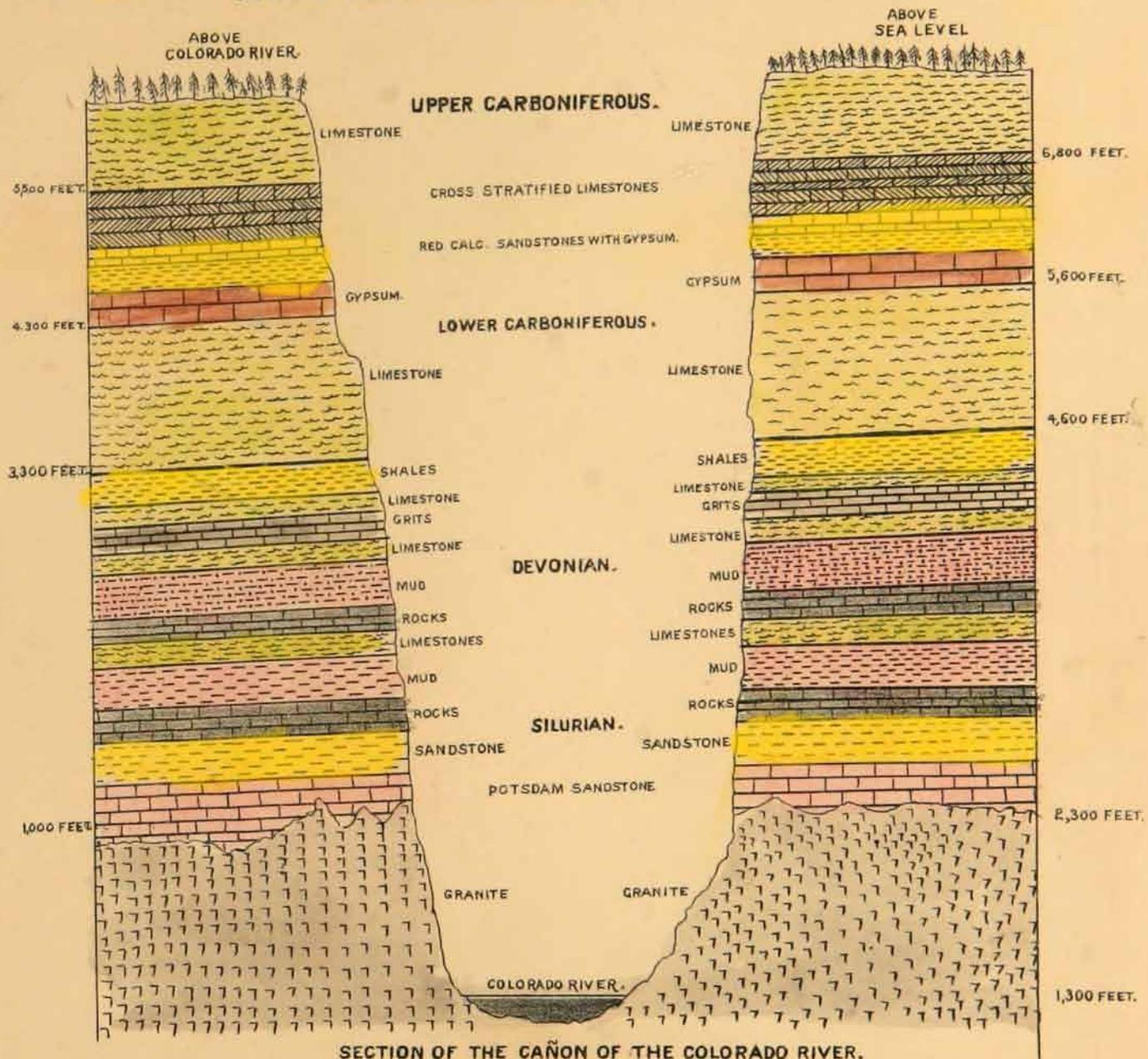
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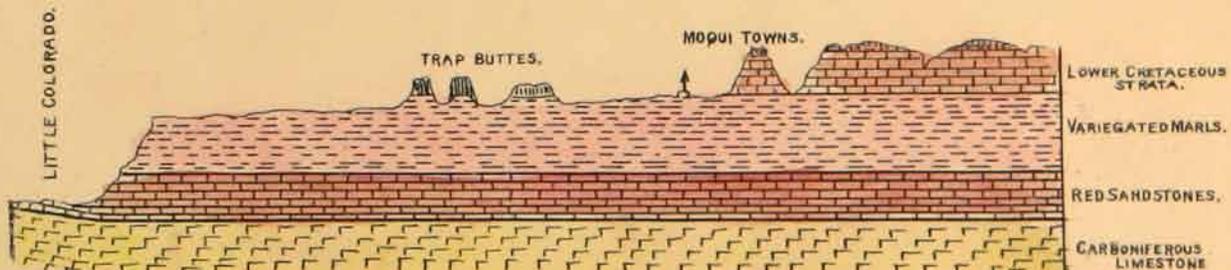




SECTION OF STRATA FROM PICACHO MOUNTAIN TO BILL WILLIAMS MOUNTAIN.



SECTION OF THE CAÑON OF THE COLORADO RIVER.



SECTION OF MESA BETWEEN THE LITTLE COLORADO AND MOQUI VILLAGES.

**GEOLOGICAL FORMATIONS IN ARIZONA.**



# DIAGRAMS SHOWING PRODUCTION OF GOLD AND SILVER,

TAKEN FROM CLARENCE KING'S REPORT TO U. S. CENSUS BUREAU.

DIAGRAM No. 1, SHOWING COMPARATIVE BULLION PRODUCT FOR SQUARE MILES IN THE UNITED STATES.

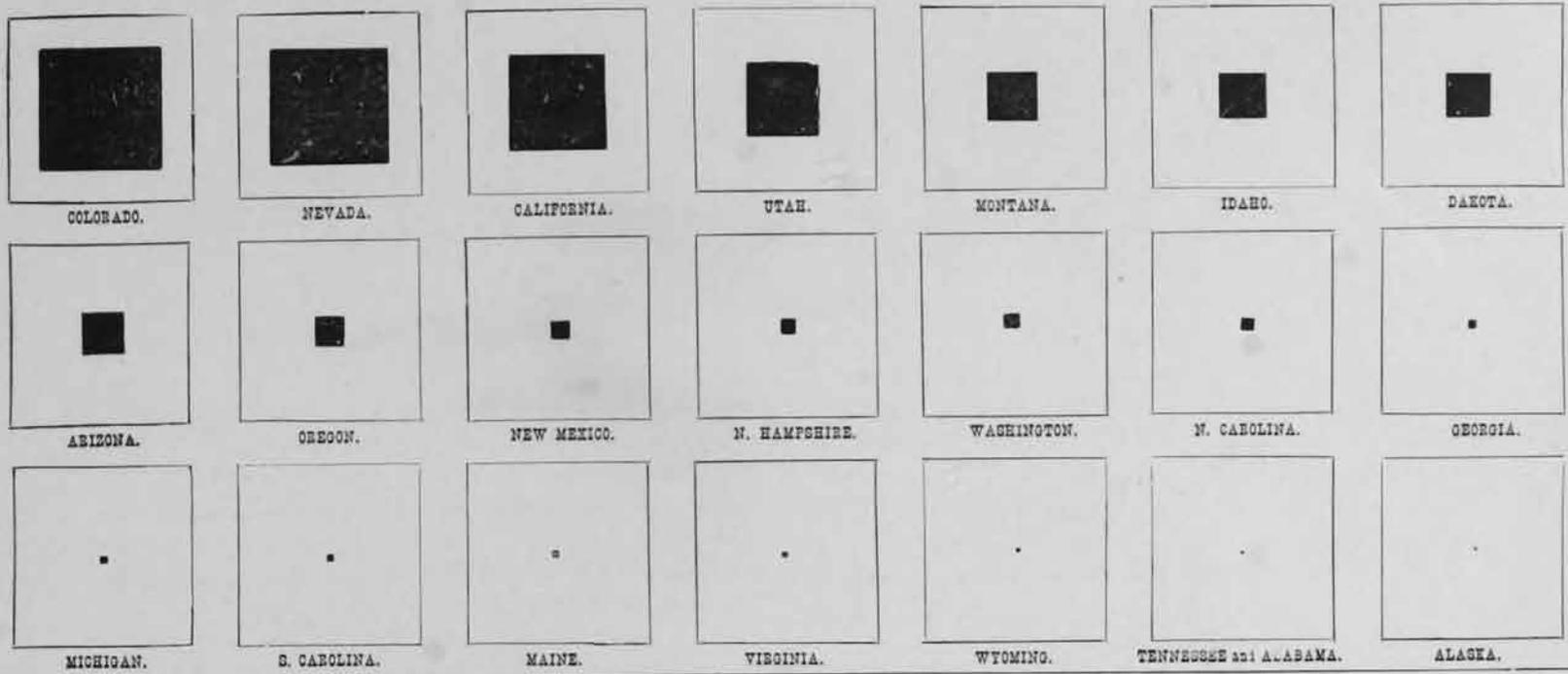
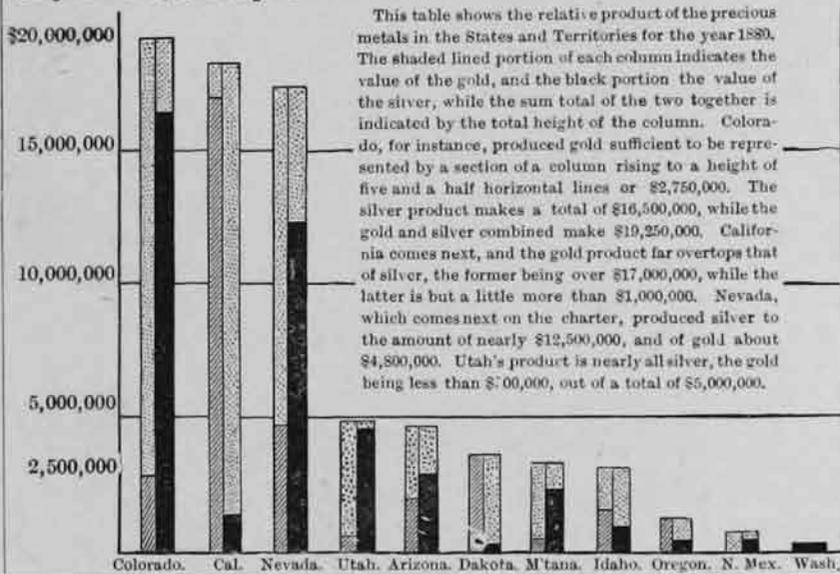


Diagram No. 2, Showing Relative Bullion Product of the States and Territories.



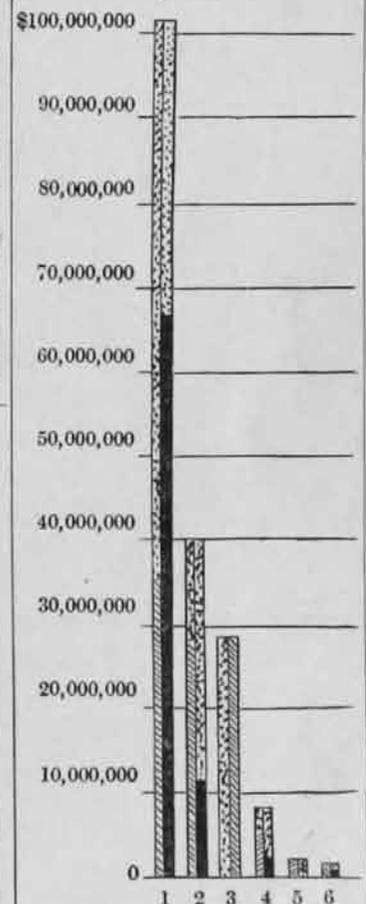
## PRODUCTION OF PRECIOUS METALS FOR 1883.

This table gives the yield of the mines, as prepared by J. J. Valentine. It will be noticed that Arizona stands for 1883 as 5th, and is only a little less in production than Nevada:

1. Colorado	\$24,310,100
2. California	15,673,314
3. Montana	9,879,000
4. Nevada	8,770,621
5. Arizona	8,183,743
6. Utah	7,017,682
7. Mexico	5,022,384
8. Idaho	3,805,827
9. New Mexico	3,413,519
10. Dakota	2,823,000
11. British Columbia	652,016
12. Oregon	592,980
13. Alaska	105,000
14. Washington Territory	63,526

Total .....\$90,313,612

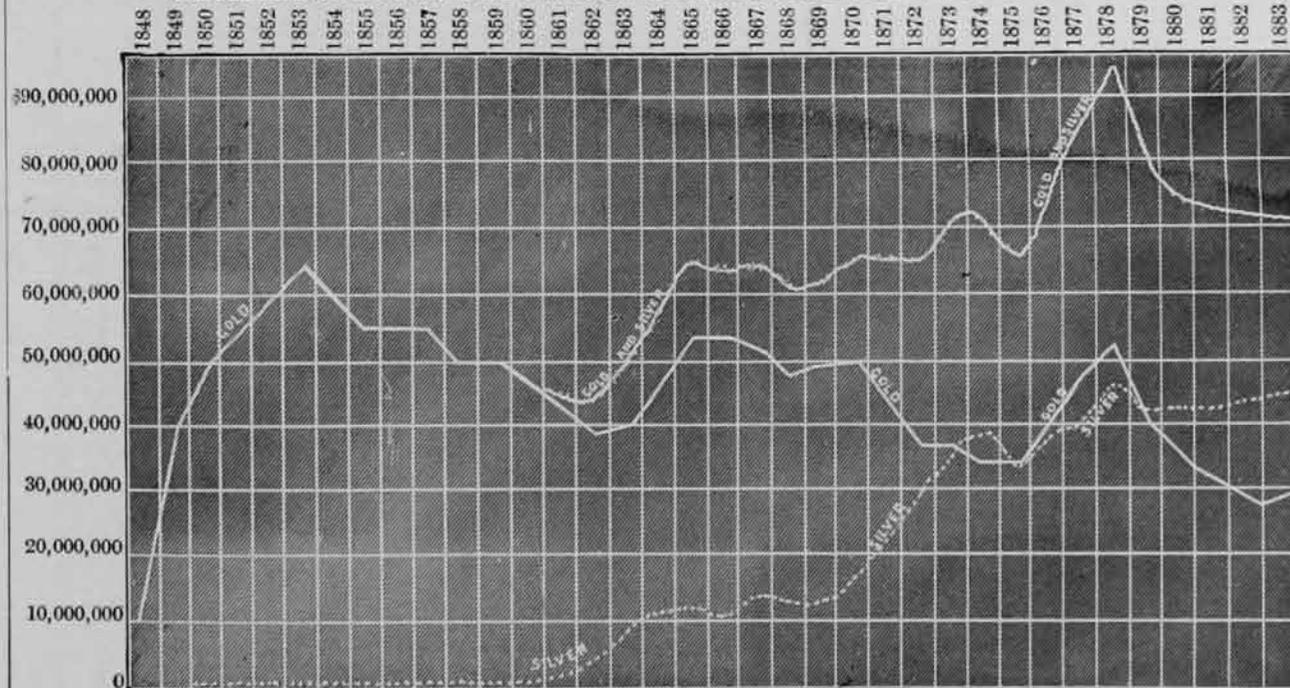
## DIAGRAM SHOWING ANNUAL BULLION PRODUCT OF THE WORLD.



1. North America.
2. Europe, including Russia and Asia.
3. Australia.
4. South America.
5. Africa.
6. Japan.

The total product of gold and silver is in each case shown by the height of the column, the product of gold by the height of the shaded part, and the product of silver by the height of the black part.

## DIAGRAM SHOWING THE ANNUAL BULLION PRODUCT OF THE UNITED STATES.



This table shows at a glance the amount of gold produced in the United States since its discovery in California in 1848. The yield of gold ran up rapidly until it reached its highest production in 1853. The gold and silver combined reached the culminating point in 1878.



# EXPLANATORY.

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**W**E do not expect to present our readers with accounts of strange and novel events. We are dealing with the facts of history. These are made up from the statements and records of others. There can be no originality in the work of the historian. Hence our task was to endeavor to gather together all the chief historical facts relative to Arizona Territory, and arrange them for handy reference for use of residents, as well as furnish valuable information to the traveler, the tourist, or the emigrant, who is seeking a location.

In preparing this work, every source of information has been sought to render it a complete and authentic history—such as the files of newspapers and magazines, all books and publications that could be obtained, relating to the subject, old letters and diaries, scrap-books, and interviews with all who could or would relate the incidents of the past, and the facts of the present—all has been gleaned that seemed possible, and from these, and with such aid as others have kindly given, we have compiled and written the history.

We have consulted and quoted from various publications, among them "Historical Sketches of New Mexico," by L. Bradford Prince; "Life among the Apaches," by J. C. Cremony; "Arizona as It Is," by H. C. Hodge; "Handbook of Arizona," by R. J. Hinton; "Arizona and Sonora," by S. Mowry; "The Apache Country," by Ross Browne; "Colorado River Explorations," by J. W. Powell and Lieut. J. C. Ives; "Personal Narrative," by J. R. Bartlett, and numerous other publications having reference to that part of the country.

In addition to all these sources of information, we visited every county, village, and mining-camp of importance throughout the Territory, and by personal examination, were enabled to give statements about all localities in Arizona, which we think are substantially correct.

To the press of the entire Territory, with one exception, we wish to return our cordial thanks for favorable notices, and for the use of their respective files. They have aided us in every way.

We have given considerable space to the biographical department, which contains very much of interest. A few years from now it will be oftenest perused, for people delight to read of the pioneers of a country and of their trials. Each sketch contains some incidents of pioneer life, or some facts relative to the country, its soil, mode of cultivation, variety of crops, and similar information not easily separated from the personal narrative, but can be found by the sub-headings.

The book is fully illustrated, as may be seen at a

glance, with views of scenery and of many of the principal residences, ranches, mines, mills, orchards, public buildings, and business houses. Portraits of many of the pioneers appear, as well as of territorial and county officers and prominent citizens.

This work, for convenience of reference, has been divided into twenty-eight divisions, as follows:—

1. Acquisition of Spanish Territory.
2. Early expeditions through Arizona.
3. Operations of the missionaries.
4. First pioneer settlers of the Territory.
5. First discovery of gold in Arizona.
6. Civil war in Arizona.
7. Organization of Arizona Territory.
8. Rivers and lakes of Arizona described.
9. Description of mountain ranges.
10. Description of principal valleys.
11. Climate and healthfulness.
12. Soil and various productions.
13. Botanical features of the Territory.
14. Forests and lumber business.
15. Scenery and pleasure resorts.
16. State of society in the Territory.
17. Native Indian tribes described.
18. Zoology of the Territory.
19. Mineral resources of Arizona.
20. Descriptions of each county and village.
21. Biographical sketches of citizens.
22. Public schools of Arizona.
23. Railroads of Arizona.
24. Review of important events.
25. Stock-raising business in Arizona.
26. Newspapers of the Territory.
27. List of votes cast.
28. Miscellaneous historical matters.

These have been again separated into about 500 subdivisions, as given on table of contents on other pages of the book, which will prove an invaluable guide to the subjects mentioned.

We expect criticism. All that the publishers ask is that it be done in charity, after considering all the obstacles and hindrances involved in a work of this magnitude. Few persons without actual experience can comprehend the care and pains necessary to complete a book of this description.

Our thanks are due to the citizens of the Territory for the cordial good feeling manifested toward our enterprise, having received from them that aid and support which can only be expected among prosperous and intelligent people.

THE PUBLISHERS.



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# HISTORY

OF

# ARIZONA TERRITORY

SHOWING ITS

## RESOURCES AND ADVANTAGES.

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WHEN Thomas H. Benton said that the child was then born that would see a railroad connecting ocean with ocean, most people smiled, and thought that the day-dream of the old man had somewhat unsettled his hitherto stalwart intellect. No dream of his day, no matter how bright the colors that may have been placed before the imagination, ever pictured the progress of the great Pacific West. Since that day-dream three vigorous States have been settled and many Territories organized, containing millions of prosperous people.

Arizona, the youngest of these, has two trans-continental railways. Yet only within the last dozen years has any-thing at all definite been known of this large and very important part of our common country

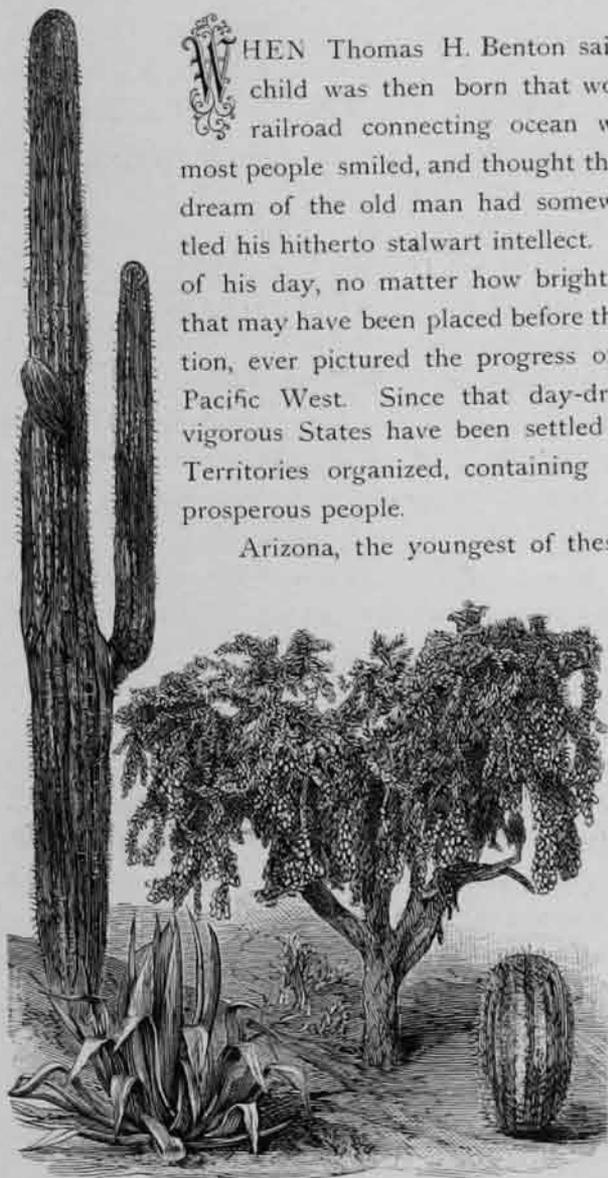
Up to about 1860 it was a far-off land, even to those on the western border of civilization. School boys then looked upon their maps and wondered if they might ever be permitted to traverse the "unexplored regions" marked thereon, where now two great important lines of railroad cross the "Great American Desert" of our early geography.

The shrine of Montezuma is in ruins; his temple has crumbled, and the faith which so challenged our admiration has perished with its believers; but Montezuma has come to his ancient empire. He has come "in glory from the East." He has come in the spirit of the nineteenth century, in its railroads and telegraph; its trade and commerce; its mining, manufacturing and agricultural industries; in its schools and churches and academies, and in all that develops the various resources of a country.

### AN UNDEVELOPED COUNTRY.

As yet the great resources of this Territory are only partially developed. The hardy miner has, however, established the fact that mines of gold, silver, copper, lead, and iron of great extent and richness abound throughout the whole country. Not only are these metals found in the bowels of the earth, but mountains of lead, copper, iron, sulphur, and salt rear their heads, confronting the explorer on every side, and impressing him with the vast wealth of this almost unexplored region, destined to become at some future period the center of civilized society, and a prosperous State of the American Union.

Forests of considerable extent exist in many parts



SPECIMENS OF ARIZONA CACTI.

of the country, and the scenery is generally picturesque, many of the hill-sides being covered with a dense growth of small trees; so that amidst forests, dashing cascades, bald mountains, and snow-clad peaks, many sections of Arizona present unsurpassed scenes of natural beauty.

In the mountains dense forests alternate with well watered glades, covered with grass and flowers, while many springs bubble out in the shady glens and find their way to the thirsty plain.

Many of the mountain summits are covered with an abundance of pine, juniper, and oak; water is found in the various streams and springs, and its valleys and foot-hills are covered with a fine growth of rich grasses.

#### SOIL AND NATURAL VEGETATION.

The soil is variable, varying from white pebble to red clay and black aluvium. Differing greatly from geological rules of other nations, the various deposits seem to appear with most unexpected surroundings.

Sands are found along streams where fine soil might be expected, while the dark, strong formation is often found upon the *mesa*, where only vegetation of some sterility grows. This is not from any want of vegetable nutrition in the soil, but from absence of water. Streams are scarce, and rain scarcer. The mountains rise from the plains without the ordinary foot-hills. The cactus clambers up to the apex of many of the high ranges.

Covering this land, and adding a weird interest to the landscape, is the *cactai*, the most unique of all combinations of vegetation. Of grass there cannot strictly be said to be any, except at those times when a sporadic rain falls, when a fine crop springs up, thick, tender, and juicy; but as the air is dry, and the soil is light and full of sand, between the sinking and evaporation, it is in a few days as dry as ever. Then the grass dies.

#### ARIZONA LANDSCAPE VIEW.

In the landscape of the *mesa* the *cactus giganteus* forms no inconsiderable item of interest—its tall, fungus-shaped stalk rearing aloft its rounded, leafless form, covered with prickles in rows, and about two inches long. It not unfrequently attains a diameter of one foot and a height of twenty feet, and its branches is but the out-pushing of an arm as leafless and prickly as the parent stalk. In the center of this stalk is a hard, woody, cylinder-shaped formation, varying in diameter from one to four inches, which incloses the pith, and is itself enveloped by a cushion of spongy material, strongly fibrous.

A few strokes of an axe will fell the largest of them, and in a few weeks, owing to the rapid decay, nothing but the cylindrical sheath of the pith can be found. Though the stalk is heavy, the roots are small and short—striking out only a few inches from the large, bulb-shaped termination

of the stalk, that rests scarcely under the surface of the ground. It is of slow growth and many of them have held aloft their heads on these plains to the bleaching rays of the sun, growing so slowly that years scarcely make any perceptible change—loving the dry winds and the sun-bath—demanding, as the condition of existence, a cloudless sky, a parched soil, dry, hot air, and a century in which to develop. The *cactus giganteus* is the emblem of sterility.

#### EPITOME OF EARLY HISTORY.

Three hundred years ago the world was filled with rumors of wonderful discoveries, by land and by sea. Some, like De Soto, set off in quest of the "spring of eternal youth," which it was confidently asserted was just on the other side of a certain range of mountains. It was easier to believe in a land of gold than in a spring of eternal youth. We here mention in order a few of the early events that occurred affecting Arizona, to be more fully related hereafter:—

1527.—Cabeza de Vaca was the first European who ever stood on Arizona soil. The story of his long journey across the continent, beginning in 1527, his strange adventures, dangers and privations will never lose their interest.

1539.—Marcos de Viza comes second, with an extravagant and exaggerated account, written by himself, of crossing the western desert and first seeing the great cities of the pueblos.

1540.—Next was the march of Coronado, who, with an army, traversed the whole of New Mexico. This was the most important of any expedition. We have a perfect narrative by Castaneda, which is quoted elsewhere.

1580.—Forty years later and we have the missionary efforts of Friar Ruiz and his companions in 1581, which led to the rescue of the monks in the expedition of Espejo.

1662.—In 1662 we have the brilliant expedition of Peñalosa across the great plains, which resulted in no permanent conquest or colonization. The natives were gradually reduced to more severe bondage.

1680.—In 1680 the natives made a successful revolt and drove the Spaniards from the country.

1696.—Sixteen years later the Spaniards obtained a new supremacy by the final subjugation of the natives. Thus matters continued, except when aroused by Indian troubles. They improved their surroundings and amassed property and wealth for many years.

1837 saw an insurrection which resulted in the killing of the Governor and other high officials, and the proclamation of a pueblo Indian as Provisional Governor.

In 1847 the American army under Gen. Kearney entered the Territory and a provisional government was established. All these epochs of history will be fully treated in subsequent pages.

## ARIZONA TERRITORY ORGANIZED.

Spanish Arizona, Acquisition and Purchase; Origin of Name; Act of Organization; First Officers; Removal of Capital; Population; Resources; Progress of Territory; Table of Votes, etc., etc.

## SPANISH ARIZONA.

PREVIOUS to the Mexican War there were for fifty years but few important events in Spanish Arizona—an Indian outbreak in 1802, and the Mexican Revolution of 1822, and the Apache uprising of 1827. This last made an end of Spanish or Mexican rule. Tubac was really abandoned in 1840, although the Boundary Commission found about thirty soldiers there in 1850. Several ranches were held only by sufferance of the Indians. Mining was substantially suspended. Tubac and Tucson were protected from complete devastation by small companies of soldiers. Mexican authority north of Tucson and west of Rio Grande was a sham. Only two important points were occupied in a business way—one on the Gila, where the Pima and Maricopa villages still exist, and the other at Papogueria, where the Papagoes maintained a struggle against the Apaches, whom they usually defeated.

The Apache Indian, superior in strength to the Mexican, had gradually extirpated every trace of civilization, and roamed, uninterrupted and unmolested, sole possessor of what was once a thriving and popular Spanish province. Thus it remained until its acquisition by the Americans.

## ACQUISITION OF MEXICAN TERRITORIES.

That portion of Arizona lying north of the Gila River and all of the Territory of New Mexico, together with a considerable area that was added to Colorado, Utah, and Nevada, was ceded to the United States by the treaty known as that of Guadalupe-Hidalgo, signed February 2, 1848, at the close of the Mexican War. The country was then formally turned over to the United States by the Mexican authorities; American troops took possession of Tucson and Tubac; the Mexican colors were lowered, the stars and stripes hoisted in their place, and the authority of the Great Republic established where Spaniard and Mexican held sway for more than two hundred years.

By act of Congress approved September 9, 1850, New Mexico was defined and made a Territory. "Provided, it may be divided into two or more Territories, and *Provided*, that when admitted as a State it shall be with or without slavery, as its constitution may provide." New Mexico was

estimated to contain at that time (including Arizona) 100,000 Mexicans, 25,000 Indians, and 25,000 Americans.

## THE GLADSDEN PURCHASE

That part of Arizona lying south of the Gila River was obtained by purchase from the Government of Mexico, under the treaty made by James Gladsden, on the part of the United States, at Mexico, December 30, 1853; and extends west from 109 degrees meridian of longitude to the 115th degree, and north from 31 degrees, 20 seconds of north latitude to the Gila River.



AN ARIZONA MOUNTAIN STREAM.

The price paid for this piece of land, embracing some 40,000 square miles, was \$10,000,000. It was generally considered a barren desert and not worth purchasing at any price, but subsequent discoveries of gold have made it a valuable acquisition. But it would have been of more value if the original idea of Gladsden of securing the port of Guaymas and control of the gulf had been carried out. But the region was practically unknown to the American people. "There is not a reason to doubt," says Hinton, "that the original idea of the acquisition formed a point in the scheme for establishing a Southern Confederacy, which was a vigorous conception in many minds at that time."

Not a single American inhabitant was said to have been in the entire bounds of Arizona in 1847. Before its separate territorial organization, the only really American settlements within the present lines were some mining camps on the western edge of Mohave County, in the Hualupais, Peacock, and Cerbat Mountains. In addition to these were a few Americans, chiefly mining managers, engineers, and employes, who, from 1858 to 1861, and again in 1863-64, were in and about Tucson and Tubac. All else, and there was little else outside of officials and troops, were Mexicans and Indians, variously estimated at from 9,000 to 15,000 souls.

#### BOUNDARY COMMISSION AND SURVEY.

A joint commission appointed by the United States and Mexican Governments began a survey of the boundary between the two nations in the summer of 1849. The work occupied several years and was of great benefit in giving a knowledge of the character of the country along that line and its resources.

The first commissioner appointed was John B. Weller, and Andrew B. Gray, a well-known engineer, was made surveyor. Major (afterward Colonel) W. H. Emory, Captain E. L. F. Hardcastle, and Lieutenant (afterward Colonel) E. W. Whipple, United States Engineer Corps, were detailed for the scientific and field work.

The commission first assembled at San Diego, California, and in February, 1850, finding it almost impossible to advance beyond the Colorado, because of the difficulties of outfitting, an adjournment was held till November of the same year.

Colonel Fremont was soon after substituted for Mr. Weller, but did not enter on the duties of his position, because of his election from California to the United States Senate.

J. D. Bartlett, Esq., of Providence, Rhode Island, was commissioned in June, 1850, and entered at once on the active discharge of the required work.

Among those connected with the commission was its secretary, Dr. James H. Webb, of Boston, afterwards well known to the country for the part he took some five years later in organizing the Free State Emigration to Kansas, as the Secretary of the New England Emigrant Aid Society.

Lieutenant J. G. Strain, United States Navy, was also a member. He will be remembered because of his untimely death while conducting an exploration of the Panama Isthmus. Andrew B. Gray remained as surveyor. He afterwards conducted the first railroad exploration on the thirty-second parallel. Captain Edward Barry, a Mexican War volunteer, took charge of the mechanics and laborers.

The boundary survey was completed by Major Emory and Lieutenant Michler, in 1855.

Colonel J. C. Cremony, a well-known San Francisco

gentleman, and author of "Life among the Apaches," who afterwards served with the California column of volunteers that, under Gen. J. H. Carlton, in 1862-63, reoccupied Arizona for the Union during the civil war, was employed as interpreter.

George Thurber, whose name is known as a scientist, was the botanist of the commission, and Theodore F. Moss acted as geologist and mining engineer. Among other names, since better known to the country, who served with the commission, are those of Gen. Ambrose E. Burnside, afterward United States Senator, and Colonel Michler, of the Engineer Corps.

On the Mexican Commission, or connected therewith, now familiar to Anglo-American ears, was that of Lieutenant Dias, late President of the Mexican Republic.

#### ORIGIN OF NAME "ARIZONA."

Much difference of opinion prevails concerning the derivation and the meaning of the word "Arizona," the most probable being either *ari*, few or small, and *zoni*, fountain, or *arida* dry, and *zona*, zone. Either one conveys a correct idea, as the fountains are both small and few, and, generally speaking, it is an arid land. By this it is not intended to say that it is without water or verdure, for that would be very far from the truth, but there are large areas devoid of water, and almost so of verdure, and the generally received impression of the landscape is that of a blistered, sun scorched country. Hundreds of thousands of acres in bodies are sandy and dry, upon which glistens the alkali in the sunshine.

The most probable theory of the use of the name is that it is a corruption of "Arizuma," first applied to the country by the early Spanish explorers.

Some maintain that the word is of Pima origin, and means "Little Creek;" others that it refers to the traditional maiden queen who once ruled over all the Pima nation. Before it was conferred on the whole Territory it was borne by a mountain near the celebrated Planchas de Plata, on the southern boundary of the Territory.

An old Aztec tradition says: "The earth is the offspring of the sky. Long prior to the present race of men, the earth was peopled by a race of giants who in time died off, leaving the earth uninhabited. After a long time, a celestial virgin, a child of one of the thirteen great deities who rule all things, came down to the earth, and, being well pleased, remained for a long time its sole inhabitant. Once when in a deep sleep, a drop of dew from heaven fell on her, and she conceived and bore two children, a son and a daughter, from whom have sprung all the people of the earth. The name of this celestial virgin was Arizunna, the beautiful, or sun beloved maiden."

The Mohave language, which is by far the most per-



*J. J. Putter*  
TREASURER.



*E. J. Hunt*  
AUDITOR.



*F. A. Frittle*  
GOVERNOR.



*M. H. Sherman*  
ADJT. GENERAL.



*N. W. Kennerman*  
SECRETARY.

TERRITORIAL OFFICERS.

ELLIOTT. LITH. S.F.

fect and complete of any of the Indian dialects of the country, has two words of nearly the same meaning.

#### TERRITORIAL ORGANIZATION ATTEMPTED.

Arizona remained as part of New Mexico attached to Doña Ana County until twenty years ago.

On the last day of December, 1854, a memorial to Congress was introduced in the Legislature of New Mexico by the Representative from Doña Ana County, praying for the organization of the Territory into a separate political division. The name first chosen was "Pimeria," but the one afterwards adopted was "Arizona."

These first attempts to secure a Territorial government proved failures, and it was not until nearly ten years later that the object was attained, and the act received the President's signature.

In 1857, an act to organize the Territory was introduced in Congress but failed. Senator Gwin, of California, introduced a bill in the Senate to organize the Territory. Mr. Green, of Missouri, in 1860 introduced a bill to provide a "temporary government for the Territory of Arizuma," which also failed.

In 1860, Sylvester Mowry was appointed to go to Washington and urge the passage of the bill, but political jealousies and the breaking out of the Civil War postponed the matter. But the efforts of Mowry—his lectures on the resources of Arizona—awakened an interest in this section which eventually secured the passage of the Act of Organization and Separation from New Mexico.

#### ORGANIZATION OF THE TERRITORY.

The act establishing the Territory of Arizona was approved by the President on the 24th of February, 1863. Section 1 of the act describes the boundaries as follows:—

"All that portion of the present Territory of New Mexico situated west of a line running due south from the point where the southwest corner of the Territory of Colorado joins the northern boundary of the Territory of New Mexico, to the southern boundary line of said Territory of New Mexico be, and the same is hereby erected into a temporary government by the name of the Territory of Arizona." This section also provides that Congress may at any time divide the Territory or change the boundaries.

The second section makes provision for the appointment of Territorial officers, and extends to Arizona all the laws and enactments of the Territory of New Mexico not inconsistent with the provisions of this act, until they shall be repealed or amended by future legislation.

Section 3 enacts "that there shall neither be slavery nor involuntary servitude in the said Territory otherwise than in the punishment of crimes, whereof the parties shall have been duly convicted; and all acts, either of Congress or of the Territory of New Mexico, establishing, regulat-

ing, or in any way recognizing the relation of master and slave in said Territory, are hereby repealed."

The Territory thus organized was estimated to contain at that time 126,141 square miles. The Territory was formally organized by the territorial officers at Navajo Springs, forty miles west of Zuni, December 29, 1863. The officers there took the oath of office.

By Act of February 24, 1866, the territory that now forms the southwest corner of Nevada, and which lies west of the mouth of the Grand Cañon, and to the north and west of the Black Boulder, Virgin, and Iceberg Cañons of the Río Colorado, was added to the area of the "Sage Brush State." It contains 12,225 square miles, and reduced Arizona to the area now embraced.

#### LOCATION OF THE CAPITAL.

The capital was first located twenty-two miles north of Prescott, by proclamation of the Governor, at Fort Whipple, which had been erected by order of General Carleton for protection of the miners then working the placers of Sierra Prieta.

The civil officers appointed to conduct the affairs of the new Territory entered on their duties at Navajo Springs, forty miles west of Zuni, the twenty-ninth day of December, 1863, amidst a general rejoicing, the firing of guns, and addresses. Thus was inaugurated the Territorial government of Arizona. The "government" remained at the Springs but a short time, and then moved westward and reached Prescott.

The capital was removed to Tucson in 1867, but in January, 1877, was again returned to Prescott, where it has since remained.

#### ORGANIZATION OF THE GOVERNMENT.

Governor Goodwin issued a proclamation, and Hon. R. C. McCormick, then Secretary of the Territory, made the following address:—

GENTLEMEN: As the properly qualified officer, it becomes my duty to inaugurate the proceedings of the day. After a long and trying journey we have arrived within the limits of the Territory of Arizona. These broad plains and hills form a part of the district over which, as the representatives of the United States, we are to establish a civil government. Happily, although claimed by those now in hostility to the Federal arms, we take possession of the Territory without resort to military force. The flag which I hoist in token of my authority, is no new and untried banner. For nearly a century it has been the recognized, the honored, the loved emblem of law and liberty. From Canada to Mexico, from the Atlantic to the Pacific, millions of strong arms are raised in its defense, and above the efforts of all foreign or domestic foes, it is destined to live untarnished and transcendent.

## FIRST OFFICERS OF TERRITORY.

Governor, John N. Goodwin,<sup>‡</sup> of Maine; Secretary, Richard C. McCormick, of New York; Chief Justice, Wm. F. Turner, of Iowa; Associate Justices, William T. Howell, of Michigan; Joseph P. Allyn, of Connecticut; District Attorney, Almon Gage, of New York; Surveyor-General, Levi Bashford, of Wisconsin; Marshal, Milton P. Duffield, of California; Superintendent Indian Affairs, Charles D. Poston, of Kentucky.

## OFFICERS OF ARIZONA, 1884.

Title of office.	Name of officers.	Length of term	Begins.	Ends.	Salary
Governor,	F. A. Tritle,	4 years,	Feb. 6, 1882	Feb. 6, 1886	\$2,600
Secretary,	H. M. Van Armar,	4 "	Mar. 17, 1882	Mar. 17, 1886	1,800
Treasurer,	Thos. J. Butler,	2 "	Jan. 1, 1882	Jan. 1, 1884	1,000
Auditor,	E. P. Clark,	2 "	Jan. 1, 1882	Jan. 1, 1884	1,000
Supt. Pub. Instruction,	W. B. Horton,	2 "	Jan. 1, 1882	Jan. 1, 1884	2,000
Librarian,	J. S. Furness,	4 "	Jan. 1, 1882	Jan. 1, 1886	600
Chief Justice,	Sumner Howard	4 "	Jan. 13, 1884	Jan. 13, 1888	3,000
Associate Justice,	A. W. Sheldon,	4 "	Aug. 7, 1882	Aug. 7, 1886	3,000
Associate Justice,	D. H. Pinney,	4 "	June 19, 1882	Jan. 19, 1886	3,000
U. S. Dist. Attorney,	J. A. Zabriskie,	4 "	July 18, 1882	July 18, 1886	.....
U. S. Marshal,	Z. L. Tidball,	4 "	July 19, 1882	July 19, 1886	.....
Adjutant-General,	M. H. Sherman.	.....	.....	.....	.....
Delegate to Congress,	G. H. Oury.	2 "	Mar., 1883	Mar., 1885	.....

<sup>‡</sup> Died in San Francisco, Feb., 1884.

## POPULATION OF ARIZONA.

The population of the Territory at its organization was roughly estimated at 20,000. The number of Indians was put down at from 45,000 to 58,000. About half of these were set down as friendly to the whites; the other half hostile. But all these estimates were found to be wide of the mark, as shown by the first census taken thereafter. For the last few years, however, the population has rapidly increased, and the whole Territory is in a prosperous condition. There are no reliable estimates of population for 1884, but Governor Tritle places it at 75,000.

Counties.	1880. Total.	1876. Total.	1870. Total.	Nativity, 1870.		
				Native.	Foreign.	Chinese.
*Apache . . . .	5,283	.....	.....	.....	.....	.....
*Maricopa . . . .	5,689	3,702	.....	.....	.....	.....
Mohave . . . .	1,190	822	179	122	55	2
Pima . . . . .	17,007	8,117	5,116	1,900	3,816	..
*Pinal . . . . .	3,044	1,600	.....	.....	.....	.....
Yavapai . . . . .	5,012	13,738	2,143	1,207	934	12
Yuma . . . . .	3,215	2,212	1,621	619	1,002	8
†Graham . . . .	.....	.....	.....	.....	.....	.....
†Cochise . . . .	.....	.....	.....	.....	.....	.....
†Gila . . . . .	.....	.....	.....	.....	.....	.....
‡Total . . . . .	40,440	30,192	9,658	3,849	5,807	22

\* Organized after 1870.

† Organized after 1880.

‡ Including 1,632 Chinese and 3,393 half-breeds and Indians.

The native population of 1870 were classified as follows: Arizona, 1,240; California, 156; New York, 481; Ohio, 235; Pennsylvania, 275; colored, 26.

The foreign population represented the following countries: Austria, 24; British America, 143; China, 20;

‡ John A. Gurley, of Ohio, was first appointed Governor, but died before taking possession of his office.

Denmark, 19; England, 137; France, 69; Germany, 379; Ireland, 495; Scotland, 54; Sweden, 14; Switzerland, 23.

## ORGANIZATION OF COUNTIES.

First session of Legislature of Arizona was held the fourth day of October, 1864.

At that session the Territory was divided into four counties. Pima, Yuma, Mohave, and Yavapai.

In 1871, the Legislature organized the county of Maricopa out of Yavapai County.

In 1875, the county of Pinal was organized out of Pima, Maricopa and Yavapai.

In 1879, the county of Apache was organized out of Yavapai County.

In 1881, the county of Gila was organized out of portions of Pinal and Maricopa.

In 1881, Graham County out of Pima and Apache.

In 1881 Cochise was organized from Pima County.

There are now ten counties as follows:—Mohave, Yavapai, Apache, Yuma, Maricopa, Gila, Pinal, Graham, Pima, and Cochise.

## PROGRESS OF THE TERRITORY.

"The advancement of the Territory," says Governor Tritle, "both with regard to wealth in the development of profitable industries and increase of population, has been remarkable. The Territory can now claim 75,000 people and over \$20,000,000 of taxable property; and while the progress of our civilization and the development of our resources have been oppressed by most serious difficulties, it is now safe to say that those dangerous and disturbing elements which have been such forcible factors in checking our progress are well under control. During the past two years exceptional development has been made in all our industries, mining, grazing, and agricultural; extensive railroad enterprises have been successfully completed; and the affairs of the Territory generally are in an excellent condition."

## THREE GREAT RESOURCES.

Although one of the least known sections of our common country it has grand resources which are at last being understood and appreciated.

Arizona possesses three great sources of wealth, mining, agriculture and grazing, all of which are being rapidly developed.

The valleys along the principal water-courses yield magnificent crops of grain, fruits, and vegetables, and even the mesa or table-lands adjacent will grow almost anything with a sufficient supply of water. The richness of the valleys and their wonderful productiveness are attracting a stream of immigration from all parts of the country, the East, and all the locations are being rapidly taken up.

It has been demonstrated that Arizona possesses a soil unsurpassed by any State or Territory in the Union,

capable of producing everything grown in the temperate and semi-tropical zones.

Beyond the making of flour and lumber the manufacturing interests of the Territory are yet in their infancy.

Owing to the sparse population and the continuous excitement in the Territory about mines, but little has been done in developing the agricultural resources of the country; but the richness of the soil, the wide and excellent pasture-ranges, and the mildness of the climate, all tend to make this Territory a very desirable field for the emigrant and the employment of labor and capital.

The country south of the Gila is watered by the San Pedro and Santa Cruz Rivers and several smaller streams, and is composed of plains, valleys, and broken chains of mountains. Nearly every portion of it is covered with nutritious grasses; live-oak and mesquite grow in abundance for fuel, on the plains and in the valleys, and many of the mountains are covered with excellent forests of timber.

No better grazing country can be found, and quite a large portion is yet unoccupied. The valleys possess excellent agricultural advantages; with irrigation two crops are annually produced on the same land.

Many of these valleys were settled by the Catholic Fathers over one hundred years ago, and a history of the changes that have since ensued would fill a large volume. Over a century ago, these fathers, attracted by the salubrity of the climate and the fertility of the soil, established several missions, improved farms, introduced herds, and built churches, one of which is still well preserved, and for style of architecture and solidity of construction, is admired by all who see it.

DESERT MIRAGE.

Among the wonderful and beautiful phenomena of the singular climate is the desert mirage. In the delightful, pure, balmy air of morning, you see, suspended in the mid-air, fairy-like structures, pictured above the rose-tinted horizon, assuming all the fantastical shapes in nature and art to your enraptured vision. Now, a castellated structure in all its grand proportion; you turn your gaze reluctantly from the enchanting picture to your sketch book; you look again, alas, it is gone! and in its place another fairy-like structure, equally beautiful and equally evanescent.

Later in the day the weary and thirsty traveler is gladdened with the view of a lake of water. Green bushes bordering it are pictured on the water in cooling shadows. It is just ahead, hastening you on with famishing impatience. Hasten as you will, you can get no nearer; you cannot realize that it is a mere mirage, and yet hasten on after the phantom.

TERRITORIAL FINANCES.

Governor Tritle in his late message says that there is a bonded debt of \$120,000 and a floating debt of warrants issued by the Territory of about \$165,000, all bearing interest at the extraordinary rate of ten per cent. per annum. The large amount of warrants that are now issued, and in the nature of a floating debt, renders them subject to a discount of about ten per cent., thus largely increasing the cost of Territorial government. "Bonds should be issued to take up these warrants. I am convinced that the bonds of this Territory can be negotiated at par, if not at a premium, if bearing interest at the rate of seven per cent. per annum, drawn payable in twenty years, and a sinking fund provided to go into effect in five years from the date of their issuance."

"Ascertaining that no information existed either in the office of Territorial Auditor or Treasurer as to the amount of taxable property in the several counties of the Territory, I directed a communication dated, December 6th, 1882, to each of the sheriffs, who are ex officio assessors and tax-collectors, requesting them to inform me in this matter, but only one-half the counties, Yavapai, Pima, Yuma, Gila, and Maricopa, responded. I find that the counties mentioned have \$10,144,772.17 represented on their rolls, and from such data as I can gather, I am led to believe that the other five counties will bring the aggregate up to \$18,000,000. At the present rate of taxation, twenty-five cents on the \$100, we would have for payment of general expenses:

From taxes, the sum of.....	\$45,000
From licenses, about.....	15,000
Total	\$60,000

"The per capita for care of convicts in our penitentiary is about one dollar per day. We have now say one hundred prisoners, making \$3,000 per month, or \$36,000 per annum, if no increase occurs. Our insane have averaged about forty in number, contracted to be supported at \$6.00 per week, which would make about \$1,000 per month, or \$12,000 per annum. Placing our general expenses at the same figure as the average of the past two years we have \$25,000 for that purpose. Our interest will be about \$27,500 per annum, unless bonds are issued to take up our warrants now unpaid, and the retirement of the \$110,000 of bonds already issued, and lower rate bonds issued instead. We have the following showing as a low estimate of what we must disburse yearly:

For Penitentiary.....	\$36,000
For Insane.....	12,000
For General Expenses.....	25,000
For Interest.....	27,500
Total.....	\$100,500

And our income from taxation and license would be, laying

aside any increase in taxable property, about \$60,000, or a deficiency of about \$40,000 per annum."

"From an examination of the expenses of the Territorial government, for supporting the Territorial prison, insane patients, together with interest on indebtedness and general expenses of government, I am convinced that not only is a reduction of taxation impossible, but unless additional sources of revenue are found, the Legislature will be compelled to either greatly increase the debt annually, or make a rate of taxation greater than now. I most respectfully urge the importance of so arranging the tax laws as to compel all classes of property within the Territory to bear their just and equitable proportion of the expenses of the government, the protection of which all share alike."

#### CLIMATE OF ARIZONA.

The climate of Arizona is exceedingly dry in its western division, and in the section adjoining the River Colorado; and in many portions of the interior the heat of the summer is intense, it often reaches one hundred and twenty degrees in the shade, at which it will continue for many days in succession. Winter in these quarters is almost unknown, and except upon the high mountains, snow never falls; but in the northern and eastern portion of the Territory the mountains are clad with snow perpetually; throughout the valleys and low hills snow and frost are unknown, and the climate of the Territory may be called perpetual summer.

#### ARTESIAN WELLS FOR IRRIGATION.

Many portions of the country are but poorly watered; but vast areas are supplied with abundance of water from the innumerable branches of the Colorado and Gila, the two principal rivers in the Territory.

"Irrigation by artesian process," says Governor Tritle, in his late message, "is a subject of great importance as affecting the progress of this Territory. Much of the land known as 'desert land' in Arizona, which cannot be reclaimed by the ordinary methods of irrigation—superficial streams not existing in many localities—could, I believe, be made productive by artesian well process. We have also large sections of country which are now only useful for grazing purposes, and that only to the limited extent that the present water supply will permit, that would be fitting homesteads for those who engage in both agriculture and grazing, if only the addition of artesian water could be made.

"The Government still owns nearly all the table-land of Arizona. Without water it is worthless to the poor man except for grazing, and not very valuable for that, and without a change in the land laws it is unlikely that the rich will make any attempt to develop water."

Since this was written, five or more artesian wells have been sunk, securing flowing water. A reward was offered by the Legislature for the first flowing wells and the committee appointed to investigate the question reported "success in obtaining flowing water by artesian wells under circumstances which give assurance of great benefit to the Territory."

#### THE PRE-HISTORIC SETTLER.

The prospector, while searching for gold and silver, is often surprised to find remains of pre-historic civilization in most unexpected localities. There is little doubt that the whole of Arizona, including the wide-spread desert and mountain cañon, has been a scene of activity in the ages past.

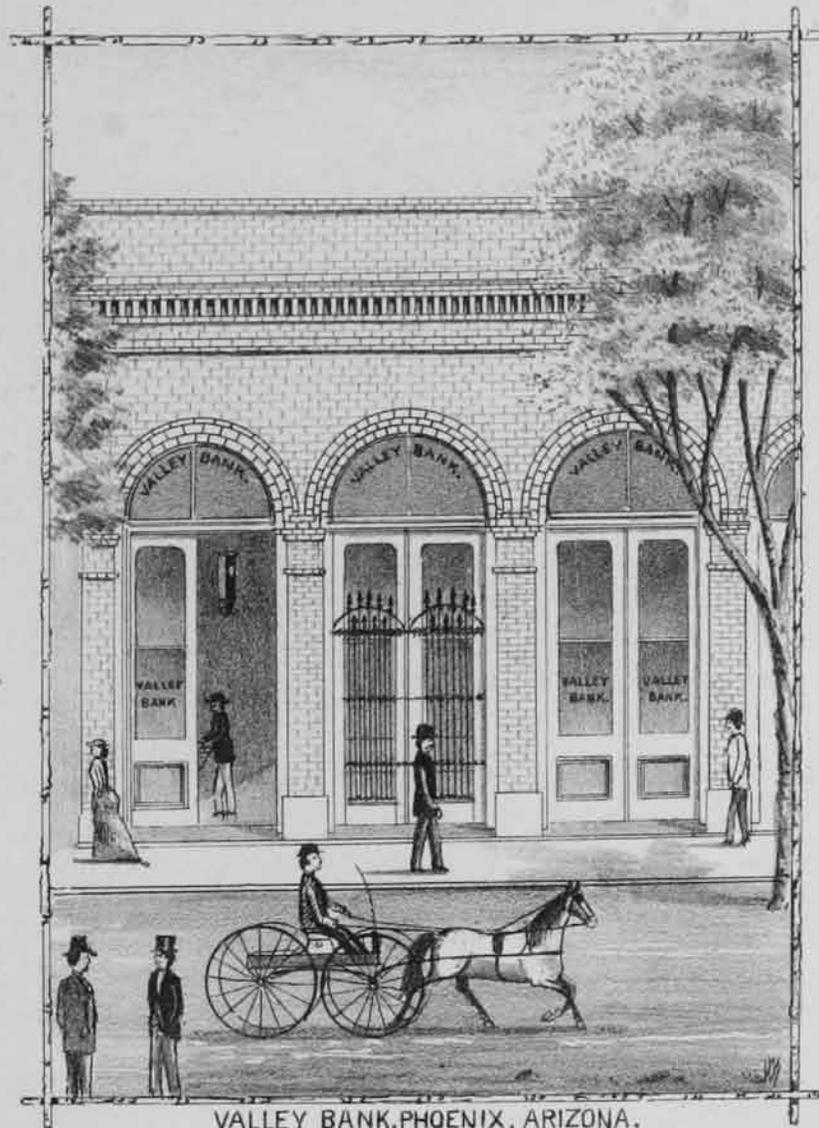
There is no subject of greater interest to the intelligent mind than the unwritten history of the human race. We look back to our ancestors, who were probably no better than ourselves, with an innate veneration, common to all mankind. It is human to inquire into the past. We have a strong natural desire to know the early history of man as an inhabitant of the earth, and to speculate on the future. It is probable that these ancient races were gold hunters like ourselves. Wherever they have found old ruins, may be discovered, in nearly every case, valuable mines. A similar experience was made by the early explorers of the wonderful copper mines of Lake Superior. The best mines and the largest deposits of copper had been discovered and worked by an ancient and unknown race; in Arizona and New Mexico, old workings are not uncommon.

Modern miners and prospectors have discovered a relation between the ancient ruins and deposits of the precious metals—a clew to the richer spots in Arizona and New Mexico, revealed by the marks left by the ancient gold-hunters.

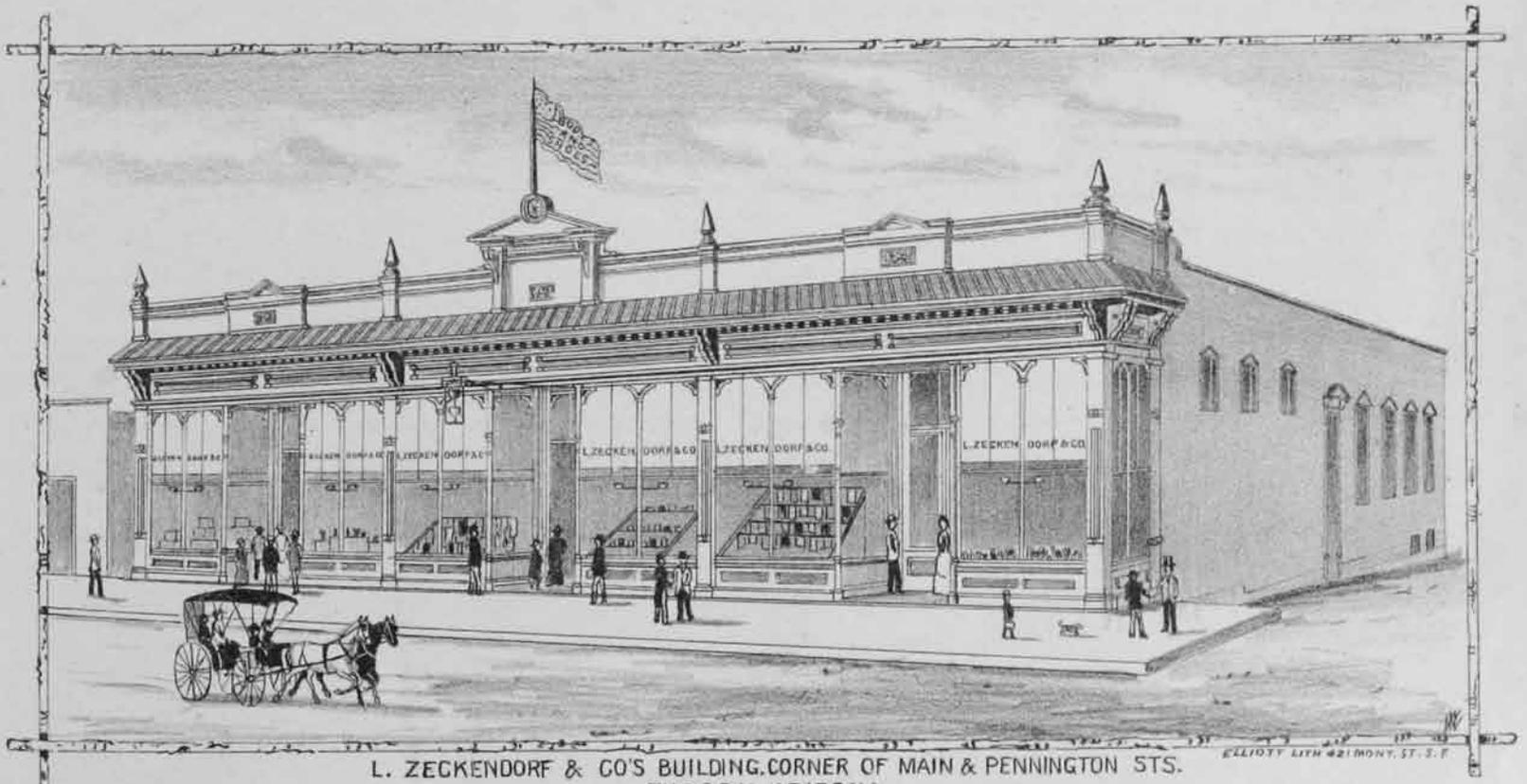
#### ARIZONA COMPARATIVE TABLE.

The following table gives some valuable information and shows the comparative size and population of several Territories and States. Arizona would make three States as large as New York, and one hundred of the size of Rhode Island.

Name.	No. of persons.	No. of sq. miles.	No. of families.	No. of dwellings.	Inhabitants to sq. miles.	No. of acres to each person.
Arizona .....	40,440	112,920	9,536	9,033	0.36	1,787
Idaho .....	32,610	84,290	7,774	7,770	0.39	1,654
Colorado .....	194,327	103,645	41,260	39,018	1.87	341
Nevada .....	62,226	109,740	15,178	14,557	0.57	1,127
New York .....	5,082,871	47,620	1,078,905	772,512	106.74	6
California .....	864,694	155,980	117,508	160,037	5.54	115
Rhode Island .....	276,531	1,085	60,259	41,388	254.87	2



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## EARLY EXPEDITIONS THROUGH ARIZONA.

First Discoveries; Search for "the Seven Cities;" Discovery of California; First Exploration of Colorado River; First Visit to Casa Grande; Grand Canon Discovered; Pueblo Towns Visited, etc.

### FIRST WHITE MAN ON THE PACIFIC.

VASCO NUNEZ DE BALBOA, the first white man to step upon the plain of Pacific Coast history, is introduced to the reader without prelude, or essay, upon the causes that led to his doing it. He was from the humble walks of life, heartless, fanatical, vain, cruel and ambitious. He was a Spaniard by birth, and a ghoulish by nature, who, to escape his creditors in Hispaniola, crept into the hold of a vessel bound for the Caribbean Sea. The commander, Enciso, threatened to have him thrown overboard, when found, but, unfortunately for humanity's sake, failed to do it.

Finding his way eventually into the country where Cortez was teaching Catholicism with his sword to the Aztec worshippers of the sun, he became a leader of expeditions against that unfortunate race, and a successful general, who, winning easy victories, slaughtered those whom he conquered, and planted the cross in blood wherever he went.

It was this man, whom destiny had selected to stand in history, at the threshold of a new era, and part the screen that was hiding from the world a stage, upon which mankind were to commence a new act in the drama of life. He made the discovery, in 1513, being led by an Indian to the mountain, from where he could look out upon the sleeping legendary waters "beyond America," that conquerors and kings had sought in vain for. A few years later the discoverer's head was cut off by Peter Anais, the Governor of Darien, who had become afraid and jealous of him.

### ANCIENT SPIRIT OF DISCOVERY.

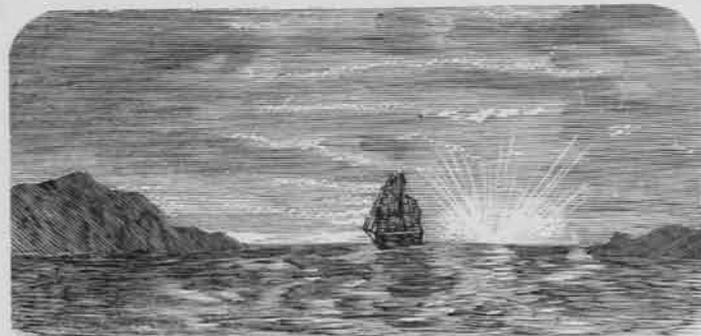
After it became known that a western water boundary had been found to the country that Cortez had subjugated for Spain, the spirit of discovery was increased to a fever-heat. The imagination of the adventurous of all countries was excited to search for the El Dorado, where the Incas had procured their vast treasures of gold. It was hoped that the "fountain of perpetual youth" might be there, that would rescue from old age the one who bathed in its living waters. At least, beyond were the Indies, with the wealth of the Orient, to tempt adventurous trade, and to fan the flame was added, by the Catholic Church, their

spirit and zeal for religious conquest, to save the souls of heathen who lived in the countries found and to be found, where the shores were washed by the newly discovered ocean.

With all these incentives urging to action, can it be wondered at that vast treasures were spent in searching into these newly opened fields for adventure. The road to them had been found after eleven years of search, by Columbus and others, unsuccessfully prosecuted, to discover a strait or water passage through America, over which they might sail to the fountain of wealth, the fabulous land of Cathay, and the Island of Cipango. To reach those strange countries had been the dream that first led Columbus to undertake the voyage that resulted in the discovery of America.

### FIRST VESSEL ON THE PACIFIC.

1519.—Six years after this, the ill-fated Portuguese Magellan, started on the famous voyage that resulted in the discovery of the long sought route to the Indies, thus solving the maritime problem of the fifteenth century. Three years later his vessel returned to Spain, with a log-book that contained a record of the death of that gallant commander at the Philippine Islands, whose vessel, the



FIRST VESSEL ENTERING THE PACIFIC OCEAN.

*Victoria*, had been the first European craft to sail on the waters of the Pacific Ocean, and the first to make a voyage around the world.

It was this famous navigator that gave the name, "Pacific" to our ocean, after having sailed into it from the straits of the "Ten Thousand Virgins," as he called it (now known as Magellan). He had been for sixty-three days beating up through it against tempest and adverse currents, where the tides rose and fell thirty feet. Is it strange that the word PACIFIC should have been the one above all others to force itself upon the happy navigator, when he saw the quiet water that lay before and around him, as he passed out upon this unexplored ocean?

1524.—Five years after the departure of the Magellan expedition from Spain, Cortez wrote to his monarch, Charles V., a letter dated October 15, 1524, in which he states that he is upon the eve of entering upon the conquest of *Colima*, on the South Sea (Pacific Ocean). *Colima*

is now one of the States of Mexico. He further says that "the *great men* there" had given him information of "an island of Amazons, or women only, abounding in pearls and gold, lying ten days' journey from Colima," and the Spanish Jesuit historian, Miguel Venegas, referring to that letter, one hundred and thirty-three years ago, writes that "The account of the pearls inclines me to think that these were the *first intimations we had of California and its gulf.*"

#### CABEZA DE VACA EXPEDITION.

1527.—The expedition of Pauphilo de Narvaez started to explore Florida in 1527. Cabeza de Vaca was one of the chief officers. The expedition became divided and De Vaca finally made his way, after great hardships, along the borders of the Gulf of Mexico westward and into New Mexico. After ten years of wandering in an entirely strange country he finally reaches the City of Mexico.

It is difficult to trace the exact route of De Vaca, as time and distances are wanting. The country with town of "fixed habitations" undoubtedly referred to the domain of the Pueblo Indians in New Mexico; and the great river coming from the north, which they crossed, was in all probability the Pecos.\* From there they were guided through fifty leagues of desert, and over rough mountains to another very great river, the water of which was breast high. This was undoubtedly the Rio Grande; and it was here that they had the long parleying with the natives as to the route to be pursued, the latter telling them of the great deserts to be passed if they went directly westward. Up this river they marched for thirty-four days—seventeen on the east side and seventeen on the west. Part of the distance was over plains lying between chains of great mountains; and they proceeded till they reached permanent habitations, where abundance of corn was raised, and where the natives, besides pumpkins, beans, etc., had "shawls of cotton." Some of their houses were of earth and some of cane mats. Just how far up the valley of the Rio Grande Cabeza de Vaca came we shall probably never know; but evidently not further than central New Mexico, as the turquoises which were presented to him, and which certainly came from the great Chalchicuitl Mountain in the Cerrillos, twenty miles south of Santa Fé, he mentions as coming "from the north." From the highest point reached, the party seems to have turned quite abruptly west, probably as soon as they had passed by the desert regions on the west of the river; and then marched for more than 100 leagues, continually finding settled domiciles, with plenty of maize and beans. It may be well conjectured that this was along the line of the Puerco and San Jose, and among the numerous pueblo towns, of which

we have such full descriptions a few years later, in the time of Coronado, although the route may have been further south. From this time the course of the travelers was southwest until they reached the points in Sonora where they heard of the nearness of other Christians.

#### SEARCH FOR THE "SEVEN CITIES."

1530.—In the year 1530 Vino de Gurman possessed an Indian who was a native of the valley of Oxitipa. The Indian told him that he was the son of a merchant who had died a long time before, but who, in his lifetime, used to travel through the interior of the country in order to sell ornamental feathers, to be made into plumes, and who obtained in exchange for them great quantities of gold and silver, which metals were very common in that country. The Indian added that he had accompanied his father on one or two of these trips, and had seen cities which were so splendid and large as to compare favorably with the City of Mexico. These cities were seven in number, and in them were whole streets occupied by goldsmiths. To reach this country it was necessary to march for forty days across a desert, where there was no vegetation but a species of short grass about five inches high, and to go into the interior of the continent in a northerly direction between two oceans.

Full of confidence in these statements he raised an army of 400 Spaniards and 20,000 Indian allies and, starting from the City of Mexico, marched for the "Land of the Seven Cities." But the army became demoralized, and they abandoned the further search for the wonderful cities. The Tejon Indian died and for several years the "cities" were not sought.

#### DISCOVERY OF CALIFORNIA.

1534.—Its discovery was made in 1534, by Ortun Ximenes, a mutineer who led an outbreak on board the ship of which he was pilot, resulting in the death of several officers, including the captain. The expedition had been fitted up for exploration purposes by order of Cortez, and, after the commander was thus killed, Ximenes took charge and continued the search, discovered the Peninsula of Lower California, landed upon it at a point somewhere between La Paz and Cape St. Lucas, and, while on shore, was killed, with twenty of his men, by Indians. The remainder of the crew returned to Chametla, where they reported a numerously peopled country found, where the shores were lined with valuable beds of pearls.

Up to this time the word "California" had been applied to no part of the Pacific Coast or its waters.

1536.—Cortez, fitting up an expedition, set sail for the country found by the mutineers. He landed on the first day of May at the place where Ximenes was killed, giving

\* Sketches of New Mexico, Hon. L. B. Prince, of Santa Fé.

the name of Santa Cruz to the bay. He established a colony there, and sent back his four vessels for supplies and such of his party as had remained behind. Only one of them ever came back and it brought no provisions. Cortez immediately embarked on the returned vessel and set out in search of his lost squadron, finding it stranded on the coast of Mexico, hopelessly damaged. Procuring fresh stores he returned to the colony, that in his absence had been reduced to a famishing condition, many of whom died of starvation, or over-eating from the provisions he had brought with him.

#### CALIFORNIA FIRST NAMED.

The historian, Gomara, says (and mark the language): "Cortez, that he might no longer be a spectator of such miseries, went on further discoveries, and *landed in California, which is a bay,*" and Venegas, the California historian of 1758, referring to this passage in the work of Gomara says that it "likewise proves that this name was properly that of a bay which Cortez discovered on the coast, and perhaps that now called de la Paz, and used to signify the whole *peninsula.*" This was the first application of the name California to any definite point on what is called the Pacific Coast.

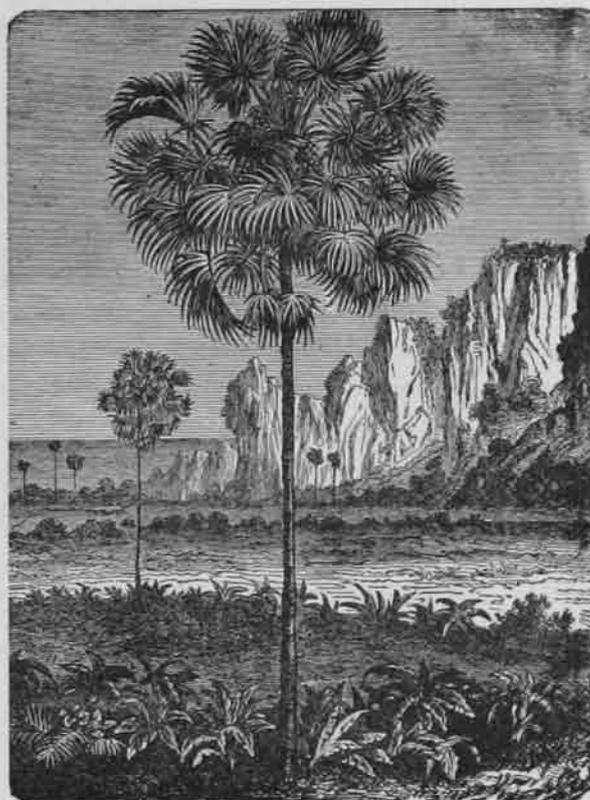
Cortez was soon recalled to Mexico, on account of impending troubles and danger of a revolt in that country, glad to have an excuse for leaving a place that had proved fruitful only of disaster. Within a few months he was followed by the colony, and Lower California, with its rocks and wastes of sand, was left to the Indian, the cactus, and the cayote.

#### EXPLORATIONS OF FRIAR MARCOS.

1539.—The friars, Marcos de Niza, provincial of the Franciscan order in Mexico, and Honorato, accompanied by the negro or Moor, Estavanico, who had crossed the continent with Cabeza de Vaca, set out from Culiacan, on the 7th of March, 1539, in search of the rich countries reported to lie in the Northwest. From accounts contained in the letter addressed to the viceroy by Friar Marcos, and from other evidence, it is probable that the reverend explorer did really penetrate to a considerable distance into the interior of the continent, and did find there countries partially cultivated, and inhabited by people possessing some acquaintance with the arts of civilized life; though, as to the precise situation of those regions, or the routes pursued in reaching them, no definite idea can be derived from the narrative. The friar pretended to have discovered, northwest of Mexico, beyond the 35th degree of latitude, extensive territories, richly cultivated, and abounding in gold, silver, and precious stones, the population of which was much greater, and farther advanced in civilization, than those of Mexico.

#### ACTUAL RESIDENT OF CIBOLA.

Soon Marcos met with an actual resident of Cibola, the first whom he had seen, and from him received a great deal of interesting information. The traveler describes this man as "a white man of a good complexion, of far greater capacity than the inhabitants of this valley or those which I had left behind me." He was quite aged, and had fled from the city on account of some difficulty, but said he would return with the friar if the latter would procure his



BONITO VALLEY, ARIZONA.

pardon. He said that the Lord of the Seven Cities lived at one of them, called Ahacus, having lieutenants in charge of the others. Cibola is a very large and populous city, having many fine streets and market-places; in several places there are immense houses five stories in height (the French version of Ternaux-Compans says "ten stories"), in which the rulers meet at certain times of the year. The houses are of stone and lime, the gates and smaller pillars of the principal residences are of turquoise, while all the household vessels and ornaments are of gold. Satisfied with modestly saying this much as to his own city, the Indian then informed Friar Marcos that all the others of the Seven Cities were similarly built, but several were larger than Cibola, the most extensive being Ahacus, the capital. Toward the southeast was situated another kingdom, called Marata, with a large population, and many-storied houses, which was continually at war with the ruler of the Seven Cities.\*

\*This and three following paragraphs are from "Sketches of New Mexico," by L. B. Prince.

## KINGDOM OF TOTONTEAC.

To the west was the kingdom of Totontec, which was the greatest and most important in the world, thickly populated, and very rich. Here the people were dressed in woolen cloth like that of the friar, only more beautiful. They were highly civilized and very different from those already seen. There was also another very large kingdom, called Acus, which he begged Marcos not to confound with Ahacus, the city, although the names were somewhat similar. Among other things the Cibolan said that the people of his city slept on "beds raised a good height from the ground, with quilts and canopies over them, which cover the said beds." In this valley the friar counted over a thousand buffalo hides, extremely well prepared, and a constantly increasing amount of turquoise, all of which, however, was said to come from Cibola. Here also he was shown an enormous hide, half as large again as that of the largest ox, which he was told was that of a great beast having one horn growing from the middle of his forehead which bent down towards his breast, but has a point going straight forward, so strong that it would "break anything how strong soever it be, if he run against it;" and the natives told him that these animals were very abundant in that country.

## THE SEVEN CITIES EXAMINED.

Marcos was convinced of the impossibility of forcing an entrance into the city or visiting it peaceably, and so concluded to make as thorough an examination of it as he could from without. So he told his followers that he proposed to see it at all events, but not one would accompany him. Finally, when they saw him actually start alone, two of the chiefs consented to join him; and with them and his own Indians from the south he proceeded until he was within sight of the long-looked-for city. He found that it was situated "on a plain at the foot of a round hill, and maketh show to be a fair city, and better seated than any that I have seen in these parts. The houses are builded in order, according as the Indians told me, all made of stone with divers stories, and flat roofs, as far as I could discern from the mountain, whither I ascended to view the city. The people are somewhat white; they wear apparel and lie in beds; their weapons are bows; they have emeralds and other jewels, although they esteem none so much as turquoise, wherewith they adorn the walls of the porches of their houses and their apparel and vessels, and they use them instead of money through all the country. They use vessels of gold and silver, for they have no other metal, whereof there is greater use and more abundance than in Peru." Having viewed the city, which his comrades told him was the least of the Seven Cities, the friar named the country "El Nuevo Reyno de San Francisco," "and

thereupon," he says, "I made a great heap of stones by the aid of the Indians, and on the top thereof I set up a small, slender cross, because I lacked means to make a greater, and said that I set up that cross and heap in the name of the most honorable Lord Don Antonio de Mendoza, Viceroy and Captain-General of New Spain, for the Emperor, our lord, in token of possession." Not satisfied with thus formally annexing the City of Cibola itself to the Spanish dominion, De Niza further solemnly declared that the possession which he then took was "also of the 'Seven Cities,' and of the kingdoms of Totontec, of Acus, and of Marata."

## ROUTE TAKEN BY MARCOS.

The route taken by Marcos de Niza on this celebrated expedition is, says L. B. Prince, so far as its main features are concerned, easy to distinguish. He first traveled nearly parallel with the coast of the Gulf of California, until he reached its head, and then turned to the northeast, and continued traveling in that general direction for the rest of the distance. The fertile and populated valleys were along the Gila and its tributaries. There is no doubt at all that Cibola was Zuñi, being what is now called the "Old Pueblo," or "Old Zuñi." The kingdom to the southeast may have referred to the Pueblo country in the vicinity of Acoma and Laguna, or possibly to one still more distant and across the Rio Grande, towards Abó and the ruins now called "Gran Quivira." Totontec, if situated as stated, to the west, would be identical with the Moqui towns; and Acus might have been the country now represented by the ruins in the Chaco Valley, the Pueblo Bonito, etc. But the experience of Coronado, shortly afterwards, shows these reports of kingdoms to have been very shadowy, and at all events greatly exaggerated.

## FIRST EXPLORATION OF COLORADO RIVER.

1540.—The marine armament consisted of two ships commanded by Fernando de Alarcon, who sailed from the port of Santiago on the 9th of May, 1540, and, proceeding along the coast towards the northwest, reached the extremity of the Gulf of California in August following. There he discovered a great river, which he named *Rio de Nuestra Señora de Buena Guia* (or River of our Lady of Safe Conduct), probably the same now called the *Colorado*. This stream Alarcon ascended to the distance of more than eighty leagues, with a party of his men, in boats, making inquiries on the way about the Seven Cities, in reply to which he received from the Indians a number of confused stories—of kingdoms rich in precious metals and jewels—of rivers filled with crocodiles and other monsters—of droves of buffaloes—of enchanters—and other wonderful or remarkable objects.

Of Totontec he could learn nothing, though, at the end of his voyage up the river, he obtained what he consid-

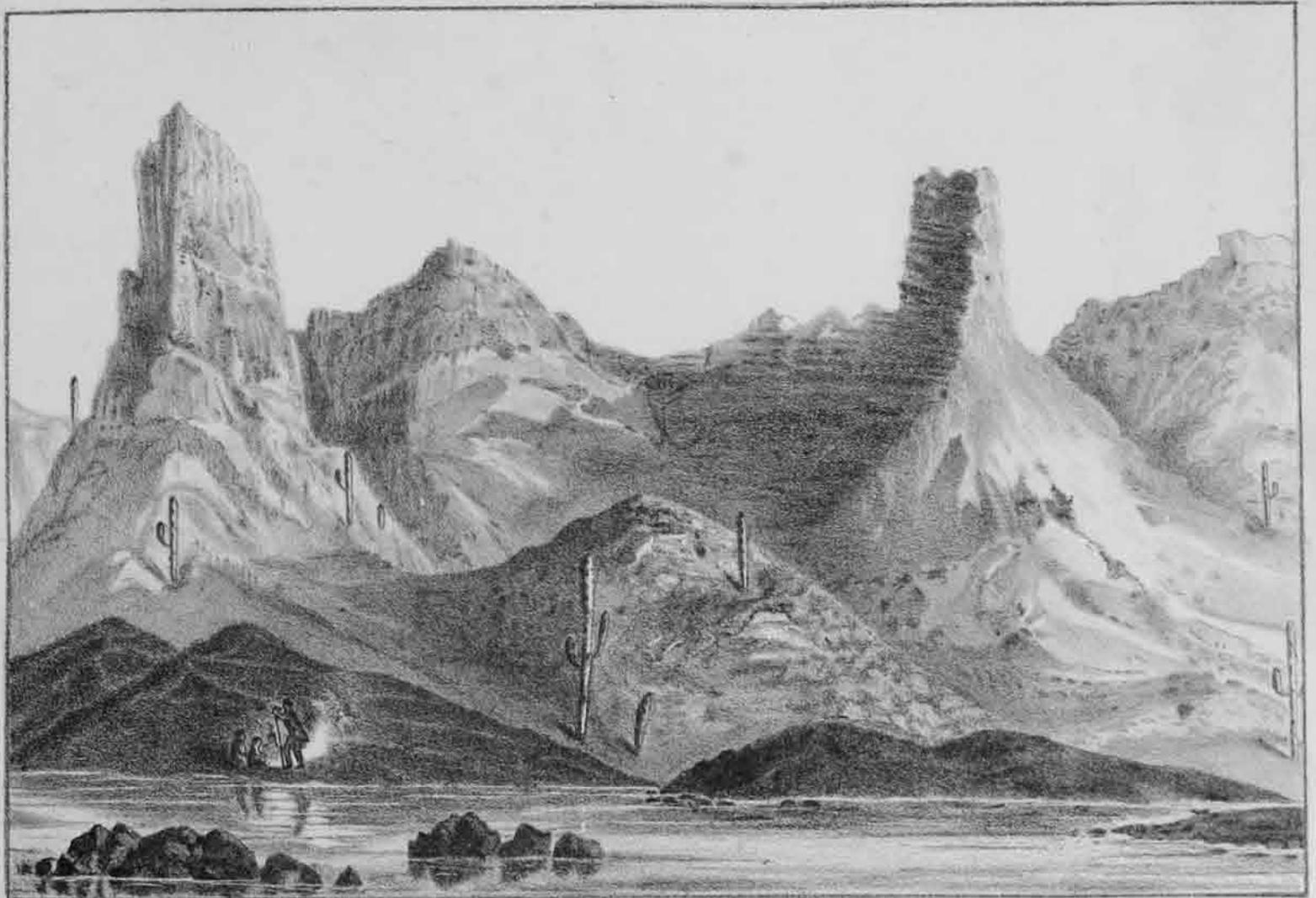


CLIFF DWELLINGS, MANCOS CANON.



MOJAVE CANON.

ELLIOTT, LITH. 421 MONT ST. S.F.



SHORE ON COLORADO RIVER, ARIZONA.

ELLIOTT, LITH. 421 MONT ST. S.F.

ered some definite information respecting Cibola, and was assured that he might reach that place by a march of ten days into the interior. He, however, suspected treachery on the part of those who gave the assurance, and, not conceiving it prudent to attempt to advance further, he returned to his ships.

In a second voyage up the river he obtained no additional information, and, believing it needless to continue the search, he went back to Mexico, where he arrived before the end of the year.

#### EXPEDITION OF CORONADO.

1540.—No sooner was it known that an expedition for the conquest of Cibola and the wonderful Land of the Seven Cities had been decided on, than the most adventurous cavaliers of New Spain hastened to take part in the enterprise. The best families of Castile were represented among them, and the troop of 400 which finally started was the most brilliant which, at that time, had ever been raised in the New World. Francisco Vasquez de Coronado, the Governor of New Galicia, was very properly appointed as Captain-General, by the Viceroy, both because the discovery of Cibola had been made through his instrumentality, and because his province was the natural starting-place of the expedition. He was a man experienced both in arms and in government, wise, prudent, and able, and a great favorite with Mendoza. The Viceroy also appointed the other officers of the expedition; and here the only difficulty which arose was from an *embaras de richesses*. "Seeing the great number of gentlemen taking part in this expedition," says Castañeda, "the Viceroy would have been glad to give each one the command of an army; but as the soldiers were so few, it was necessary to make a choice. He concluded to name the captains himself, because he was so greatly loved and respected that he knew no one would refuse to obey those whom he designated."

The historian of the expedition, Pedro de Castañeda de Nagera, who accompanied it through all its journeyings, and afterwards in Culiacan wrote a full account of all that occurred, mentions a number of other illustrious names, in order to impress upon the reader the chivalrous and aristocratic character of those who were engaged in it, and to prove that it contained "more men of quality than any which has been undertaken for the making of discoveries," adding that it must surely have been successful but for the great riches, and the young bride, noble and charming, left behind by the commander, to which attraction he attributes his intense desire to return at a later day. With the 400 Spaniards were 800 Indian soldiers, so that the entire expedition was composed of 1,200 men; and these

were directed to rendezvous at Compostella, the capital of New Galicia, in the spring of 1540. At the same time Don Pedro Alarcon was ordered to start from Natividad, on the Pacific, with two ships, and proceed to Xalisco with such munitions as the soldiers could not well carry, and thence sail along the coast as near as possible to the army, so as to keep up communication with it, the supposition being that the route of the expedition was near to the coast of the Pacific.

#### WHOLESALE HANGING OF THE NATIVES.

After much fatigue, the army reached the town of Chiametla; and here it was discovered that the supply of provisions were already failing, and a halt of some days was required in order to replenish the stock. From this place, Samaniega, the Maestro de Campo, imprudently went with only a few men to an adjacent Indian village, and while there was shot in the head with an arrow and killed. A grand military funeral was had, and all the natives who even "seemed to be" inhabitants of the place where the murder took place, were hung; but the affair naturally cast a gloom over the expedition.

The army remained here for a month, but Coronado himself only stayed half of that time, as he was impatient to press on to the exploration, if not the immediate conquest, of the famed lands before him. So he took a few of his most intimate friends, and with fifty horsemen and a few soldiers on foot, started in advance, leaving the main body of the army under the command of Don Tristan de Arellano, with orders to follow him in a fortnight. The General took with him all of the priests, as for some reason none of them would remain with the army; but after proceeding on the march three days, one of their number, named Antonio Victoria, happened to break his thigh and had to be sent back to Culiacan for treatment, "which," says Castañeda, "was no small consolation for all the people." Meanwhile Coronado and his party were proceeding successfully on their journey, full of enthusiasm, and meeting with no trouble from the natives, as many of the latter were acquainted with Friar Marcos, or had acted as an escort on the recent expedition of Diaz and Saldivar; and so they arrived at Chichilticale.

#### "CASA GRANDE" FIRST VISITED.

But here a great disappointment awaited them. Instead of the flourishing town they had been led to expect, they found in reality but one single building, and that in ruins and even without a roof. It is true that its proportions and style of architecture proclaimed it to be the work of some superior and civilized nation, differing widely from the inhabitants of the country around, but that was small consolation under the circumstances. They had come seeking the riches of the present, and not the

Pages 37, 38 and 39 are mostly from Sketches of New Mexico by L. B. Prince.

relics of the past. This building, Chichilticale, is almost beyond a doubt identical with the structure now called the "Casa Grande," of Arizona, which has been so frequently described by travelers in recent days, both the situation and the description making the identification almost positively certain.

#### MARCHING THROUGH ARIZONA.

At this point the great desert began; but Coronado would not wait for his army, but pressed on rapidly with his little escort in hopes of making discoveries of such importance that the present disappointment would be forgotten. For fifteen days they marched through a continuous desert, barren, sandy, and devoid of water; but at length their eyes were gladdened by the sight of a narrow stream, whose waters had such a reddish tinge that they named it Vermejo. What added to their joy was the fact that they were but eight leagues from the special object of their journey, the City of Cibola. Here they saw a few Indians, but could open no communication, as they fled as soon as they were approached.

Marching on, on the evening of the next day, when they were but two leagues from the city, they discovered some Indians on an elevation, who raised such a frightful cry that it startled and alarmed the Spaniards, who were unaccustomed to such extraordinary sounds, the fright of some of the soldiers being so intense, Castañeda says, that they "saddled their horses wrong end foremost." "But," he adds, "these were men of the new levy." The veterans started in pursuit of the Indians, but the latter succeeded in escaping to the city.

#### THE "SEVEN CITIES."

The next day the whole army arrived in sight of Cibola; but here their disappointment was even greater than at Chichilticale, and the air was filled with maledictions against Friar Marcos and his enormous exaggerations. Instead of the large city described in his "Relation," they saw a small town located upon a rock, containing not over 200 warriors, but protected from capture by the steepness and difficulties of its approach. It was true that the houses were of three or four stories in height, but they were small and inconvenient, and one court-yard had to serve for an entire quarter. The whole province contained seven cities, some of which were much larger and better fortified than Cibola.

The Spaniards had hoped that their overtures of peace and friendship would be accepted without question or delay, but the Indians seemed to understand that peace meant subjugation, and so only replied to the demand of the interpreter by menacing gestures, and drew up their warriors in good order to resist an attack. This speedily followed, for Coronado led his followers to an immediate

charge, with loud cries of "Santiago." The Indians could not withstand this attack, but fled to the shelter of the town. The Spaniards followed, but found that the task before them was not an easy one. The single approach was steep and dangerous, the commanding position of the town on the summit of a rocky mesa, giving its defenders an immense advantage. The assailants, as they attempted to carry it by storm, were received with showers of stones, one of which struck Coronado himself to the ground, where he would have been killed had not Hernando de Alvarado and Lopez de Cardenas thrown themselves before him and protected him from the showers of missiles with their own bodies. Nevertheless, his followers pressed on, and "as it is impossible to resist the furious attacks of Spaniards," says Castañeda, in less than an hour the city was captured, and the Europeans marched in triumph through the streets of the first Pueblo town that had ever felt their tread. The conquerors were rejoiced to find a plentiful supply of provisions, of which they were sorely feeling the need; and, after a short period of rest, Coronado succeeded in reducing the entire province to subjection.

Meanwhile the army which had been left at Culiacan, under the command of Arellano, had slowly proceeded on its march, traveling on foot and with considerable difficulty. They passed through the town which Cabeza de Vaca had called "Corazones," where the commander was so much pleased that he concluded to colonize the country. From here they tried to obtain news of the ships which were to have accompanied them to the head of the gulf, but could learn nothing, and so they stopped at the new town, which was called Sonora, awaiting news and orders from Coronado. These came in the middle of October, by the hands of Melchior Diaz and Juan Gallégos, and the main army immediately set out for Cibola.

#### REPORTS SENT TO MEXICO.

Gallégos proceeded to Mexico to carry an account of the expedition as far as it had progressed; and he took with him Friar Marcos, who had been obliged to fly from the army at Cibola on account of the indignation of the troops at the exaggerations and falsities of which it had now been proved he had been guilty, in the relation of his former journey. Arellano and a considerable number of soldiers who were sick, or had not the strength requisite for the hardships of the coming journey, remained at Sonora. The main body marched over the same route taken by Coronado, and were hospitably received by the Indians along the road, who had been well treated by the General. They reached the desert at Chichilticale without notable adventure, except that many were seized with a violent disease from eating preserved Indian figs, given to them by the natives. When almost across the desert, and

within a day's march of Cibola, they encountered a violent storm, followed by a very severe and deep snow. The Spaniards resisted the cold without difficulty, but the Indians who accompanied them suffered very severely, as they came from the warm country to the south, and had never experienced such intensely frigid weather before. Some succumbed to the exposure and perished, while many others were only saved by being carried on the horses while the Spaniards walked. On arriving at Cibola, however, the army found not only a warm welcome from the General and their comrades, but that Coronado, with an unusual degree of care, had provided for them excellent and comfortable quarters in advance.

#### SEARCH FOR OTHER "SEVEN CITIES."

While the whole army, thus reunited, was resting after its desert march, Coronado endeavored to obtain information of the surrounding country. He was soon told of a province called Tusayan, twenty-five leagues distant, where there were seven cities similar to those of Cibola. The inhabitants were said to be very brave, but the Cibolans could give no very exact information concerning them, because there was no intercourse between the two provinces.

Coronado was unwilling to continue his march until this province had been visited, and consequently sent a small detachment under Don Pedro de Tobar, in whose bravery and address he had special confidence, to reconnoiter, and, if practicable, take possession of the country. With them was sent, as an adviser, half spiritual and half military, Friar Juan de Padilla, a Franciscan monk who had been a soldier in his younger days. The expedition marched so rapidly and secretly that it arrived in the province and up to the very walls of the houses of the first village without being discovered, and encamped after dark in the midst of the unsuspecting population.

At dawn the Indians were astonished to see the strangers at their doors, and especially amazed at the sight of the horses, the like of which they had never seen before. An alarm was sounded, and the warriors quickly assembled with bows and clubs to drive away the invaders. The Spanish interpreter endeavored to explain that they came as friends, but the Indians, while hearing them politely, insisted that the strangers should withdraw, and, drawing a line on the ground, forbade any of the Spaniards to pass beyond it. One soldier rashly ventured to cross, when he was immediately attacked and driven back. At this the friar, who seemed to have been more aggressive even than the Captain, urged a charge, exclaiming in vexation at the delay, "In truth, I do not understand why we have come here!" at which the Spaniards rushed forward and killed a great number of the Indians, while the remainder fled to the houses for protection.

These soon returned in the attitude of suppliants, bringing presents, and offering their own submission and that of the whole province. During the day deputations came from the other towns to confirm their surrender, and to invite the Spaniards to visit them and trade.

In this province, which was then called Tusayan, but which is identical with the modern Moqui, were seven villages, which were governed as were those of Cibola, by a council of aged men, having also governors and captains. They raised large quantities of corn, and had well tanned leather, and among the presents which they brought to Tobar were poultry and turquois.

#### SEARCH FOR COLORADO RIVER.

Having accomplished its object, the expedition returned to Cibola, where Don Pedro gave an account of his adventures to Coronado, and also told him of a great river further to the west, of which he had received information from the people of Tusayan. On this river it was said that a race of giants lived; and so much was told of its extraordinary size and character that Coronado determined to send another expedition to explore it. Accordingly, Don Garcia Lopez de Cardenas, with twelve horsemen, set forth, proceeding first to Tusayan, where they procured guides and laid in provisions for the desert journey. After traversing an uninhabited country for twenty days, they at length arrived on the banks of the river. This river the discoverers called the Tison, correctly recognizing it as the same of which the mouth had been seen at the head of the Californian Gulf. It is now known as the Colorado of the West; and its Grand Cañon, along which Cardenas thus marched nearly three and a half centuries ago, is one of the most wonderful natural curiosities of the world.

#### FIRST VISIT TO THE "GRAND CAÑON."

They found so deep a cañon that the sides seemed "three or four leagues in the air." It was impossible to descend the rugged and almost perpendicular banks to the water, so the party marched along the side for three days, hoping to find a safe place at which to make a descent.

The river was so far below that it appeared but an arm's length in width, but the Indians assured the Spaniards that it was fully one-half a league across. At length they arrived at a point that seemed more favorable for an attempt to descend, and Captain Melgosa, Juan Galeres, and one other soldier, who were the lightest and most active of the company, volunteered to make the experiment; but toward night-fall they returned, torn and exhausted, reporting that they had only been able to accomplish a third of the distance. They said that even from there the river assumed large proportions, and that some of the rocks, which from the surface appeared scarcely as high as a man, were in reality taller than the tower of

the Cathedral of Seville. The expedition proceeded somewhat further along the river until it reached some great falls, but was finally compelled to return for want of water.

PUEBLO OF ACOMA, IN 1540.

Proceeding easterly, after a five days' march, Hernando de Alvarado, with twenty men, arrived at Acuco—the present Pueblo of Acoma—a town built on the summit of a great rock, with sides so perpendicular that ascent was impossible except at one place, and there only by the use of artificial steps. The situation was practically impregnable; for after ascending 200 steps it was necessary to climb 100 more that were far more difficult, and then a perpendicular ascent of twelve feet remained to be accomplished, which could only be done by the use of holes made in the face of the rock. On the summit was heaped a quantity of great stones, to be rolled down on the heads of any enemies attempting to scale the height, while those above were entirely protected from danger. The flat crown of the rock contained enough good soil for the cultivation of large quantities of corn, and wells sunk in the solid stone supplied the town with water. Acuco boasted of about 200 warriors, and from their fearlessness, and the security of its position, was the terror of the surrounding country.

On the approach of the little band of Spaniards, the Indians came down boldly into the plain, and haughtily forbade them to proceed further; but finding that Alvarado displayed no fear, but was preparing his company to make an attack, they suddenly changed their tone and sued for peace and amity, which were readily accorded. They soon afterwards presented the Spaniards with a great quantity of poultry, together with bread, corn, piñons, etc., which were very acceptable. Alvarado, however, did not delay, but pressed on his journey, arriving in three days at a province called Tiguex, the inhabitants of which, on seeing Bigotes, who was highly esteemed in all that country, received the Spaniards with great hospitality. The precise location of Tiguex cannot be determined at this time; but from the distance to various surrounding points, such as Jemez, Cicuyé, etc., it is evident that the province lay along the valley of the Puerco River, embracing probably the territory on both sides, and especially to the east. It included twelve villages in all, and its principal towns were probably about west from Bernalillo. Alvarado was so much charmed with the appearance of the country and the kindness of his reception that he sent an envoy to Coronado at Cibola, recommending that he should bring the whole army to winter there.

Without waiting for a response the little expedition continued its march, and at the end of five days arrived at Cicuyé, the city of "Bigotes," which was found to be built of houses four stories in height, and strongly fortified.

Here they were received with special demonstrations of joy and welcome, escorted into town to the music of drums and fifes, and presented with many cotton goods and turquoises. Cicuyé was situated on the Jemez River, and probably at or near the present pueblo of Santa Ana, as it was about four leagues distant from Cia.

DESCRIPTION OF PUEBLO TOWNS.

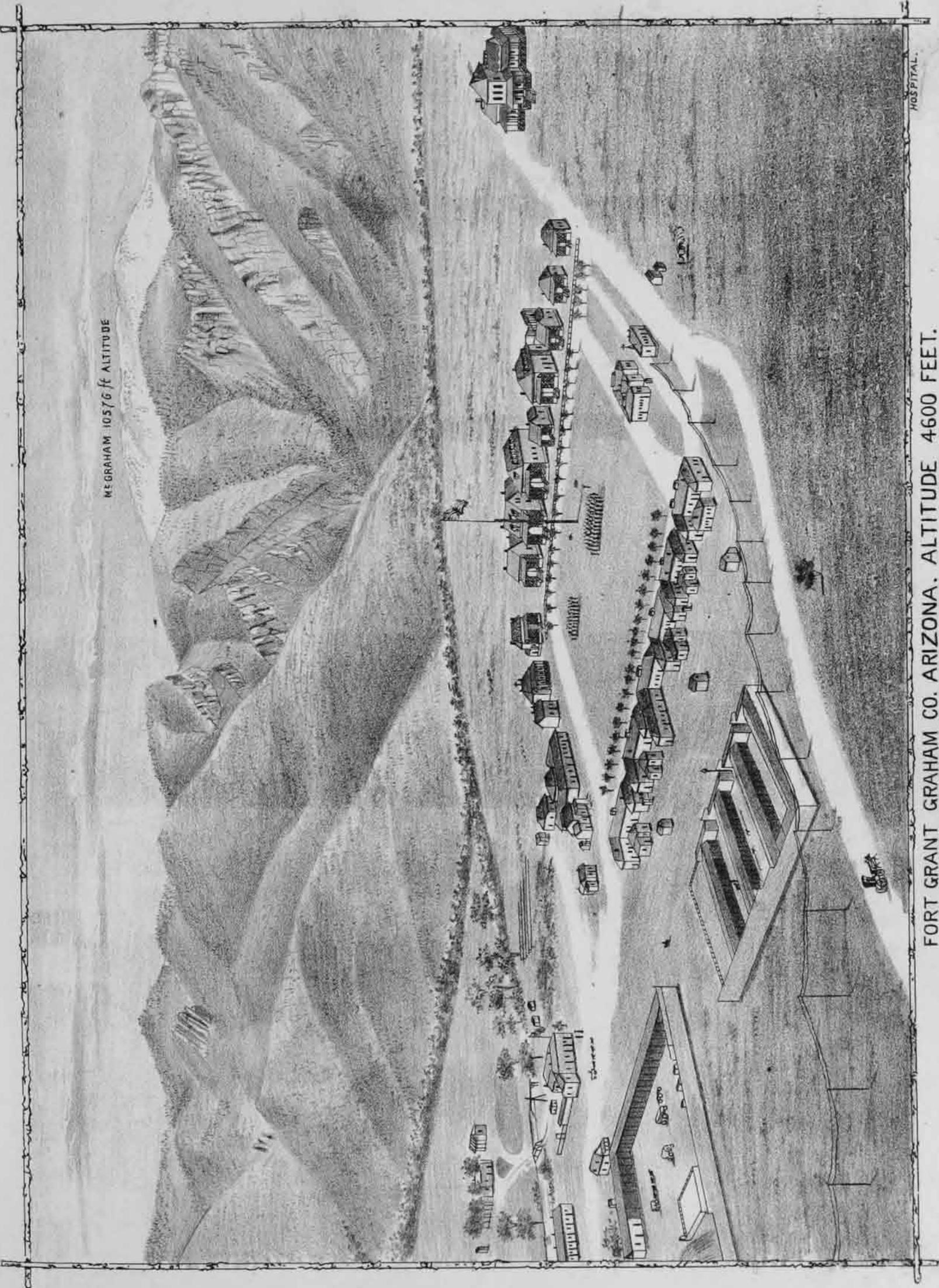
Castañeda, speaking of the towns, says: "The houses are built in common. The women mix the mortar and build the walls. The men bring the wood and construct the frames. They have no lime, but they make a mixture of ashes, earth, and charcoal, which takes its place very well; for although they build their houses four stories high, the walls are not more than three feet thick. The young men who are not yet married serve the public in general. They go after firewood, and pile it up in the court or plaza, where the women go to get it for the use of their houses. They live in the estufas, which are under-ground in the plazas of the villages, and of which some are square and some are round. The roofs are supported by pillars made of the trunks of pine trees. I have seen some with twelve pillars, each of twelve feet in circumference, but usually they have only four pillars.

"They are paved with large, polished stones, like the baths of Europe. In the center is a fire-place, with a fire burning therein, on which they throw, from time to time, a handful of sage, which suffices to keep up the heat, so that one is kept as if in a bath. The roof is on a level with the ground. Some of these estufas are as large as a tennis-court. When a young man marries, it is by order of the aged men who govern. He has to spin and weave a mantle; they then bring the young girl to him, he covers her shoulders with it, and she becomes his wife.

"The houses belong to the women, and the estufas to the men. The women are forbidden to sleep in them, or even to enter, except to bring food to their husbands or sons. The men spin and weave; the women take care of the children and cook the food. The soil is so fertile that it does not need to be worked when they sow; the snow, falling, covers the seed, and the corn starts underneath.

"The harvest of one year is sufficient for seven. When they begin to sow, the fields are still covered with corn that has not yet been gathered. Their villages are very neat; the houses are well distributed, and kept in good order; one room is devoted to cooking, and another to grinding grain. The latter is apart, and contains a fire-place, and three stones set in masonry; three women sit down before the stones; the first breaks the grain, the second crushes it, and the third grinds it entirely to powder. In all the province glazed pottery abounded, and the vases were of really curious form and workmanship."

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CRYSTAL FALLS ON GRAHAM CREEK. IN THE DISTANCE.

The buildings at Cicuyé were described as follows: "The town is built in a square, around a plaza in the center, in which were the estufas. The houses are four stories high, the roofs arranged in terraces, all of the same height, so that the people could make a tour of the whole town without having to cross a single street. To the first two stories there is a corridor in the form of a balcony, which also passes completely around the town, and under which was a pleasant place to sit in the shade. The houses have no doors below, but were entered by movable ladders which reached to the balconies on the inside of the square."

#### SEARCH FOR A WONDERFUL COUNTRY.

The greater part of the forces soon returned to Mexico, while the others, under their commander, wandered, for nearly two years longer, through the interior of the continent, in search of a country called *Quivira*, said by the Indians to be situated far in the north, and to be governed by "a king named Tatarax, with a long beard, hoary-headed, and rich, who worshiped a cross of gold, and the image of the Queen of Heaven." This country they found near the 40th degree of latitude; but the people had no other wealth than skins; and their king, though hoary-headed, possessed no jewels, "save one of copper, hanging about his neck." *Quivira* is described as a level territory, covered with herds of buffaloes, which form the whole support of the inhabitants; and, if its latitude has been correctly reported, it is most probably the region about the head-waters of the Arkansas and Platte Rivers, though Gomara places it near the sea, and says that the Spaniards saw ships on the coast laden with East India goods. Vazquez had, probably, before leaving *Quivira*, learned the true value of Indian accounts of rich countries; and, not deeming it advisable to pursue the search for them any longer, he returned to Mexico, in 1543.

#### ROUTE THROUGH ARIZONA.

They turned their faces southward, passed through central Arizona, were the first white men to see the ruins of Casa Grande and the Pima settlements on the Gila *Quivira*. They found ruins of large stone buildings, which were found in their present state by the first Spanish settlers, and are called *casas grandes de los Azteques* (great houses of the Aztecs), from the supposition or tradition that they were built by that people before their invasion of Mexico. Vazquez de Coronada, indeed, remarks that the inhabitants of Cibola, though not wanting in intelligence, did not appear to be capable of erecting the houses which he saw there.

It is evident Coronado entered Arizona by the valley of the Santa Cruz, and passed by where Tucson now stands. He visited and examined the ruins of Chichitala, which he named Casa Grande, followed the Salado to its junction

with the Verde, up the latter stream to the Valley de Chino, and thence across to the San Francisco mountain country. From there he passed into the valley of the Colorado Chiquito, and finding large quantities of wild flax growing on its banks, he named the stream "Rio del Lino." From that point three days' march brought him to the first of the Moquis villages, forty-five days after starting from Culiacan.

#### ROMANCE OF EARLY EXPEDITIONS.

"The explorer of those days," says Prince, "was traveling entirely in the dark. Nothing in more modern times has been similar to, or can again resemble the uncertainty and romance of those early expeditions, for the recent explorers of Africa, for example, had a perfect knowledge of the shape of the exterior of the continent, and knew exactly what tribes lived on each shore, and what rivers emptied into each ocean. All that was left as a *terra incognita* was a certain area in the center, and that of known length and breadth. But the early explorers of America literally knew nothing of the land they entered. It was absolutely virgin soil. They might find impassable mountains or enormous lakes; they might have to traverse almost interminable deserts, or discover rivers whose width would forbid their crossing; they might chance upon gigantic volcanoes, or find themselves on the shore of the ultimate ocean. And as to inhabitants and products they were equally ignorant.

We are sometimes induced to smile at the marvelous stories related by some of the older explorers, at their still more extravagant expectations, and the credulity with which everything (however exaggerated or unnatural) relating to the new continent was believed. But we must remember that it was a day of real marvels, and that nothing could well be imagined more extraordinary and unexpected than those things which had already been discovered as realities. An entire new world had been opened to the enterprise, the curiosity, the cupidity, and the benevolence of mankind. It is as if to-day a ready mode of access to the moon were discovered, and the first adventurers to the lunar regions had returned laden with diamonds, and bearing tidings of riches and wonders far beyond the wildest imagination of former generations. Just so the early explorers had returned to the Eastward, telling of the marvels of the new Indies, of the luxuriant vegetation, the vast extent, the untold riches, the silver and the gold of the western continent. As one adventurous explorer followed another, new discoveries were constantly made, each apparently exceeding its predecessor in importance, in riches, and in glory. Amerigo Vespucci landed on the mainland of the south, and the Cabots and Verazano skirted the shores of the northern parts of the continent. Then Cortez discovered and conquered the

great empire of the Montezumas, and Pizarro subdued the rich dominion of the Incas. The wealth of these two fallen kingdoms was a marvel, as the accumulated treasures of generations fell into the hands of the conquerors as it were in a moment.

After such discoveries what might not be expected? When the realities already known so far surpassed all former extravagance of imagination, why might not the future bring forth things even more surprising? Why might not kingdoms be found as far transcending Mexico and Peru as those kingdoms exceeded the barbarism and poverty of the savage inhabitants of some of the first-discovered islands? There was nothing impossible in this, nor illogical in the anticipation; and this should be borne in mind in reading of the later expeditions into the interior of the continent, of the readiness with which stories of marvelous riches and stores of gold and precious stones were credited, and of the eagerness with which men braved danger and hardship in the venturesome expeditions of that day.

And another element is not to be overlooked, and that is the religious one. In many hearts this was a strong, impelling principle. Here were unknown heathen nations to be brought to the knowledge of the faith; here were untold thousands of souls to be saved.

1542.—During the remainder of the sixteenth century there were four attempts made to explore the northern Pacific Coast by the Spaniards, only one of which was of importance. It occurred in 1542, under the command of Juan Rodriguez Cabrillo, who reached, in latitude 44°, March 10, 1543, *the coast of Oregon*, and then returned. He discovered Cape Mendocino, and named it after his friend Mendoza, the viceroy of Mexico. He also named the Farallone Islands, opposite San Francisco Bay.

Spain, however, in the New World did not have everything her own way in the sixteenth century. Her great ambition was to control the western route to the East Indies, that her ships, laden with silks, costly gems, and rare fabrics from that country, might pass undisturbed into her home ports. But the student of history reads of combats and strife between the Spaniards on the one side, and the Dutch fleets and English freebooters on the other, as they searched the high seas in quest of Spanish treasure ships.

#### BOLD AND RECKLESS ADVENTURER.

1578.—There was one, bolder and more reckless, more ambitious and successful than the others, who won the reputation of being the "King of the Sea." In 1578 he passed into the Pacific, around Cape Horn, and scattered terror and devastation among the Spanish shipping along the coast. He captured the East India galleon, that was on her way home loaded with wealth; levied contributions

in the ports of Mexico; and, finally, with his war vessels freighted with captured treasures, sailed north to search for the fabled Straits of Anian, through which he proposed passing home to England, and thus avoid a combat with the fleets of Spain, that lay in wait for him off the Straits of Magellan. His name was Captain Francis Drake; but afterwards the English monarch knighted him for becoming the most successful robber on the high seas, and now the historian records the name as Sir Francis Drake.

#### FIRST INLAND TRAVELER ALONG THE COAST.

When near the mouth of Umpqua River, in Oregon, Francis Drake put his Spanish pilot, Morera, ashore, and left him to find his way back, 3,500 miles, through an unknown country thickly settled with savages, to his home in Mexico. This feat must have been accomplished, as the only account of the fact comes through Spanish records, showing he survived the expedition and told the result. Thus was accomplished the first inland travel or exploration of the coast from north to south. It would have been interesting to have read his journal of the condition of things more than 300 years ago, and of the various incidents of his long journey.

#### VERY COLD WEATHER.

1579.—On the 17th of June, 1579, Drake entered what the historian of the expedition called a "faire, good bay, within thirty-eight degrees of latitude of the line. That exactly corresponds with what is now known as Drake's Bay, behind Point Reyes. There, although it was in the month of June, his men "complained grievously of the nipping cold." Drake having given up the perilous north-eastern passage by way of the fabulous Straits of Anian, sailed away for England by way of the Philippine Islands and the Cape of Good Hope. It is probable that while off the northwest coast, Drake saw the snowy crest of Mount Shasta and some of the Oregon peaks, and concluded that he had got near enough to the North Pole. At any rate, it is clear enough that he never passed through the Golden Gate, or rested on the magnificent waters of San Francisco Bay.

The Reverend Fletcher, chaplain of Drake's expedition, must have been a terrible old story-teller. He says that when off the coast of Oregon, in the month of June, "The rigging of the ship was frozen stiff, and the meat froze as it was taken off the fire." Moreover, saith the same veracious parson, "There is no part of earth here to be taken up, wherein there is not a reasonable quantity of gold and silver." These arctic regions and golden treasures were found along the ocean shore between San Francisco and Portland.

1581.—After Coronado no further attempts were made at discovery until 1581, when Augustine Ruiz, a Franciscan

friar, determined to penetrate a section not before visited and carry a knowledge of Christianity. Two other Franciscans accompanied him and an escort of twelve soldiers. After a march of 500 miles they reached the pueblos of the Rio Grande. Here the soldiers refused to go further, and the missionaries continued on and were all finally killed. Thus ended their mission.

COUNTRY FIRST NAMED "ARIZUMA."

1582.—It was not until 1582 that any further efforts were made to explore the region known to the Spaniards as "Arizuma." In that year Antonio de Espejo led an expedition toward the north. He penetrated to the region of the Rio Grande, traveled up that stream some fifteen days, and named the country Nuevo Mexico. He passed through many pueblos, and, turning westward, visited Zia and Acoma. The former place he speaks of as having a population of 20,000 souls, "and containing eight market-places and better houses, the latter plastered and painted in diverse colors." The Zuni pueblos were next visited and named Cibola. From this point, Espejo traveled westward to the Moquis towns, where he was received most hospitably and presented with baskets of corn and mantles of cotton cloth. Tarrying here but a short time, he again journeyed on, and forty-five leagues southwest of Moqui, on a mountain easily ascended, he discovered rich silver ore. The mines were situated near two rivers, whose banks were lined with great quantities of wild grapes, walnut trees, and flax "like that of Castile."

From Zuni, Espejo retraced his steps to the Rio Grande, and, crossing over to the Rio Pecos, descended that stream to its mouth and then returned to Mexico, where he arrived in 1583.

A century elapsed after these explorations before any effort was made to establish a permanent settlement in "Arizuma."

CONTINUED DISCOVERIES ON THE COAST.

On the line between Washington Territory and the British Possessions is an indenture from the sea, running inland over one hundred miles, from where it sweeps around to the northwest for about 250 miles, and cuts off from the continent a large tract of country, known as Vancouver Island. This indenture is known as the Strait of Juan de Fuca, having been so called because a Greek by that name claimed to have discovered it while sailing in 1592, under Spanish colors and authority. A reasonable doubt existed in his time as to the truth of his claim, but after events have served to partially dispel it.

The incentive that prompted all nations to discoveries and occupation along the Pacific Coast is forcibly and plainly given by King Philip III., of Spain, in a message to his viceroy in Mexico, which states the reason why he

issues an order for the further exploration of the coast and its occupation. The document was dated August 16, 1606, and sets forth that

"Don Pedro de Acunna, Knight of the Order of St. John, my governor and captain-general of the Philippine Islands and president of my royal audience there. You are hereby given to understand that Don Louis de Valasco, my late viceroy in New Spain, in regard to the great distance between the port of Acapulco and those islands, the fatigue, hardships, and danger of that voyage, for want of a port where ships might put in and provide themselves with water, wood, masts, and other things of absolute necessity, determined to make a discovery, and draughts, with observation of harbors along the coast, from New Spain to these islands."

EARLY ACCOUNT OF THE NATIVES.

The communication goes on to give the successive events in the prosecution of the enterprise until after the return of Viscaino's expedition in 1603, and then adds, speaking of the Indians found upon our coast:—

"That their clothing is of the skins of sea-wolves, which they have a very good method of tanning and preparing, and that they have abundance of flax, hemp and cotton, and that the said Sebastian Viscaino carefully informed himself of these Indians and many others whom he discovered along the coast for above 800 leagues, and they all told him that up the country there were large towns, silver, and gold, whence he is inclined to believe that great riches may be discovered, especially as in some parts of the land veins of metal are to be found."

Thus the Spanish crown gives reasons for wishing to occupy the country, and it must be borne in mind that these inducements were equally strong with other powers that were hostile to Spain. Venegas, in his effort to justify the Jesuits, gives the additional reasons not mentioned by the king why Spain and England, those powerful rivals, should each desire to possess it. He writes:—

"That in the meantime the English should find out the so much desired passage to the South Sea, by the north of America and above California, which passage is not universally denied, and one day may be found; that they may fortify themselves on both sides of this passage, and thus extend the English dominion from the north to the south of America, so as to border on our possessions. Should English colonies and garrisons be established along the coast of America on the South Sea, beyond Cape Mendocino, or, lower down, on California itself, England would then, without control, reign mistress of the sea and its commerce, and be able to threaten by land and sea the territories of Spain; invade them on occasion from the E., W., N., and S., hem them in, and press them on all sides."

## REMAINED AN UNKNOWN LAND.

With all these causes at work to spur forward the different maritime nations of the world—with all these visions of things imagined, that lay covered up in the land unknown, working upon the fancy, it could do naught else than dot the high seas with adventurers and fleets of empires. Yet *one hundred and sixty-three years passed* after the discovery before a permanent settlement was made in any part of this fabulous land, that held secreted for the coming generation, within its limits, the realization of all their wildest hopes.

## SEBASTIAN VISCIANO'S EXPEDITION.

1602.—There remains the record of but one Spanish navigator who passed up along the coast of California during the seventeenth century. His name was Sebastian Viscaino, who sailed from Acapulco May 5, 1602. Passing north along the coast of Lower California, he discovered the harbors of San Diego and Monterey, the latter being named by him in memory of his friend, the viceroy of Mexico. At this point he sent back his sick, then moved on up the coast, leaving Monterey harbor to slumber for 163 years, disturbed only by the winds and the *balsas* of the natives. His course was close in along the shore, searching for harbors, where a station to supply the East India galleons might be established. Reaching a point a few miles below the bay that we now know as San Francisco, his evil genius sent him out to sea, where he continued north, keeping the land in sight, and thus passed that port.

Coming opposite to what is now called Drake's Bay, behind Point Reyes, where that famous sea king spent those thirty-six days when he landed and took possession of the country for England, he changed his course and put into shore in search of the cargo of a vessel called the *San Augustine*, that had been wrecked there in 1595. The learned historian, Juan de Torquemada, writing in 1615, says:—

"He anchored behind a point of rocks called 'La Punta de los Reyes,' in the port San Francisco."

## RETURN OF THE VESSEL.

He continued his voyage towards the north, keeping the land in view, until he had sighted Cape Mendocino, when a council of his associates was called to decide what was best to do under the circumstances. But six able-bodied men were left on the vessel; had there been fourteen it was the general's intention to push north to latitude 46 degrees, near where the Columbia River has since been found to empty into the Pacific Ocean. From all that could be learned, he believed that near this were the Straits of Anian, that were supposed to separate Asia from America,

and connect the Atlantic with the Pacific Ocean, through which he proposed to sail for Spain.

## SUFFERINGS OF THE EARLY EXPLORERS.

The condition of that crew is beyond the power of pen to describe; the following from that of Torquemada, who was writing of them, will give some idea of what the navigator of those early times had to contend with, having no means of preserving on shipboard, for long voyages, vegetables for food, to ward off this horrible disease. After describing the progress of the disorder, he continues as follows:—

"Nor is the least ease to be expected from change of place, as the slightest motion is attended with such severe pains that they must be very fond of life who would not willingly lay it down on the first appearance of so terrible a distemper. This virulent humor makes such ravages in the body that it is entirely covered with ulcers, and the poor patients are unable to bear the least pressure; even the very clothes laid on them deprive them of life. Thus they lie groaning and incapable of any relief, for the greatest assistance possible to be given them, if I may be allowed the expression, is not to touch them, nor even the bed-clothes.

"These effects, however melancholy, are not the only ones produced by this pestilential humor. In many, the gums, both of the upper and lower jaws, are pressed both within and without to such a degree that the teeth cannot touch one another, and withal so loose and bare that they shake with the least motion of the head, and some of the patients spit their teeth out with their saliva.

"Thus the sick were unable to receive any food but liquid, as gruel, broth, milk of almonds, and the like. This gradually brought on so great a weakness that they died while talking to their friends. . . . Some, by way of ease, made loud complaints, others lamented their sins with the deepest contrition, some died talking, some sleeping, some eating, some while sitting up in their beds."

## OBSTACLES TO EARLY EXPLORATIONS.

We must pass, without further notice, the details of this celebrated voyage, except to note that it returned to Mexico in March, 1603. Much of what has been given here of the hardships attending it has been for the purpose of impressing upon the reader's mind a knowledge of some obstacles guarding the approach of our coast, which, combined with her rocky shore and uncultivated soil, placed at the threshold against invasion a more formidable and dreaded defense than the fabled winged serpent was which guarded approaches to India.

## OPERATIONS OF MISSIONARIES.

Establishment of First Missions; Cordial Reception by Indians; First Church Erected; Prosperity of Missions; Expulsion of the Missionaries; Ruins of Churches; Present Condition, Etc.

### ATTEMPT TO SETTLE ON THE COAST.

IN 1606 the king issued an order for the establishment, at Monterey, of a supply station for the East Indies, but it was never executed, and nothing further towards settlement was attempted until 1683, when Admiral Otondo headed an expedition, by water, to take possession of the country. He landed at La Paz, erected a church, and made that his headquarters. Father Kino was in charge of the religious part of the enterprise, and set about learning the Indian language, and soon translated into their tongue the creeds of the Catholic Church. The effort lasted about three years, during which time they were visited with an eighteen months' drought, and before they had recovered from the blow, received orders to put to sea, and bring into Acapulco safely the Spanish galleon, then in danger of capture by the Dutch privateers that were lying in wait for her. This was successfully accomplished; the treasure ship was conveyed safely in, but the act resulted in the abandonment again of the occupation of California.

The society of Jesuits was then solicited by the Government of Spain to undertake the conquest, and was offered \$40,000 yearly from the royal treasury to aid them in the enterprise, but declined the undertaking. Spain was then forced to abandon the attempt to occupy the country, though it was believed to be the rival of the legendary El Dorado, and a key to the defenses of her possessions already obtained in the New World.

For one hundred and forty-seven years after Cortez had first established a colony on the coast, the treasure of private citizens and the Government of Spain had been poured out in unsuccessful attempts to hold the country by explorations and colonies; but the time had at last come when they were forced to yield possession to its native tribes, and acknowledge defeat.

### OCCUPATION BY THE JESUITS.

A professor in Ingolstadt College made a vow, while lying at the point of death, to his patron saint, Francis Xavier, that if he should recover, he would, in the remaining years of his life, follow the example set in the life-time of that patron. He did recover, resigned his professorship,

and crossed the sea to Mexico, and eventually became the one who, as a missionary, accompanied that last expedition. He was a German by birth, and his name in his native land was Kuhn, but the Spaniards have recorded it as Father Eusebio Francisco Kino.

Father Kino had become strongly impressed in his visit to the country with the feasibility of a plan by which the land might be taken possession of and held. His object was not the conquest of a kingdom, but the conversion of its inhabitants, and the saving of souls. His plan



MISSION CHURCH OF SAN XAVIER DEL BAC.

was to go into the country and teach the Indians the principles of the Catholic faith, educate them to support themselves by tilling the soil, and improvement through the experience of the advantages to be obtained by industry; the end of all being to raise up a Catholic province for the Spanish crown, and people paradise with the souls of converted heathen. The means to be employed in accomplishing this were the priests of the order of Jesuits, protected by a small garrison of soldiers, both sustained by contributions from those friendly to the enterprise. The mode of applying the means was to first occupy some favorable place in the country, where, protected by a small garrison, a storehouse and a church could be erected that

would render the fathers' maintenance and life comparatively secure. This would give them an opportunity to win the confidence of the Indians, by a patient, long-continued, uniform system of affectionate intercourse and just dealing, and then use their *appetites* as the means by which to convert their souls.

#### FIRST MISSIONARY PLAN.

It is difficult for us of the nineteenth century to appreciate the grand conception, to realize the magnitude of the task undertaken by that monastic Hercules. With a heart that loved humanity because it had a soul, with a charity that forgave all things except a death in sin, infolding with affection all the images of the Creator, with a tongue that made the hearer listen for the voice of angels, with a faith in success like one of the chosen twelve, he became an enthusiast, and was to California what John the Baptist was to Christianity, the forerunner of a change to come. And the end is not yet—it will never be, for eternity will swallow it up.

Spain had spent vast treasures, in that century and a half of unsuccessful effort, to survey and occupy the upper Pacific Coast. The first colony, established in 1536, by Cortez, had cost \$400,000; the last, by Otondo, in 1683, \$225,400, to which add all the expensive efforts that occurred between those dates, and the total foots among the millions. So vast an outlay, followed by no favorable result, rendered the subject one of annoyance, and clothed with contempt any that were visionary enough to advocate a further prosecution of such an enterprise so repeatedly demonstrated to be but a "delusion and a snare."

#### JESUIT MISSIONARIES ARRIVE.

With such an outlook, uncheering, unfriendly, with no reward to urge to action, except beyond the grave, with a prospect of defeat and a probability of martyrdom as a result, Father Kino started on the 20th of October, 1686, to travel over Mexico, and, by preaching, urge his views and hopes of the enterprise. He soon met on the way a congenial spirit, Father Juan Maria Salva Tierra; and then another, Father Juan Ugarte, added his great executive ability to the cause. Their united efforts resulted in obtaining sufficient funds by subscription. Then they procured a warrant from the king for the order of Jesuits to enter upon the conquest of California, at their own expense, for the benefit of the crown. The order was given February 5, 1697, and it had required eleven years of constant urging to procure it. October 10th, of the same year, Salva Tierra sailed from the coast of Mexico to put in operation Kino's long-cherished scheme of conquest. The expedition consisted of one small vessel and a long-boat, in which were provisions, the necessary ornaments and furniture for fitting up a rude church, and Father

Tierra, accompanied by six soldiers and three Indians. It was an unpretentious army, going forth to conquest, to achieve with the cross what the army, navy, and power of a kingdom combined had failed to do.

#### POSSESSION TAKEN OF THE COUNTRY.

On the 19th of October, 1697, they reached the point selected on the east coast of the peninsula, and, says Venegas:—

"The provisions and animals were landed, together with the baggage; the father, though the head of the expedition, being the first to load his shoulders. The barracks of the little garrison were now built, and a line of circumvallation thrown up. In the center a tent was pitched for a temporary chapel; before it was erected a crucifix, with a garland of flowers. . . . The image of our Lady of Loretto, as patroness of the conquest, was brought in procession from the boat, and placed with proper solemnity."

On the 25th of the same month, formal possession was taken of the country in "his majesty's name," and has never since been abandoned.

#### THE INCORRIGIBLE NATIVES.

Immediately the priest initiated the plan of conversion. He called together the Indians, explained to them the catechism, prayed over the rosary, and then distributed among them a half bushel of boiled corn. The corn was a success—they were very fond of it; but the prayers and catechism were "bad medicine."

They wanted more corn and less prayers, and proceeded to steal it from the sacks. This was stopped by excluding them from the fort, and they were kindly informed that corn would be forthcoming only as a reward for attendance and attention at the devotions. This created immediate hostility, and the natives formed a conspiracy to murder the garrison and have a big corn-eat on the thirty-first day of October, only twelve days after the first landing of the expedition upon the coast. The design was discovered and happily frustrated, when a general league was entered into among several tribes, and a descent was made upon the fort by about five hundred Indians. The priest rushed upon the fortifications and warned them to desist, begging them to go away, telling them that they would be killed if they did not; but his solicitude for their safety was responded to by a number of arrows from the natives, when he came down and the battle began in earnest. The assailants went down like grass before the scythe, as the little garrison opened with their fire-arms in volleys upon the unprotected mass, and they immediately beat a hasty retreat, where at a safe distance they sent in one of their number to beg for peace, who, says Venegas:—

"With tears assured our men that it was those of the neighboring rancheria under him who had first formed the

plot, and on account of the paucity of their numbers, had spirited up the other nations, adding that those being irritated by the death of their companions were for revenging them, but that both the one and the other sincerely repented of their attempt. A little while after came the women with their children, mediating a peace, as is the custom of the country. They sat down weeping at the gate of the camp, with a thousand promises of amendment, and offering to give up their children as hostages for the performance. Father Salva Tierra heard them with his usual mildness, shewing them the wickedness of the procedure, and if their husbands would behave better, promised them peace, an amnesty, and forgetfulness of all that was past; he also distributed among them several little presents, and, to remove any mistrust they might have, he took one of the children in hostage, and thus they returned in high spirits to the rancherias."

Thus the first contest was brought to a termination eminently satisfactory to the colonists. The soldiers' guns had taught the Indians respect, and the sacks of corn allured them back for the priests to teach them the Catholic faith.

#### PLAN OF CONVERTING THE INDIANS.

We quote furthur from Venegas, the Jesuit historian as follows, that the reader may get a correct understanding of the manner in which the fathers treated the aboriginal occupants of the country, and the way they conquered the ignorance, indolence, and viciousness of those tribes:—

"In the morning, after saying mass, at which he (Father Ugarte) obliged them to attend with order and respect, he gave a breakfast of pozoli to those who were to work, set them about building the church and houses for themselves and his Indians, clearing ground for cultivation, making trenches for conveyance of water, holes for planting trees, or digging and preparing the ground for sowing. In the building part, Father Ugarte was master, overseer, carpenter, bricklayer and laborer; for the Indians, though animated by his example, could neither by gifts nor kind speeches be prevailed upon to shake off their innate sloth, and were sure to slacken if they did not see the father work harder than any of them; so he was the first in fetching stones, treading the clay, mixing the sand, cutting, carrying and barking the timber, removing the earth, and fixing materials. He was equally laborious in the other tasks, sometimes felling the trees with his axe, sometimes with his spade in his hand digging up the earth, sometimes with an iron crow splitting rocks, sometimes disposing the water trenches, sometimes leading the beasts and cattle, which he had procured for his mission, to pasture and water, thus, by his own example, teaching the several kinds of labor. The Indians, whose narrow ideas and dullness could not at first enter into the utility of these fatigues,

which at the same time deprived them of their customary freedom of roving among the forests, on a thousand occasions sufficiently tried his patience—coming late, not caring to stir, running away, jeering him, and sometimes even forming combinations and threatening death and destruction; all this was to be borne with unwearied patience, having no other recourse than affability and kindness, sometimes intermixed with gravity to strike respect; also taking care not to tire them, and suit himself to their weakness. In the evening the father led them a second time in their devotions, in which the rosary was prayed over, and the catechism explained; and the service was followed by the distribution of some provisions.

At first they were very troublesome all the time of the sermon, jesting and sneering at what was said. This the father bore with for awhile, and then proceeded to reprove them; but finding that they were not to be kept in order, he made a very dangerous experiment of what could be done by fear. Near him stood an Indian in high reputation for strength, and who, presuming on his advantage, the only quality esteemed by them, took upon himself to be more rude than the others. Father Ugarte, who was a large man, and of uncommon strength, observing the Indian to be in the height of his laughter, and making signs of mockery to the others, seized him by the hair and lifting him up swung him to and fro; at this the others ran away in the utmost terror. They soon returned, one after another, and the father so far succeeded to intimidate them that they behaved more regularly for the future.

In writing of the same priest and his labors in starting a mission in another place, this historian relates:—

#### HARMONIZING THE SAVAGES.

"He endeavored, by little presents and caresses, to gain the affections of his Indians; not so much that they should assist him in the building as that they might take a liking to the catechism, which he explained to them as well as he could, by the help of some Indians of Loretto, while he was perfecting himself in their language. But his kindness was lost on the adults, who, from their invincible sloth, could not be brought to help him in any one thing, though they partook of and used to be very urgent with him for pozoli and other eatables. He was now obliged to have recourse to the assistance of the boys, who, being allured by the father with sweetmeats and presents, accompanied him wherever he would have them; and to habituate these to any work it was necessary to make use of artifice.

"Sometimes he laid a wager with them who should soonest pluck up the mesquites and small trees; sometimes he offered reward to those who took away most earth, and it suffices to say that in forming the bricks he made himself a boy with boys, challenged them to play with the

earth, and dance upon the clay. The father used to take off his sandals and tread it, in which he was followed by the boys, skipping and dancing on the clay, and the father with them. The boys sang, and were highly delighted; the father also sang, and thus they continued dancing and treading the clay in different parts till meal-time. This enabled him to erect his poor dwelling and church, at the dedication of which the other fathers assisted.

"He made use of several other such contrivances in order to learn their language, first teaching the boys several Spanish words, that they might afterward teach him their language. When, by the help of these masters, the interpreters of Loretto, and his own observation and discourse with the adults, he had attained a sufficient knowledge of it, he began to catechise these poor gentiles, using a thousand endearing ways, that they should come to the catechism."

#### FORT ARIZONA MISSIONS.

1687.—The first mission established in Arizona was at Guevavi, some thirty miles south of Tucson, in the year 1687. Francisco Kino and Juan Maria Salva Tierra were the pious pioneers who laid the foundation stone. Although the exact date is not at hand, it is supposed that the missions of Tumacacori and San Xavier del Bac were founded about the same time, or shortly after. According to authentic documents we know the latter existed in 1694, and was then the most northern of the Sonora missions. While establishing these missions, Father Kino and his companion pushed north, and were the first to preach the doctrines of Christianity to the Indians living along the Gila.

1690.—One of the oldest missions established by the Jesuit Fathers was that of St. Gertrude de Tabac, in the Santa Cruz Valley, forty-five miles south of Tucson, the latter part of the sixteenth century. A writer in "Rudo Ensayo," in 1762, says that the Indians on the San Pedro River state that the missions were built previous to 1694. Solorano, a Spanish writer during the reign of Philip III., also mentions these old missions, and gives much information respecting the country, the old pre-historic ruins, etc. In the "Cronica Cerifica" of about the same date, a long account is given of the early explorations, the old missions, and of the Indians then in that region, who were estimated at 75,000.

1695.—An effort was made to establish a mission among them at Casa Grande in 1695, but was frustrated by an uprising of the Indians, who assassinated some of the fathers and compelled the others to flee. No efforts were afterwards made to convert the Gila tribes.

1699.—On the 7th of February, 1699, Father Kino visited the Yumas and Maricopas of the Colorado River, but no permanent missionary establishments were made among them at that time.

#### NUMBER OF MISSIONS IN 1710-1720.

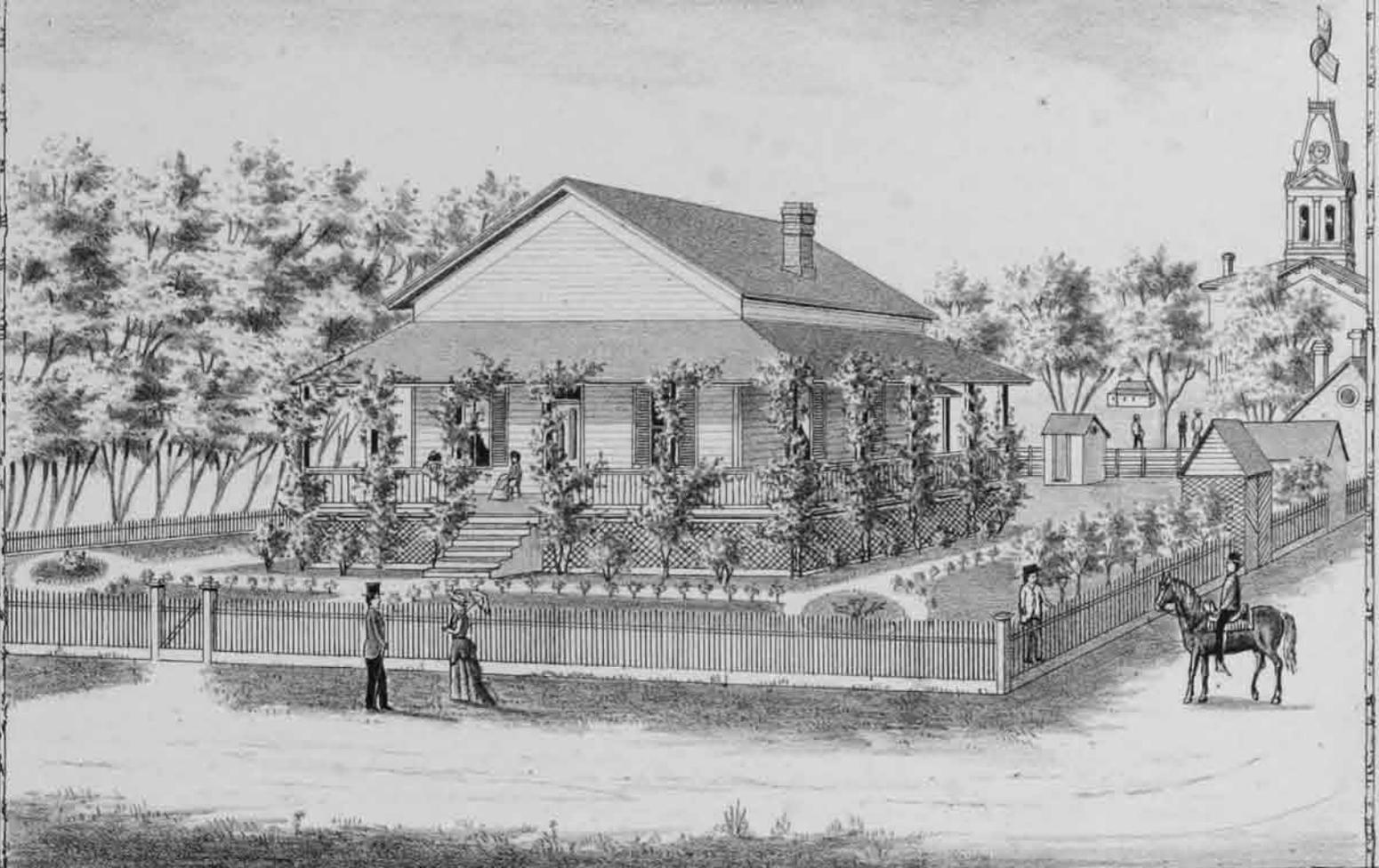
1710.—In 1710 there were eight missions in a flourishing condition within the Territory of Arizona. These were named, respectively, Guevavi, San Xavier del Bac, St. Joseph de Tumacacori, St. Gertrude de Tubac, San Miguel de Sonoita, Calabasas, Arivaca, and Santa Ana. They possessed herds of cattle, sheep, and horses; cultivated a large area of land, which yielded cereals, fruits, and vegetables. Many rich silver mines near the missions were worked extensively, and, with the rude reduction facilities at hand, produced large quantities of the precious metals. This was the most prosperous era in the history of the Arizona missions.

1720.—In 1720 the missions were prosperous and flourishing, and in Sonora, including what is now Arizona, there were twenty-nine missions and seventy-three Christian Indian pueblos, or villages, in charge of the Jesuit Fathers. In what is now Arizona there were known to have been the missions of San Xavier del Bac, St. Gertrude de Tabac, St. Joseph de Tumacacori, San Miguel de Sonoita, Guavavi, Calabasas, Arivaca, and Santa Ana.

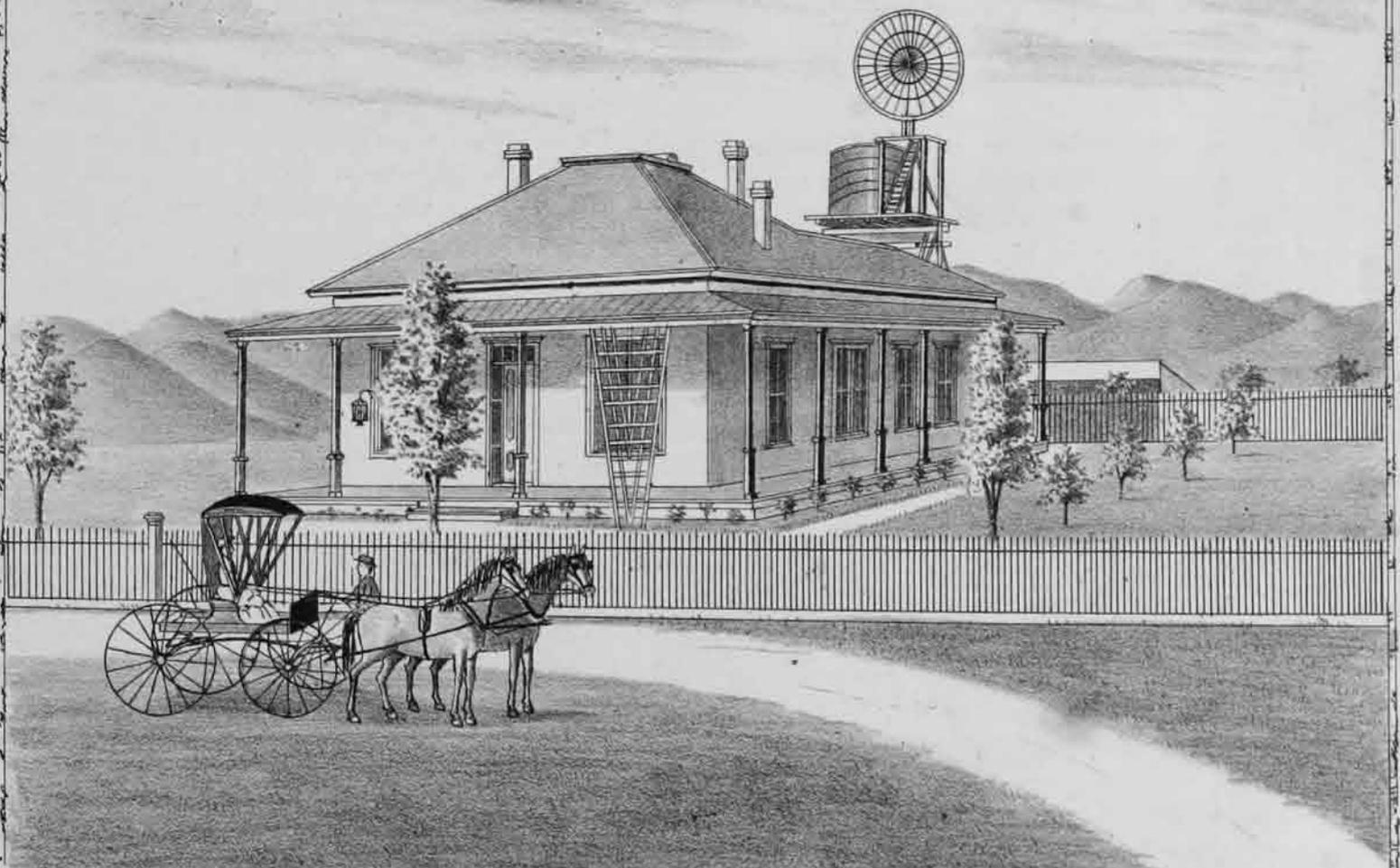
1721.—In 1721 the Indians rose in rebellion, killed a number of the priests, and destroyed many of the missions. From this blow they never entirely recovered. In 1743, Father Ignacio Keller was commissioned to proceed to the Moquis villages and make an attempt to win the inhabitants to the Christian faith. He was thoroughly qualified for the enterprise, having passed several years among the Indians of the Gila. In September he set out, accompanied by several Pimas, as guides. He passed the Gila and the Salt Rivers, and journeyed north into a mountainous country, where he encountered hostile Apaches, who attacked and compelled him to retrace his steps.

1744.—In October, 1744, Father Jacob Sedelmeyer again made an attempt to reach the Moquis. He went no further than the Gila, being dissuaded from the expedition by the Pimas, who assured him that the mountains to the north were infested with fierce Apaches, who would certainly massacre his whole party. So the father had to give up his project, and resign the Moquis to their sun-worshipping idolatry. He explored portions of the Rio Salado and the Verde, and ascended the Gila some distance, but was driven back by the Apaches. He then descended the stream to the Colorado.

1751.—This year there was an outbreak of the Pima and other Indians, who destroyed some of these mission churches, and killed many of the priests in charge. In 1769 the Marquis de Croix, viceroy of Mexico, sent to the Superior of Santa Cruz in Europe, and had fourteen priests sent out to the New World to fill the places of those killed by the Indians in this outbreak.



RESIDENCE OF H.N. ALEXANDER. ESQ. PHOENIX. ARIZONA.



RESIDENCE OF M.W. STEWART. WILCOX. ARIZONA.

## MISSION CHURCH OF SAN AUGUSTINE.

1769.—The mission church of St. Augustine, at Tucson, was founded by one of the priests sent out by request of the Marquis de Croix in 1769, and this old mission church has long been in ruins. The first mission church of San Xavier del Bac was founded at a very old date—now unknown—and on its ruins was commenced, in 1768, the present mission church of that name, the only one of all the old missions now standing. It is a model of architecture, and excites the wonder and admiration of all who visit it; and from its antiquity and surroundings, and the many interesting circumstances connected with it, deserves special mention, to which a subsequent chapter will be devoted. Since 1720 there have been about fifty priests of the Jesuit and Franciscan orders sent into Arizona, of whom more than one-half have been murdered by Indians or died of privation.

## ARREST AND EXPULSION OF THE JESUITS.

1767.—The Jesuits continued their missionary work in Lower California for seventy years. On the second day of April, 1767, all of the order throughout the Spanish dominions, at home and abroad, were arrested by order of Charles III., and thrown into prison, on the charge of conspiring against the State and the life of the king. Nearly six thousand were subjected to that decree, which also directed their expulsion from California, as well as all other colonial dependencies of Spain. The execution of the despotic order was intrusted to Don Gaspar Portala, the Governor of the province. Having assembled the Fathers of Loretto on the eve of the nativity, December 24th, he acquainted them with the heart-breaking news. Whatever may have been the faults of the Jesuits in Europe, they certainly had been models of devoted Christians in the New World. They braved the dangers of hostile savages, exposed themselves to the malarious fevers incident to new countries, and had taken up their residences far from the centers of civilization and thought, so dear to men of cultivated minds, to devote themselves, soul and body, to the salvation of the natives, that all civilized nations seemed bent on exterminating. It is probable that the simple-minded son of the forest understood little of the mysteries of theology; and his change of heart was more a change of habit than the adoption of any saving religious dogma. They abandoned many of their filthy habits, and learned to respect the family ties. They were taught to cultivate the soil, to build comfortable houses, and to cover their nakedness with garments. They had learned to love and revere the fathers, who were ever kind to them.

After seventy years of devoted attention to the savages, after building pleasant homes in the wilderness, and surrounding themselves with loving and devoted friends,

they received the order to depart. They took their leave on the night of February 3, 1768, amidst the outcries and lamentations of the people, who, in spite of the soldiers, who could not keep them back, rushed upon the departing fathers, kissing their hands, and clinging convulsively to them. The leave-taking was brief, but affecting: "Adieu, my dear children! Adieu, land of our adoption! Adieu! It is the will of God!" And then, amid the sobs and lamentations, heard all along the shore, they turned away, reciting the litany of the Blessed Mother of God, and were seen no more.

## FRANCISCAN MISSIONARIES IN ARIZONA.\*

1768.—"In May, 1768, fourteen Franciscan Fathers from the College of Santa Cruz de Queratero, arrived at Guaymas, destined to take the place of the expelled Jesuits in the missions of Pimiera Alta, as Arizona was then called. They found the several establishments in a declining condition; life and energy seemed to have departed with the Jesuits, and where once all was order and industry, slothfulness and confusion now reigned supreme.

"The Apache, until then but little known, made constant raids on the more exposed of the missions, driving off their herds of sheep and cattle. The Franciscans set themselves to work industriously, and in some measure succeeded in bringing back the order and prosperity so long enjoyed by their predecessors.

"It is very probable that the mission of San Augustine in Tucson (now called the old pueblito), was one of the first founded by the Franciscans. The author of the *Rudo Ensayo* says that in 1762 there were at Tucson a sufficient number of Indians to form a good mission, but that the priest of San Xavier could not take charge of them, having more than he could do to attend to his own flock.

"After many failures they at last succeeded in founding two missions on the Gila and Colorado."

1774.—In January, 1774, Captain Juan Bautista Ainsa, in pursuance of orders from the viceroy, undertook to establish communication by land between Sonora and Alta California. He was accompanied by Fathers Garcez, Pedro, and Elrach, who visited the Maricopas, Yumas, and other river tribes, and for nearly two years labored persistently among them. Father Garcez visited the Mohaves and Yavapais, and explored a large portion of Central Arizona, everywhere preaching the doctrines of Christianity among the wondering savages.

## YUMA MISSIONS ESTABLISHED.

1776.—In 1776 Captain Ainsa returned from California, bringing with him from the Colorado, Palma, and other chiefs of the Yuma tribe, praying for the establish-

\* From Hamilton's "Resources of Arizona."

ment of missions among them. In compliance with their request, Father Garcez was selected as the man best fitted for the task, and in 1779 three missions stood on the banks of the Colorado—two on the western and one on the eastern side. One was on the hill opposite the junction of the Gila, where Fort Yuma now stands, and was known as La Concepcion; another was established near Chimney Peak, and was called San Pablo, and the last was opposite the Castle Dome Mountain, and named San Pedro. A presidio was established on the hill of La Concepcion, and a small garrison, for the protection of the missions, maintained therein under the command of Don José Maria Ortega. On the seventeenth day of July, 1781, the Yumas rose against the Spanish authorities, massacred the officers and soldiers of the garrison of La Concepcion, and the priests and civilian employés of all the missions. The women and children were made captives, the buildings destroyed, and thus ended the missions of the Colorado.

#### MISSION CHURCH OF SAN XAVIER DEL BAC.\*

"1768.—The erection of the present mission church of 'San Xavier del Bac' was commenced in 1768, on the site of one of the same name which had gone to decay. It is some ten miles south of Tucson, in the rich and beautiful valley of the Santa Cruz, and near the Papago villages. It was completed in 1798, with the exception of one of the towers, which is yet in an unfinished state. Its dimensions are 115x70 feet. The style of architecture is a commingling of the Moorish and the Byzantine. The outside is castellated, and surrounded by one dome, and two minarets. The foundation walls are of brick with a fine coating of cement. The outside walls are of brick, also cemented. The inside walls are of stone and cement, plastered and stuccoed and the interior has the form of the Latin cross. The church fronts to the south, and the front center is covered with beautiful scroll work, having also the coat of arms of the Franciscan monks, which is a cross, with a rope coil above, and two arms below, one of which represents that of Christ, and is naked, the other one that of St. Francis de Assisi, and is partially clothed, San Francis de Assisi being the patron of the church. A life-sized bust of St. Francis Xavier adorned and surrounded the front, but the head and part of the bust have been broken off by some modern Vandal. The roof is surrounded by a brick balustrade, cemented, and at each angle and corner are griffons worked in cement, forty-eight in all. On the outside of the church to the west is a wide open niche where the Papago Indians were formerly congregated for morning prayers, and adjoining this was the old Indian burial ground and dead chapel. Of late years, for sanitary reasons, the dead are buried farther down the valley. To the

south of the church are the old convent buildings, which of late have been renovated and occupied by four of the Sisters of St. Joseph, who for several years past have lived here teaching a school for the Papago children, and caring for and comforting the sick among the Indians.

#### SKILL IN STRUCTURE OF CHURCH.

"When once inside the church, the beholder is forcibly struck with the display of skill in its structure, its beauty and grandeur, and the taste displayed in its adornment. The inside of the church has the form of the Latin cross, the foot being to the south, and extending thence to the north end, where the main altar is. The walls and ceilings are tastefully decorated and frescoed. The main altar is dedicated to St. Francis Xavier, and one of the central chapels to St. Francis de Assisi. Four large fresco paintings represent the Annunciation, the Visitation of the Virgin to Elizabeth, the Nativity of Christ, and the Visitation of the Magi. The altar work and all the cornices are done in cement, as are also the six arched ceilings overhead, the main one of which is fifty feet high, and the others about thirty feet high. The ceilings were all frescoed, but much of this has been defaced by time, and the elements. The four evangelists, in sculpture, adorn the main altar, and the scroll work is covered with gold leaf which, in its early days, when the frescoes and paintings were fresh and bright, and all the other surroundings new and in perfect harmony, must have presented a beautiful, grand, and gorgeous sight, especially to the half-wild Indians who had never before seen anything of like character.

#### DESCRIPTION OF THE CHAPEL.

"In the lateral chapel of the Virgin, there is a cross of small pieces of ironwood, imbedded in cement, on which there was formerly a sculptured figure of Christ. Within the body of the church there are in all over fifty pieces of sculpture, most of which are grand and beautiful, perfect in form, feature, and position. In two of the angles of the main arch, there are two most beautiful statues, representing angels, which tradition states are portraits of the two daughters of the artist who decorated the church. The main aisle is adorned by two large fresco paintings representing the Last Supper and the Pentecost. The foregoing is but a faint and imperfect description of this old and venerable church, whose wonderful beauty and symmetry of form attracts the attention of all, and creates wonder surprise, and admiration in the bosom of every beholder. East of the altar, a door leads into the vestry, where the valuables of the church are kept.

"In former times there were large quantities of gold and silver ornaments, priests' vestments, and other furniture, which was kept in the vestry, some of which has been lost, stolen, or carried away to other churches, and a portion

\* From Hodges "Arizona As It Is."

yet remains, among which are one full set of priests' vestments, two gold cruets of about six ounces each, a large silver cross, several candlesticks of solid silver, a Douay Bible of date 1692, and a few other minor ornaments. On the door leading to the vestry is the name of its builder, Pedro Bojargues, 1797.

"The masonry work of the church was executed by two brothers named Gauna, who evinced great skill and genius in their work. From the south end of the main aisle, a doorway leads to the west, into the baptismal chapel, and from there a flight of winding stairs, consisting of twenty-seven, twenty-one, and twenty-one steps, leads to the upper floor of the west minaret, or tower. At the rise of twenty-seven steps, a doorway leads to the right into the choir gallery, which is arched and frescoed. A further rise of twenty-one steps leads to the second floor of this tower, where there is a chime of four old and rich sounding bells, one of date 1804, and the three others so old and defaced by time their date is obliterated. From this floor a doorway leads to the roof of the main building, and on going across, the visitor enters the east tower, where but one bell remains of the four formerly there. The date of the one remaining is also obliterated by time, but it carries the mark of some worse than Vandal, who has made of it a rifle target. Returning to the west tower, the visitor rises the last flight of twenty-one steps to the upper floor of the tower, from whence a fine view is obtained of the beautiful valley of the Santa Cruz, of distant mountain chains, of picacho peaks, and many evidences of ancient upheavals and volcanic eruptions. The steps leading to the upper floor, sixty-nine in all, have a rise of ten inches each, making the whole rise fifty-seven and one-half feet.

#### OLD AND VENERABLE CHURCH.

"When it is remembered that this old, venerable, and wonderful church was commenced 116 years since, in a wild Indian country, far from the centers of civilization, we can but admire the great energy, perseverance, and indomitable will of the old Jesuit and Franciscan Fathers who planned, carried out, and so successfully accomplished this great work. It is, says Hodges, the only remaining edifice left in the Territory of the many erected by those of a former century and age, and should be cared for and preserved by legislative enactment, as a memento of the past.

#### ADVENTUROUS PIONEER MISSIONARIES.

"Among adventurous pioneers," says the "Resources of Arizona," "who explored Arizona from 1773 to 1776, mention should be made of Fathers Pedro Font, Francisco Garcia, Sylvestre Escalante, and Francisco Dominguez. These zealous sons of Saint Francis visited and made a thorough examination of the Casa Grande, traversed a large part of central Arizona, penetrated to the Moquis

villages, but it does not appear any attempt was made to found missions there. Escalante's party crossed the Colorado above the Grand Cañon, and reached the Uintah Mountains. He also explored the country as far east and south as Moro, in New Mexico. He published an interesting account of the region through which he passed, and the different tribes he encountered.

"Escalante appears to have been the last of that pious and zealous band who followed in the footsteps of Marco de Niza, and carried the Cross among the savage tribes of Arizona for nearly 250 years. After the destruction of the missions on the Colorado, the depredations of the Apaches became more frequent. They swept down from their mountain strongholds, leaving death and destruction in their track, and keeping the peaceful neophytes in a constant state of alarm. The breaking out of the Mexican War of Independence was a heavy blow to their prosperity. Deprived of the fostering care and protection of the viceregal rule, they languished and declined. The government of the republic did not exhibit a friendly spirit, and in 1827 a decree was published ordering their suppression. Shortly after they were abandoned to the tender mercies of the Apache, and the fruits of 150 years of patient industry, unremitting toil, privation, and self-denial, were given back to the savagery from which they had sprung.

"That the missions of Arizona at one time attained a high degree of prosperity and gathered about them a large Indian population, is shown by their baptismal records, several of which are in a perfect state of preservation to-day. From 1720 until their abandonment in 1827, the missions of Tubac, Tumacacori, San Xavier, and Tucson have had in succession forty-seven priests, many of whom fell martyrs to their faith, and moistened with their blood the seeds of Christian truth planted in the wild regions of 'Arizuma.'"

#### INDIAN MISSIONARY MEETING.

We insert the following, written by Bishop Salponite, of Tucson:—

"Early in the morning the Indians had to go to church for morning prayers and to hear mass. Breakfast followed this exercise. Soon after a peculiar ring of the bell called the workmen. They assembled in front of the church, where they were counted by one of the priests, and assigned to the different places where work was to be done. When the priests were in sufficient numbers they used to superintend the work, laboring themselves; otherwise they employed some trustworthy Mexican to represent them. Towards evening, a little before sundown, the workmen were permitted to go home. On their arrival in the houses, which were located around the plaza, one of the priests, standing in the middle of this plaza, said the evening prayer, in a loud voice, in the language of the tribe. Every

word he pronounced was repeated by some selected Indians who stood between him and the houses, and last, by all the Indians present in the tribe."

An alphabet of the Pima language was prepared, and the converts had made some progress in learning to read and write. They were taught the arts of agriculture, and under the direction of the fathers large tracts were reclaimed and made productive, and many a smiling grain field and fruitful vineyard and orchard flourished where now all is ruin and desolation.

#### ONLY OLD CHURCH REMAINING.

Of all the mission churches built by the Jesuits and Franciscans in Arizona, that of San Xavier del Bac is the only one remaining in a state of preservation. This mission was among the first established in the Territory, but the present building is supposed to date from 1727. When the priests were driven from the missions in 1827 the Papagos took charge of the church, and preserved it from destruction by the Apaches. In 1863, thirty-five years after its abandonment, it was again taken possession of by two members of the order who founded it. These priests were from Los Angeles, California, and accompanied the first Commissioner of Indian Affairs, C. D. Poston, when he visited the Territory.

#### RETURN OF THE PRIESTS.

Great was the joy of the simple Papagos at having the "black gowns" once more among them. The gold and silver vessels of the altar, and all the other valuable ornaments, were brought forth from the secure hiding-places where they had remained undisturbed all these long years; nave, chancel, and altar were gaily decorated; lights flashed from every column, and the voices of the happy Papagos filled the dim aisles and lofty arches of the old church with songs of joy and gladness. Since then religious services are held regularly, and a school has been established by the Sisters of St. Joseph, but the pastor resides in Tucson; and the edifice is left entirely in the charge of the Indians, who take the greatest care of it.

#### RUINS OF ST. JOSEPH'S MISSION.

The ruins of St. Joseph's Mission, Tumacacori, are located on the west side of the Santa Cruz River. There is abundant evidence of long-continued cultivation in the vicinity. The first church building was constructed in 1752. It was destroyed by the Apaches in 1820. The mission buildings, of which sufficient remain to show their character, were of large extent, and yet cover a considerable area. The church itself is partially unroofed, the chancel with its dome still remaining in fair preservation, while the nave is open to the sky and the weather. It is a rather plain structure, built of brick and concrete, or *cojin*, as the Mexicans term it. Apparently it was both smaller and ruder than the

church of San Xavier del Bac. The main structure is about one hundred feet long by forty or fifty wide. The form was that of a plain Greek cross with a basilica. The cross, emblem of the devout hope and sacrificial service which animated the Jesuit Padres, still crowns the latter, and outlines against the marvelous skies and under the shadow of the gray, sear hills, the symbolized passion and power of Christian zeal and endeavor. Two towers remain in fair preservation. On the west side an unroofed chapel remains otherwise almost intact, while on the other the sacristy is quite dilapidated. It has evidently been used both as a stable and granary and the interior of the nave shows the vandal hand of prospectors and travelers.

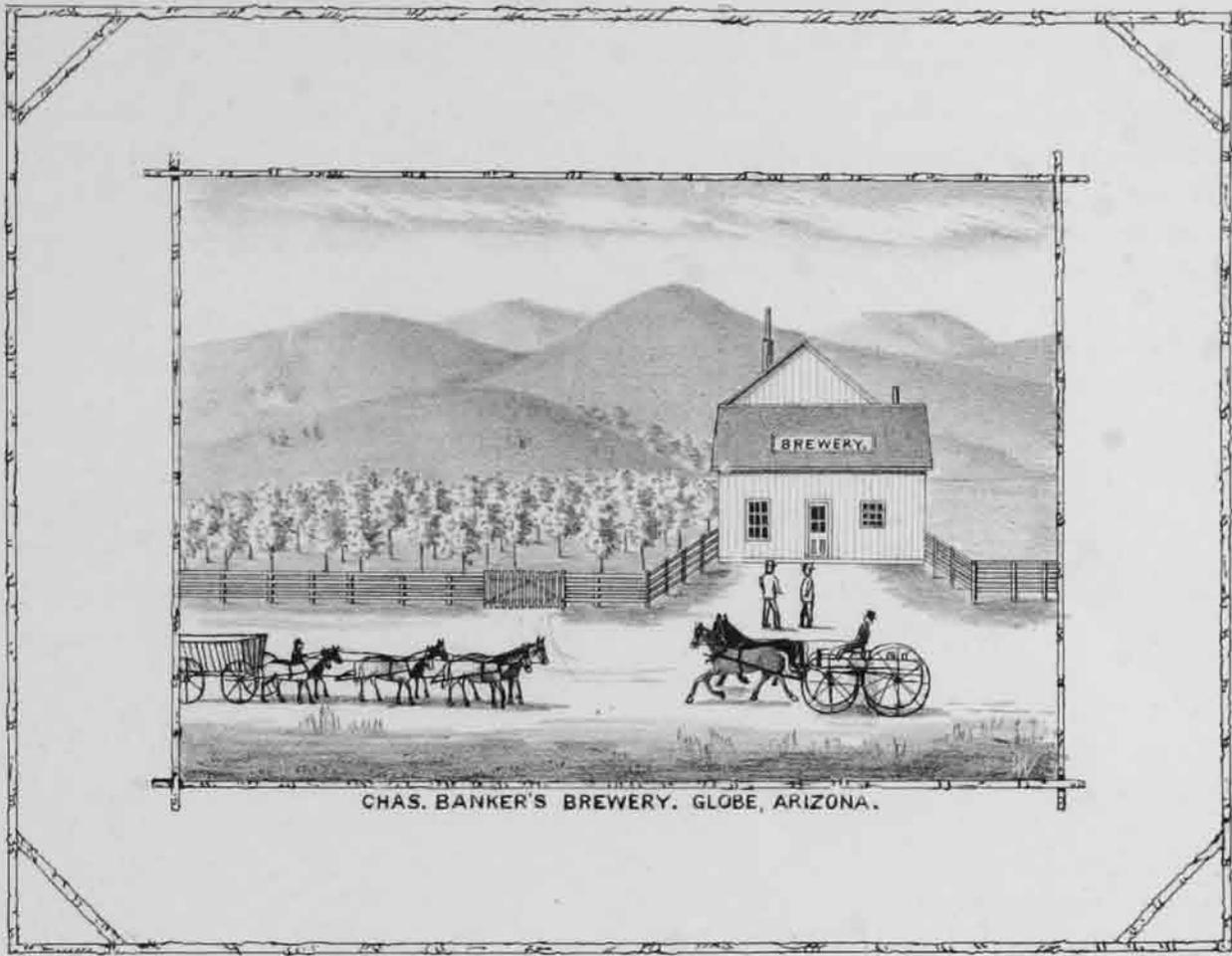
Professor Thomas Davis, Superintendent of the Aztec Syndicate Mines, who spent thirty years in the mineral fields of Mexico and the United States, states that when he first passed down the Santa Cruz Valley, in 1849, the church roof was nearly intact, and much of the interior was in good preservation.

#### PLENTY OF FRUIT.

There were many fruit trees, pomegranates, peaches, etc., bearing profusely; and the walls that once inclosed the home, orchard, and garden were still to be traced by the eye. They are now almost obliterated. The church ruins stand square with the compass, the principal front facing the south.

At the rear end there stands a high wall in good preservation, inclosing a circular mortuary, still perfect. Within this inclosure, formerly the ground for meditation, the wall contains niches, still perfectly defined and evidently once used as shrines. It is notable that the place of sepulcher should be the one best preserved. To the west of the church is a large inclosure, the walls of which are readily traced.

It is evident that this was the work-yard of the mission, as there are the remains of arrastras, rude smelting vassos or furnaces, a few heaps of debris, etc., to show that the good Jesuits were actively engaged in the mining and working of ores. On the east of the church can be traced some buildings which appear to have been the mission residence. Part of the front wall, with gateway, still remains. Beyond this can be followed the lines of a small orchard and field, once inclosed, while in front of the church itself are the remains of another inclosure, in the south-west corner of which there are crumbling adobe walls that marked some large buildings, which, on a hasty examination, suggest out-offices, stables, etc. Judging by the examination made, the church and mission buildings proper, with their immediate appurtenances, would appear to have been inclosed and walled in the form of a cross, of which the east and west were the largest.



CHAS. BANKER'S BREWERY. GLOBE, ARIZONA.



RESIDENCE OF G. A. CHAPEL. OAK STREET. GLOBE, ARIZONA.

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## SPANISH TERRITORIES.

Operations of Fur Traders; First Commercial Relations; Boundless Territory Acquired; Legal Possession; Extent of Purchase; A Good Bargain; An Unknown Region Explored, Etc.

### THE FUR TRADERS.

THESE traders carried on for years an extensive and profitable business, in the course of which they traversed all part of the country about the southern branch of the Columbia, the head-waters of Colorado and into California. It is a lonesome and perilous life, but there was little time to think of danger when the skins of 5,000 beavers, 4,000 martens, 1,000 bears, and as many wolves were collected in a year and carried on pack animals through the long miles of mountain and forest to the newly-established post at Fort Ashley on Utah Lake. The unit of value was then a beaver's skin, while bullets circulated as fractional currency. A bear's skin was worth fifty bullets.



FORT ASHLEY—FUR TRADING POST.

Competition in trapping was concentrated in 1835, under the name of American Fur Company; but the diminishing stock of fur-producing animals, combined with the able and merciless opposition of the Hudson Bay Company, gradually drove this last company from the mountains, and to disorganization. Straggling bands of fur trappers continued in the business for a few years, but their number gradually melted away, until there is now left but a pitiful remnant of those former knights of the frontier.

### FIRST ATTEMPTED COMMERCIAL RELATIONS.

A first attempt to re-establish commercial communications between the United States and the Rocky Mountains, was made by W. H. Ashley, of St. Louis, who had been for some time previous engaged in the fur trade

of the Missouri and Yellowstone countries. He quitted the State of Missouri in the spring of 1828, at the head of a large party of men, with horses carrying merchandise and baggage, and proceeded up the Platte River, to the sources of its northern branch, called the Sweet River, which had not been previously explored.

In 1824, Mr. Ashley made another expedition upon the Platte, and through the cleft in the mountains which has since been generally called the Southern Pass, and then, advancing farther west, he reached a great collection of salt water called the Utah Lake (probably the Timpanogos, or Lake Tegayo, of the old Spanish maps), which lies imbosomed among lofty mountains, between the 40th and 42d parallels of latitude. Near this lake, on the southeast, he found another and smaller one, to which he gave his own name, and there he built a fort, or trading post, in which he left about one hundred men, when he returned to Missouri in the autumn. Two years afterwards a six-pound cannon was drawn from Missouri to this fort, a distance of more than 1,200 miles, and, in 1828, many wagons, heavily laden performed the same journey.

### PRESIDENT JEFFERSON'S POLICY.

President Jefferson, soon after his inauguration, took steps to learn something of the character of the country in the province of Louisiana. In a letter to Mr. Livingston, at Paris, April 18, 1802, Mr. Jefferson said: "There is on the globe one single spot, the possessor of which is our natural and habitual enemy. It is New Orleans—through which the produce of three-eighths of our territory must pass to market." He considered France, under Napoleon, a vastly more dangerous neighbor than Spain.

Mr. Jefferson, in the entire correspondence relating to this purchase, was impressed with the desirability of getting rid of all foreign neighbors of a war-like and territory-trading propensity. He considered that the future of the country rested upon the acquisition of a continental republic from ocean to ocean and from the Lakes to the Gulf. He objected to contiguous neighbors who would, with the signature of a sovereign, make French from Spanish citizens, or *vice versa*, or perhaps begin a war with the United States, claim a nominal victory, cede "conquered territory," and then join with the nation to whom the cession was made for a war to complete title.

### LARGE TERRITORY CLAIMED BY SPAIN.

It is not popularly known that the whole "Pacific Northwest" was included in the "Louisiana Purchase," so called.

Spain, in 1800, was in possession, or claimed ownership, of all the territory south of the United States, now in Florida, Alabama, Mississippi, Louisiana, and the entire

Louisiana Purchase, also the territory embraced in the Texas annexation of 1845, and the Mexican cession by the treaty of Guadalupe Hidalgo.

October 1, 1800, after the alliance, Spain, by the secret treaty of San Ildefonso, ceded the Province of Louisiana back to France with no restrictions as to limits, but with her ancient boundaries as they were when France, in 1762, ceded the province to Spain.

The treaty was kept a close secret for many years. As soon as President Jefferson learned of it, he at once set about obtaining at least a free right of way of the Mississippi. At this time very little was known of the area, resources, or physical characteristics of the great country west of the Mississippi. The whole territory was occupied by roving bands of Indians of the most savage and warlike description. There were a few straggling settlements or trading posts in the Red River country, New Mexico, and on the Pacific Coast. The most dense ignorance prevailed in regard to the territory. These posts were conducted by Spanish, English, Russian, and a few by Americans.

#### FIRST GRANT IN THE NORTHWEST.

In 1712, Antoine de Crozat received a grant from Louis XIV., of the privilege of trading in the country. He was "given the right to dig all sorts of mines, veins, and minerals throughout the whole extent of the country of Louisiana, paying as in lieu a fifth part of the gold and silver which the said sieur Crozat shall transport to France." He was also permitted to search for "precious stones and pearls," and was to pay a fifth part to Louis.

The grant was to be forfeited in case Crozat ceased work for a period of three years. Whether he succeeded as well as his more modern followers or not is not known; but it is presumed he did not, as he surrendered the grant to the crown, and abandoned his colony in 1717. In the same year the grant was made to the Company of the West, afterward the Mississippi Commercial Company, on which was based the well-known John Laws' Mississippi Scheme. This was an utter failure, and ten or fifteen years subsequent the grant was surrendered. That portion of the Province of Louisiana lying east of the Mississippi was ceded by France to Spain, including the city of New Orleans. In 1800, by the treaty of San Ildefonso, the Province of Louisiana was transferred back to France by Spain. That portion lying west of the Mississippi River, including what is now known as Idaho, Montana, Wyoming, Oregon, and Washington, had already been ceded by the king of France to the king of Spain in a letter of delivery to Monsieur L'Abbadie, Director-General.

There was almost constant trouble between the United States and the Spanish authorities during the period from 1795 to 1800.

#### LEGAL POSSESSION OF THE COUNTRY.

October 23, 1803, Congress passed an act to enable the President to take possession of the Territories ceded by France to the United States, and President Jefferson at once proceeded to occupy and take actual possession of the province. But, singular as it may seem, the delivery was not made to the commissioner on the part of France until November 30th of the same year, when it was received from the commissioner on the part of Spain. This was only twenty days prior to its transfer by France to the commissioners on the part of the United States. Anticipating any possible trouble, President Jefferson had the militia from the States of Ohio, Kentucky, and Tennessee congregated at Natchez, but no occasion arose for their services. William C. C. Clairborne was appointed Provisional Governor.

It was not until January 16, 1804, that General James Wilkinson, in command of the United States troops, notified the War Department that he had not "until this day" received the delivery of the possession in Upper Louisiana. He had become quite uneasy at the delay of the French and Spanish troops in vacating the province, and complained to the War Department of it.

Owing to subsequent acts growing out of rival commercial schemes, the United States and France were hardly on speaking terms.

These differences between the two republics were, however, settled by a convention, September 30, 1808. Napoleon, at this date, was First Consul of France.

#### BOUNDLESS TERRITORY ACQUIRED.

In this way the United States succeeded to the title of Spain for the entire province, including the whole country from the Pacific Coast, which now forms the coast line of Oregon and Washington Territory, sweeping down southeasterly, and including Arkansas, Missouri, Iowa, Minnesota, Montana, Idaho, Wyoming, Dakota, Colorado, and Nebraska.

#### EXTENT AND COST OF TERRITORY.

The boundaries of the province of Louisiana, as stated by Napoleon, were very indefinite, the treaty itself being couched in terms of "studied ambiguity." This imbroglio was still further complicated by the stirring events that occurred on the Florida border during our war with England and the reprisals made by General Jackson for the repeated infractions of neutrality by the Spanish authorities. The United States, however, determinedly disregarded the claims of Spain in connection with certain indefinite portions of the boundary, and insisted upon the country, as we have described it.

The net cost of the Louisiana Purchase was \$23,529,353. It embraced 756,961,280 acres, which fixes the price

per acre at three and three-fifths cents. This rate is much lower than any cession or purchase made by the United States, with the exception of the Alaska Purchase, which cost a fraction less than two cents per acre. The Gadsden Purchase cost \$10,000,000. As to its great fertility, and considering the vast commerce that is transacted throughout the purchase, the province of Louisiana will stand alone as a remarkably well-conducted Yankee bargain.

The area conveyed by this purchase embraced 2,300 square miles in Alabama, 3,600 in Mississippi, 41,346 in Louisiana, 52,202 in Arkansas, 65,370 in Missouri, 73,542 in Kansas, 55,045 in Iowa, 57,531 in Minnesota, west of the Mississippi River, 75,995 in Nebraska, 57,000 in Colorado, 95,274 in Oregon, 150,932 in Dakota, 69,994 in Washington, 143,776 in Montana, 86,294 in Idaho, 83,563 in Wyoming, and 68,991 in Indian Territory, lying in what are now known as eleven States and six Territories, and giving a total of 1,182,752 square miles.

#### UNKNOWN REGION TO BE EXPLORED.

For many years before, the existence of one or more large rivers west of the great water-shed of the Rocky Mountains was considered very probable by geographers, including Thomas Jefferson, afterward president of the United States. Search for this suppositious river was vigorously prosecuted by various explorers and others.

The first white man known to have visited this region was Chevalier de la Verendrye, Governor of Quebec, who, at the head of an exploring party, arrived at "the gateway of the mountains" on the first day of January, 1743, and there erected a monument of stones, under which he deposited a leaden plate emblazoned with the French coat of arms. This monument has never been found. Sixty-two years later the great overland expedition of Lewis and Clarke traversed the Territory and recorded its chief characteristics.

The period which elapsed from the first Anglo-Saxon voyages to the Pacific Coast to the discovery of gold forms one of the most interesting chapters in our history. The solitude and primitive order of the vast territory of Alaska, Washington Territory, Oregon, and California were unbroken, save by an occasional adventurer; and California was as little known to the world as the fabled garden of Eden. Its solitude was only broken by an occasional hunter and trapper.

#### FIRST KNOWN OF THE NORTHWEST.

The first exploring party was that of Lewis and Clarke. The party consisted of Meriwether Lewis, Captain, U. S. A., First Regiment Infantry (formerly Mr. Jefferson's secretary); William Clarke, First Lieutenant, U. S. A.; John Ordway, Nathaniel Prior, and Patrick Gass, Sergeants, U. S. A.; Chas. Floyd, William Bratton, John Colter, John Collins, Pier Gruzatte, Robert Frazier,

Joseph Fields, George Gibson, Silas Goodrich, Hugh Hall, Richard Worthington, Thomas P. Howard, Peter Wisner, John Baptiste Le Page, Francis Labniche, Hugh M'Neal, John Potts, John Shields, George Shannon, John B. Thompson, William Werner, Alexander Willard, Richard Windsor, Joseph Whitehouse, John Newman, George Drewyer or Drulyard, and Tousaint Chabono (the last two interpreters), the wife of the interpreter Chabono, a Snake squaw and her child, and "York," a colored servant to Captain Clarke, who died at Richmond, Virginia, in the fall of 1879. President Jefferson himself prepared the written instructions for Captain Lewis. The party in boats entered the Missouri River May 4, 1804.

The account as given by Lewis and Clarke attracted general attention to the unoccupied great West, and the United States sought to purchase the territory, claimed by Spain as related.

Expeditions from Boston were soon inaugurated for settlement and trade upon the Columbia; and from this period American vessels, at intervals, visited the coast, but their trade was chiefly confined to the Columbia River and the distant whale-grounds in the North Pacific.

#### EXPLORATION OF FUR COMPANIES.

In the year 1810 a new stimulus was given to the commercial interests of the Pacific Coast. John Jacob Astor, of New York, in connection with Wilson P. Hunt, of New Jersey, and others, organized the Pacific Fur Company. In September, 1810, the ship *Tonquin*, with the stores, officers, employés, etc. of this company, sailed from New York, and arrived at the Columbia on the 24th of March, 1811, and established themselves on the southern bank near the mouth, which they named after the founder of the company, *Astoria*. Astor and Hunt admitted into the company Messrs. McDougal, McKay, and Robert and David Stewart, who, at the head of eleven clerks, thirteen Canadian voyagers, and five mechanics, entered upon a most lively and profitable fur trade. A garden was planted, started by planting twelve potatoes, (all they had,) and an American settlement was commenced.

On the 5th of May, 1812, the ship *Beaver*, twenty guns, Captain Sowls, by way of the Sandwich Islands, with additional supplies, and having on board Mr. Clark, six clerks, and twenty-six Kanakas, arrived to join Astor's company on the Columbia.

News of American occupation of Oregon reaching the British authorities and the members of the Northwest Fur Company, (a company established by charter of Louis XIII., of France, in Acadia, Nova Scotia, in 1630, and whose existence and legality were acknowledged by the British Government on the transfer of Acadia to England by the treaty of Utrecht, in 1714,) they became alarmed at

the encroachments of Americans is such close proximity to the northern British American boundary, then undefined and uncertain.

#### WILKES' EXPLORING EXPEDITION.

The next most important exploration by United States Government was the Wilkes' Expedition. This fleet consisted of the United States ship *Vincennes*, United States ship *Peacock*, United States ship *Relief*, United States brig *Porpoise*, tender *Sea-Gull*, and tender *Flying-Fish*. This fleet, well equipped, and manned with seamen and scientific men, sailed on its mission August 18, 1838; and, after exploring the South Pacific, arrived, on April 28, 1841, off Cape Disappointment, near the mouth of the Columbia River, but, owing to the roughness of the bar, and not knowing the channel, Wilkes headed north, and on the 11th of May, entered the Straits of Fuca, just forty-nine years after the navigator Vancouver had visited there.

From here the expedition continued down the coast, and thence extended its operations to the South Pacific, returning home by China and the Cape of Good Hope, and arrived at New York on the 10th day of June, 1842, and disbanded.

Wilkes' official report to Congress of his extensive explorations in the Pacific—a work of five volumes, with drawings, maps, charts, &c.—is a valuable acquisition to our early history of the Pacific Coast; but fails to exhibit either the genial climate or fertile soil of California as these subjects deserve; and the single allusion of his mineralogist, Mr. Dana, of the indication of precious metals in some quartz specimens found in southern Oregon, is the only mention made of minerals in his report.

#### FREMONT'S EXPLORATIONS.

The solicitude of the Government to ascertain more concerning the region in the vicinity of the Columbia River being settled up with Americans caused a commission to be issued to John C. Fremont, to explore the Rocky Mountains in search of an available pass to the Columbia. In furtherance of this object, Fremont, at the head of a party fitted out for this expedition, left Washington on the 2d of May, 1842; and, after a six months' campaign, in which he extended his explorations no farther than the Rocky Mountains, he, on the 29th of October, returned and reported the result of his observations, which were so favorably received by Congress that a *second* expedition was fitted out, with directions to explore not only a route through the Rocky Mountains but through the greater part of Oregon and California. Fremont was again appointed to command this expedition, consisting of thirty-nine men, which left the Missouri River on their western tour in May, 1843.

This expedition returned by the Colorado Desert, which, he says, was "a vast desert plain spread before us, from which the boldest traveler turns away in despair."

He further says of his company, that "Our cavalcade made a strange and grotesque appearance; and it was impossible to avoid reflecting upon our position and composition in this remote solitude. Within two degrees of the Pacific Ocean; already far south of the latitude of Monterey, and still forced on south by the desert on one hand and the mountain range on the other; guided by a civilized Indian, attended by two wild ones from the Sierras, a Chinook from the Columbia, and our own mixture of American, French, and German—all armed; four or five languages heard at once; above a hundred horses and mules, half wild; American, Spanish, and Indian dresses and equipments intermingled—we looked more like we belonged to Asia, than to the United States."

Here Fremont met the Apaches, whom he calls the Arabs of the New World. They had to move all day in a state of watch, and prepared for combat—scouts and flankers out, a front and rear division of our men, and baggage-animals in the center. At night, camp duty was severe. Those who had toiled all day had to guard, by turns, the camp and the horses, all night. Frequently one-third of the whole party were on guard at once; and nothing but this vigilance saved them from attack. They were constantly dogged by bands, and even whole tribes of marauders; and although one of the party was killed, and the camp infested and insulted by some, while swarms of them remained on the hills and mountain-sides, there was manifestly a consultation and calculation going on, to decide the question of attacking.

They reached the Rio Virgen River, a tributary to the Colorado. Indians appeared in bands on the hills, but did not come into camp. For several days they continued up the river, the bottoms of which were thickly overgrown with various kinds of brush; and the sandy soil was absolutely covered with the tracks of *Diggers*, who followed stealthily, like a band of wolves; and they had no opportunity to leave behind, even for a few hours, the tired animals, in order that they might be brought into camp after a little repose. A horse or mule left behind was taken off in a moment. On either side the valley is bounded by ranges of mountains, everywhere high, rocky, and broken. The caravan road was lost and scattered in the sandy country, and they had been following an Indian trail up the river. The hunters the next day were sent out to reconnoitre, and in the meantime they moved about a mile farther up, where they found a good little patch of grass. In a few hours the hunters returned, having found a convenient ford in the river, and discovered the Spanish trail on the other side.

## PIONEER SETTLERS OF ARIZONA.

First Pioneers; First Overland Explorer; Mormon Adventurers; First Organized Exploration; Whipple's Expedition; Early Surveying Parties; Discoveries on the Colorado; Lieutenant Ives' Trip, Etc.

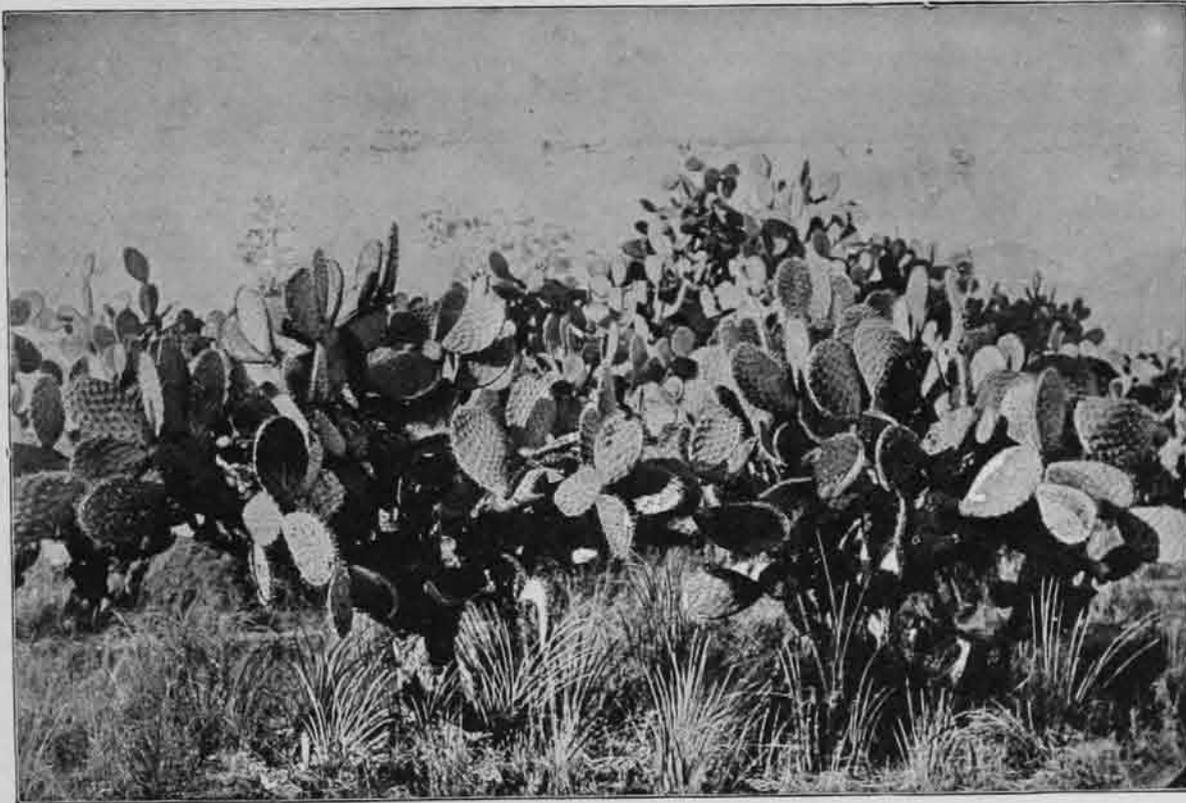
### FIRST ARIZONA PIONEERS.

**P**ROBABLY the first American pioneer of Arizona was Sylvester Pattie, who, with his son Jas. O., set out from Bardstown, Kentucky, in 1824, with a party of one hundred hardy and adventurous frontiersmen, upon a trap-

have since been lost. An account of this expedition was published in President Jackson's message to Congress, in 1836.

The oldest living trapper in Arizona, said Charles D. Poston, in 1856, is old Pauline Weaver, from White County, Tennessee. His name is carved in the Casa Grande, near the Pima villages on the Gila River, under date of 1832. This old man has been a peacemaker among the Indians for many years, and is now spending the evening of his life in cultivating a little patch of land on the public domain in the northern part of the Territory, on a beautiful little stream called the Hassayampa.

Felix Aubrey, author of an interesting book on New Mexico, who was killed at Santa Fé in a broil, while preparing for an expedition to prospect for gold in Arizona,



ARIZONA PRICKLY PEAR CACTUS. (*Opuntia Vulgaris*.)

ping expedition to the head-waters of the Arkansas River. After many romantic adventures in New Mexico, the party dispersed, and a few of the boldest spirits undertook to reach the Pacific Coast. They spent one winter at the celebrated mines (copper) of Santa Rita del Cobre, at the head-waters of the Gila River, and the next spring trapped down the river to its confluence with the Colorado. Here they embarked their canoes on the turbid waters of the Colorado, and drifted down to the Gulf of California, whence they crossed the peninsula (Lower California) to the Pacific Ocean in 1830. Here they were imprisoned by the Mexican commandant at San Diego, and after a long and cruel confinement, the elder Pattie died in prison. James O. Pattie was then released, and all traces of him

made several trips into the Tonto Basin, now embraced by the San Carlos or White Mountain Reservation, the Gila Valley, the Santa Rita Mountains, and other portions of the Territory.

A Frenchman named Leroux was in the country at an early date, and was well known to the Pimas, who acted as guide to the United States Boundary Commission in 1849-51.

Among other early explorers of whose adventures we have no definite account, was Capt. John Moss, who penetrated the cañons of Colorado. Captain Adams also made voyages up this river.

A few trappers' guides and hunters also penetrated Arizona occasionally.

## FIRST OVERLAND EXPLORER.

Capt. Jedediah S. Smith must stand in history as the first white man who came overland into California. In 1825 he led a company of forty men into the country west of Salt Lake, crossed the Sierra, and entered California in July, 1825. He returned through Walker's Pass. He was sent by the Fur Company the next year with instructions to inspect the gold placers. He gave the first reports of gold found at Mono Lake, and other points, on his first return trip.

On his second trip, in 1826, he passed as far south as the Colorado River, and here had a battle with the Indians, in which all but himself, Turner and Galbraith were killed. They escaped and arrived at the Mission San Gabriel, where they were arrested as filibusters and sent to San Diego, where they were released upon a certificate from the officers of some American vessels that chanced to be on the coast, that they were peaceful trappers and had passports from the Commissioner of Indian Affairs.

This certificate bears date December 20, 1826, and in the following May we find them in camp near San Jose, where the following letter was written to Father Duran, who had sent to know what their presence there signified:—

REVEREND FATHER: I understand through the medium of one of your Christian Indians, that you are anxious to know who we are, as some of the Indians have been at the mission and informed you that there were certain white people in the country. We are Americans on our journey to the River Columbia; we were in at the Mission San Gabriel in January last. I went to San Diego and saw the general and got a passport from him to pass on to that place. I have made several efforts to cross the mountains, but, the snows being so deep, I could not succeed in getting over. I returned to this place (it being the only point to kill meat), to wait a few weeks until the snow melts so that I can go on; the Indians here also being friendly, I consider it the most safe point for me to remain, until such time as I can cross the mountains with my horses, having lost a great many in attempting to cross ten or fifteen days since. I am a long ways from home, and am anxious to get there as soon as the nature of the case will admit. Our situation is quite unpleasant, being destitute of clothing and most of the necessaries of life, wild meat being our principal subsistence. I am, Reverend Father, your strange but real friend and Christian brother.

J. S. SMITH.

May 19, 1827.

Reuniting himself with the company he had left on the American River the year before, Smith started for the Columbia River. Near the head of the Sacramento Valley he passed out to the west, reaching the ocean near the mouth of Russian River, and followed the coast line as far as the Umpqua River, near Cape Arago, when all but himself, Daniel Prior, and Richard Laughlin, were treacherously murdered by savages, losing all their traps and furs.

## SURVIVORS OF SMITH'S PARTY.

Isaac J Sparks, now of San Luis Obispo, Cal., was one of the J. D. Smith party. He came again with a party as late as 1832, and from the Black Water they proceeded to the Gila River, which they followed till they came near the line of the Yuma. Here Job Dye (now living in Santa Cruz, Cal.), Isaac Williams, Turkey Green, and 'Squire Green, being in advance of the party, fell upon a party of

Indians who were on their way to Sonora for the purpose of stealing horses. A skirmish took place which lasted about an hour and a half. The Indians threw up a fort of brush-wood, and nobly stood their ground, until the remainder of the whites came up, who, in company with the others, made a deadly charge and put them to flight. Of the Indians there were killed or wounded fourteen or fifteen.

This party resorted to various expedients at times to outwit the Indians. The principal part of the company would leave the camp, thus leading the Indians to think that *all* had gone, when, in fact, there were six or eight concealed within, where they would remain perfectly quiet until the Indians got fairly into camp, when, upon a certain signal, they discharged their fire-arms, whose deadly and unerring aim would send the Indians for a moment bounding in the air, while the despairing shriek of death burst from their lips; the next they lay lifeless on the ground.

The day succeeding the skirmish mentioned above they journeyed on to the Yuma village, where they traded for beans, corn, etc., and thence proceeded to the Rio Colorado, or Red River. Here the party separated, and Mr. Sparks, with eleven others, came through to California, and arrived at the Pueblo de Los Angeles on the 10th of February, 1832.

Their warfare with the Indians being over, they thought themselves secure from further molestation, when, lo! to their surprise and mortification, they found themselves prisoners of the country, under the authorities of the land, the laws not permitting strangers to travel without a passport. Not liking to be detained in "durance vile," Mr. Sparks watched narrowly for an opportunity to escape, and after a short time succeeded in evading the vigilance of his captors, and made good his escape to San Pedro.

## AMERICAN PIONEER SETTLERS.

The first to establish business in the Territory of New Mexico was Roubidoux, who settled in Toas in 1822. Charles Beaubien came in 1827. Kit Carson came first to Santa Fé in 1826, where he studied Spanish.

Lucian B. Maxwell, another early settler, employed 500 men, had 1,000 horses, 10,000 cattle, and 40,000 sheep. He lived like a feudal chief, literally "lord of all he surveyed." The oldest living American in Santa Fé for many years was James Conklin, who came in 1825, and died in June, 1883.

Samuel B. Watrous, father of the town of that name, arrived in 1835. James Bonney was the original settler at La Junta in 1842, his house being the first one seen in 1846 for a distance of 775 miles in coming from the East.

In 1846, Maj. W. H. Emory started from Fort Leavenworth and followed the Arkansas River, up which he went to Bent's Fort, where he joined himself to General Kearney's "Advanced Guard of the Army of the West."

Thence he traveled southward, crossing Raton Pass and moving along the edge of the foot-hills to Las Vegas whence his route to Santa Fé coincided closely with that previously followed by Dr. Wislizenus. From Santa Fé the army went southward for 230 miles, and thence westward to the Gila and Colorado Rivers, beyond which it went northwest, crossed the Coast Range, and finally reached San Diego, in California.

#### THE MORMON BATTALION.

A battalion of Mormons, desiring to emigrate to California, was organized in Missouri, and placed under command of Lieut.-Col. Philip St. George Cooke, marched through New Mexico and Sonora, crossing the Colorado River at the mouth of the Gila, and entered California in February, 1847. This body numbered about 360. Some settled in California, others joined their co-religionist in Utah.

In the season of 1847 there was little or no emigration across the plains. The war with Mexico was in active progress, giving employment to the adventurous spirits who otherwise would probably have sought adventure on the great road to the Pacific.

In 1848-49, Dr. O. M. Wosencraft and others formed a company in New Orleans, and coming by Brownsville, Texas, and the Rio Grande, reached lower Arizona. They passed up through the country to Mariposa Plains. On reaching the Colorado River at that point, they found a dilapidated rawhide boat, which, after some delay and repairs, was used to cross over. A band of Uma Indians were about to attack another small party of whites. They had taken their horses, and were about taking their lives with their clubs. The party was only four. They had come in advance of a drove of mules which were being driven from Tepic, Mexico, to Almaden Mines, Santa Clara County, California.

#### CAPT. JOSEPH WALKER'S EXPLORATIONS.

In 1850, Capt. Joseph Walker, one of the explorers and pioneers of this vast western empire, explored the country of the Moqui Indians, then supposed to be a remnant of the Aztecs, in which he reported seeing the ruins of old and massive habitations, pyramids, castles, pottery, etc., which gave evidence of a very remote and advanced civilization. These ruins he found between the Gila and San Juan Rivers. They are believed to mark the site of the great city of Grand Quivera, or Pecos, the most populous and grandest of that race, now long extinct.

Walker found his way through the pass known as Walker Pass, from the Mohave Desert, into Tulare Valley. It was ten miles from plain to plain, and on his way he traveled along the head-waters of Kern River. General Beale afterwards traveled the same region, going eastward by the southern route.

It was not until 1850 that Capt. Joseph Walker discovered the pass through the Sierra Nevada Mountains, which leads into Tulare Valley, although others attribute the discovery to Jedediah S. Smith, as far back as 1825, while trapping in the service of the fur company, of which General Ashley was the chief in command in the mountains; and others still ascribe it to Ogden, the American in the employ of the Hudson Bay Company, who is said to have found it in 1827; or to Ewing Young, of Tennessee, a pioneer of Oregon, who died in 1841; or again, to William Wolfskill, an early pioneer of California, who passed through it, on his way farther westward, from an exploration of the Wasatch Mountains at a subsequent period. It is clear, at all events, that, whosoever discovered the pass, it was never utilized to the purposes of emigration and travel until it was made generally known by Capt. Joseph Walker.

In 1849, a ferry was established near the village of Yuma, by Dr. Lincoln, and others, who were killed by Indians. On July 11, 1850, Don D. Jaeger, Benjamin Hartshorne, and others, arrived from California and again started this ferry, which had been stopped by the Indians, as related. It is said 60,000 emigrants to California crossed this ferry in 1850-51.

The lumber for the ferry-boat was brought with the greatest difficulty across the desert from San Diego, and the ferry was established at Pilot Knob, near where Hanlon's Ferry is now run. They made money until November, 1851, when the ferry-men were attacked and driven off by the Yuma Indians.

#### FIRST ORGANIZED EXPLORATION OF ARIZONA.

The United States Boundary Commission, in 1850, was the first party of organized Americans to enter the boundaries of Arizona. It was under the direction of Hon. John R. Bartlett, who had selected some thirty members. The party was divided, and one portion, accompanying Mr. Bartlett, set out on a route that had never been gone over by white men.

The Commissioner traveled in a close carriage, drawn by four fleet and powerful mules, accompanied by Dr. Webb. The inside of the carriage was well supplied with revolvers and shotguns. With this party was John C. Cremony, who had further adventures among the Apaches ten years later. The party reached the boundaries of Arizona at the Chiracahui Mountains, where water and grass were found in abundance. They entered the pass since known as "Apache Pass." The exact position of the encampment was latitude  $32^{\circ} 08' 43''$ , longitude  $104^{\circ} 24' 33''$ .

Between these mountains and the San Pedro is an undulating plain, intersected by a mountain range near the river, with brackish water in some parts. Portions of

this bear a short grass, but there is no wood except in the Apache Pass, through which they passed, and put a scanty supply there.

#### SAN PEDRO VALLEY IN 1850.

The San Pedro Valley is next reached, and lying some ten or twelve feet below the bottom land, unmarked by trees, the river is not observed until at its very margin. It was here about thirty feet wide and two and a half deep. Its depth varies with the rainy and dry seasons. Its valley is from a quarter of a mile to a mile in width, and in some places he was told it was still wider. This valley formerly sustained a considerable population, scattered about in haciendas and ranches, and engaged in rearing cattle. He noticed the ruins of haciendas which for years had been abandoned, and also saw herds of wild cattle roaming through the mesquite chaparral of the valley. A few days after he met with a large party of Mexicans, under Don Ilarian Garcia, engaged in hunting wild cattle, in order to obtain a supply of beef for the army, for which beef he had the contract. From him Mr. Bartlett learned that the valley was much broader farther south, and that thousands of cattle grazed there.

"A pretty little stream, which Mr. Bartlett learned from the Mexican hunters referred to, called the Babacanora, entered the San Pedro about twenty-five miles above where they first encamped. At this stream, near a ruined hacienda, there were remains of an orchard of fruit trees.

"The valley of the Babacanora is wide, and was covered with luxuriant grass; indeed, it was a much more attractive and apparently richer spot than the valley of the San Pedro. Its broad flats or bottoms resembled those of the Mohawk River, and it was in these, near the confluent with the latter stream, that the Mexicans were hunting the wild cattle.

#### WILD HORSES ON THE PRAIRIE.

"Leaving the valley of the San Pedro, they came upon a rolling country or prairie, here and there covered with a short grass, upon which were encountered small herds of mustangs. This grass was eagerly eaten by the animals. On these plains were found many depressions with pools of water. One of these depressions led to a small running stream, coursing through a level bottom, which they traced for about fifteen miles. This was studded for a portion of the distance with large oaks and sycamores, and resembled a highly cultivated English park; yet solitude reigned around, and there was no evidence that it had ever been inhabited by white men. Farther on, near where the stream forced its way through the mountains known as the Sierra de Santa Rita, were found the ruins of a hacienda, with a tract of rich bottom land near. On this bottom there were cottonwood trees of immense size. The stream,

which is here about twenty feet wide, empties into the Santa Cruz near the hacienda of Calabaza.

"The whole district lying between the valley of the San Pedro and the Santa Cruz may strictly be called a grazing country. It is well watered by the streams mentioned and by the many small pools. As they approached the lofty Sierra de Santa Rita, they crossed several arroyos lined with trees, showing that after the rainy season there is a great abundance of water."

#### JOHN GALLANTIN'S OPERATIONS.

In 1850, John Gallantin and his band of followers were murdered by the Yuma Indians. It is said that the Governor of Chihuahua having offered a premium of \$30.00 for every Apache scalp, Gallantin got together a band of cut-throats and went into the business. But all his activity and cupidity failed to find the Apaches, and scalps became very scarce. Determined to make money out of the Governor's terms, he commenced killing Papago, Opatah, and Yaqui Indians, whose scalps he sold in considerable numbers at \$30.00 each, declaring that they had been taken from the heads of Apaches. But the ease with which Gallantin and his band supplied themselves, without producing any sensible diminution of Apache raids, excited suspicion, and he was actually caught taking the scalps from the heads of several Mexicans murdered by his people in cold blood. Finding that he had been discovered in his unspeakable villainies, he fled to New Mexico, where, by stealing and by purchase, he collected about 2,500 head of sheep, with which he was passing into California, when he encountered his well-merited fate at the hands of the Yumas. Not a soul of his band escaped death.

There were of the party a band of twenty-one Americans with a great many sheep which they were driving to California. The military, consisting of a Sergeant and ten men, had been driven off by the Yumas just before the advent of these visitors, who were wholly ignorant of the fact, and quite unprepared to expect the hostility which terminated with their massacre. They were received by the Yumas with every profession of friendship, the Indians bringing in large quantities of slim, straight and dried cottonwood branches to build fires with, and rendering them other kindly services, so that all apprehension was completely lulled. While the evening meal was in preparation, the Yumas interspersed themselves thickly among the Americans, who had some four fires going, built by the Yumas, who had placed the long, smooth cottonwood branches across each other, in every direction, and the fire as near to the center as possible. So soon as those sticks had burned through so as to leave an effective club at each end, a single sharp cry gave the signal, upon which each Yuma present, probably a hundred, seized his burning



*J. L. Miller*



*S. C. Miller*

PIONEERS OF ARIZONA



*J. R. Walker*



*Geo. Lount*

brand, and commenced the work of death, dealing blows to the nearest American, while another large party rushed fully armed upon the scene, and quickly dispatched their unprepared and unsuspecting visitors. The Americans fought with desperation, discharging their six-shooters and using their knives with bloody effect, but were soon overcome by resistless numbers, and slain to a man.

#### GENERAL SMITH'S EXPLORATIONS.

In the winter of 1850 and 1851, General Smith, commanding the Pacific Division, sent a schooner from San Francisco to the head of the Gulf of California, and directed Lieutenant Derby, topographical engineer, to make a *reconnaissance*, with a view of establishing a route of supply to Fort Yuma, *via* the Gulf and the Colorado. After leaving Fort Yuma, they followed the east side of the river, keeping as near to the bank as possible. He encountered the Mojaves, and found their appearance and customs generally to agree with the descriptions of the early explorers. The descent was accompanied with hardship and danger. Both the Mojaves and Yumas were hostile, and the difficulty of traveling near the river was extreme, owing to the chains of rugged and precipitous mountains that crossed the valley. The summer heats had parched and withered the face of the country; the stream was low, and what was seen of it did not create a favorable opinion regarding its navigability.



PASQUAL, THE YUMA CHIEF.

Pasqual, whose portrait is here given, was said to be in command of the Indians engaged in the massacre of the Gallantine party of Americans. He was accused of other murderous attacks, but was with the tribe subdued by General Hintzleman, after two years' warfare. They have remained in subjection ever since.

#### FIRST STEAMBOATS ON COLORADO RIVER.

The first steamer making the trip from the Gulf of California to Yuma Landing, arrived on December 3, 1862. It was the *Uncle Sam*, owned and commanded by Captain Turnbull, by which steamer the post was supplied until June 24, 1853, when it ran ashore a few miles

below the post and was abandoned. Her first trip up occupied fourteen days, being much impeded by an earthquake, which changed the channel of the river. She returned in fifteen hours, and made the next trip up in three days.

On January 18, 1854, Capt. George A. Johnson, of the Colorado Steam Navigation Company, reached Yuma with the sixty-ton side-wheel steamer, named *General Jesup*, after the then Quartermaster-General of the United States Army, since which time the river has been regularly navigated by steamers.

#### LIEUTENANT A. W. WHIPPLE'S EXPEDITION.

In the spring of 1854 Lieutenant Whipple, topographical engineer, in command of an expedition for the exploration and survey of a railroad route near the thirty-fifth parallel, reached the Colorado, at the mouth of Bill William's Fork, and ascended the river about fifty miles, leaving it at a point not far below where Captain Sitgreaves had first touched it. The expedition was composed of nearly a hundred persons, including the escort. The Mojaves were friendly, furnishing provisions to the party, whose supply was nearly exhausted, and sending guides to conduct them by the best route across the desert westward. The river was probably higher than when seen by Captain Sitgreaves, and it was the opinion of Lieutenant Whipple that it would be navigable for steamers of light draught. The course of the Colorado northward could be followed with the eye for only a short distance, on account of mountain spurs that crossed the valley; a high distant range through which the river came was supposed to be the "grand cañon."

After leaving Albuquerque, they first came upon a portion of the Pueblo Indians, as they are called, inhabiting the village of Laguna. These Indians were stated to be semi-civilized, and had some Episcopalian missionaries amongst them, who gave a favorable account of their progress and enlightenment. They speak the Akoma language, and cultivate the soil. They are but little molested by the wild tribes residing in their neighborhood, and are doing well.

The next tribe was the Navajoes. This was a warlike and predatory tribe. They numbered about 4,000 warriors, but inhabited a vast extent of territory. They did not depend much on the products of the soil, but owned immense herds of sheep, horses, and cattle. The chief of this powerful tribe was allied to Mangus Colorado, the great head of the Apache nation, by marriage with one of his daughters, who was the child of Mangus and a Mexican captive, taken from Sonora in one of his many incursions. The Navajoes frequently joined in these invasions, and carried fire and sword into the very heart of Sonora and Chihuahua.

Their language was very similar to that of the Maricopas. They inhabited all the western and northern part of New Mexico, as far south as the El Pinal Range of mountains on the Gila River.

A deserted tract of country was then passed over, evidently once inhabited by the Zuni Indians, as was proven by the *debris* of many huts and villages, built after their style. In this tract is a wonderful shaft of solid rock, perpendicular on its face, and nearly five hundred feet in height. This rock is covered at the base with old Spanish inscriptions dating back as far as 1670, proving, beyond a doubt, that the Spanish missionaries, accompanied by their guards, penetrated years ago over the whole of this to us unknown region. These vestiges of a former visitation are extremely interesting to the antiquary.

#### ZUNI AND MOQUIS VILLAGES.

Passing this region, Mr. Whipple arrived at Zuni, an Indian town, built on elevated ground in the center of a vast plain. The houses are ranged so as to present a circular appearance, doubtless with the intention of enjoying a complete survey of the whole surrounding country, so as to give timely alarm in case of invasion by a hostile party. The Zunis pay much attention to cultivation, their country being almost bare of game, and raise corn and other cereals in abundance, for which the soil is peculiarly fitted. They are, nevertheless, warlike, and are frequently engaged in war against the Navajoes.

When at peace with these, their ancient enemies, they leave the plains, and scatter abroad along the streams of the country, spending their time in hunting and fishing, and when at war invariably retreat to their circular towns.

Next on the route came the Moquis, residing to the north and west of the Colorado Chiquito, which river empties into the Colorado, and in connection with that and the Gila, to the south, forms an extensive delta. The Moquis very much resemble the Zunis, and have some manufactures in cotton, such as girdles, cotton blankets, etc. They had, however, been nearly decimated by the ravages of small-pox; and Mr. Whipple was told that only a few warriors, with some women and children, were left of this once formidable tribe. The Zunis have also suffered much from the same scourge.

#### GOLDEN BULLET COUNTRY.

To the south and eastward of the Colorado Chiquito, lies what is known as the "Gold Bullet" country, mentioned in the Santa Fé papers. This tract is inhabited by the Tonto Apaches, and the Yampi Indians, and is the delta above mentioned, as inclosed by the Gila, Colorado, and Colorado Chiquito Rivers. The Yampis and Tontos are among the most degraded and vicious of the tribes on the continent. They are extremely indolent, and subsist on reptiles, and other small animals of the field, such as mice,

rats, squirrels, etc., and are cowardly, dirty, and treacherous.

Mr. Whipple had an opportunity to examine some of the gold bullets that had often been talked about, and he discovered that the gold had been separated by quicksilver, which was afterward extracted by pressure, leaving a round mass of metal. These Indians also had a quantity of clothing which they offered for sale, amongst which were some satin vests, proving conclusively that these articles had been obtained from white travelers, either by purchase or robbery and assassination, the latter most probably. As no quicksilver has been discovered amongst them, and as the natives did not appear acquainted with the article, it is but just to conclude that the gold had been obtained in the same manner, and as it was found in possession of their white victims, they naturally offered it in trade to other whites, believing it to be of some value to that race. These facts, then, at once do away with the impression that the precious metal abounds in that country to any extent.

Next on the route were the Mojaves, an entirely different race of red men. These Indians resided on both banks of the Colorado River, as far south as its junction with the Gila. Mr. Whipple and Mr. Campbell represented them as being in every respect vastly superior to any other tribe of Indians on the route, morally, physically and mentally. They were brave, honest, warlike, and bold. They were also hospitable, and, for Indians, very industrious. They were the hereditary enemies of the Cocopa and Maricopa tribes, speaking nearly the same language, and evidently derived from the same original stock.

They were represented as being of gigantic stature, admirably made and exceedingly dignified in bearing. They were free and independent in speech and action, and delighted in war; but, nevertheless, paid great attention to cultivating the soil and providing for their wants. They were numerous and formidable, and were held in great terror by the Yampis and Tontos, who inhabited the "golden bullet" country.

Mr. Whipple obtained full supplies of provisions amongst these people, and was treated by them with great hospitality. They possessed large quantities of corn meal, and of unground grain, and all sorts of ground provisions in abundance. They appeared perfectly aware of the objects of the expedition, and seemed as zealous that a railroad should traverse their country as we ourselves could be. In fine, Mr. Whipple ascribes to them by far the first rank of the many tribes through which he passed.

#### EARLY SURVEYING PARTIES.

Lieutenant Williamson, in 1854, made a survey of the country north of the Gila, in view of a route for a railway from the Atlantic to the Pacific.

In 1854, Lieut. A. B. Gray made a survey from

Marshall, Texas, to El Paso, and thence across the country to Tubac, from which point he made two surveys, one to Port Lobos on the Gulf of California, and the other to Fort Yuma, and on to San Diego.

In 1855, Lieutenant Parke made a survey of a route from San Diego to Fort Yuma, the Pima Vilages, Tucson, El Paso and into northern Texas.

Lieut. Edward F. Beal, afterwards Minister to Austria, made several explorations through northern Arizona, which were published from time to time by Congress, and are very valuable for reference.

Captain Simpson, late General U. S. Engineer Corps, and Dr. Newberry, also made explorations of northern Arizona.

Among the early explorers of 1855, was Herman Ehrenberg, a civil engineer and a scientist of more than ordinary reputation and ability. He remained in the Territory while Chas. D. Poston visited Washington City.

Ehrenberg, Hinton says, was no ordinary man. Arriving here at an early age, he had worked his way to New Orleans, where he was located when the Texas war summoned him, with others, to activity. He enlisted in the "New Orleans Grays," and was present at the battle of Goliad and Fanning's defeat, and was one of the few who survived the barbarous massacre of prisoners who surrendered to the Mexican authorities. At the close of the Texan struggle he returned to Germany, and wrote an account in his native language of that interesting period, giving much information of the new country, which has induced a large emigration of Germans to Texas. He afterward returned to the United States, and, in 1840, at St. Louis, joined a party which crossed the continent to Oregon. Thence he went to the Sandwich Islands, and after wandering in Polynesia for a few years, returned to California in time to join Colonel Fremont in the effort to free California from Mexican rule. He remained in California until the new purchase from Mexico attracted his restless nature, and, after a long and arduous service in Arizona, fell a victim to the treachery of the Indians at Palm Springs, in California, where he was buried.

#### CRABB'S FILIBUSTERING EXPEDITION.

The so-called filibustering expedition of Henry A. Crabb should be mentioned among the early operations in this section:—

In 1856, Gandara was the legally elected Governor of Sonora. Pesqueira pronounced against him. Henry A. Crabb was married to a member of the Ainsa family, of Sonora. While on a visit to his wife's relations, he met Pesqueira, since Governor of that State, who proposed to him to bring down a force of 1,000 armed Americans to help him wrest the government from Gandara. Crabb's

reward was to be a broad strip of territory across the northern frontier of Sonora. The pretext to palliate this gift of land to the Republic and the people was to be that the land was given to the American "colonists" in consideration of their protecting the border from Apache incursions. Crabb raised his men in California, and at once marched *via* Yuma, crossing the desert of Senoita, with an advanced guard of 100 men. Meanwhile Pesqueira had driven out Gandara, secured the State Government, and had no use for Crabb. Pesqueira stoutly denied all complicity with Crabb, and roused the State against him, and besieged him at Caborea, and when Crabb's ammunition was exhausted and the building on fire in which he was intrenched, and more than half his men were killed or wounded, secured his surrender without arms on promise of immunity and safe conduct to Arizona. Every man of Crabb's party was then butchered, and Pesqueira caused Crabb's head to be sent to the city of Mexico, in evidence of his own sincerity and loyalty. The 900 of Crabb's party, learning of his death, never completed their organization. A party of twenty-seven Americans started from Tucson to Crabb's relief, but arrived late and had to fight their way back against overwhelming numbers.

#### FIRST STORE IN THE INTERIOR.

February 28, 1856, Solomon Warren opened the first American store at Tucson. He came from Fort Yuma, with thirteen pack animals loaded with merchandise. This was ten days before the Mexican troops and authorities evacuated the place. The same year Chas. D. Poston made his second visit to Arizona, and says there were about thirty other Americans in Tucson at that time.

#### POSTON'S EXPLORING PARTY.\*

In 1854, Chas. D. Poston landed at Nanachista, on the Gulf of California, and explored the country as far as western Sinalou, and thence through to the Big Bend of the Gila, Fort Yuma, and San Diego.

In August, 1856, an exploring party, under direction of Chas. D. Poston, was fitted out at San Antonio, Texas, and after a perilous journey through the Apache Pass arrived at Tubac and proceeded to examine the silver mines reported to exist in that section, and in 1857 companies were formed for the purpose of developing these mines. A million of dollars was spent in them up to 1861.

The company was Americans and Germans, who settled at the old Presidio of Tubac, on the Santa Cruz River, and engaged in working the silver mines in the Santa Rita Mountains, Arivaca, the Cerro Colorado, and elsewhere in the southern portion of the Territory.

Among the pioneers who came previous to 1860 and

\* See Poston's revised statement under "Pioneers."

are now living in Arizona, are Chas. D. Poston, who came first in 1854; H. S. Stevens, 1856; Samuel Hughes, 1858; Peter Kitchen, 1854; Michael McKenna, 1856; William S. Onny, 1856; and N. B. Appel, 1858. A full list and biographical sketch of "the Pioneers" will be found elsewhere.

#### LIEUTENANT IVES' EXPEDITION.

It was not until 1857 that an appropriation became available for further exploration. A small steamer was constructed in New York, for the purpose of ascending the river, and shipped to San Francisco in parts, and thence reshipped to Fort Yuma, where it was put together. It was an iron steamer fifty feet long. When loaded it drew somewhat less than two feet of water, and the river was ascended four hundred and fifty miles above Fort Yuma. Sometimes the little craft was nearly overwhelmed in the treacherous currents, and sometimes the men were obliged to tow the steamer over shoals where it would touch bottom continually.

Bands of natives would follow the boat, hugely amused with the puffing, snorting canoe that was, apparently, so helpless and good for nothing.

Among their first adventures on the river was their encountering the tidal wave, or "bore," which they heard coming from the direction of the gulf, a deep, booming sound, like the noise of a distant water-fall. Every moment it became louder and nearer, and in half an hour a great wave, several feet in height, could be distinctly seen flashing and sparkling in the moonlight, extending from one bank to the other, and advancing swiftly upon them. While it was only a few hundred yards distant, the ebb tide continued to flow by at the rate of three miles an hour. A point of land and an exposed bar close under their lee broke the wave into several long swells, and as these met the ebb the broad sheet around boiled up and foamed like the surface of a caldron, and then, with scarcely a moment of slack water, the whole went whirling by in the opposite direction. In a few moments the low rollers had passed the island and united again in a single bank of water, which swept up the narrowing channel with the thunder of a cataract. At a turn not far distant it disappeared from view, but for a long time, in the stillness of the night, the roaring of the huge mass could be heard reverberating among the windings of the river, till at last it became faint and lost in the distance.

The next night, though moored in a place comparatively unexposed, the boat dragged her anchors and was carried a mile up the river; but as high water approached, lines were taken out, the necessary preparations made, and, by great exertions on the part of the men, she was floated into position at the head of the gully. The next

morning, after the water had fallen, she lay snugly encased between the grassy banks, twenty feet above the surface of the river, secure from the effects of tides and storms, but presenting a very odd appearance, and inspiring the Captain with apprehensions lest there should never be another tide that would rise high enough to float her out.

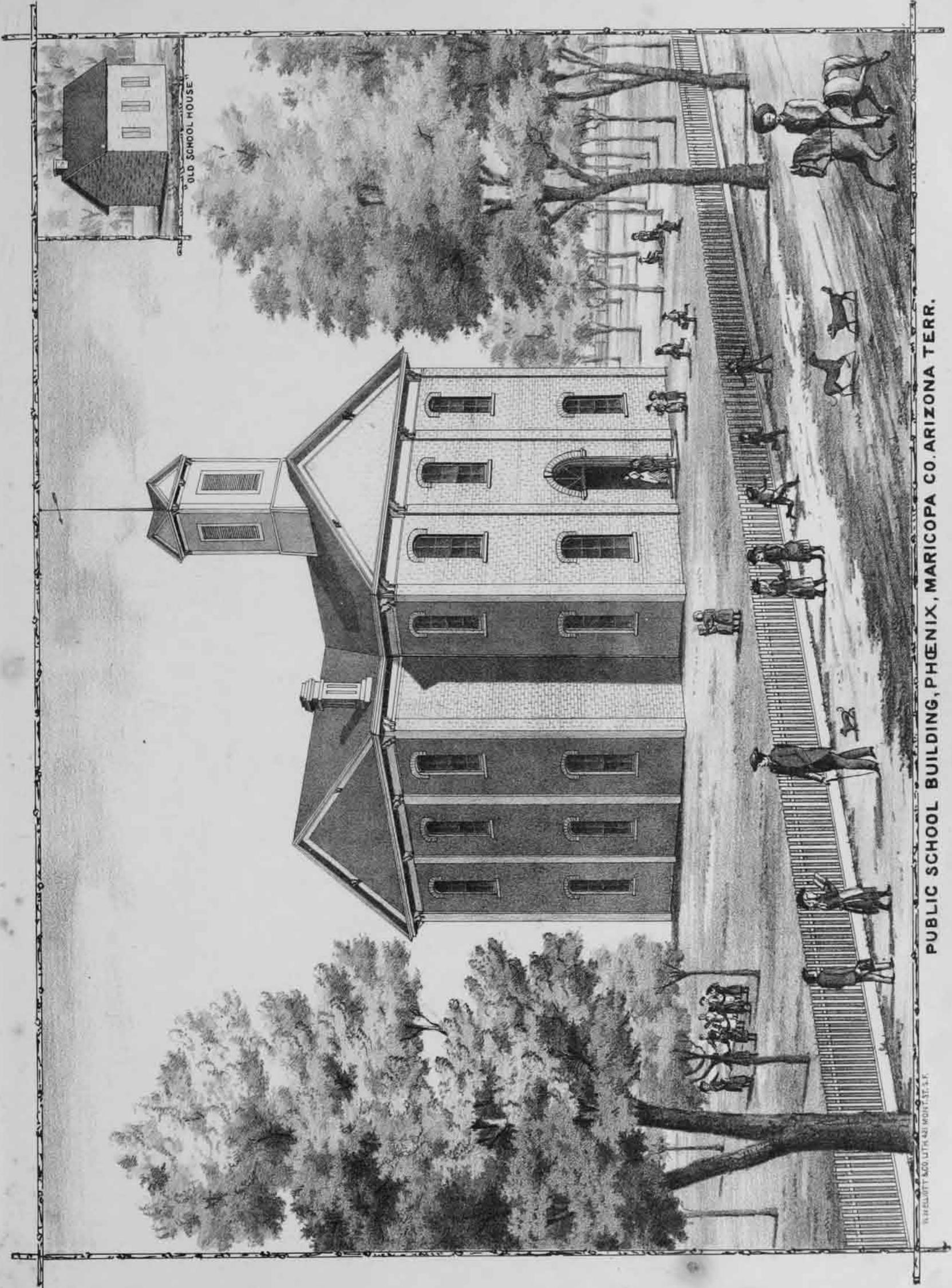
They reported the water of the Colorado as perfectly opaque, and the rapid current made a sunken rock or snag visible by the ripple on the surface.

#### DESCRIPTION OF THE "EXPLORER."

While the boat was in motion, a man was stationed at the bow with a sounding pole, and constantly called out the depth of the water and the character of the bottom. The labor attending the crossing of a bar, carrying out the anchors and lines, heaving upon the windlass, handling the boat poles, and lightening the boat of the cargo by carrying it ashore in the skiffs, was by no means small; and, to enable the men to undergo it with less fatigue, they were divided into two gangs or watches, which alternately work and rest for a day. The working party remains near the bow, and the others distribute themselves as they best can over the limited accommodations afforded by the wood piles on either side of the boiler. What little space was left abaft the boiler, when the luggage was all aboard, was taken up by the fireman and engineer. The latter was incessantly occupied in responding to the hails of the pilot from the deck overhead to go slower or faster, or to stop, or to back, or to go ahead. He thought the Colorado the queerest river to run a steamboat upon that he ever met with in his experience as an engineer.

#### SLOW PROGRESS UP THE COLORADO.

"This slow progress and the long detentions, though dull enough, were a source of intense satisfaction and fun to the spectators on the banks. The Yumas were no longer seen. But the sharp-witted Chemehuevis seemed to have exclusive possession of the upper end of the valley. Not having the same experience in steamers as the former tribe, for they seldom go to Fort Yuma, they doubtless watched with great curiosity for the long-expected boat. If they had anticipated inspiring the Indians with awe or admiration, they were sadly disappointed, for they regarded this method of ascending the river with unaffected contempt. They demonstrated how vastly inferior our mode of locomotion is to theirs. They can foot it on the shore, or pole along a raft upon the river without interruption, and that days should be spent in doing what they can accomplish in half as many hours, struck them as unaccountably stupid. The gleeful consciousness of superiority, at all events, kept them in an excellent humor. When the boat reached the Sand Island shoals, as usual, they were waiting the approach of the steamer at points



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opposite to the bars. At first the boat's troubles occasioned them unqualified delight. They watched the boat with breathless eagerness as it tried in vain to get through one place after another, and every time she ran aground a peal of laughter would ring from the bank; but after a while the mishaps appeared to move their compassion, and some one of them would run ahead, and point out to Captain Robinson the part of the bar that had the greatest depth upon it, which their frequent fording of the stream often enabled them to know. An old woman, among others, endeavored to help the Captain along, but as he approached the place she indicated, his knowledge of the river showed him that it would not do, and he sheered off without making the trial. The benevolence of the old hag was at once converted into rage, and with clenched fists and flaming eyes she followed along the bank, screaming at the Captain, as long as he was in hearing, a volley of maledictions."

#### NAME GIVEN TO "THE NEEDLES."

After four weeks of tedious and slow progress, they reached "The Needles," near where the Atlantic and Pacific Railroad now cross the Colorado. These are a cluster of slender and prominent pinnacles named by Lieutenant Whipple. They report their course to have been for some days very much to the west. A little below their camp the river turned to the north, and continued in that direction till it entered a chain of mountains twelve or fifteen miles above. This chain, which they called the Mojave Range, separates the Chemehuevis and Mojave Valleys. The Monument Mountains bar the view towards the south. The region which they were traveling scarcely deserved the name of valley. It is a basin of the desert, bounded by the Monument and Mojave Mountains, and by spurs projecting from them. There is very little alluvial land or vegetation. One place was passed that looked somewhat inviting, where wheat and corn fields, dotted with groves of mesquite, extended to a considerable distance back from the river.

The mountain scenery was beautiful; with every change of position it presented new varieties of fanciful and bold groupings. The Needles and a high peak of the Monument Range, which Lieutenant Ives called Mount Whipple, are the most conspicuous landmarks, and designate the points where the river enters and leaves the Chemehuevis Valley.

#### THE MOJAVE CANON.

After leaving this point the *Explorer* was, with a high pressure of steam, forced up the rapids, once or twice trembling from stem to stern as she grazed upon a rock, but reached the still water above without sustaining damage.

A low purple gateway and a splendid corridor, with massive red walls, formed the entrance to the cañon. At the head of this avenue frowning mountains, piled one above the other, seemed to block the way. An abrupt turn at the base of the apparent barrier revealed a cavern-like approach to the profound chasm beyond. A scene of such imposing grandeur as that which now presented itself was never before witnessed. On either side majestic cliffs, hundreds of feet in height, rose perpendicularly from the water. As the river wound through the narrow inclosure, every turn developed some sublime effect or startling novelty in the view. Brilliant tints of purple, green, brown, red, and white illuminated the stupendous surfaces and relieved their somber monotony. Far above, clear and distinct upon the narrow strip of sky, turrets, spires, jagged, statue-like peaks and grotesque pinnacles overlooked the deep abyss.

The waning day found them still threading the windings of this wonderful defile, and the approach of twilight enhanced the wild romance of the scenery. The bright colors faded and blended into a uniform dark gray. The rocks assumed dim and exaggerated shapes, and seemed to flit like giant spectres in pursuit and retreat along the shadowy vista. A solemn stillness reigned in the darkening avenue, broken only by the splash of the paddles or the cry of a solitary heron, startled from his perch on the brink of some overhanging cliff.

The obscurity was rapidly increasing, when a turn of the river threw a sudden light upon the way, and they passed out of the cañon, having reached the low foot-hills beyond. A short distance further, coming to a good camping place, they hauled up to the bank for the night.

#### BEAUTIFUL VIEW.

At this season of the year (February), before the burning heat has withered the freshness and beauty of the early vegetation, this valley, of course, appears in the most attractive aspect. It may be that the eye, weary of the monotonous sterility of the country below, is disposed to exaggerate its charms, but as they first saw it, clothed in spring attire, and bathed in all the splendor of a brilliant morning's sunlight, the scene was so lovely that there was a universal expression of admiration and delight. Towards the north, to the limit of vision, the tortuous course of the river could be traced through a belt of alluvial land, varying from one or two to six or seven miles in width, and garnished with inviting meadows, with broad groves of willow and mesquite, and promising fields of grain. From either border of this glistening expanse, and contrasting with its emerald hue, rose dark gray terraces, leading, with regular steps, to the bases of lofty mountain chains, whose bold and picturesque outlines are so softened by the dis-

tance as to harmonize with the smiling scene below. A pale blue haze, singularly transparent and delicate, lends an exquisite tint both to mountain and valley.

#### THE LAND EXPEDITION.\*

It was evident that the river could be navigated no farther. Climbing a mountain, nothing but a confused mass of volcanic rocks, piled in confusion upon each other, came to view.

The expedition could go no further by water up the river and returned to The Needles, and the little steamer returned to Yuma. The land expedition pursued a north-east course from The Needles, toward the Big Bend of the Colorado, passing through Sitgrave's Pass, and a weary travel through a soft, yielding soil, brought them to the edge of the valley, or basin. For several days they reported passing through a good grazing country. In the valleys were blue grama and pin grass, both highly nutritive, but want of water was considered as making the country valueless.

Each successive valley crossed had been twelve or fifteen hundred feet higher than the preceding; they had now attained an elevation of nearly four thousand feet above the level of the sea. Thus far the scenery had been monotonous and rather uninteresting; the valleys and ranges possess the same general character. After traveling four days without water for the animals, a spring was discovered by Mr. Peacock, and since called Peacock's Spring.

The next day, April 3d, was a cool, lovely morning and a favorable day for travel. After proceeding a mile or two they issued from the hills and entered a region totally different from any that had been seen during the expedition. A broad tableland, unbroken by the volcanic hills that had overspread the country since leaving Fort Yuma, extended before the view, rising in a gradual swell towards the north. The road became hard and smooth, and the plain was covered with excellent grass. Herds of antelope and deer were seen bounding over the slopes. Groves of cedar occurred, and with every mile became more frequent and of larger size. At the end of ten miles the ridge of the swell was attained, and a splendid panorama burst suddenly into view. In the foreground were low table-hills, intersected by numberless ravines; beyond these a lofty line of bluffs marked the edge of an immense cañon; a wide gape was directly ahead, and through it were beheld, to the extreme limit of vision, vast plateaus, towering one above the other thousands of feet in the air, the long, horizontal bands broken at intervals by wide and profound abysses, and extending a hundred miles to the north, till the deep azure blue faded into a light cerulean tint that blended with the dome of the heavens.

\*The route of this expedition is given in the map of Arizona.

#### ARIZONA PARADISE DESCRIBED.

The expedition continued on north of Bill Williams' Mountain, and entered a region of pines. The valleys were covered with a bright green sward, and after leaving the desert waste it appeared like a paradise.

The melting snows had converted it into a well-watered garden, and covered it with green meadows and spring flowers. The grass, even when dried by the summer's sun, will remain nutritious. The groves of trees will at all times give the region a habitable appearance, and, though it is not known how great the supply of water would be during the summer, the country can never present the arid wastes that are spread along the belts of territory both north and south.

They traveled all day in the midst of picturesque and charming scenery. The valleys were covered with a bright green sward, and open groves were disposed gracefully upon the lowlands and ridges. Heavy masses of snow were still piled upon the San Francisco summit, and this close proximity of winter heightened and gave a zest to the enjoyment of spring.

The camp was in the midst of an extensive meadow at the northern base of Bill Williams' Mountain. This peak, though the second in importance of the cluster, is far less lofty than its colossal neighbor, and the snows that whitened its crest a few weeks since had nearly disappeared. A sparkling brook now dashes down the ravine and meanders through the center of the meadow, which contains perhaps five hundred acres, and is covered with a luxuriant growth of grama grass. Stately pines and spruce are scattered upon the surrounding slopes, and afford a delightful shade. They found in possession of the spot a herd of antelope that scoured over the mountain like the wind when they saw the train approaching.

To eyes that have been resting upon the deserted and ghastly region northward this country appears like a paradise. They see it to the greatest advantage.

The route continued through an open park, dotted with flowery lawns and pretty copses, and then reached the edge of the great forest that surrounds the San Francisco Mountain, and entered its somber precincts. It was delightful to escape from the heat of the sun, and travel through the cool underwood. Across the dark, shady glades a glimpse would sometimes be caught of a bright tinted meadow glowing in the sunlight. Antelope and deer were constantly seen bounding by, stopping for a moment to gaze at them, and then darting off into the obscure recesses of the wood.

Half-way to the mountain they passed an open prairie—a natural clearing in this vast expanse of pines—and camped upon the eastern edge. Water was found in a ravine close by. The amount of snow melted from the

mountain-sides was immense, and every water-course was filled with a cold, clear rill. They entered a region of pines, and held a course a little east of north. The pine trees became larger and the forest more dense as they proceeded.

#### APRIL STORM ENCOUNTERED.

A heavy gale roared among the branches overhead, and about noon it commenced snowing. For some time they kept at the bottom of a ravine that afforded a partial shelter from the blast, but the surface of the ground was rough, and the snow fell so thick and fast that it was impossible to select the way.

Ascending to the table-land, they happened upon an open portion of the forest and encountered the full violence of the storm. The fall of snow was accompanied with thunder and lightning, an unusual phenomenon at such a time. The flashes were vivid, and the reverberations loud and frequent. The scene would have been beautiful had it not been so thoroughly uncomfortable. The storm at last became so vehement that they were unable to proceed. Men and mules huddled together under such trees as afforded the best shelter, and waited as resignedly as possible till the fury of the tempest had somewhat abated. The day was nearly spent; the packs were therefore taken off, camp made, fires kindled, and the mules driven into a ravine. About sunset it promised to clear off, but the clouds reassembled, the wind and sleet again drove past and the night was bleak and raw. The unfortunate mules, benumbed with cold, stood shuddering about the fires that were made in the ravine.

The sudden change from hot summer weather was a severe test of endurance, and there was danger that in their weak condition they would not be able to stand it. The snow and the gale continued nearly all of the next day. The grass was entirely covered. The animals had to fast for twenty-four hours longer.

#### A LANDSCAPE VIEW.

Towards the north was the field of plateaus and cañons, and shooting out from these a line of magnificent bluffs, extending eastward an enormous distance, marked the course of the cañon of the Little Colorado. Further south, eighty miles distant, towered the vast pile of the San Francisco Mountain, its conical summit covered with snow, and sharply defined against the sky. Several other peaks were visible a little to the right, and half way between them and this cluster of venerable and mighty volcanos was the Red Butte, described by Lieutenant Whipple, standing in isolated prominence upon the level plain. On the north side of the Colorado appeared a short range of mountains, close to the cañon, which had been previously hidden by the intervening plateaus.

A march of twenty miles having been made, and no sign of water appearing, they had to put up with a dry camp. The grass was miserable, and altogether the mules fared badly. During the night the herders were negligent, and at day-break nearly a hundred of the animals were missing. They had taken the back trail for the lagoons, but, having started late and traveled leisurely, were overtaken not many miles from camp. The trip did not render them better fitted for the day's journey, which had to be delayed until they were brought back.

The sun was oppressively warm, and every place whose appearance gave promise of water was carefully searched, but without success. Ten miles conducted to the head of a ravine, down which was a well-beaten Indian trail. There was every prospect, therefore, that they were approaching a settlement similar to that of the Hualpais, on Diamond River. The descent was more rapid than the former had been, and in the course of a few miles they had gone down into the plateau one or two thousand feet, and the bluffs on either side had assumed stupendous proportions. Still no signs of habitations were visible. The worn-out and thirsty beasts had begun to flag, when they were brought to a stand-still by a fall a hundred feet deep in the bottom of the cañon. At the brink of the precipice was an overhanging ledge of rocks, from which they could look down, as into a well, upon the continuation of the gorge far below. The break reached completely across the ravine, and the side walls were nearly perpendicular. There was no egress in that direction, and it seemed a marvel that a trail should be found leading to a place where there was nothing to do but to return.

#### A DIZZY PATHWAY.

A closer inspection showed that the trail still continued along the cañon, traversing horizontally the face of the right hand bluff. A short distance of it seemed as though a mountain goat could scarcely keep its footing upon the slight indentation that appeared like a thread attached to the rocky wall, but a trial proved that the path, though narrow and dizzy, had been cut with some care into the surface of the cliff, and afforded a foothold level and broad enough both for men and animals. The party and the train followed it, one by one—looking very much like a row of insects crawling upon the side of a building. They proceeded for nearly a mile along this singular pathway, which preserved its horizontal direction. The bottom of the cañon, meanwhile, had been rapidly descending, and there were two or three falls where it dropped a hundred feet at a time, thus greatly increasing the depth of the chasm. The change had taken place so gradually that Mr. Ives says he was not sensible of it, till, glancing down the side of his mule, he found that he was walking within

three inches of the brink of a sheer gulf a thousand feet deep; on the other side, nearly touching his knee, was an almost vertical wall rising to an enormous altitude. The sight made his head swim, and he dismounted and got ahead of the mule, a difficult and delicate operation, which he was thankful to have safely performed.

A part of the men became so giddy that they were obliged to creep upon their hands and knees, being unable to walk or stand. In some places there was barely room to walk, and a slight deviation in a step would have precipitated one into the frightful abyss. He was a good deal alarmed lest some obstacle should be encountered that would make it impossible to go ahead, for it was certainly impracticable to return. After an interval of uncomfortable suspense, the face of the rock made an angle, and just beyond the turn was a projection from the main wall with a surface fifteen or twenty yards square that would afford a foothold. The continuation of the wall was perfectly vertical, so that the trail could no longer follow it, and they found that the path descended the steep face of the cliff to the bottom of the cañon.

#### A DESPERATE ATTEMPT.

It was a desperate road to traverse, but located with a good deal of skill—zigzagging down the precipice, and taking advantage of every crevice and fissure that could afford a foothold. It did not take long to discover that no mule could accomplish this descent, and nothing remained but to turn back. They were glad to have even this privilege in their power. The jaded brutes were collected upon the little summit, where they could be turned around, and then commenced to re-perform the hazardous journey. The sun shone directly into the cañon, and the glare reflected from the walls made the heat intolerable. The disappointed beasts, now two days without water, with glassy eyes and protruding tongues, plodded slowly along, uttering the most melancholy cries. The nearest water of which they had knowledge was almost thirty miles distant.

#### SAVING THE TRAIN.

There was one chance of saving the train, and after reaching an open portion of the ravine, the packs and saddles were removed, and two or three Mexicans started for the lagoons, mounted upon the least exhausted animals, and driving the others loose before them. It was somewhat dangerous to detach them thus far from the main party, but there was no help for it.

Directions were given not to return for a couple of days. This gave the beasts time to rest, and afforded the party an opportunity of exploring the trail beyond the precipice, where they had to stop. Several cañons head near this place, all leading into the mighty avenue which forms the main water-way. Each branch has its subor-

dinate tributaries, that interlock with one another, and cut away more than half of the original plateau.

#### IVES' OPINION OF THE COUNTRY.

The reconnoitering parties had now been out in all directions, and everywhere had been headed off by impassable obstacles. The positions of the main water-courses had been determined with considerable accuracy. "The region last explored is, of course, altogether valueless. It can be approached only from the south, and after entering it there is nothing to do but to leave. Ours has been the first, said Mr. Ives, and will doubtless be the last, party of whites to visit this profitless locality. It seems intended by nature that the Colorado River, along the greater portion of its lonely and majestic way, shall be forever unvisited and undisturbed. The handful of Indians that inhabit the sequestered retreats have probably remained in the same condition, and of the same number, for centuries. The country could not support a large population and by some provision of nature they have ceased to multiply."

The deer, the antelope, the birds, even the smaller reptiles, all of which frequent the adjacent territory, have deserted this uninhabitable district. Excepting when the melting snows send their annual torrents through the avenues to the Colorado, conveying with them sound and motion, these dismal abysses, and the arid table-lands that inclose them, are left, as they have been for ages, in unbroken solitude and silence. The lagoons by the side of which they were encamped furnished, as far as they had been able to discover, the only accessible watering place west of the mouth of Diamond River. During the summer it is probable they are dry, and no water exists upon the whole of the Colorado plateau.

The expedition crossed the little Colorado River, visited the Moquis Villages, to be described elsewhere, and continued on due east to Fort Defiance, near the line of Arizona and New Mexico.

#### IVES' EXPEDITION DISBANDED.

All of the party, excepting Mr. Ives, continued on towards the east, crossing the plains from Santa Fé to Fort Leavenworth, and repairing thence to the seaboard. It was necessary for Mr. Ives to dispose of the steamer and certain property at Fort Yuma, and to settle the accounts of some members of the expedition who had gone back in the boat, and he accordingly took the stage from Santa Fé to El Paso, and from that place followed the southern overland mail route to San Diego. This expedition furnished the public with the first reliable information about Arizona, and is still a standard work for reliability and reference.

## CIVIL WAR IN ARIZONA.

Surrender of Forts to Confederates; Settlers Driven Away; Apaches' Murderous Career; California Battalion Arrives; March Through Arizona; Arizona Volunteers; Adventures of the Troops; Battle of the Apache Pass; Indians Surrender; Adventures, etc.

### ARIZONA DURING THE CIVIL WAR.

THE part taken or assumed by Arizona during the Civil War was that of a passive character. There was a small loyal element, but it did not assume a very aggressive shape. In fact, the inhabitants were driven off by the Apaches, or needed to protect their homes from their depredations.

Arizona became a highway for fugitives to and from the Confederate States. Among them may be mentioned Captain afterward General Longstreet, who deserted the old flag to join the Confederacy.

At the breaking out of the Civil War, Arizona was on the eve of prosperity; but then every industry came to a stand-still. Ranches, stock ranges, and mines were abandoned, and the few whites left in the Territory sought refuge in Tucson and Yuma. Then the Apaches had full sway, and carried death and destruction before them in southern Arizona.

Nine miles from Tumacacori are the ruins of Hacienda del Santa Rita. In these buildings was a remarkable fight, conducted by Captain Smith, a half dozen Mexican employés, and the wife of one of the latter, against a force of eighty Indians, directed by Cochise in person. The Hacienda was abandoned June 15, 1861, Messrs. Wrightson and Grosvenor having been slain previous to this step. The ruins are a striking and mournful object in the bold sweep of landscape. Several unmarked mounds, and two over which white sandstone slabs were erected, marked with the names of Grosvenor and Slack, showed the resting place of these victims of the Apache savages.

In April, 1861, the Butterfield overland mail line was stopped in view of the dangers that threatened its continuance. An act of Congress changed the route elsewhere.

In July, 1861, the only Federal troops in the Territory shamefully abandoned Forts Breckenridge and Buchanan. The two forts were reduced to ashes, together with large quantities of Government property. Without waiting, says J. Ross Browne, to ascertain the number, or to prepare for any defense, they burned all their wagons, spiked

their cannon, and packed their provisions on mules over the mountains to Fort Craig. There were four companies, numbering altogether 450 men. They had heard of the surrender of Fort Fillmore, toward which they were marching, and this caused them to take a different route.

At Fort Fillmore, 500 Federal troops of the regular army surrendered to about 250 renegade Texans, ragged, undisciplined, poorly armed, and badly equipped.

### CONFEDERATES ENTER ARIZONA.

A scattering company of roving Texan bandits, under the guerilla chief, Captain Hunter, numbering about 100, reached Tucson on the 27th of February, 1862, and



APACHE INDIAN PRISONERS.

took possession of the place. Most of the inhabitants had fled to Sonora for safety, or stood ready to join the rebels. Hunter and his party held possession of the Territory, advancing as far as the Pimo villages, and even threatening Fort Yuma, till the advance of the California column, in May, when they retreated to the Rio Grande.

The few citizens and traders who remained loyal to the Government, and the managers and workmen employed at the mines, being thus left at the mercy of lawless desperadoes, roving bands of Apaches and Sonorians, fled from the country as fast as they could procure the

means of escape. Many of them were imprisoned, and some were murdered. The hostile Indians, ignorant of our domestic disturbances, believed they had at length stampeded the entire white population. On the public highways they fell upon small parties and slaughtered them. It was their boast, and is still their belief, that they had conquered the American nation.

The Sonoran Mexicans, greedy for plunder, rushed in from the borders by hundreds, and commenced ransacking the mines, stealing the machinery, and murdering the few employés that remained.

#### TUBAC AND TUCSON PLUNDERED.

At Tubac, the headquarters of the Arizona Mining Company, the Apaches, commanded by their chief, Cochise, besieged the town on one side, while the Sonorians lurked in the bushes on the other. Twenty men held it for three days, and finally escaped under cover of night. During one night a messenger was sent to Tucson, and returned with a party of twenty-five, under command of Grant Ourey, who went to the assistance of those beleaguered at Tubac. They drove off the Apaches. A party of Mexican robbers had also come up from Sonora, but they fell back to Tumacacori Mission, on seeing the American strength, and there murdered, in cold blood, an old American who lived at the ranch, and whom even the Indians had spared.

There was nothing left. The troops had burned all the stores, provisions, and groceries, public and private, that they could lay hands upon, as stated above, torn down the mill at Tucson, burned the Canoa, and destroyed the Government stores at Breckenridge and Buchanan, amounting in value to half a million dollars.

A few American miners held on to their locations in Cerbat and Haulapai Mountains. Except at Tucson and Yuma all had been driven or frightened away.

#### CALIFORNIA BATTALION IN ARIZONA.

Gen. Jas. H. Carleton, with 3,000 California Volunteers, was ordered into Arizona and New Mexico. It consisted of artillery, infantry, and cavalry. This army was at first ordered to relieve General Canby, the incidents of whose position in New Mexico have just been related. The California Battalion was composed of stalwart men hardened by exposure to every vicissitude of farmer's and miner's life.

After leaving San Francisco they were delayed by the floods of 1861-62, and performed great labor in making roads, digging and restoring wells in desert places, constructing bridges, establishing depots, escorting trains, protecting settlers, etc.

Their progress through Arizona was very slow. The Apaches were constantly on the watch at every exposed place.

#### ARIZONA VOLUNTEERS.

In 1861 the Arizona Volunteers entered the field. They operated mostly with the California Battalion. They established Camp Lincoln as an outpost of Fort Whipple, twenty-four miles from Prescott. A list of the Arizona volunteers and their operations is given elsewhere.

The frontiers of the Mexican line, previous to the Rebellion, was guarded by a line of forts located about one hundred miles apart. Colonel Loring, a North Carolinian, had been sent out by Floyd, Secretary of War, in the spring of 1860, to take command of the department of New Mexico. Col. G. B. Crittenden, a Kentuckian, was appointed by Colonel Loring to command an expedition against the Apaches, to start from Fort Staunton in the spring of 1861. Lieut. Col. B. S. Roberts, however, who here joined the expedition with two companies of cavalry, soon discovered that Crittenden was devoting all his sober moments—which were few—to the systematic corruption of his subordinates, with intent to lead his regiment to Texas, and there turn it over to the service and support of the Rebellion.\* Roberts repelled his solicitations, and refused to obey any of his orders which should be prompted by treason. He finally accepted a furlough, suggested by Loring, and quickly repaired under it to Santa Fé, the headquarters of the department, making a revelation of Crittenden's treachery to its commander, Colonel Loring, and his adjutant, but only to find them both as disloyal as Crittenden. He was rudely rebuked by them as a meddler with other men's business, and ordered directly back to Fort Staunton, but found opportunity to give notice to Captain Hatch, commanding at Albuquerque, to Captain Morris, who held Fort Craig, and other loyal officers, of the treachery of their superiors, and the duty incumbent on them of resisting it.

#### REMAINED FAITHFUL TO THE UNION.

Meantime, desperate efforts were made by the prominent traitors to bring their men over to their views, by assurances that the Union had ceased to exist—that it had no longer a Government able to pay them or feed them—while, if they would but consent to go to Texas and take service with the Confederacy, they should be paid in full, and more than paid, besides having great chances of promotion. To their honor be it recorded, not one man listened to the voice of the charmer, though Captain Claiborn, at Fort Staunton, made several harangues to his company, intended to entice them into the Confederate service. Of the 1,200 regulars in New Mexico, one only deserted during this time of trial, and he, it is believed, did not join the enemy. Finally, the disloyal officers, headed by Loring and Crittenden, were glad to escape unattended,

\*From Greeley's American Conflict.

making their rendezvous at Fort Fillmore, twenty miles from the Texas line, not far from El Paso, where Major Lynde commanded. Here they renewed their intrigues and importunities, finding a large portion of the officers equally traitorous with themselves. But Major Lynde appeared to hold out against their solicitations. His forces, however, were so demoralized that, soon afterward, July 24, 1861, when he led 480 of them, out of 700, to the village of Mesilla, some twenty miles distant, he fell into an ambush of 200 badly armed Texans, and, after a skirmish, wherein his conduct can only be vindicated from the imputation of cowardice by the presumption of treason, he ordered a retreat to the fort, which his men were next day engaged in fortifying, when surprised, at 10½ A. M., by an order to evacuate that night. The commissary was ordered to roll out the whisky, from which the men were allowed to fill their canteens, and drink at discretion.

No water was furnished for the weary march before them, over a hot and thirsty desert. They started as ordered; but, before they had advanced ten miles, men were dropping out of the ranks, and falling to the earth exhausted or dead drunk.

At 2 A. M., a Texan force was seen advancing on their flank, whereupon Lynde's adjutant remarked, "They have nothing to fear from us." Our men were halted, so many of them, at least, as had not already halted of their own accord, and the officers held a long council of war. Many privates of the command likewise took counsel, and decided to fight. Just then, Captain Gibbs appeared from the officers' council, and ordered a retreat upon the camp, saying, "We will fight them there." Arrived at the camp, our soldiers were ordered to lay down their arms, and informed, "You are turned over as prisoners of war." The subordinate officers disclaimed any responsibility for this disgraceful surrender, laying the blame wholly upon Lynde. Our men were paroled, and permitted, as prisoners, to pursue their course northward, after listening to a speech from Colonel Baylor, of their captors, intended to win their good-will.

#### TERRIBLE SUFFERING.

Their sufferings, on that forlorn march to Albuquerque and Fort Wise, were protracted and terrible, some becoming deranged from the agony of their thirst, some opening their veins and drinking their own blood. Major Lynde, instead of being court-martialed and shot, was simply dropped from the rolls of the army, his dismissal to date from his surrender, July 27, 1861; and Capt. A. H. Plummer, his commissary, who held \$17,000 in drafts, which he might at any moment have destroyed, but which were handed over to, and used by the Rebels, was sentenced by court-martial to be reprimanded in general orders, and suspended from duty for six months!

#### NEW MEXICO ESTABLISHED SLAVERY.

New Mexico, thus shamefully bereft, at a blow, of half her defenders, was now reckoned an easy prey to the gathering forces of the Rebellion. Her Mexican population, ignorant, timid, and superstitious, had been attached to the Union by conquest, scarcely fifteen years before, and had, meantime, been mainly under the training of Democratic officers of strong pro-slavery sympathies, who had induced her Territorial legislature, some two years before, to pass an act recognizing slavery as legally existing among them, and providing stringent safeguards for its protection and security—an act which was still unrepealed. Her Democratic officials had not yet been replaced by appointees of President Lincoln.

Her delegate in Congress, Miguel A. Otero, issued, February 15, 1861, and circulated an address to her people, intended to disaffect them toward the Union, and incite them to favor of the Rebellion.

The Democratic Governor, Abraham Rencher, though a North Carolinian, upon receiving news of Lynde's surrender, issued a proclamation calling out the entire militia force of the Territory, to act as a home guard, which call, though it added considerably to the effective force of her defenders, was calculated to exert a wholesome influence upon public opinion, and keep restless spirits out of mischief.

Col. E. R. S. Canby, who had succeeded to the command of the Department, was a loyal and capable soldier and was surrounded, for the most part, by good and true men.

#### ACT ESTABLISHING SLAVERY REPEALED.

When the new Governor, Henry Connolly, met the Territorial Legislature, in December, 1861, a very wholesome and earnest loyalty was found well-nigh universal, so that the Governor's cautious recommendation that the act for the protection of slave property be modified, as needlessly severe and rigorous, was promptly responded to by an almost unanimous repeal of the entire act, leaving the statute-book of New Mexico clean of all complicity with the chattelizing of man.

Meantime, Colonel Canby was quietly proceeding with the organization of his militia and other forces for the inevitable contest, crippled throughout by the want of money, munitions, and supplies of all kinds. Even directions and orders, so plentifully bestowed on most subordinates, were not vouchsafed him from Washington, where the absorption of all energies in the more immediate and momentous struggle on the Potomac and the Missouri, denied him even an answer to his frequent and importunate requisitions and representations.

An urgent appeal, however, to the Governor of the adjacent Territory of Colorado, had procured him thence

a regiment of volunteers, who, though falling far enough short of the efficiency of trained soldiers, were worth five to ten times their number of his New Mexican levies. Making the best use possible of his scanty or indifferent materials, he was probably about half ready to take the field when apprised that the Texans were upon him.

#### CONQUEST OF NEW MEXICO.

Gen. H. F. Sibley had encountered similar difficulties, save in the qualities of his men, in organizing and arming, in northwestern Texas, the "Sibley Brigade," designed for the conquest of New Mexico. His funds were scanty, and the credit of his Government quite as low as that depended on by Canby; but the settled, productive districts of Texas were not very remote nor inaccessible, while Canby's soldiers were for weeks on short allowance, simply because provisions for their comfortable subsistence were not to be had in New Mexico, nor nearer than Missouri, then a revolutionary volcano, where production had nearly ceased.

Two insignificant collisions had taken place near Fort Craig, in October, 1861. In the earlier, a company of New Mexican volunteers, Captain Mink, were routed and pursued by a party of Texans, who, in their turn, were beaten and chased away, with considerable loss, by about 100 regulars from the fort. The surviving Texans escaped to Mesilla, and Canby occupied the frontier posts so far down as Fort Staunton, leaving Fort Fillmore still in the hands of the Texans.

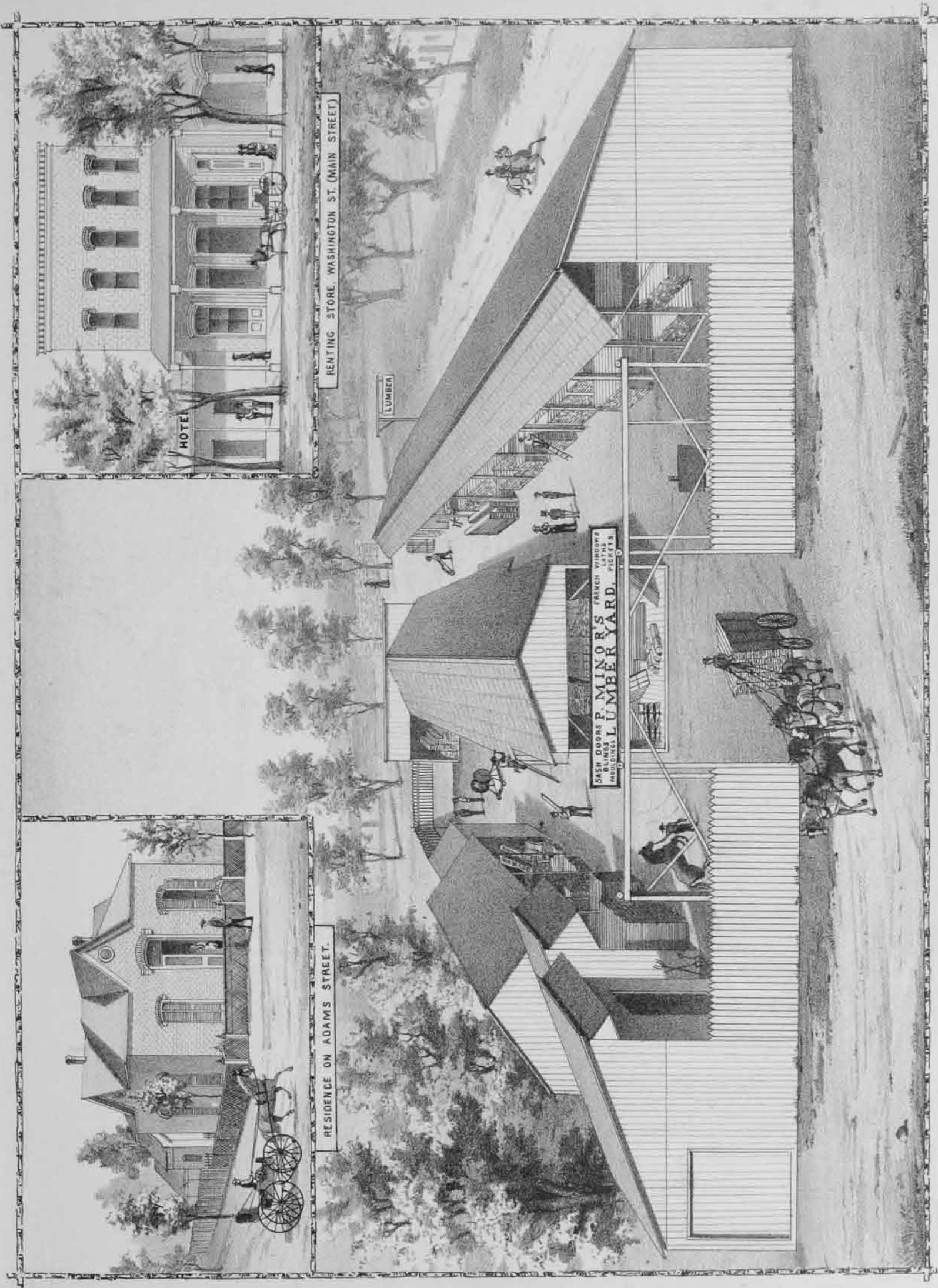
#### THE TEXAN RANGERS.

General Sibley, who had hoped to advance in the autumn of 1861, was still at Fort Bliss, within the limits of Texas, on the first of January, 1862, but moved forward, a few days thereafter, with 2,300 men, many of them trained to efficiency in the Mexican War and in successive expeditions against the Apaches and other savages, wherein they had made the name of "Texan Rangers" a sound of terror to their foes. For Canby's regulars and American volunteers, they had some little respect—for his five or six thousand New Mexicans, none at all. Advancing confidently, but slowly, by way of Fort Thorn, he found Canby in force at Fort Craig, which he confronted about the middle of February, 1862. A careful reconnaissance convinced him that it was madness, with his light field-guns, to undertake a siege, while his offer of battle in the open plain, just outside the range of the guns of the fort, was wisely declined. He would not retreat, and could not afford to remain, consuming his scanty supplies, while to pass the fort without a contest, leaving a superior force undemoralized in his rear, was an experiment full of hazard; he, therefore, resolved to force a bat-

tle, and, with that view, forded the Rio Grande to its east bank, passed the fort at a distance of a mile and a half, and encamped nearly opposite, in a position of much strength, but entirely destitute of water, losing 100 of the mules of his baggage-train during the night, by their breaking away, in the frenzy of their thirst, from the weary and sleepy guards appointed to herd them. He was thus compelled to abandon a part of his wagons and baggage next morning, as he started for the river, the smallness of his force not permitting him to divide it in the presence of a capable and vigilant enemy.

When his advance, 250 strong, under Major Pyron, reached Valverde, at 8 A. M., a point where the river was accessible, fully seven miles from the fort, they found themselves confronted by a portion of our regular cavalry, Lieutenant-Colonel Roberts, with two most efficient batteries, Captain McRae and Lieutenant Hall, supported by a large force of regular and volunteer infantry. Our batteries opening upon him, Pyron, greatly outnumbered, recoiled, with some loss, and our troops exultingly crossed the river to the east bank, where a thick wood covered a concentration of the enemy's entire force. The day wore on with more noise than execution, until nearly 2 P. M., when Sibley, who had risen from a sick bed that morning, was compelled to dismount and quit the field, turning over the command-in-chief to Col. Thomas Green, of the 5th Texas, whose regiment, in the meantime, had been ordered to the front. The battle was continued, mainly with artillery, wherein the Federal superiority, both in guns and in service, was decided, so that the Texans were losing the most men in spite of their comparatively sheltered position. To protract the fight in this manner was to expose his men to constant decimation without a chance of success. Canby, who had reached the field at 1 P. M., considered the day his own, and was about to order a general advance, when he found himself anticipated by Green, at whose command his men, armed mainly with revolvers, burst from the wooded cover and leaped over the line of low sand-hills behind which they had lain, and made a desperate rush upon McRae's battery confronting them. Volley after volley of grape and canister was poured through their ranks, cutting them down by scores, but not for an instant checking their advance.

There were 1,000 when they started; a few minutes later there were but 900; but the battery was taken, while, choosing death rather than flight, McRae, Lieutenant Michler, and most of their men lay dead beside their guns. Our supporting infantry, twice or thrice the Texans in number, and including more than man for man of regulars, shamefully withstood every entreaty to charge. They lay groveling in the sand in the rear of the battery, until the Texans came so near as to make their revolvers danger-



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ous, when the whole herd ran madly down to and across the river, save those who were overtaken by a cowardly death on the way. The Colorado volunteers vied with the regulars in this infamous flight.

Simultaneously with this charge in front, Major Raguet, commanding the Texas left, charged our right at the head of his cavalry; but the disparity of numbers was so great that he was easily repulsed. The defeat of our center, however, soon altered the situation, our admirable guns being quickly turned upon this portion of the field, along with those of the Texans, when a few volleys of small-arms, and the charging shout of the victors, sufficed to complete the disaster. No part of our army seems to have stopped to breathe until safe under the walls of the fort. Six excellent guns, with their entire equipage, and many small-arms, were among the trophies secured by the victors. The losses of men were about equal—60 killed and 140 wounded on either side.

#### FORT CRAIG INVULNERABLE.

Fort Craig was still invulnerable, though a flag of truce, dispatched by Canby as he reached its gates, was fondly mistaken for a time by the Texans as bearing a proposition to surrender. It covered an invitation to a truce for the burial of the dead and proper care of the wounded, to which two days were given by both armies, when a rebel council of war decided that an assault was not justifiable, but that they might now safely leave Canby to his meditations, and push on up the river into the heart of the Territory. They did so, as they anticipated, without further opposition from the force they had so signally beaten. Leaving their wounded at Socorro, 300 miles on the way, they advanced to Albuquerque, fifty miles farther, which fell without resistance, and where their scanty stock of provisions was considerably replenished.

#### BATTLE NEAR SANTA FE.

At Cubero, sixty miles westward, they obtained more provisions and some ammunition. Still advancing on Santa Fé, the Confederates encountered, at Cañon Glorietta, or Apache Pass, fifteen miles from Santa Fé, near Fort Union, a new Federal force of 1,300, composed partly of regulars, but mainly of green Colorado volunteers, the whole commanded by Col. John P. Slough.

The Rebel force actually present, under Col. W. R. Scurry, was decidedly inferior in numbers, but in nothing else. The narrowness of the cañon precluded all flanking, enabling the Rebels to span it with a line of infantry, which instantly charged, with the Texan yell, revolver and knife in either hand. Our forces scarcely waited to be in danger before breaking and flying in the wildest confusion. In a few moments, not a man of them remained in sight of the Rebels.

Scurry halted, re-formed his men, brought up his guns, and fired a few shots to ascertain the position (if position they still had) of his adversaries, and then ordered Major Shropshire, with his right, and Major Raguet, with his left, to charge with cavalry and develop the new Federal line, while he would lead forward the center at the first sound of their guns. Delay ensuing, he moved to the right to ascertain its cause, and found that Shropshire had been killed. Immediately taking command of that wing, he advanced and attacked—the left opening fire, and the center advancing, as he did so. Three batteries of eight guns each opened a deadly fire of grape, canister, and shell, as they came within range, tearing through their ranks, but not stopping their advance. A short but desperate hand-to-hand conflict ensued, our infantry interposing to protect their guns, which were saved and brought off, with most of our wagons. But our infantry soon gave way, and the Texan victory was complete. Their loss was reported by Scurry as thirty-six killed and sixty wounded; but among the former were Majors Shropshire and Raguet, Captain Burkholt, and Lieutenant Mills.

During the fight, which lasted from noon until about 4 P. M., Major Chivington, of Colorado, with four companies, gained the rear of the Rebel position, and destroyed a part of their train, also a cannon, which he spiked, when, learning that Slough was defeated, he decamped. Our total loss was reported as twenty-three killed and fifty wounded; while, in a skirmish with Pyron's cavalry, the morning before, Slough took fifty-seven prisoners with a loss of only fifteen.

#### REBELS EVACUATE THE TERRITORY.

Sibley entered Santa Fé in triumph soon afterward, meeting no further resistance. He collected there all that remained of his little army, and confiscated to its use whatever of provisions and clothing, of wagons and animals, he could lay hands on. But he found the population, with few exceptions, indifferent or hostile, the resources of food and forage extremely limited, and his hold upon the country bounded by the range of his guns. Never had heroic valor been persistently evinced to less purpose. Before he had rested a month, he found himself compelled to evacuate his hard-won conquest, and retreat by forced marches to Albuquerque, his depot, which Canby, advancing from Fort Craig, was threatening. He reached it in time to save his supplies, but only to realize more completely the impossibility of attaching New Mexico to the Confederacy, or even of remaining in it.

He evacuated it on the 12th of April, 1862, moving down both banks of the river to Los Lunas, thence to Peralto on the east side, where he found Canby looking for him. Some fighting at long range ensued, with no

serious results; but Sibley, largely outnumbered, crossed the river during the night, and pursued his retreat down the west bank next morning, Canby moving almost parallel with him on the east. The two armies encamped at evening in plain sight of each other.

#### RETREAT OF THE TEXANS.

Sibley, in his weakened condition, evidently did not like this proximity. "In order," as he says in his report, "to avoid the contingency of another general action in our then crippled condition," he set his forces silently in motion soon after night-fall, not down the river, but over the trackless mountains, through a desolate, waterless waste, abandoning most of his wagons, but packing seven days' provisions on mules, and thus giving his adversary the slip. Dragging his cannon by hand up and down the sides of the most rugged mountains, he was ten days in making his way to a point on the river below, where supplies had been ordered to meet him, leaving his sick and wounded in hospitals at Santa Fé, Albuquerque, and Socorro, to fare as they might.

He naively reports that "sufficient funds in Confederate paper were provided them to meet every want, *if it be negotiated,*" and honors the brothers, Raphael and Manuel Armijo—wealthy native merchants—who, on his arrival at Albuquerque, had boldly avowed their sympathy with the Confederate cause, and placed stores containing \$200,000 worth of goods at his disposal. He states that, when he evacuated Albuquerque, they abandoned luxurious homes to identify their future fortunes with those of the Southern Confederacy, and considerately adds, "I trust they will not be forgotten in the final settlement."

In closing, General Sibley expresses the unflattering conviction that, "except for its political geographical position, the Territory of New Mexico is not worth a quarter of the blood expended in its conquest," and intimates that his soldiers would decidedly object to returning to that inhospitable, undesirable country. These and kindred considerations had induced his return to Fort Bliss, Texas, and now impelled him to meditate a movement without orders still further down the country.

Colonel Canby wisely declined to run a race of starvation across those desolate mountains, in the rear of the flying foe, but returned to Santa Fé, whence his order, of even date with Sibley's official report, claims that the latter had been "compelled to abandon a country he had entered to conquer and occupy, leaving behind him, in dead and wounded, and in sick and prisoners, one-half of his original force."

#### ADVANCE OF THE CALIFORNIA BATTALION.

Capt. J. C. Cremony was of the advance, and was ordered from Yuma to occupy Antelope Pass. Here he found

the river had made great inroads upon the *mesa*, or tableland, between it and the hill, until only a passage of something like a hundred yards intervened. Of this pass he took possession, drawing up his two wagons and picket line in such a manner as to intercept all travel, while a lookout was maintained during the day from the top of a peak.

They soon after marched on up the Gila, reaching the first Maricopa villages, south of Phoenix. Lieut.-Col. Theodore Coult, of the infantry, was in command at the center village. Quartermaster George Shearer was dispatched across the Gila Bend, sixty-five miles, with the mails. The camp was located on an extensive clear plain. By digging about a foot or two, plenty of alkali water was to be had. The grass was found to have made the animals sick, and Captain Cremony moved them to a more favorable point three miles westward. Here a redoubt of earth was thrown up, in case of an attack, and within were placed the extra arms, ammunition, and provisions. In this inglorious manner the company remained until the arrival of Col. E. A. Regg, when they were ordered to advance.

The grazing ground to which they resorted during the stay near the Maricopa villages had been the scene of a desperate conflict between that tribe and the Pimos, on one side, and the Yumas, Chimehuevis, and Amojaves, on the other. Victory rested with the Maricopas and Pimos, who slew over four hundred of the allied tribes, and so humiliated them that no effort has ever been made on their part to renew hostilities. This battle occurred in 1859, and the ground was, at this time four years later, strewn with the skulls and bones of slaughtered warriors. Every day large numbers of the Maricopas visited the camp and were received with kindness, which they never failed to appreciate.

General Carleton next ordered Captain Cremony and his command, with Capt. Thomas Roberts, Company E, 1st California Infantry, to advance to the San Pedro River. Here it became necessary to know if Dragoon Springs, some thirty miles further east, could supply both companies with water. Captain Roberts took the advance with his infantry, three wagons, and seven mounted men, to act as scouts and couriers. Water in abundance was reported and Captain Cremony joined the advance party. A long and fatiguing march of forty miles, without water, was made before reaching Apache Pass. But as the amount of water was uncertain, Captain Roberts pushed ahead with the infantry and seven cavalry, starting at 5 P. M. By daylight the balance of the army were on the long and dreary march, and at dark arrived at Ewell's Station, fifteen miles west of the pass. Captain Roberts was attacked in Apache Pass by a very large body of Indians.

"We fought them," says Cremony, "for six hours, and finally compelled them to run. Captain Roberts then directed us to come back through the pass, and report with orders to park the train and take every precaution for its safety. On leaving the pass we were pursued by over fifty well-armed and mounted Apaches, and we lost three horses, killed under us, and that one—pointing to a splendid gray—is mortally wounded. Sergeant Maynard had his right arm fractured at the elbow with a rifle ball, and John Teal was believed to be killed, as we saw him cut off by a band of fifteen or twenty savages, while we were unable to render him any assistance."

The wagons were ordered to be parked; every man was supplied with ammunition and posted to the best advantage; proper attention was paid to the wounded sergeant, and the camp arranged in such a manner as to insure a warm reception to a large body of savages. They remained on the *qui vive* until one o'clock A. M., when to their extreme surprise and sincere gratification, they were joined by John Teal, who was supposed to have been killed. He brought with him his saddle, blanket, saber, and pistols, having lost his horse and spurs. His narrative is so full of interest, and so well illustrates a phase in Apache character, that it is worth recording.

#### JOHN TEAL'S ADVENTURES.

"Soon after we left the pass," said he, "we opened upon a sort of hollow plain or vale, about a mile wide, across which we dashed with speed. I was about two hundred yards in the rear, and presently a body of about fifteen Indians got between me and my companions. I turned my horse's head southward, and coursed along the plain, lengthwise, in the hope of outrunning them, but my horse had been too sorely tested, and could not get away. They came up and commenced firing, one ball passing through the body of my horse, just forward of his hind quarters. It was then about dark, and I immediately dismounted, determined to fight it out to the bitter end. My horse fell and as I approached him he began to lick my hands. I then swore to kill at least one Apache. Lying down behind the body of my dying animal, I opened fire upon them with my carbine, which, being a breech-loader, enabled me to keep up a lively fusillade. This repeated fire seemed to confuse the savages, and instead of advancing with a rush they commenced to circle round me, firing occasional shots in my direction. They knew that I also had a six-shooter and a saber, and seemed unwilling to try close quarters. In this way the fight continued for over an hour, when I got a good chance at a prominent Indian and slipped a carbine ball into his breast. He must have been a man of some note, because soon after that they seemed to get away from me, and I could hear their voices

growing fainter in the distance. I thought this a good time to make tracks, and divesting myself of my spurs, I took the saddle, bridle, and blanket from my dead horse and started for camp. I have walked eight miles since then."

It is needless to add how gratified they were to receive this brave and loyal soldier again, and find him free from wound or scar. It was subsequently ascertained that the man he shot was no less an individual than the celebrated Mangas Colorado, but the rascal survived his wound to cause more trouble.

#### BATTLE OF APACHE PASS.

Cheis, the principal warrior of the Chiricahui, and his braves, united with Mangas Colorado, made a force of about seven hundred warriors, determined to hold the pass against the soldiers. Roberts, entirely unsuspecting an attack, entered the pass with the ordinary precautions. He had penetrated two-thirds of the way, when, from both sides of that battlemented gorge, a fearful rain of fire and lead was poured upon his troops, within a range of thirty to eighty yards. On either hand the rocks afforded natural and almost unassailable defenses. Every tree concealed an armed warrior, and each warrior boasted his rifle, six-shooter, and knife. A better armed host could scarcely be imagined. From behind every species of shelter came the angry and hissing missiles, and not a soul could be seen. Quickly, vigorously, and bravely did his men respond, but to what effect? They were expending ammunition to no purpose, their foes were invisible there was no way to escalate those impregnable natural fortresses, the howitzers were useless, and the men doubtful how to attack the foe. In such strait, Roberts determined to fall back, re-form, and renew the contest. The orders were given and obeyed with perfect discipline. Reaching the entrance to the pass the troops were reorganized; skirmishers were thrown out over the hills so as to command the road; the howitzers were loaded, and belched forth their shells whenever found necessary. In this manner the troops again marched forward. Water was indispensable for the continuance of life. Unless they could reach the springs, they must perish. A march of forty miles under an Arizonian sun, and over wide alkaline plains, with their blinding dust and thirst-provoking effects, had already been effected, and it would be impossible to march back again without serious loss of life, and untold suffering, without taking into account the seeming disgrace of being defeated by seven times their force of Apaches.

What would it avail those brave men to know that the Indians were as well armed as they; that they possessed all the advantages; that they outnumbered them seven to one, when the' outside and carping world would

be so ready to taunt them with defeat, and adduce so many specious reasons why they should have annihilated the savages?

Forward, steadily forward, under a continuous and galling fire, did those gallant companies advance until they reached the old station house in the pass, about six hundred yards from the springs. The house was built of stone, and afforded ample shelter; but still they had no water, and eighteen hours, with a march of forty miles, including six hours of sharp fighting, had been passed without a drop. Men and officers were faint, worn-out with fatigue, want of sleep, and intense privation and excitement, still Roberts urged them on and led the way. His person was always the most exposed, his voice ever cheering and encouraging.

#### APACHES CONSTRUCT BREASTWORKS.

Immediately commanding the springs are two hills, both high and difficult of ascent. One is to the east, and the other overlooks them from the south. On these heights the Apaches had built rude but efficient breastworks by piling rocks one upon the other so as to form crenelle holes between the interstices. From these fortifications they kept up a rapid and scathing fire, which could not be returned with effect by musketry from three to four hundred feet below. The howitzers were got into position, but one of them was so badly managed that the gunners were brought immediately under the fire from the hills without being able to make even a decent response. In a few moments it was overturned by some unaccountable piece of stupidity, and the artillerists driven off by the sharp fire of the savages. At that juncture, Sergeant Mitchell, with his six associates, made a rush to bring off the howitzer and place it in a better position. Upon reaching the guns, they determined not to turn it down hill, but up, so as to keep their fronts to the fire. While performing this gallant act, they were assailed with a storm of balls, but escaped untouched, after having righted the gun, brought it away, and placed it in a position best calculated to perform effective service. So soon as this feat had been happily accomplished, the exact range was obtained and shell after shell hurled upon the hills, bursting just when they should. The Apaches, wholly unused to such formidable engines, precipitately abandoned their rock works and fled in all directions.

It was nearly night. To remain under those death-dealing heights during the night, when camp-fires would afford the enemy the best kind of advantage, was not true policy, and Captain Roberts ordered each man to take a drink from the precious and hardly-earned springs, and fill his canteen, after which the troops retired within the shelter afforded by the stone station house, the proper guards and pickets being posted.

In this fight Roberts had two men killed and three wounded, and it was afterwards learned from a prominent Apache who was present in the engagement, that sixty-three warriors were killed outright by the shells, while only three perished from musketry fire. He added: "We would have done well enough if you had not fired wagons at us." The howitzers being on wheels, were deemed a species of wagon by the Apaches, wholly inexperienced in that sort of warfare.

Captain Roberts suffered his men to recruit their wasted energies with supper, and then, taking one-half his company, the remainder being left under command of Lieutenant Thompson, marched back to Ewell's Station, fifteen miles, to assure the safety of the train under Captain Cremony's command, and escort it through the pass.

#### MARCH OF THE CALIFORNIA COLUMN.

At five o'clock A. M., the train was straightened out with half the effective cavalry force three hundred yards in the advance, and the other half about as far in the rear, while the wagons were flanked on either side by the infantry. In this order they entered that most formidable of gorges, when the bugles blew a halt. A considerable body of the infantry were then thrown out on either side as skirmishers, with a small reserve as the rallying point, while the cavalry were ordered to guard the train, and make occasional dashes into the side cañons. The skirmishers, plunged into dark and forbidding defiles, and climbed steep, rocky and difficult acclivities, while the cavalry made frequent sorties from the main body to the distance of several hundred yards.

In this manner they progressed through that great stronghold of the Apaches and dangerous defile, until they joined the detachment under Lieutenant Thompson, at the stone station house, where they quartered for the remainder of that day.

Let it be borne in mind that Captain Roberts' company of Californian Infantry had marched forty miles without food or water, had fought for six hours with desperation against six times their numbers of splendidly-armed Apaches, ensconced behind their own natural ramparts, and with every possible advantage in their favor; had driven that force before them, occupied their defiles, taken their strongholds, and, after only one draught of water and a hasty meal, had made another march of thirty miles, almost absolutely without rest. It is doubtful if any record exists to show where infantry have made a march of seventy miles, fought one terrible battle of six hours' duration, and achieved a decided victory under such circumstances.

The shrill fife, the rattling drum, and the mellow bugles sounded the reveille before dawn of the next day. The camp-fires were soon throwing up their lively jets of



*Thomas Fitch*



RESIDENCE OF HON. THOMAS FITCH, ON 12 TH. ST. AND MILITARY PLAZA, TUCSON, ARIZONA.

flame and smoke, while the grateful odors of frying bacon and browning flap-jacks saluted the appreciative nostrils of the hungry troops. But there was no water, and without water they could have no coffee, that most coveted of all rations. The Apaches had again occupied the heights above the springs, and also the water sources, which were thickly sheltered by trees and willow underbrush. Roberts again made preparations to dislodge the savages, and ordered his howitzers into the most favorable positions. The howitzers then opened fire—the shells burst splendidly; large numbers of Apaches were observed to decamp from the heights in the most hurried manner; the springs also underwent a similar cleaning, and in less than twenty minutes the troops were permitted to advance and fill their canteens, while the cavalry, without waiting further orders, made a rush after the retreating savages until the rapid rise and terribly broken nature of the ground checked their career. The hillsides were covered with fleeing Apaches, who seemed imbued with supernatural powers of locomotion. Upwards they sped with the celerity of Alpine goats, until they disappeared behind the crests of tall mountains and rugged hills. In peace and quiet they partook of the precious fountain. Horses and mules, which had not tasted water for forty-eight hours, and were nearly famished from so dusty a road and so long a journey under the hottest of suns, drank as if they would never be satisfied. An hour later they moved through the pass, entered upon the wide plain which separates it from the San Simon River, and reached camp on that creek, without further trouble, about four o'clock P. M.

#### ADVENTURES OF THE TROOPS.

Short breathing space was afforded at the San Simon. On the morning of the third day after arrival, and the trying tests to which they had been subjected, orders came from Captain Roberts to Captain Cremony to escort the train of twenty-six wagons back to the San Pedro, in order to furnish the required transportation for the provision, ammunition, clothing, and other supplies of the column. For this duty was assigned fourteen troopers, and seven men of Roberts' company. The intervening country had been well examined through fine field glasses, and on two occasions a thorough reconnoissance had been made by the cavalry, which showed that a very excellent passage existed to the north of the Chiricahui Range, over nearly a level plain, and that the distance would be only some seven miles longer. This route, with the approbation of Captain Roberts, was at once selected for return. Nature had provided a passage nearly as short, much less laborious for men and animals, well supplied with water, wood, and grass, and, by its open character, affording the very best field for the operations of cavalry, and the widest range for splendid breech-loading weapons of long reach. It was

not a question whether they should again fight the Indians, but whether they could forward the main object of the expedition. Indeed, strict orders had been given to refrain from Indian broils as much as possible, to suffer some wrong rather than divert time and attention from the great purpose contemplated, which was to liberate Arizona from Confederate rule and effect a junction with General Canby as soon as possible. Had it been exclusively an Indian campaign, other means would have been adopted.

They started in the evening just after sundown, to prevent the Apaches from seeing the dust raised by the column, and directed their course over the open plain, north of the Chiricahui Range, and between it and the mountains, from which it is divided, some four miles, by an open and elevated piece of clear land, without trees or rocks, and thickly covered with the finest grama grass. They traveled all night with the cavalry covering the front and rear, and the seven infantrymen sleeping in the empty wagons, with their weapons loaded and ready at a moment's warning. Every little while the cavalry were required to patrol the length of the column, to ward off any sudden and unforeseen attack. The infantry were allowed to sleep, in order that they might be fresh to keep guard throughout the day. In this manner we progressed until five A. M., next day. The wagons were handsomely corralled nearly in a circle, with the animals and men all inside, except the guard, and the camp properly prepared against surprise. We were then exactly north of the Chiricahui Mountains, and south of another range, each being about two miles distant. There could be distinctly seen large numbers of Apaches riding furiously up and down the steeps of those heights, and sometimes advancing on the plain, as if to attack. But experience had taught them that our carbines and Minnie rifles were deadly at nearly a mile's distance, and they did not approach within their reach. Horses were tied to the picket rope, which extended across the open-air end of the corral, and covered by a sufficient guard. Finding that the Apaches did not care to make an onslaught, the cavalry and teamsters, all of whom were well armed, retired to rest, after partaking of a hearty meal. Next evening, at dark, they again hitched up and pursued their journey as before.

The next halt was made six miles from Ewell's Station, and they had come seventy miles in two nights. That day they saw no Indians, although the same precautions were adopted as if surrounded by large numbers. Their next march was to the Ojo de los Hermanos, or the "Brothers' Springs," so as to avoid stopping to water at Dragoon Springs, which were two miles up a deep and dangerous canon, where the enemy would possess every possible advantage, and where the animals would have to be led to water a mile or more from the wagons, with the

delightful prospect of not finding anything like a sufficiency.

In due course of time they regained the San Pedro River, where General Carleton had arrived with a considerable body of troops, Apache Pass was again entered and traversed; but it seemed as if no Indian had ever awakened its echoes with his war-whoop—as if it had ever been the abode of peace and silence. Next day they emerged from the pass without molestation, or seeing an Indian sign; but, instead of directing their course toward the San Simon, diverged by another route toward the Cienega, a flat, marshy place, at the foot of the next easterly range of mountains, of which Stein's Peak is the most prominent. The San Simon Creek, as it is called, sinks about a mile south of the station bearing that name, and undoubtedly furnishes the supply of water which is to be had at the Cienega, located on the same plain, and about eight miles south of the spot where the creek disappears.

#### APACHES KILL EVERY ONE.

They had progressed about two miles beyond the pass, when they suddenly came upon the bodies of thirteen persons, pierced in many places with bullet and arrow holes, and some with the arrows still sticking, driven deeply into their frames. After some examination, the verdict was that they were the bodies of white men killed by the Apaches but a short time before. This conclusion proved correct, as was afterward ascertained beyond all doubt, and their destruction was compassed by a trick peculiarly illustrative of Apache character.

While these united forces were occupying Apache Pass, waiting the arrival of the troops as just related, they descried a small band of Americans approaching from the east, across the wide plain intervening between that place and the Cienega, and determined to cut it off. Those wily Indians soon recognized in the new-comers a small, but well-armed party of the hardy and experienced miners from the Santa Rita del Cobre, and knew that such men were always on their guard and prepared to defend their lives with the greatest courage and determination. They knew that they would be specially on the *qui vive* after having entered the pass, and that any attack upon them would probably result in the loss of several of their warriors. How to compass their ends and obviate this last possibility became the chief objects of their attention. Two miles east of the pass, right in the clear and unobstructed plain, there is a gully, formed by the washing of heavy rains through a porous and yielding soil. This gully is from six to eight feet deep, a quarter of a mile long, three or four yards wide, and cannot be seen from horseback until the rider is within fifty yards of the spot. With consummate cunning a large body of the Apaches

ensconced themselves in this gully, knowing that the travelers would be somewhat off their guard in an open plain without place of concealment, and awaited the approach of their victims. Not apprehending any danger, the hardy miners rode forward with their rifles resting across their saddle bows and their pistols in scabbards. When they had arrived within forty yards of the gully, a terrific fire was opened upon them by the Indians, which killed one-half their number outright. The remainder sought safety in flight, but were overtaken and every one killed. They had with them \$50,000 in gold-dust.

These were the bodies discovered by the army, and interred as circumstances would permit.

#### OLD FORT WEST CONSTRUCTED.

In the spring of 1862, the California troops had got well forward, and were at various points. Among the posts established was Fort West, named after Colonel West, of First California Infantry. The post was located in the vicinity of the Santa Rita Mines, near the site of old Fort McLane. This location was wisely taken, being in the favorite ground of the Apaches. It was situated just over the line in New Mexico.

#### GENERAL CARLETON IN COMMAND.

Soon after the California soldiers reached New Mexico, General Canby was recalled and the command devolved upon General Carleton, and an active campaign was inaugurated against the Apache and Navajo Indians. The many signal triumphs obtained over these Indians could only have been achieved by California soldiers who understood somewhat the Indian character.

#### FORT DAVIS EVACUATED.

General Carleton dispatched Capt. E. D. Shirland and his company C of the First California Cavalry Volunteers, to retake Fort Davis, in Texas. Upon Shirland's arrival, he found the fort deserted by the Confederates; but also discovered that they had left three men behind who had been seized with small-pox. Those poor fellows were abandoned to their fate; but the Confederate troops had scarcely left the place before the Apaches arrived, and with their usual caution they made careful inspection before trusting themselves into the building. In the course of their investigations they discovered the three sick men, and, recognizing the disease with which they were afflicted, filled their bodies full of arrows shot from between the iron bars of the windows, and, without attempting to enter the fortress, went on their way toward their own fastnesses. A few days afterward, Shirland, at the head of twenty-five men, encountered over two hundred of those same Apaches at the place known as "Dead Man's Hole," and killed twenty-two of them without sustaining any other loss than that of a single carbine.

## ARREST OF MOWRY.

In June, 1862, the proprietor of the \*Mowry Silver Mines was seized by a large armed force, under the orders of Gen. J. H. Carleton, while in the legitimate pursuit of his business, and retained as a political prisoner for nearly six months. This seizure was made, as it now appears, upon a false charge. This seizure was illegal, and dictated by personal hostility on the part of General Carleton, as alleged by Mowry.

The following is an extract from the Journal of the Senate of the United States, June 13, 1864:—

“The President *pro tempore* presented a message from the Secretary of War, covering a report of the Adjutant General, in reply to the resolution of the Senate of May 20, 1864, relating to the seizure of the silver mine of Sylvester Mowry, in Arizona, by order of General Carleton, commander in New Mexico, and asking by what authority the mine is now worked, and what disposition is made of the proceeds.

“The Adjutant General relates the fact of the arrest of Mr. Mowry, under order of General Carleton, on the 8th of June, 1862, on a charge of treasonable complicities with the rebels, and in view of a circular issued by Brigadier-General Wright, commanding the Department of the Pacific, declaring all property of enemies of the United States subject to confiscation. The property of Mowry was also seized, and a Board of Investigation appointed by General Carleton reported it as their opinion that he had given aid and comfort to the enemy, and that there was sufficient reason to restrain him of his liberty, and bring him to trial before a military commission. Mowry was then confined, July 2d, in Fort Yuma, California, awaiting trial, but on November 4, 1862, was unconditionally released, under orders from our War Department, Judge Turner directing the commander of the fort to investigate the cause, and retain or release the prisoner as might appear right. There being no evidence before the Board, he was released accordingly.”

While Capt. McCleave, of First California Cavalry, was in command, the Indians having raided and stampered horses and stock, the captain pursued them and at the end of four days surprised them in a cañon and killed forty Indians, not a soldier being even wounded. Here they burned the camp, destroying two tons of dried beef, prepared *marcal*-root, saddles, blankets, bows and arrows. Over three hundred horses were found belonging to the United States Government.

The First California Cavalry, two companies, consisting of 200 troopers, under McCleave and Fritz, were, from continued service of the horses, in need of rest and refreshment. For this purpose General Carleton ordered them

\*Sylvester Mowry was afterwards delegate to Congress from Arizona.

to Reventon, a large ranch near Tubac. But better feed being found near San Xavier del Bac, the companies took up temporary residence at that place for some months.

## INDIANS SUBDUED AND CAPTURED.

The “column of California” captured and held in subjection at Fort Sumner over 9,000 Navajo Indians, including well-known chiefs, distinguished warriors, women, and children. The Apaches proper amounted to nearly 1,500. They were under charge of Capt. H. B. Bristol, Fifth United States Infantry. The force at Fort Sumner was ridiculously small in comparison to the Indians, and could not have been sufficient except for the extreme vigilance adopted.

To show the great amount of service required of California Volunteers, we quote from orders given General Carleton some four months after he assumed command; that was to “keep the country clear of Indians for the space of 300 miles around the post.”

So soon as Sibley’s command had been driven from Arizona and New Mexico, General Carleton devoted his attention to protect from Indian outrage the inhabitants of those Territories.

About this time General Carleton instituted rigid inquiries as to the quantity of provision on hand in the subsistence departments of New Mexico and Arizona, and, from the reports made to him, came to the conclusion that there would be somewhat of a scarcity before supplies could be received. Nearly three thousand Californian troops had been thrown into the two Territories, nine thousand Indians—Apaches and Navajoes—had succumbed to our arms, the country had been overrun and devastated by Sibley’s column from Texas, no industrial nor agricultural pursuits had been re-commenced, and absolute want stared everybody in the face. This state of affairs had been foreseen by Carleton, to some extent, and he was consequently in a condition to be independent until such protection could be granted as would induce the resident population to re-commence farming operations.

## LIST OF MILITARY FORTS.

The following is a list of the military forts in Arizona for 1884, together with the names of the officers in command, and troops stationed at these various posts. The officers of the Military Department of Arizona are good and true men, and will compare favorably with those in any other department. The character of most of them is above reproach. At all the forts are large reservations.

Fort Apache is in Apache County, in an extensive valley cut out of the Sierra Blavea Mountains. It is at an altitude of 6,000 feet, latitude 33° 40', longitude 32° 52'. It is on the south bank of White Mountain River. Major Edward Collins, First Infantry, commanding. Troops I

Third Cavalry, and A, B and F, Sixth Cavalry, and Company B, First Infantry.

Fort Bowie is situated in Cochise County, on a limestone formation. The valley is 1,200 feet deep. It is 3,911 feet above the sea. It was established in 1863. It is eight miles south of the railroad at Bowie Station. It is in the noted Apache Pass. Major D. Perry, Sixth Cavalry, commanding. Troops M, Third Cavalry, and M, Sixth Cavalry and Company F, First Infantry.

Fort Grant is 65 miles north of Tombstone, in the foot-hills of the Penaleno Range of Mountains, 3,985 feet above sea level. It is one of the important posts of Arizona. It is about 25 miles north of Southern Pacific Railroad. Lieut.-Col. C. G. Bartlett, First Infantry, commanding regiment and post. Headquarters, Band and Company A, First Infantry; Troops D, E and F, Third, and D, Sixth.

Fort Huachuca is in a delightful valley on the slope of the Huachuca Range of Mountains. It is one of the largest forts in the Territory. It is situated near the Mexican border, on the line of Cochise and Pima Counties. Capt. A. R. Chaffee, Sixth Cavalry, commanding. Troops H, I and L, Sixth Cavalry, and Co. C, First Infantry.

Fort Lowell is 7 miles from Tucson. Its elevation is 2,530 feet, in pleasant surroundings. It is at the base of Santa Catalina Mountains, on Rillito Creek. Colonel E. A. Carr, Sixth Cavalry, commanding. Headquarters Band, Troops E and K, Sixth Cavalry, and Co. I, First Infantry.

Fort McDowell is on the Verde River, 7 miles above its junction with Salt River, in Mariposa County, in latitude 33° 40', and is 1,800 feet above the sea. It is 25 miles northeast of Phoenix. Major James Biddle, Sixth Cavalry, commanding. Troops C and G, Sixth Cavalry, and Company D, First Infantry.

Fort Mojave is on the Colorado River, 325 miles above Yuma, 600 feet above the sea, and 60 feet above the Colorado River, in latitude 35° 0' 24", longitude 114° 34' 40". It is in Mohave County. It was established in 1858. Captain F. E. Pierce, First Infantry, commanding. Company G, First Infantry.

Fort Thomas is in the Pueblo Viejo Valley, in Graham County, near the Gila River, and near the site of old Camp Goodwin, north of Camp Grant about 25 miles. Major G. A. Purington, Third Cavalry, commanding Troops A, C, G and L, Third Cavalry.

Fort Verde, in Yavapai County, is in Verde Valley, 7 miles wide, bordered by mountains. Its altitude is 3,500 feet. It is in latitude 34° 33', and longitude 34° 37', and 40 miles east of Prescott. Capt. Gerald Russell, Third Cavalry, commanding. Troops K, Third Cavalry, and Company E, First Infantry.

Whipple Barracks is on an elevated plain, 40 miles west from Fort Verde. It is 5,600 feet high. It is the

headquarters of the Department and residence of the commanding General. It is on Granite Creek, 1 mile from Prescott. It was first located in Chino Valley, 22 miles from Prescott, in 1863, but removed in 1866. Lieut. Col. D. R. Clendenin, Third Cavalry, commanding. Headquarters, Band and Troop H, Third Cavalry, and Company K, First Infantry.

San Carlos is near the San Carlos Indian Reservation. Here Indian troops or scouts are regularly employed, commanded by Captain Emmet Crawford, Third Cavalry. Companies A, B, C and F, Indian Scouts.

In the field, near Fort Apache, are stationed several companies watching the Apache Indians. At this writing Second Lieut. C. B. Gatewood, Sixth Cavalry, is commanding. Companies D and E, Indian Scouts, are here used with good success against the Apaches.

There are about 1,000 troops now in the various forts.

#### GENERAL STAFF OFFICERS.

(Figures denote rank in corps and department.)

Commanding officer, Brig.-Gen. Geo. Crook.

#### QUARTERMASTER'S DEPARTMENT.

21 Captain CHARLES W. WILLIAMS, A. Q. M. U. S. Army, Whipple Barracks, A. T. Assistant to the chief quartermaster of the Department. 36 Captain D. H. FLOYD, A. Q. M. U. S. Army, Fort Huachuca, A. T. Post Quartermaster and A. O. O.

#### MEDICAL DEPARTMENT.

9 Captain J. B. GIRARD, Assistant Surgeon U. S. Army, Post Surgeon, Fort Lowell, A. T. 25 Captain P. R. BROWN, Assistant Surgeon U. S. Army, Post Surgeon and Treasurer, Fort Huachuca, A. T. 29 Captain J. de B. W. GARDINER, Assistant Surgeon U. S. Army, Post Surgeon Fort Bowie, A. T. 21 First Lieutenant GEORGE MCCREERY, Assistant Surgeon U. S. Army, Post Surgeon, Whipple Barracks, A. T. 32 First Lieutenant E. C. CARTER, Assistant Surgeon U. S. Army, Post Surgeon and Treasurer, Fort Thomas, A. T. 35 First Lieutenant W. E. HOPKINS, Assistant Surgeon U. S. Army, Whipple Barracks, A. T. 36 First Lieutenant C. C. BARROWS, Assistant Surgeon U. S. Army, Post Surgeon, Fort Grant, A. T. 37 First Lieutenant P. R. EGAN, Assistant Surgeon U. S. Army, Post Surgeon, Fort Apache, A. T.

#### PAY DEPARTMENT.

6 Major JOSIAH A. BRODHEAD, Paymaster U. S. Army, Tucson, A. T. 9 Major WILLIAM H. COMEGYS, Paymaster U. S. Army, Tucson, A. T.

#### ACTING ASSISTANT SURGEONS IN THE DEPARTMENT.

Dr. A. P. FRICK, Post Surgeon, Fort Verde, A. T.; Dr. THOMAS B. DAVIS, Post Surgeon, San Carlos, A. T.; Dr. JAMES L. ORD, Post Surgeon, Fort Mojave, A. T.; Dr. GEO. E. ANDREWS, Post Surgeon, Fort McDowell, A. T.; Dr. JOHN J. CARROLL, Fort Grant, A. T.; Dr. CHAS. H. ALLEN, Fort APACHE, A. T.; Dr. WILLIAM D. CROSBY, Fort Lowell, A. T.

These forts will be more fully described and located in the chapter on counties and villages.

RIVERS AND LAKES OF ARIZONA.

Principal Lakes; Numerous Rivers; Water Supply; Never Failing Sources; Navigable Streams; Subterranean Rivers; Grand Canons, etc.

THE WATER SUPPLY.

WATER is a precious article in Arizona. Men go out prospecting for springs just as the miner searches for gold croppings. He who secures a spring can control thousands of acres of land. But the springs are few and far between. Notwithstanding this scarcity of water, Arizona is noted for its rivers. The largest river of the Pacific Slope passes through the Territory. The Salt and Gila are large streams. But the valleys of most of them are

Apache Lake is in the vicinity of the fort of that name, near the north fork of the White Mountain River.

Reservoir Lake is on the eastern base of the White Mountains, and consists of a shallow basin floored and walled by lava. The water is shallow and weedy. Its maximum area is about sixty-five acres.

Bartlett's Tank is four miles from Stoneman's Lake. The road leads through thick cedar, and becomes very rocky. Two and a half miles southwest of the lake are two small creeks, with wood and grass, but no permanent water.

The noted Montezuma well is fifty-five miles northeast of Prescott, twelve miles north of Camp Verde. It is in a limestone formation, on a bare, rocky, and level mesa one hundred feet above the creek and seventy feet above the water, which is clear, pure, and about a hundred feet in depth. The opening to the well is circular and about six hundred feet across. The walls are perpendicular on the north-

west side. "Midway between the water and the surface of the mesa," says Hinton, "are three or four pre-historic cave dwellings, twelve to twenty feet frontage, and about the same depth." The eastern and southeastern borders of the well are within thirty to one hundred feet of Beaver Creek, from which it is separated by a rim of inclosing limestone rock, which was built up with stone buildings its whole width, and



SIDE CANONS OF THE COLORADO RIVER.

narrow and the streams have cut deep channels, and only in a comparatively few places are their waters accessible or obtainable for irrigation.

THE PRINCIPAL LAKES.

Neither has Arizona many lakes of any size. They are numerous in the northern and eastern parts of the Territory and are generally called *lagunas*. Other marshy grounds are called *cieneegas*. In some places they are called *wells*, owing to the steep banks that surround them. In other places called *pools* or *tanks*. The following are the chief lakes or natural water springs:—

about one hundred feet in length; the walls of these old buildings yet remaining are twenty feet high in places. Broken pottery ware is abundant in the immediate vicinity. Dykes of lava are on the flat, and the well itself is supposed to be the crater of an extinct volcano.

There are a number of small lakes in the San Francisco Mountains, filled with clear, cold water and stocked with fish.

In Mohave County is Red Lake, a body of water of considerable size, which derives its name from the surrounding soil, which gives color to the waters.

Stoneman's Lake is fifty-eight miles west of Sunset. Crossing on Atlantic and Pacific Railroad, on the Colorado-Chiquito and about thirty miles northeast of Camp Verde. It is about four and one-half miles in circumference, with an abundance of permanent water. It is inclosed by bluffs about four hundred feet high, with thick, heavy pine, and good grass. It is very difficult to get water. The road leads through the Mogollon Mountains from Simpkin's Spring to Stoneman's Lake. In the spring of the year, the road through the mountains is perfectly saturated with water, very miry, and impassable for heavily loaded wagons.

Zuñi Lake is near the eastern line of Arizona, some thirty miles from the Milligan settlement, which is on the upper waters of the Colorado-Chiquito River. It is one of the most desolate regions on the continent, surrounded by bleak, barren, desolate, volcanic mountains, with no outlet, and is nearly one mile across in its widest part. The water is in no place over five feet deep. In the southern part of the lake is a volcanic cone about eighty feet above the surface. From this cone issues a stream of salt water somewhat impregnated with saltpetre, which, by its continual flow, keeps up a uniform height. The heat of the sun leaves salt in crystallized form.

#### COLORADO RIVER.

The Colorado River drains a territory of 300,000 square miles, or more than 180,000,000 acres, a majority of which land is still owned by the Government. A portion of this 800 miles in extent, resting on the Rocky Mountains, is fed by snows, and has numerous rivers, which, with all their branches, form cañons—one leading into another and finally merging into the grand gorge, 6,000 feet deep and 300 miles long. The lower part of the Colorado, for 700 miles, runs through an almost rainless country. There is no wearing away of the banks into the rounded, graceful forms so usual in the vicinities of rivers. The channels of the rivers being so deep, the country is thoroughly drained of water, and very few springs emerge from the surface. The soil is consequently destitute of vegetation. There are evidences, however, of an extensive alluvial deposit, of a time when the river meandered through fertile plains like the Mississippi. The elephant, the mastodon, and their contemporaries wandered in herds over suitable pastures, where now desolation reigns. It is difficult to estimate the influence which this strange system of rivers has exerted over California. Had not the early explorers, when in search of gold, met this obstruction, the California mines would have been discovered and worked, and California would have been cursed with the blight that has covered all the Spanish possessions. It was reserved for a more vigorous race to develop.

#### SOURCES OF THE COLORADO.

Green and Grand Rivers form the head of the Colorado. The former rises near Fremont's Peak, in Wyoming, and runs in a southerly course and unites with Grand River, in Utah, the latter rising in Colorado, just west of Long's Peak, and running in a southwesterly course to its junction with Green River. After these two rivers unite, the stream takes the name Colorado, and runs in a southerly course and empties into the north end of the Gulf of California.

It forms the boundary line between the State of California and Arizona, from the thirty-fifth parallel of north latitude, thence down said river. It is navigable a distance of about five hundred miles. Owing to the constant drifting and washing away of the sandy alluvial soil through which it passes, the water is of a reddish color, and thus the name Colorado, meaning "red river." The water is soft and very healthful.

The river passes through an immense gorge for considerable distance after entering the northern part of the Territory. The perpendicular walls that rise on either side many thousands of feet, and the seething, foaming torrent that forces its way through these rock-bound passages, form a sight wonderful to behold.

Mountains of a jagged, eccentric formation follow its general course to the southward. Peaks impressively counterfeiting human design—Castle Dome, Chimney peaks, Cargo Muchacho, or Freight Boy, Picacho, simply the Peak—loom at various points around the horizon, a fitting foreground of marvels naturally to be expected in Arizona.

The Colorado is one of the most important rivers on the Pacific Coast. Its topography and general characteristics are certainly most remarkable. Taking its rise in the Rocky Mountains, it constitutes simply a mountain stream until it reaches the vicinity of Black Cañon.

Further down it is a turbulent, yellow stream. It cuts into high sand bluffs on the Arizona side, and spreads out their contents in wide bars on that of California. It is without wharves, the few light-draught, high-decked steamboats or barges visible, of those that ply up and down the interminable reaches of the much-celebrated river, being tied up to the banks. Nowhere on the continent, perhaps nowhere in the world, is there as remarkable a river formation.

#### TRIBUTARIES OF THE COLORADO.

The Colorado has three considerable streams after the junction is formed; one is the Rio San Juan, the northern fork of which rises in southwestern Colorado, and the southern fork in New Mexico. A third branch of this stream takes its rise in northeastern Arizona, and is

known as the Rio de Chesley. Another and more considerable tributary is the Colorado-Chiquito, or Little Colorado, the northern fork of which rises in the Navajo Forest, and the others to the south in the Mogollon Mountains. From the point in the extreme northern portion of Arizona where the two Colorados unite, the great stream receives only two small streams, one flowing from southward, and the other, Bill Williams River, from the east, until it reaches the Rio Gila, near the thirty-second parallel, from whence, about forty miles below, it flows into the Gulf of California. All these streams will be particularly described hereafter.

The Colorado River elevation at Hanlon's Ferry, near Fort Yuma, is 120 feet; at the grand bend to the south, near head of Black Cañon, 900 feet; at the junction of the Green and Grand Rivers, 3,860 feet, from whence the name Colorado begins. It is essentially a cañon river until it leaves the territory of the United States, when its character in this regard materially changes, and with it the peculiarities of erosion and alluvial depositions in vicinity of its shifting bed.

#### THE MOUTH OF THE COLORADO.

At the mouth of the Colorado River is a noted landmark called Ship Rock. This rather remarkable peak can be distinctly seen twenty or twenty-five miles from the deck of a low vessel, and at that distance bears a great resemblance to a sloop before the wind. It is about two hundred feet high, and covered with guano. It bears nearly south from the mouth of the river, being distant from it twenty-five miles. A reef of low rocks runs from its base in a southwesterly direction for some two or three miles.

On the opposite side of the gulf is seen the dim outline of a high point, the only land visible in that direction. All of the region in the vicinity is low and flat. On the California side a range of mountains borders the gulf as far north as Black Cape, and then trends towards the northwest. The most elevated peaks appear from the sea to be from 1,500 to 2,000 feet in height. The country north of the cape, between the mountains and the water, is so low as to be invisible from the deck of the vessel. After passing the cape the water begins rapidly to shoal. The bottom is a soft ooze, of a grayish-blue color, and feeling like grease to the fingers.

Robinson's Landing is where vessels usually land coming to the mouth of the river. It is some miles below the mouth, on the western bank. As early as 1850 there was a small wooden building resting on piles about four feet above the ground. The owner and builder was Captain Robinson, who piloted the *Explorer* up the Colorado, in the Ives' expedition of 1857.

The whole country near the west bank of the river is low and overflowed at the highest tides. Robinson's Landing is the most elevated point, and even this is often submerged. When nearly dry, the walking is, in spots, tolerably good, but the surface is intersected, in every direction, by gulleys, whose bottoms are covered either with water, soft mud, or quicksand. Along the shore the face of the bank is very steep.

Above Robinson's Landing, where the Colorado narrows, the character of the river is generally uniform. The banks are low—in few places more than eight feet in height—and the country flat for a long distance beyond. On one or both sides there is usually a fringe of willow and cottonwood, or a thicket of high reeds. The channel is circuitous, but no very sharp bends. In few places in winter the depth of water is less than twelve feet. Sloughs branch in every direction, and many of them might mislead a person unacquainted with the localities. The current is moderate, averaging about two and a half knots an hour.

#### TIDES OF THE COLORADO.

Forty miles above Robinson's Landing, the tide raises the river two or three feet. The water is perfectly fresh, of a dark red color, and opaque from the quantity of mud held in suspension. At the mouth of the river, when the water is at its lowest stage, the surface at high tide is twelve or fifteen feet below the level it attains at the period of full moon, while at low tide it is several feet higher. During the autumn and winter the full moon tides rise higher than those of the new moon, but in spring and summer it is said that the reverse occurs. Similar alternations take place in the comparative heights of the day and night tides at different seasons. The action of the tides causes the "bore," which is described elsewhere.

In winter the days continue warm and delightful, though at night the temperature is low, and a chill wind sometimes sweeps over the wet flats, making the air disagreeable and raw. The atmospheric changes impart variety to a scene that would otherwise be oppressively monotonous. At sunrise the atmosphere is singularly pellucid, and every point on the surface of the water and the land sparkles with light. The distant peaks, that but for the *mirage* would be scarcely visible, stand out in bold relief above the horizon in curiously elongated shapes, the ever-varying outlines bathed in hues of lustrous purple and gold.

As the sun mounts higher, and the light becomes more intense, these grow indistinct, and are gradually lost in a bright mist of grayish-blue that seems to blend the earth and sky. The nearer mountains, the water, and the flats, all partake of the same blue cast.

## CHARACTER OF NAVIGATION.

The boats that ply to Fort Yuma have regular wood depots at convenient intervals. There is plenty of excellent fuel all along the bank. The dead mesquite, willow, and cottonwood trees, instead of rotting, become seasoned in the pure, dry atmosphere. The mesquite has a particularly close, fine-grained texture, and makes a hot fire:

Below Fort Yuma the river is exceedingly crooked, and the current, in some of the bends, is at least four knots an hour. Sharp turns, sand bars, and shoals are constantly encountered. There are no rocks, and the snags, though numerous, are seldom dangerous. In some places the bottom is very irregular, the soundings sometimes varying, in a distance of a dozen yards, from two and a half to twenty-one feet. At other places the river is very wide and filled with snags. The shoals extend all the way across. The occurrence of earthquakes has, at times, seriously affected the river banks and bed, entirely changing their form and character, caving in large slices of the bluff, filling up sloughs, forming new channels, uprooting snags, and creating fresh obstructions. In November, 1852, while a schooner was at anchor thirty miles above the mouth of the river, and floating in fourteen feet of water, there came a premonitory rumbling and shock, and the bed of sand was suddenly forced up, leaving the vessel aground, with only three feet of water around her. In that position she remained till floated off by the succeeding spring tides.

## EXPLORER'S PASS.

A short distance above Fort Yuma is Explorer's Pass. It is quite narrow, and, soon after entering it, you lose sight of the valley above the fort, and feel for the first time that you are in a new part of the river. The hills are but a few hundred feet in height, and the scenery, though picturesque, is by no means grand, but it presents an agreeable change to the broad, monotonous flats. At the bend below the pass, so called from the little steamboat of the Ives' exploring party, is the first grass camp seen on the river. Some rude Indian huts are standing near by, and scattered over the meadow are quite a number of mules and cattle grazing. Above the gap a pleasant valley extends two or three miles to the north. The river crosses it in several channels, in neither of which is there much water.

## COLORADO ABOVE FORT YUMA.

From Fort Yuma to Bill Williams' Fork, is one hundred and ninety miles. The Yuma Flats reach from the fort to the first chain of hills that crosses the river. At very low water the navigation at this place will, doubtless, always be found difficult and tedious. There is nothing to confine the channel, and the water is spread over a

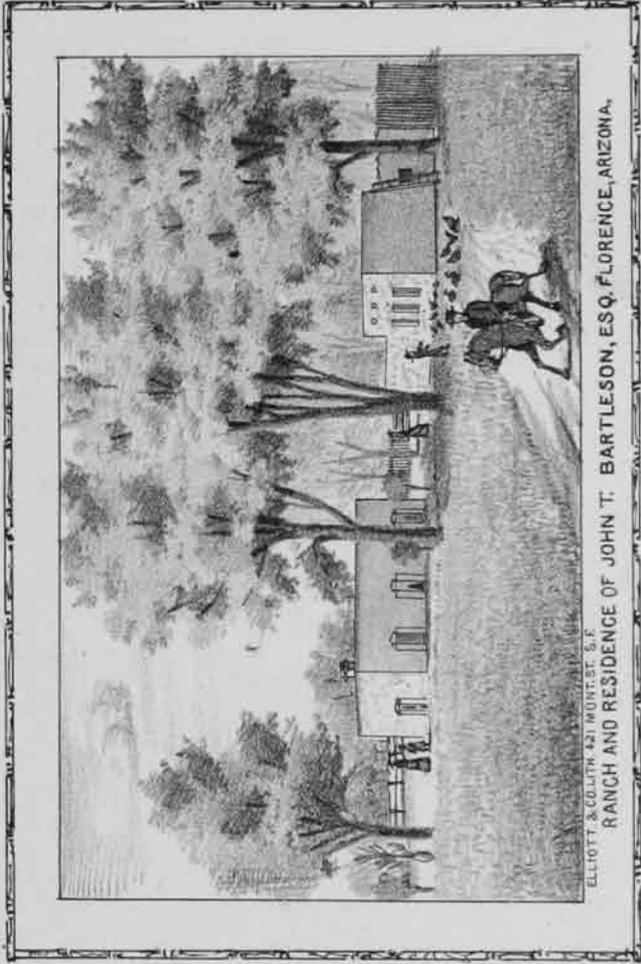
wide surface filled with bars and snags. The bed is quicksand, and does not afford good holding-ground for an anchor. There are no trees to which lines can be attached, and the snags are not strong enough to render much assistance.

From Explorer's Pass, at the entrance of the Purple Hills, to Hazard Pass, at the foot of the Great Colorado Valley, forty-four miles, the river flows generally between hills and rocky bluffs. The average depth of the channel is less than below Fort Yuma, being not more than eight or ten feet. The velocity of the current is about the same. The bed of the stream is still composed of sand, but for the first time rocks are encountered. The banks are more permanent, as might be expected, than in the flat country below, and the position of the channel more fixed. The bed of the river, however, being composed of the same shifting material, bars are met with that present difficulties to navigation. They are not so numerous as in the open country. The more precipitous the banks, the deeper, as a general rule, is the channel. In the Purple Hill Pass and through the Cane-brake Cañon the navigation is pretty good, though at the lower end of the latter pass there are one or two bars. The character of the river bed, which, as high as the mouth of Bill Williams' Fork, is composed entirely of sand, is afterwards found to be partially covered with gravel. At all of the gravelly bars the current is swift, and frequently assumes the character of a rapid. Such places present, of course, more difficulty than the sand-bars.

From Pyramid Cañon to Black Cañon, is sixty miles. In the Pyramid Cañon, which is five or six miles long, the navigation is good. Above, the bed of the stream is composed generally, of coarse gravel and rocks. Rapids occur at short intervals throughout the whole distance. The first, at the head of the cañon, has a depth of two and a half feet. Two or three small rapids which follow present no great difficulty. At Deep Rapid the channel is narrow, and the rush of water stronger than at any place below the Black Cañon, but in the center of the channel there is a depth of six feet, and there are no rocks to obstruct the passage.

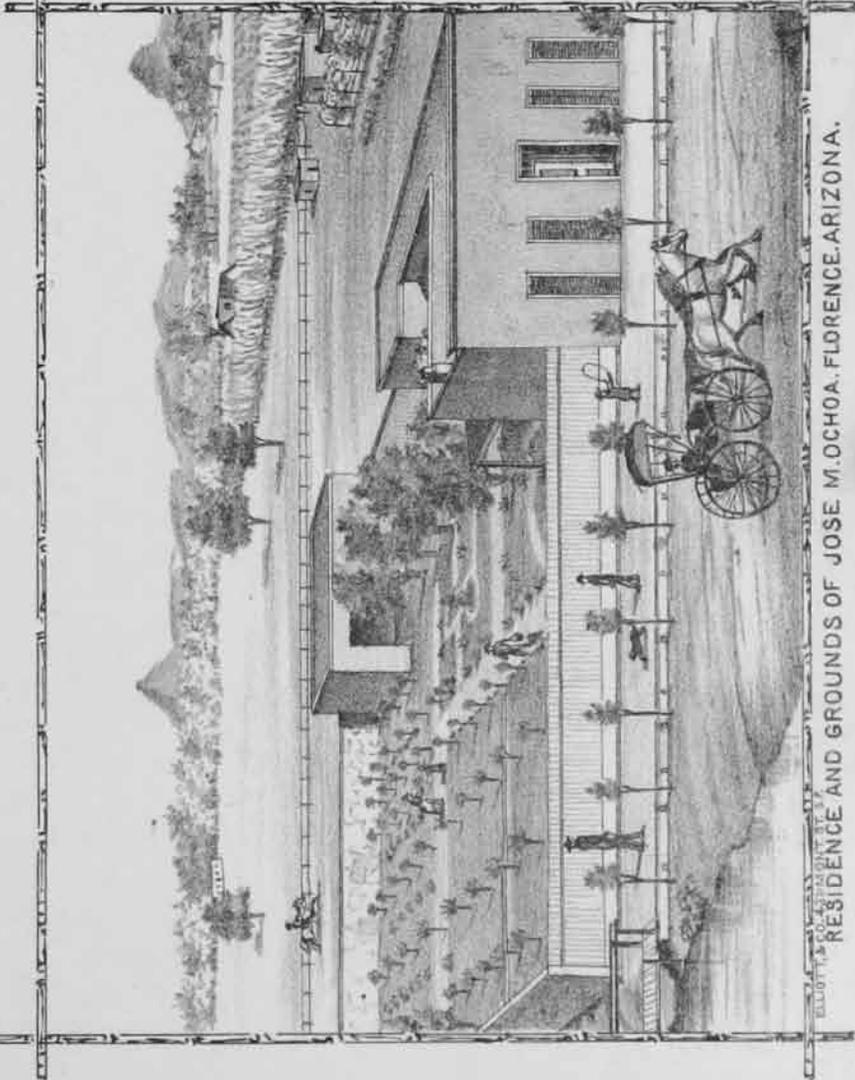
## VARIED SCENERY OF THE COLORADO.

At a bend two miles above the head of the Cane-brake Cañon, the river makes rapidly against and around the base of a massive perpendicular rock 100 feet high. The water appears to be whirling and eddying at an unusual rate. A short distance north of the rapid several high rocks, arranged in a circular form, occupy the center of the stream, leaving a narrow channel on either side. A swift current and some isolated rocks above make the passage dangerous. Looking back the rocks seem to completely block the river, and the place appears much more formidable than from below.



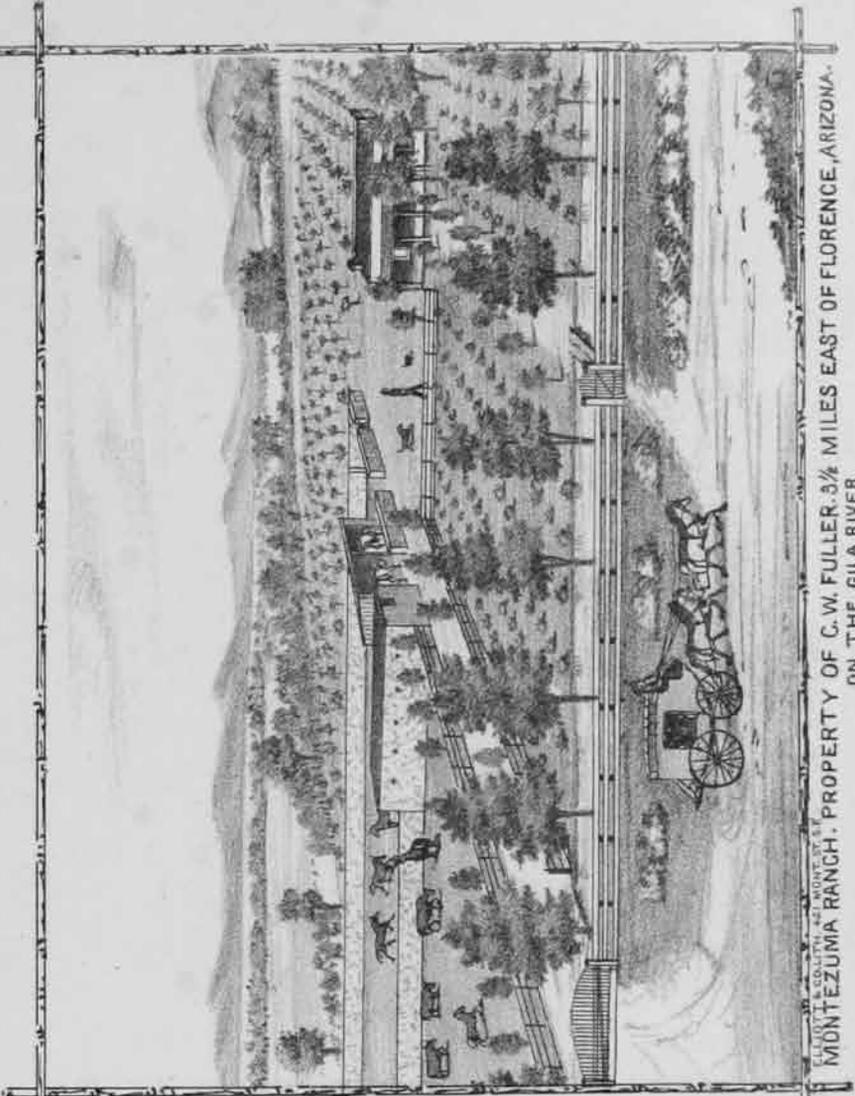
RANCH AND RESIDENCE OF JOHN T. BARTLESON, ESQ. FLORENCE, ARIZONA.

ELLIOTT & GILBERT, 421 MOUNT ST. S. F.



RESIDENCE AND GROUNDS OF JOSE M. OCHOA. FLORENCE, ARIZONA.

ELLIOTT & GILBERT, 421 MOUNT ST. S. F.



MONTEZUMA RANCH. PROPERTY OF C. W. FULLER. 3/4 MILES EAST OF FLORENCE, ARIZONA. ON THE GILA RIVER.

ELLIOTT & GILBERT, 421 MOUNT ST. S. F.

From the entrance to Cane-brake Cañon the river pursued a due westerly course, but now the river turns again to the north, winding between gravel bluffs that form a portion of the desert *mesa* which here extends to the water's edge. Passing out from these are noticed, a short distance westward, a cluster of slender and graceful spires, surrounding a spur that runs out from Chimney Peak, and appears to form a part of the Purple Hills. North of these, rendered conspicuous by lines of serrated peaks, is a range of chocolate-colored mountains, from which the river emerges through a gate formed by a huge crag of vivid red rock.

While turning a bend, a little while after passing the gate, is suddenly noticed upon the summit of a little hill on the left bank a ludicrous resemblance to a sleeping figure. The outlines and proportions are startlingly faithful. It is called the "sleeping beauty." The accuracy of the likeness presents itself from different positions for nearly a mile.

This portion of the river assumes almost the character of a cañon, and the navigation is attended with some risk to those who know nothing of the obstacles that are ahead. In one of the bends two sharp, rocky points extend from the banks, and another point juts out midway from the opposite side.

#### THE PORPHYRY GATE.

The character of the river above the Chocolate Mountains, is similar to that below Fort Yuma; but the navigation proves easier. The water is frequently divided into several channels, or spread over a wide surface, and filled with snags; but several of the most unfavorable looking places afford a clear and unobstructed passage. Bars are of constant occurrence, and at a place named the Dismal Flats, the obstacles are numerous.

A few miles above the flats a little stream, Carroll's Creek, comes in from the west. Through the whole of the Colorado Valley the course of the river is circuitous, and in the bends, along the concave banks, the channel is almost always good.

Fifteen or twenty miles above Porphyry Gate are some high mountains on the west bank of the river. These were half-way between the fort and the Mojave villages. Two or three short, low ranges intervene between the Half-way Mountains and the foot of the valley, which otherwise extends unbroken southward to the base of the Chocolate Mountains, and west to the parallel chains that form the Dome Rock Range.

#### A FAIRY-LIKE SCENE.

Stretching across the river near Bill Williams' Fork, in Yuma County, is what was called by the Ives' party the Monument Mountain. The river winds around the base of

a massive rock, into which a deep groove has been cut by the ceaseless flow of the stream. This point may be considered the southern entrance of the cañon.

Immediately above Monument Mountain the river grows narrower and deeper, and the hills crowd closely upon the water's edge. The regular slopes gradually give place to rough and confused masses of rock, and the scenery at every instant becomes wilder and more romantic. New and surprising effects of coloring add to the beauty of the vista. In the foreground, light and delicate tints predominate, and broad surfaces of lilac, pearl color, pink, and white, contrast strongly with the somber masses piled up behind. In their very midst a single pile of a vivid blood-red rises in isolated prominence.

A few miles higher a narrow gateway opens into the heart of the mountains. On one side of the entrance is a dark red column; on the other a leaning tower of the same color overhangs the pass, the ponderous rock seeming ready to fall as you pass beneath. Rich hues of blue, green, and purple, relieved here and there by veins of pink and white, are blended in brilliant confusion upon the sides of the cañon, producing a weird-like and unhealthy effect, which the fantastic shapes and outlines of the inclosing walls do not diminish. For six miles the windings of the river are through this fairy-like pass, where every turn varies and heightens the interest of the pageant, and then the lines of cliff stop, and you issue suddenly from the cañon into a comparatively open valley. Low foothills, from the range on the west side of the river, skirt the bank, but on the east side they recede, leaving a few gravelly spurs, and beyond these a belt of bottom land.

At Beaver Island are the foot-hills of the Monument Mountains. The immediate banks of the river are composed of strata, apparently formed of volcanic ashes stratified by the action of water, above which are layers of white infusorial earth and beds of gravel and sand. Just above the head of Beaver Island these strata are seen, much disturbed and metamorphosed by masses of trap that have been thrown up into low, rounded hills.

Corner Rock is a large mass of metamorphosed conglomerate, a portion of the series just described, against which the river impinges, and by which it is deflected from its course. The conglomerate is overlaid by a thick bed of dark blue basaltic trap. On the trap lies a bed of gravel.

A short distance beyond Corner Rock is Monument Cañon, which is cut through the Monument Mountains by the Colorado, its northern entrance being at the mouth of Bill Williams' Fork. Throughout the whole of its course this cañon abounds in wild and picturesque scenery, the effect of the varied outline of its walls being heightened by the vivid and strongly contrasted colors which they exhibit.

## CHIMNEY PEAK AND DOME MOUNTAIN.

Chimney Peak is a remarkably picturesque double pinnacle which crowns a mountain chain, the northwestern prolongation of the middle range of the Purple Hills. Like the other peaks of the range, it is composed of trap, and affords a striking example of the tendency to form columnar summits exhibited by all the mountains of this vicinity.

Dome Mountain, on the east of the Colorado, presents the same features in nearly an equal degree. The mountains which have this form are all trappean in character, and doubtless owe their peculiar outlines to the manner in which this material yields to the action of the elements.

Above the mica slate hills, the red, white, green, pink, and blue tufas re-appear, giving the same fantastic appearance to the scenery. These rocks, with trap and scoria, extend from the river to Chimney Peak.

Between Mount Davis and the Black Mountains the river flows between gravel bluffs and the foot-hills of the latter chain. The view in all directions, coming up the river, is intercepted, and before conscious of its neighborhood, a sudden turn around the base of a conical peak discloses the southern portal of the Black Cañon directly in front. The Black Mountains are piled overhead in grand confusion, and through a narrow gateway flanked by walls many hundreds of feet in height, rising perpendicularly out of the water, the Colorado emerges from the bowels of the range.

## THE HEAD OF NAVIGATION.

The steamer *Explorer* ascended as far as the mouth of Black Cañon, but rapids occurred in such quick succession as to make navigation almost impossible beyond the Great Bend. The difficulties encountered in the cañon were of a character to prevent a steamboat from attempting to traverse it at low water. The *Explorer's* party saw drift-wood lodged in clefts fifty feet above the river, betokening a condition of things during the summer freshet that would render navigation more hazardous at that season. It appeared to them, therefore, that the foot of the Black Cañon should be considered the practical head of navigation.

At this point the *Explorer* began to return and reports that the descent of the river was a much easier and pleasanter operation than going up, and the rapidity of the progress added an additional charm to the scenery. One or two of the rapids had to be passed with caution, but down most of them they shot with exhilarating velocity.

## DESCRIPTION OF THE "EXPLORER."

The steamboat *Explorer* was built to order in Philadelphia at very short notice, and was put together and tried upon the Delaware River before being taken to pieces

for shipment. The trial trip had to be made only three days before the boat was to start for New York in the California steamer, and there was no time to remedy a serious defect that had been developed. The boiler had been ordered, for special reasons, to be of unusual dimensions for the size of the boat, and the weight, resting upon the weakest portion of the hull, occasioned, while the steamer was in motion, a vibration and bending that threatened to break her in two amidships.

The boat was fifty-four feet long from the extremity of the bow to the outer rim of the stern wheel. Amidships, the hull is left open, like a skiff, the boiler occupying a third of the vacant space. At the bow was a little deck, on which stood the armament, a four-pound howitzer. In front of the wheel another deck, large enough to accommodate the pilot and a few of the surveying party, formed the roof of a cabin eight feet by seven.

While the steamer was in motion, a man stood at the bow with a sounding pole, which he kept constantly employed. Captain Robinson, on the after deck, piloted the boat, and assumed her entire management. One must be a good while upon the river to acquire the experience and skill that are requisite in order to run a boat successfully. A knowledge of the locality of the deepest water cannot be imparted. The rapid current, the loose character of the soil, and the sedimentary deposits occasion great and sudden variations in the river bed.

The load upon the boat was made as light as possible. Only six weeks' provisions, and such arms, ammunition, and luggage as were indispensable were taken along, but it was impossible to reduce her draught to less than two and a half feet, owing to her small size and heavy boiler and engine.

## NAVIGATION OF THE COLORADO SETTLED.

The *Explorer's* trip, in 1857, first settled the navigability of the Upper Colorado, for steamers of a light draught. It has since been demonstrated that the Colorado is navigable for steamers of 400 tons at all seasons of the year, as far as Hardyville, 513 miles above its mouth, and steamers have been as far up as Callville, 641 miles from the Gulf of California. From its mouth to the foot of the Grand Cañon, a distance of 700 miles, the river at low water has an average width of about six hundred feet, and depth of five to twenty.

The Ives' expedition was fitted out to explore the "Colorado of the West," the main object of the work being to ascertain the navigability of the river. It was ascended by the small stern wheel steamer just described, 550 miles above Fort Yuma, until they reached the Grand Cañon. The enormous, perpendicular walls of rocks, hundreds of feet high, which had formed the banks of the

rivers in many places, had prepared them for wonders, but they did not expect to see a large river come out of a gate-way two thousand feet high and only a few feet across. Here the water expedition ended.

The officers of the *Explorer*, with Messrs. Taylor, Bielawski, and Booker, half of the escort, and all but three of the men, were selected to go back with the boat. Dr. Newberry, Messrs. Egloffstein, Mollhausen, and Peacock, three laborers, the Mexican packers, together with twenty soldiers, commanded by Lieutenant Tipton, composed the land party. The notes and collections were placed in charge of Mr. Taylor, to transport to Washington.

#### EXPLORATION OF THE GRAND CAÑON.

The Colorado River region presents some of the grandest scenery on the globe. For nearly three hundred miles, in northern Arizona, its waters, during the untold ages of the past, have worn through great mountain chains, and mountain plateaus, cutting out for itself a channel many hundreds and thousands of feet deep in the hard granite, slate, porphyry, sandstone, limestone, and volcanic rocks, thus forming the Grand Cañon of the Colorado, the grandest cañon the eye of man ever saw. This cañon can in no way be fully explored, except by entering it with boats from its upper part, in Utah, as Lieutenant Powell and party did.

The Government of the United States, during the Civil War, had enough business on hand without attending to expeditions in the cause of science, for, so far, the river had no value. But the Smithsonian Institution undertook the exploration of the river. Lieutenant Powell, an eminent scientist and explorer, was sent out to gather all the information about it that was possible. The trans-continental railroad now made the matter easier. He interviewed the trappers and hunters at Salt Lake and Fort Bridger, visited Arizona, and heard all that the stage-driver could remember, and went East to make preparations for the descent of the river. The scientific public were now aroused, and many were anxious to accompany the expedition. Several boats were made in water-tight compartments, contrived so as to float, though they might be *stove*. Provisions, instruments, and all necessary articles were inclosed in water-tight rubber bags.

#### START OF POWELL'S EXPEDITION.

On the 24th of May, 1869, he left the line of the Union Pacific Railroad at the Green River Station. The boats were four in number—three built of oak, staunch and strong, double-ribbed, with double stern and stern-posts, and further strengthened by bulk-heads, dividing each into three compartments. Two of these, the fore and aft, were decked, forming water-tight cabins. The little vessels were twenty-one feet long, and were

capable of carrying about four thousand pounds each, and without the cargoes could be transported by four men. The fourth boat was made of pine, very light, but sixteen feet in length, with a sharp cut-water, and every way built for fast rowing, and divided into compartments as the others.

They took rations deemed sufficient to last ten months, expecting to stop over for the winter at some point about mid-way down the stream. They also took tools for repairing boats and building cabins. For scientific work they had sextants, chronometers, barometers, thermometers, compasses, and other instruments.

Their way for nearly fifty miles was through the Green River Bad Lands, a region of desolation. They passed safely down the upper waters. Some hundred miles below the starting-point, the labor commenced. Sometimes the river would zigzag between metamorphic slates and granite spurs, making a channel like a line of saw teeth; then it would leave the granite and cut a vast amphitheater in the sandstone, miles across and thousands of feet high. Towers, domes, castles, minarets, and all the forms of ancient and modern architecture seemed anticipated. Even sculpture was not forgotten, for in many places gigantic figures seemed to be guarding the great cañon, and threatening to overwhelm all who should dare to invade the ancient solitude. For months the party continued their voyage. Notwithstanding their ample preparations, it was nearly a failure. They lost their boats and most of their provisions, as well as their scientific instruments. They were uncertain whether the cañon was three, four, or five hundred miles long. When nearly through, it was proposed to leave the river and try to ascend its banks. It was urged that more rapids on the junction of the granite and slate would end the expedition. Part of the men determined to try to scale the walls. They were given a part of the scant provisions, and also a copy of the records of the trip. Both parties bid each other good-bye, with the firm belief that the other was destined to certain destruction.

Powell remained with the party to continue down the river, hoping that if he perished some record of their trip would be picked up on the lower river or the Gulf of California. His judgment proved the best. August 30th he emerged from the cañon, in better plight than the stage-driver did, (related in next paragraph) having witnessed, undoubtedly, the greatest wonder of the world.

Nothing was heard of the other party for years. A prospector brought the news that they scaled the walls of the cañon, but were soon afterwards killed by the Indians, being mistaken for a party of white men who had committed an outrage on an Indian woman. Under the head of "scenery" will be other full descriptions of the Grand Cañon.

## UNWILLING EXPLORATION OF GRAND CAÑON.

Some time in the sixties, three men, prospecting on the head-waters of the river in the Arizona Territory, fell into a difficulty with the Indians. Two succeeded in reaching their boats, and escaped by rowing swiftly down the stream, the swift current and bold banks facilitating their flight. When they had gone so far as to feel secure from pursuit, and took time to consider the situation, they found themselves floating in a stream so swift as to prevent their return, even if they desired it, and with banks so precipitous as to make escape in that direction impossible. The stream became swifter, and the banks, or walls, of the cañon higher every hour.

They considered the situation, but could only say, We are in "Uncle Sam's" dominion, and "it is a hell of a place." One of them remembered of hearing some old trappers, while sitting around a camp fire near Salt Lake, tell a story of a great river that was lost in a range of mountains and flowed hundreds of miles under-ground. Another said that it did not flow under-ground, but in a narrow channel thousands of feet in depth, so deep that daylight never reached the bottom. None of them, however, had ever seen the river under these circumstances. The Indians believed, some of them at least, that the deep gorge led to Heaven, and others thought it led to hell! It was certain that the route to the blessed regions would not go through any such country as they were passing. There was no way only to go on; there was no other alternative. About the third day they heard a great roaring of falling water, and before they had time to consider, were plunged over a cataract, that proved not a very high one, for, though the boat was smashed, they saved their lives by swimming to an island at the foot of the falls, and were able to save most of their provisions. They now constructed a raft of dry cottonwood logs, which they found lodged high up on an island, and continued their voyage.

Falls and rapids being now frequent, and the plunges often throwing them off their craft, they imprudently lashed themselves to it. Passing the next cataract the raft was upset, and one of the two was lost. The survivor found himself on the raft, now bottom side up, though entirely ignorant as to how he succeeded in disengaging himself while under the water.

Day after day, week after week, until the weeks became months, he floated down the river, encountering many obstacles but escaping with his life. The river was destitute of fish or animals, but in places he found the mesquite bean, which would sustain life. Months afterwards a soldier at Fort Colville saw a log floating in the river, appearing to have come out of the cañon. The unusual circumstance caused him to turn a telescope upon

it. "My God!" said he, "there is a man on that log!" A boat was dispatched, and the man was brought ashore, nearly famished, speechless, naked, and his body covered with sores. After some nourishment had been taken, he was able to say that he had come through the *great cañon*. The man recovered, and for many years afterward drove a stage in Arizona.

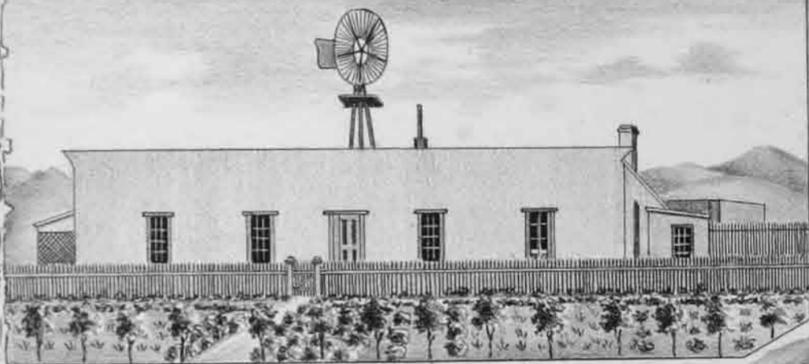
## BOAT TRIP DOWN THE COLORADO.

In the fall of 1883, J. F. Ryan made a trip from Nevada into Arizona, and came down the Colorado River in a boat of his own construction. An account of this trip he has given us for publication. He says: "We arrived at Las Vegas Ranch, which is in an oasis in the desert. A grand spring of cold water irrigates a few hundred acres of the richest of soil, and all fruits are produced in abundance, and excellent in quality. A family occupies the ranch, raises vegetables, fruits, grapes, etc., and makes wine. The wine is the native grape's juice with a few flies thrown in. A man that drinks much of it will steal his own blankets and hide them. The drawback to this place is that there is no market for the crops, or a very limited one.

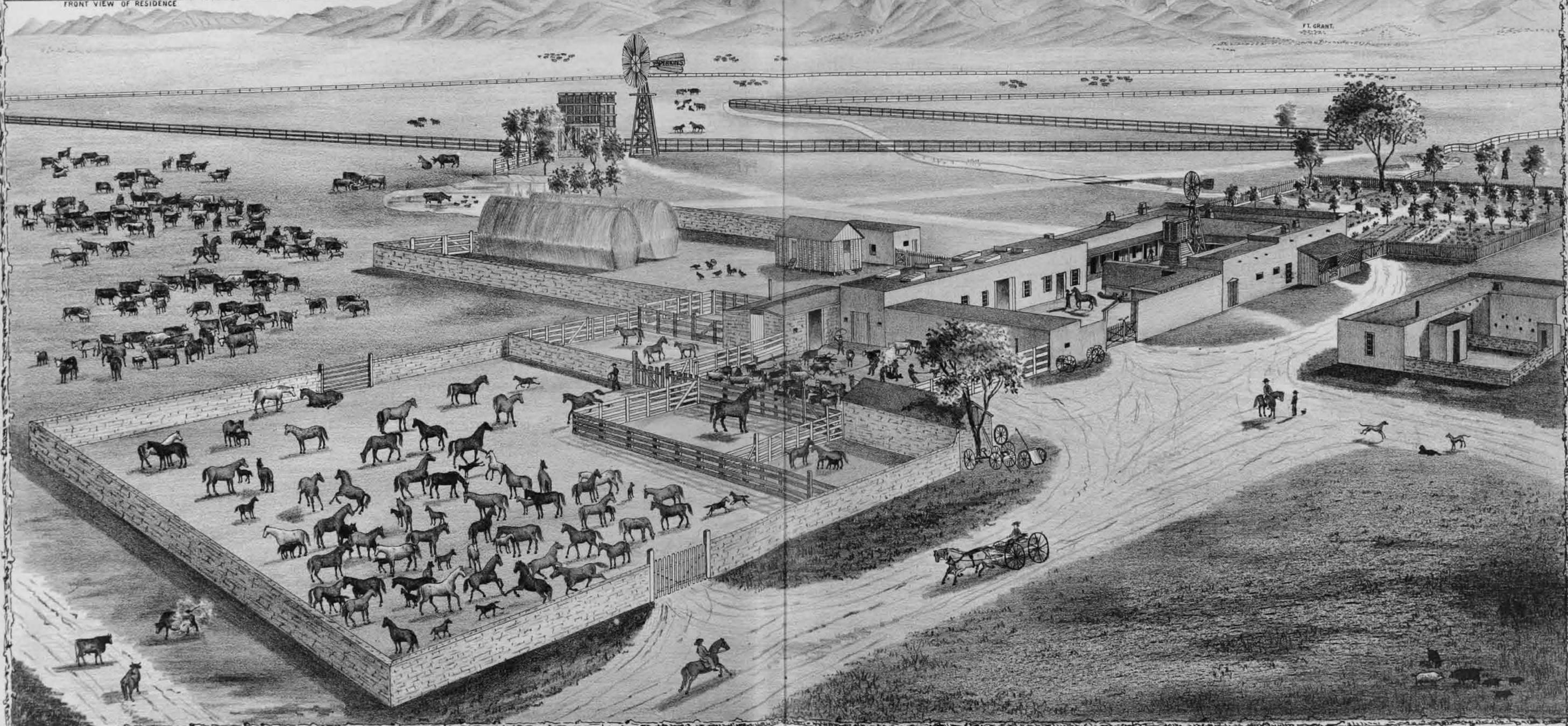
"After stopping over night at this garden spot, we again started early in the morning to cross a sixty-mile desert, and filled our barrels with water, for there is none on the desert. This was the longest and hardest day's drive on the trip. I never saw a country so devoid of animal life. We frequently witnessed the phenomenon of the *mirage*, looking like a lake of water in the distance on the desert. It was late at night when we reached El Dorado Cañon on the Colorado River, and, tired from our long journey, we rested well that night in a comfortable bed.

"The road we came over is seldom traveled, particularly the latter part of it. The mail is carried on horseback three times a week from Pioche to Arizona, by way of Virgin River, and across the Colorado at the ferry. Men in this country make long journeys on foot, and pack their blankets on their backs, a canteen of water, and a few crackers to live on. Many have perished in the deserts for lack of water, as enough cannot be carried to last the journey. They die a fearful death. There is no wood, timber, or grass on the trail, except at springs, long distances apart.

"At the cañon there are two small quartz mills, working the ores from the mines in the neighborhood. This is a very hot place. In the summer the thermometer stands from 100 to 120 in the shade. They live on canned goods entirely at this place, and only have communication by steamer in spring and summer, once a month.



FRONT VIEW OF RESIDENCE



MT GRAHAM ALTITUDE 10576 FT  
OR "SIERRA BONITA"

FT. GRANT

W.W. ELLIOTT & CO. LITH. 421 MONTGOMERY ST. S.F.

**"SIERRA BONITA RANCH" PROPERTY OF H.C. HOOKER, ESQ. GRAHAM CO. ARIZONA, DEALER IN CATTLE AND HORSES OF ALL GRADES.**  
ALTITUDE OF RANCH, 4,200 FT. P.O. ADDRESS FORT GRANT, ARIZONA. R.R. STATION WILL GO 22 MILES SOUTH.

FT. GRANT 10 MILES AWAY.

"After stopping here one day I built a boat, not being able to hire or buy one; and, with two passengers, I packed up, sailed down the river to The Needles, about one hundred miles, making it in about eighteen hours. We used our blankets for sails, and, with the swift current of the stream, made good time. We saw a great number of Indians on the banks at various points, and all were in summer costume. Many of them questioned us as to who we were and where we were going. On the river we passed Fort Mohave, a military post. If I had not been in a hurry to get through, would have continued on, in my boat, to Fort Yuma."

#### GILA RIVER.

The next river in size and importance to the Colorado is the Gila, which rises in New Mexico and passes nearly in a westerly direction across the northern part of the Territory and joins the Colorado at Yuma. It enters Arizona near the Clifton copper mines, passing through the beautiful Pueblo Viejo Valley, the San Carlos Indian Agency, and thence into the great Gila Valley some fifteen miles above Florence; on westerly it continues, receiving the waters of Salt River to add to its volume. Its length through the Gila Valley is nearly three hundred miles to its junction with the Colorado, at Yuma. The total length of the Gila, including its many windings, is fully six hundred and fifty miles. For four hundred miles, at low water, the Gila has an average width of about one hundred feet, and a depth of one or two feet.

The Gila is not a navigable stream. It has been proposed to use flat-bottom boats for considerable distance, but, since the advent of the railroad, it will never be attempted.

The San Pedro River, Salt, and Verde are the principal tributaries of the Gila. Almost the entire southern part of Arizona is drained by the Gila and its branches. Near the boundary of New Mexico it receives the San Francisco Creek, and further west the Eagle and Bonita Creeks. Two important feeders are Aqua Fria, and Hassayampa Creeks, which have their rise in the timbered mountains near Prescott. They run nearly due south to the Gila. The Rio Del Sur rises in Mexico, flows underground through the San Simon Valley, and empties into the Gila at Solomonsville.

#### VALLEY OF THE GILA.

With regard to the lands bordering on the River Gila, but a portion are susceptible of cultivation by the usual means adopted in that region, irrigation. Its valley is wooded generally with cottonwood trees, while bordering on this are "openings" of mesquite. The best portion of the Gila Valley was in 1850 occupied by the two tribes of Indians known as the Pimos and the Coco Maricopas.

This was a tract lying 180 miles from its mouth, between the point where the road from Tucson strikes the Gila and the mouth of the Salinas. The arable lands occupied and cultivated by the Indians referred to extended from sixteen to twenty miles along the river, and were from three to four miles in width. Irrigating canals or "acequias" conduct the water of the Gila over all this cultivated district. The Indians raised wheat, corn, millet, beans, pumpkins, and melons in great abundance. Their wheat and corn they grind into flour, from which they make a palatable bread. They also raised a superior quality of cotton, from which they spin and weave their own garments; an art not acquired from the Spaniards, but which was found among them more than three hundred years ago.

#### VIRGIN RIVER.

The Virgin River rises in Utah, and, running south, empties into the Colorado above the Black Cañon. Lieutenant Ives thus speaks of it in not a very flattering light:—

"Skirting the base of Fortification Rock, we ascended the river a couple of miles, and came to the mouth of a stream about the size of Bill Williams' Fork, as the latter was when we passed it. We disembarked, and followed for some distance along its border. The appearance of the bed and the banks indicated the existence, during some seasons, of a wide and deep river. It was now but a few inches deep. The water was clear, and had a strong brackish taste. This fact, and its position, led me to suppose that we were at the mouth of the Virgin, but I could scarcely believe that that river could ever present so insignificant an appearance.

#### RIO PUERCO RIVER.

This branch of the Little Colorado has of late come into notice on account of the Atlantic and Pacific Railroad following its course. From the line of New Mexico the railroad runs into Arizona for many miles through the barren valley of the Rio Puerco. The river bed is broad, but the stream itself is a scanty rivulet. Yet when there comes one of the sudden, fierce thunder-storms peculiar to this region, these plains are flooded, and in an hour the river becomes a raging torrent. This has happened again and again, in the rainy season. In a few hours the water disappears, the torrents plunge into underground water courses, and the sands are parched as before. It has been suggested that huge stone tanks be constructed to hold the water, instead of permitting it to flow off at once. The suggestion seems a good one.

#### CATARACT CREEK.

Cataract Creek has many tributaries that rise in the northern slope of the San Francisco and Bill Williams' Mountain, in Yavapai County. It runs north and flows

into the Colorado above the Grand Cañon and nearly opposite Kanab Wash, which is a stream seventy-five miles long, rising in Utah and running south to the Colorado

#### SALT RIVER.

Salt River rises in the eastern part of the Territory, in the White Mountains, its head-waters being the White and Black Rivers. It has numerous large branches, coming in mostly from the north, draining the country far to the north, including the Tonto Basin, the Sierra Ancha, White, San Francisco and other mountains. Arivaypai is the principal southern tributary. On this stream is a deep cañon with wild scenery. Its course is west and southwest, and it unites with the Gila below Phoenix some twenty miles. This river was named the Rio Salido by the early Spanish and Jesuit explorers, on account of its waters being highly impregnated with salt, which is easily noticed at low water. This is caused by a heavy salt formation, through which the river passes about one hundred miles above Phoenix. At low water it is a clear beautiful stream, having an average width of 200 feet for a distance of 100 miles above its junction with the Gila, and a depth of two feet or more. Its length is about two hundred miles and it flows through the largest body of agricultural land in the Territory after it leaves the cañon.

#### RIO VERDE RIVER.

The Verde River is one of the largest northern branches of Salt River, its upper branches rising at different points to the east, north, and northwest, from Prescott. It becomes a fine river of eighty feet in width about fifty miles northeast from Prescott, and thence runs a southerly course to its junction with Salt River, near Camp McDowell. Its whole course is about one hundred and fifty miles. It receives the waters from the San Francisco Mountains, and other timbered slopes. It drains all the southern half of Yavapai County.

The Tonto, Sipicue, Cherry, Aqua Fria, and other large creeks, are also tributaries of Salt River, coming in from the north. The main upper branches of Salt River, the White and Black Rivers, are both swift-running mountain streams, and rise in the White Mountains. They are well stocked with the real speckled mountain trout, affording rare sport to the fisherman.

#### THE LITTLE COLORADO.

The Little, or Colorado-Chiquito which was, by the Ives' exploring party, called Flax River, and by Spaniards *Rio de Lino*, rises in the northeastern declivities of the White Mountains, near the line between Arizona and New Mexico, runs in a northwesterly direction, and enters the main Colorado in northern Arizona, about fifty miles

south of the southern line of Utah, and near the head of the Grand Cañon. Lithodendron Creek is one of its tributaries, on the banks of which is the petrified forest. Leroux Creek, from the east, and Chevelons, from the west, are important mountain streams. The lower part of the Colorado-Chiquito runs through a cañon second only to that of the Grand Cañon of the main Colorado.

#### BILL WILLIAMS' FORK.

Bill Williams' Fork is an eastern branch of the Colorado, with which it unites at Aubrey, 235 miles above Yuma. Its different branches rise, some in the mountains 50 miles southwest from Prescott, some near Mount Hope, and some in the Hualapai Mountains in Mohave County. The north fork is called the Big Sandy, which has many small tributaries coming into it from every direction. The eastern branch is called Santa Maria. In its whole course it is not far from one hundred and fifty miles long, which is about the same as the Colorado-Chiquito. The Santa Maria is its main eastern branch, and the Sandy its main northern. These two streams unite some fifteen miles south of Greenwood, from which point the Bill Williams' Fork flows west to its junction with the Colorado.

#### SAN PEDRO RIVER.

The San Pedro rises near the line between Arizona and Sonora, and runs in a general northerly course a distance of over one hundred miles, and enters the Gila River at the foot of Gila Cañon, in Pinal County. It has a number of small tributaries, among them Arivaypai, which enters near its mouth, after passing through Grass Valley for five miles. On the western side is a tributary called Babacomari, rising in the Huachuca Mountains.

#### SANTA CRUZ RIVER.

The Santa Cruz River rises also near the Arizona and Sonora line, southeast from the Patagonia Mountains, making a long *détour* into Sonora to the southwest, thence to the north into Arizona, and finally sinking in the great plain or valley some twelve miles to the north from Tucson. The whole length of the Santa Cruz is not far from one hundred and fifty miles, to the point where its waters finally sink. It must have formerly run far to the northwest and perhaps entered the Gila River below Maricopa Wells, as its old bed is now distinguishable at different places. One fact connected with most of the mountain streams of Arizona, and which is applicable to most of the streams west of the Rocky Mountains, is this: The volume of water in the mountains is much greater than in the valleys and plains below.

All the rivers of Arizona will be described in an article on counties.

## MOUNTAINS OF ARIZONA.

Peculiar Formations; Principal Peaks; Extinct Volcanoes; Vast Forests; Mountain Scenery; Natural Attractions; Elevation of Places, etc

### PECULIAR MOUNTAINS.

ARIZONA instead of having a continuous mountain chain running in a given direction, has isolated peaks and detached sections coming up out of the plain apparently at random. The country presents the character of a vast upland crossed by a succession of mountain ridges and basin-shaped valleys, interrupted by the product of recent volcanic eruptions in the form of extinct craters, cones, and streams of lava, which have overflowed and buried up the lower sedimentary rocks.

Arizona is essentially mountainous, and a list of the ranges chopping it up like the ocean waves under a cross wind would be a very long one. The general "dip" of the land is to the southwest. In the northern and eastern parts the plateaus are nearly 6,000 feet high, while to the south and west they are but a few feet above the level of the sea. This grand slope is one vast network of mountains.

There are many striking peaks, large and small, and isolated formations of singular massiveness and picturesque beauty. Some of them attain a great height, and are abruptly terminated by steep mural declivities, bounding valleys of erosion, or presenting isolated buttes and fantastically castellated rocks that serve to give a peculiar aspect to the scenery.

The summits of many of the mountain ranges, especially in the northern portion of the Territory, are wide, level plateaus, covered generally with a splendid growth of pine, spruce, fir, juniper, cedar, and other timber, with clear, sparkling mountain springs bursting out at short intervals, at which point there are generally open plats of ground nearly destitute of timber, but covered with a rich coating of wild clover and other nutritious grasses, and reminding one of the beautiful oases in great deserts. All the ranges are rich in minerals.

### PRINCIPAL MOUNTAINS AND PEAKS.

San Francisco Mountain (Humphrey's Peak), 12,561 feet high, stands at the head of the list for altitude and importance. Among the other highest peaks may be mentioned Mount Graham, 10,615 feet; Mount Wrightson, 10,400 feet; Mount Kendrick's, 9,800 feet; Mount Turnbull,

9,400 feet; Mount Sitgreaves, 9,097 feet; Bill Williams' Mountain, 9,080 feet; Mount Union, 9,000 feet; Four Peaks, 8,600 feet.

Starting at the southeast corner of Arizona and going west, south of the Gila River, the principal ranges are as follows: Peria, Pedrogosa, San Jose, Huachuca, Dragoon, Chircahua, Peloncillo, Pinaleno, Galiuro, Santa Catalina, Tortilita, Sierra, Tucson, Santa Rita, Cappi, Quijotoa, Santa Estrella, Sierra de la Naril, Sierra del Ojo, Bobaquivera, Mohawk, and Gila Range.



CAÑON IN SANTA CATALINA MOUNTAIN.

Between the Gila River, which crosses the Territory from east to west across its southern third, and the Atlantic and Pacific Railroad, which bears westward midway between the Gila and the northern boundary line, are to be found the Big Horn, Eagle Trail, Plomas, Mount Hope, Juniper, Black Hills, Verde, Mazatzal, Mogollon, White, Apache, Gila, Salt River, and Bradshaw Mountains.

The northern third contains the Virgin Range, Hurricane Ledge, Sheavwitz Mountains, Buckskin Mountains, Calabasa Mountains, Rabbit Hills, and the Vermillion Cliffs.

## SAN FRANCISCO MOUNTAIN.

One of the most attractive localities in Arizona is that of San Francisco Mountain, 12,561 feet high. The location is near the line of the Atlantic and Pacific Railroad, and is about half-way between the eastern and western boundaries of the Territory. It is of volcanic formation, being itself an extinct volcano, and being surrounded by smaller mountains of the same character. The view from the summit of the mountain is magnificent in the extreme.

To the northward, 150 miles distant, may be seen the lofty peaks of the Wahsatch Mountains, in Utah, with the great plateau intervening, through which passes the Great Cañon of the Colorado, with its chasms 6,000 feet deep, and its broken, winding way through the Buckskin Range.

To the northwest can be seen the mountains of San Juan, and to the east those of Fort Defiance, with all the immense intervening table-lands, where are located the curious villages of Moquis. These table-lands have, among other curious inhabitants, thousands of Novijo sheep.

To the southeast are seen the beautiful White Mountains of eastern Arizona and New Mexico. To the south are vast ranges of the Mogollon Mountains, and at their right, southwest, great forests of pine and juniper as far as the eye can reach.

In this glorious panorama, are in sight on the west and northwest the Bill Williams' Mountains, 150 miles of the Atlantic and Pacific road, the Colorado plateau, the Aubrey Cliffs, and the mountains of southeastern Nevada. No view in Switzerland equals this in the variety of its scenery, or in the magnificence of its distances.

San Francisco Mountain is covered, to a point far up its sides, by a heavy growth of timber, while in the valley, at its southern base, are 8,000 or 10,000 acres of perfect grass-land, without stick or stone to break its smooth surface. This valley is surrounded by small mountains, fringed with a rich growth of pines. At the northern edge of the valley is a large spring, which furnishes an abundance of water the year round. The valley has a southern exposure, and is much warmer in winter than the unsheltered localities east and west. The forests in the vicinity of the mountains are full of deer, antelope, bear, wild turkeys and other fit game for the sportsman's weapon.

## AN EXTINGUISHED VOLCANO.

To the casual observer the San Francisco Mountain forms a most impressive feature in the scenery which surrounds it, not only from its symmetrical and striking outline, but also from its isolation. Rising in solitary grandeur to the altitude of 12,561 feet above the sea, its snowy summit is visible from nearly all parts of a circle drawn

around it with a radius of a hundred miles. In all that region it is without a rival or an associate, except its immediate subordinates; and in its relief from the table-land on which it rests, it may be compared to some rocky island rising from the surface of the sea.

Its geological structure fully accords with its physical aspects. It is volcanic throughout, says Dr. Newberry, and is, in fact, a huge volcano whose fires have been but recently extinguished. Through one great, and several minor vents, opened in the strata of the high *mesa*, where they have a thickness of at least 6,000 feet, a vast quantity of lava has been poured, covering with a flood of melted matter the country for many miles around, and forming one principal cone with a thousand inferior ones, of which the more conspicuous have received distinct names.

Little disruption of the stratified rocks attended this grand exhibition of volcanic force; and the formation of the mountain mass seems to have been effected entirely by the ejection of matter in a state of complete fusion, through narrow orifices of unfathomable depth.

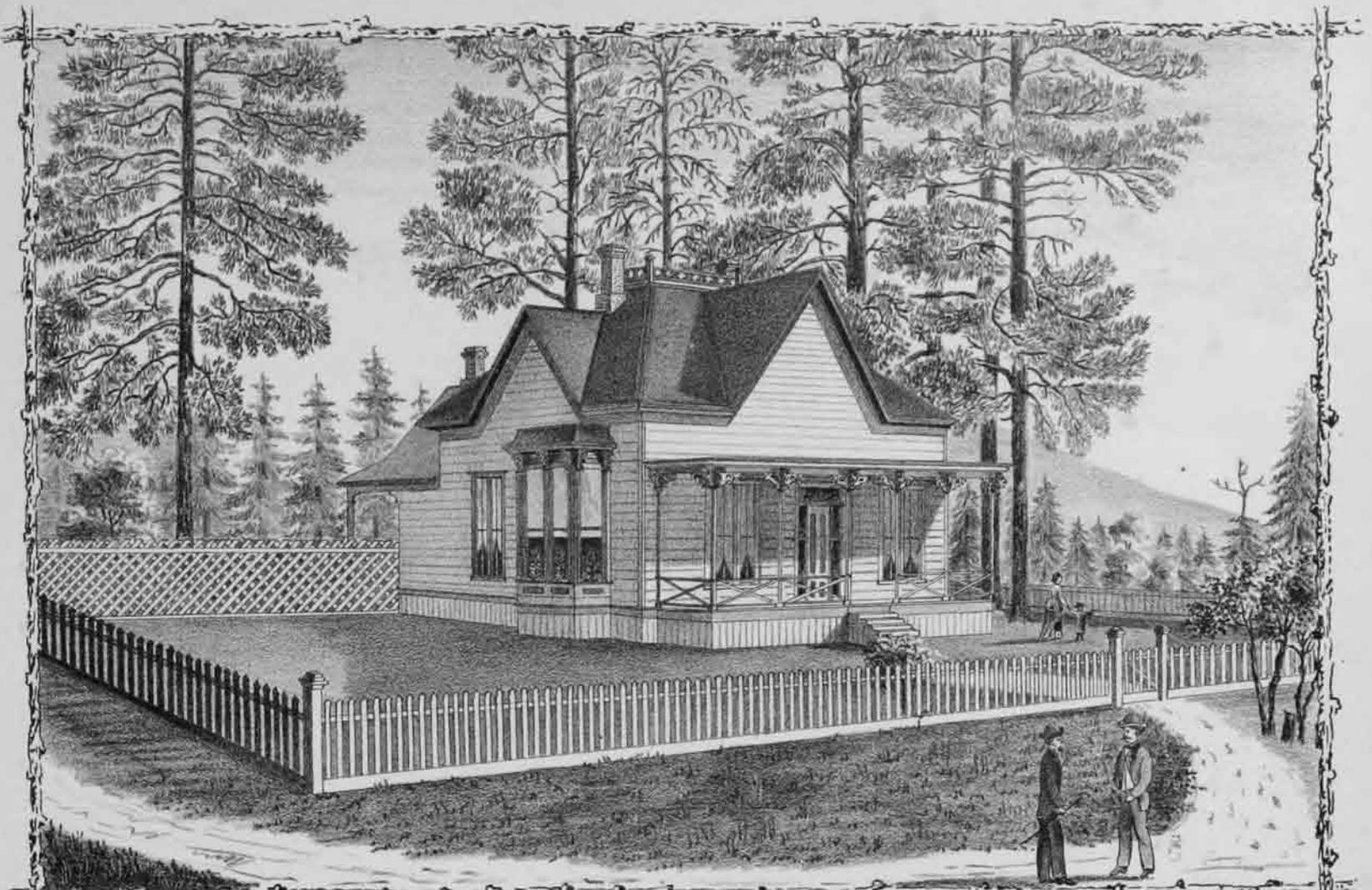
Comparatively few mountains have been wholly formed in this manner, probably none but those having the same isolated character with that under consideration. All the mountain chains which have come under observation have been composed, in a great measure, of upheaved strata of a decided sedimentary character, some of them more or less metamorphosed.

The modern date of the later eruptions of the San Francisco Mountain is attested by the remarkable freshness of some of the volcanic products which cover its slopes and base. Many of the secondary cones are distinctly crateriform, are composed of black or blood-red scoria, and are entirely destitute of vegetation, showing by all their surroundings that they have been in action, as it were but yesterday, and might be again to-morrow.

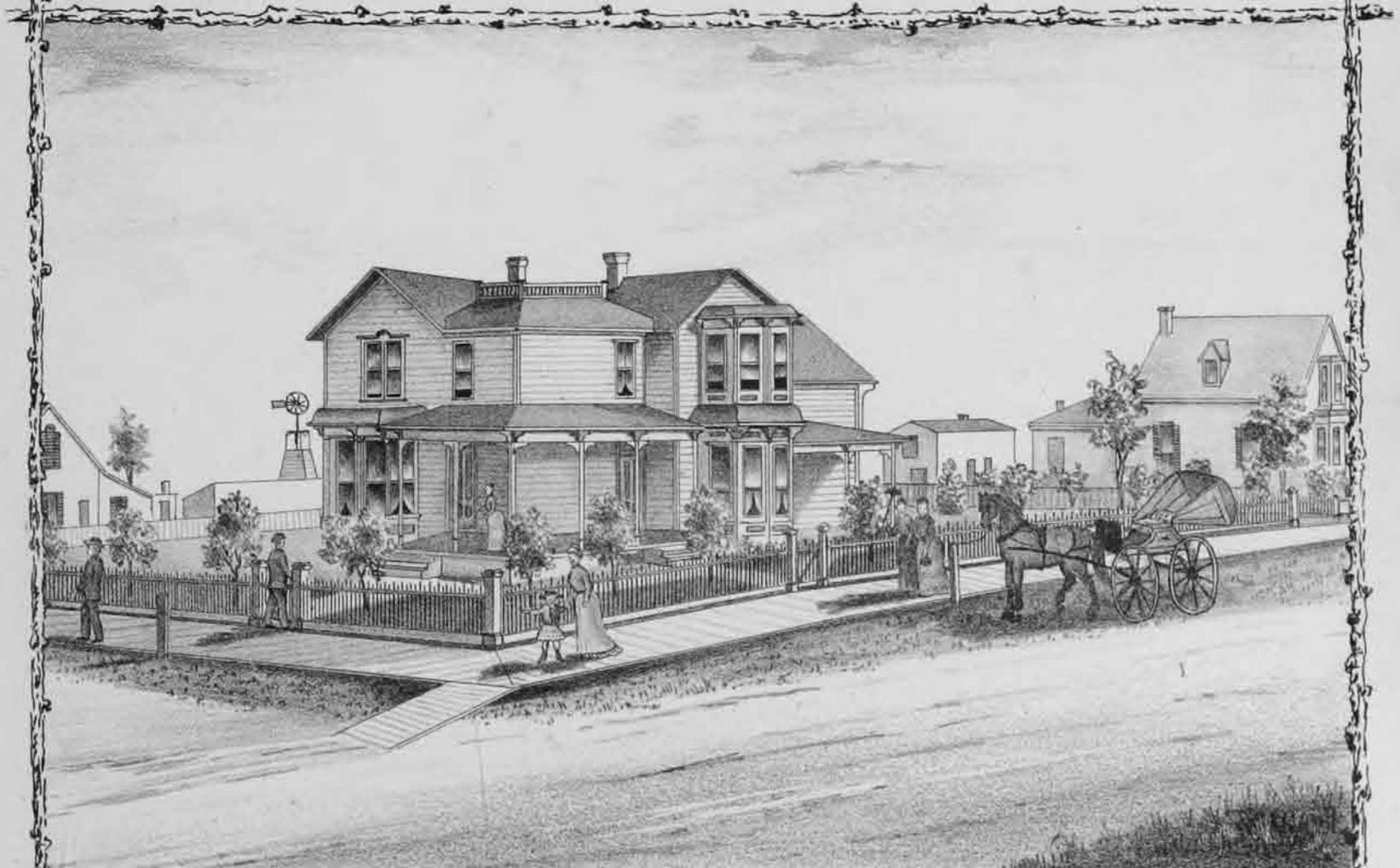
Some of the currents of lava which have flowed down the sides of the San Francisco Mountain belong so entirely to the present epoch that they have dispossessed still running streams from their beds, and now occupy their places in a congealed flood which seems but just arrested in its flow, as black and ragged, and as little affected by the action of the elements as slag fresh drawn from a furnace.

## BLACK MOUNTAINS.

This range seems to take its rise opposite the southern extremity of the Mojave Valley, twenty miles east of the river. From the Mojave Mountains, which it would cross if prolonged, it is separated by an interval of plain connected with an extensive valley lying east of this range, a valley which seems to be drained through a broad *arroyo*, terminating near the northern entrance to the Mojave Cañon. From their southern point of origin the Black



RESIDENCE OF CHARLES B. RUSH ESQ. PRESCOTT, ARIZONA.



RESIDENCE OF E. P. CLARK, PRESCOTT, ARIZONA. CORNER OF GURLEY & PLEASANT ST'S.

Mountains extend without break or interruption for more than one hundred miles, with a trend a little west of north. They constantly approach nearer to the Colorado and cross it below the mouth of the Virgin, forming the walls of the Black Cañon.

This range of mountains is of peculiar interest, from the difference which its trend exhibits from that of most of the mountain chains crossing the Colorado below. Like the Cerbat Mountains, a range parallel to and eastward of this, it approaches quite as nearly to the trend of the Wahsatch Mountains as it does to the Sierra Nevada system.

An imposing mountain stands near the west bank of the Colorado at the head of the Mojave Valley. It is the highest peak in sight, and is regarded with reverence by the Indians, who believe it to be the abode of the spirits of their departed.

#### DEAD MOUNTAIN LEGEND.

In the narrative of Miss Oatman, who was an Indian captive for many years, this mountain is alluded to. Her parents were murdered by Indians near Gila Bend, on Gila River. The particulars are given elsewhere. Her description is interesting, as furnishing an additional example of the universality among the tribes of North American Indians of the tradition of a deluge.

"They told me, pointing to a high mountain at the northern end of the valley, that in ancient times there was a flood, which covered all the world except that mountain, and that by climbing it one family was saved from the general deluge; that this family was very large and had great riches, clothing, cattle, horses, and plenty to eat; that after the water subsided, one of the family took all the cattle and one kind of clothing and went north, and was there turned from red to white; that another of the family took deer skins and bark, and from him the Indians have descended; that the progenitor of the whites had a red complexion until he stole, and then he became white; the remains of the old 'big house,' in which this ancient family lived, were up there yet; also pieces of bottles, broken dishes, and remnants of all the various kinds of articles used by them."

"They said also that this venerated spot had been, since the flood, the abode of spirits, and that if the feet of mortals should presume to tread their enchanted land, a fire would burst from the mountain and instantly consume them. It is their belief that the spirit of every white whom the Mojaves had been successful in slaying, is held there in their perpetual chains, and doomed to the torment of quenchless fires, while the Mojave by whose hand the slaughter was perpetrated is exalted to eternal honors and superior privileges therefor."

#### THE PURPLE HILLS.

Twelve miles above Fort Yuma the Colorado issues from the first of a series of mountain passes. This pass is cut through the most southwesterly of several neighboring and parallel ranges, to which, from the general color they exhibit, the name of Purple Hills was given. They are composed of granite and mica slates, associated with which are purple porphyries and trachytes, in sufficient quantities to impart to them their prevailing color. The first of these ranges has nearly a northwest and southeast trend, and in the immediate vicinity of the river is composed of a gray, massive granite, which, yielding somewhat readily to the action of the elements, as most of the granites of the Sierra Nevada System do, has formed slopes receding from the river, giving the pass an outline strikingly in contrast with that of most of the cañons cut in the porphyritic rocks higher up. Boot Mountain, a prominent peak in this range on the east side of the river, is composed of trap.

A pass extends through the third range of the Purple Hills, which are, however, not purple, but gray, being composed of mica slate, with conspicuous veins of quartz and hornblende. Many parts of the Purple Hills are rich in metallic minerals. In the second range veins of argentiferous galena had been opened by Mr. Halsted, of Fort Yuma, as early as 1854, and promised well. In the immediate vicinity of the river, the third range of the Purple Hills affords the most unmistakable evidence of the existence of valuable minerals. Gold, copper, iron, and lead are found there.

#### ELEVATION OF IMPORTANT PLACES.

This table gives the elevation, above sea level, of the principal points of interest in the Territory, both of villages, mountains, and mines:—

	FEET.		FEET.
Antelope Springs.....	8,065	Mount Davis.....	5,900
Apache Camp.....	5,000	Maricopa Hills.....	1,186
Ash Fork.....	5,175	Navajo Springs.....	5,666
Aztec Tank.....	6,032	Needles.....	483
Big Hills.....	5,702	Orabe Gardens.....	4,757
Bowie Station.....	2,609	Providence Mine.....	6,400
Benson.....	3,578	Powell's Plateau.....	8,000
Bill Williams' Mountain. . .	6,620	Peach Orchard.....	6,297
Colorado Plateau (ave.)....	5,673	Picacho Station.....	1,750
Cedar Forest.....	5,868	Picket Post.....	2,669
Cane Brake Cañon.....	252	Pinal Mountains.....	3,925
Contention Mine.....	5,200	Phoenix.....	1,800
Charleston.....	4,500	Prescott.....	5,318
Cañon Diablo.....	5,470	Pueblo Colorado.....	6,400
Camp Grant.....	3,985	Pottery Hill.....	5,722
Casa Grande.....	1,390	Peacock Springs.....	4,151
Camp Uncle Sam.....	6,000	Peach Orchard Springs.....	6,268
Camp McDowell.....	1,800	Rattlesnake Cañon.....	4,600
Colorado Cascade.....	3,097	Ranch of Tully and Ochoa...	4,900
Desert Station.....	2,135	Rancho de Hughes.....	4,900
Diamond Creek.....	1,350	Silver King Mine.....	3,700
Flagstaff.....	6,935	San Francisco Mountain...	12,561
Fort Yuma.....	200	San Pedro.....	5,550
Hermosa Mine.....	5,800	Sierra Blanco.....	11,388
Holbrook Station.....	5,111	Santa Rita Mountains.....	8,000
Herman's Camp.....	5,200	Tombstone.....	4,980
Jacob's Well.....	7,005	Tucson.....	2,390
Mojave Cañon.....	524	Viejo San Pedro.....	5,000
Molino de Mowry.....	5,750	Wilcox.....	4,164
Mt. Graham.....	10,615	Whetstone.....	6,100
McClellan Mine.....	6,500	Willow Spring.....	7,195
Mineral Park.....	3,130	Yuma Village.....	140

## SANTA CATALINA MOUNTAINS.

Looking northward from the old adobe city of Tucson, the Santa Catalina Mountains, about fifteen miles distant, appear to be a very distinct and isolated range of nearly bald peaks, with a green patch of forest on their tops, the whole rising majestically out of that great, sandy, torrid, wind-swept desert that stretches for more than a thousand miles from the south end of the Sierra Nevada, to the southern portion of the Rocky Mountains.

It is evident to the ordinary observer that this desert was lately the floor of a vast inland sea. The sand and gravel bed is slightly undulated, and seems to be overlaid on all the plain, covering, perhaps, long ranges of mountains, leaving only the sharp peaks, here and there, rearing their metal-lined spires to the skies. So constant is this isolation of peaks, that, with few exceptions, the many mountain clusters of Arizona can be skirted by a horseman in a short time; most of them in a single day. But the Santa Catalina is a marked exception. It must be the unsubmerged remnant of a long, wide, and lofty range in primeval times, for there yet remains, above the bed of this ancient sea, a range of mountains about seventy miles long, by an average breadth of twenty miles, and a height of a little over ten thousand feet.

As remarked, looking northward from the streets of Tucson, or from the trains that pass parallel with the range for fifty miles, the Santa Catalina looks a gently rounded, smooth, innocent sugar-loaf, with a crown of green trees, pleasantly contrasted with the barren reddish sand desert that glares in the quivering heat between the mountain and the observer. A good field-glass, however, resolves the beautiful object into two lofty ranges of worn and splintered mountains, inclosing a large forest between them.

## SANTA CATALINA SEEN FROM TUCSON.

The Tucson *Citizen* thus describes these mountains as seen from Tucson: "To the north are the grand old Catalinas. The Mexicans named them after some holy woman. At their base, across the desert, you see a line of cottonwoods and willows that align the banks of the Rillito (little rill, how pretty are Spanish words), that is, indeed, a little rill in the summer, but in the winter oft becomes a river that could float the *Great Eastern*.

"These Catalinas are curiously built mountains. If you would heap up two piles of sand, and then run a separate ridge past, though touching both, you could form some idea of their general shape. From Tucson we see the southern side of the ridge, while the two great heaps, representing Mount Lemmon and Mount Rice, are yet north. Make a cut through the ridge near the eastern heap, which is Mount Rice, and connect it with the cañon between Mount Lemmon and Mount Rice, and you have the great

Sabino Cañon. The sides of this cañon and the slopes of the two high peaks are the territory of the great timber belt, which some day will be a source of wealth.

"Looking from Tucson, the southern ridge presents some curious outlines. It rises gradually from the *mesa*, and is suddenly transformed into the outlines and dome of a great cathedral. The Mexicans call it 'La Iglesia,' the church. The 'clay-banks,' great perpendicular bluffs, next emerge from the mountain-side. The 'rifle-notch' is appropriately named, as its V-shaped indentation appears against the outlines of the sky. The 'finger-mountain' is the next curious freak of nature. From this stand-point it resembles the up-lifted hand, with the index finger pointing heavenward. Then follows that most singular optical illusion, the 'Ventana.'

"Viewed from Tucson it appears to be a tunnel right through the summit of the mountain. A few hours of weary toil spent in climbing the mountain-side will cause the scales to drop from the eyes of the most deceived, and firmly convince them of the truth, namely, that a granite ledge, some two hundred feet high, by the action of the elements has been cut about fifty feet deep, diagonally, from the northwest to the southeast. The top of its sides, viewed from the stand-point of Tucson, overlap, and we see the apparent tunnel. East of this are the deep shades of Sabino Cañon. Further on are the Agua Caliente Hills, at whose base are the warm springs of Fuller's Ranch. Here, too, the hand of man has planted the tree and vine, and demonstrated that Arizona cannot be excelled for her horticultural productions."

"When we comprehended," says Prof. J. G. Lemmon, "that a high valley was upheld there, fenced off by bristling peaks from the intrusive and scorching winds of the desert; when we were assured by the strong and determined botanist, Mr. Pringle, that he had just been baffled, after a long struggle, in the effort to penetrate to this valley; when General Carr told us that, to his certain knowledge—and he is an old settler, the founder of Fort Lowell—no white man had ever succeeded in passing over the southern rim of this secluded *terra incognita*, and that but recently it was one of the strongholds of the savage Apache nation; when we learned all this, the information but intensified the resolution formed on a preliminary excursion the season before, that we would penetrate these unknown mountains."

The Professor and his wife set out from Tucson in March. She was provided with a short suit of strong material, the best of firm calfskin shoes, nailed along the soles and heels with gimp-tacks, and reinforced by substantial leather leggings that promised defiance to cacti and serpents. A broad-brimmed hat with a buckskin mask, and heavy gloves, a botanical portfolio, and a long staff, completed her outfit.

Hiring a conveyance, they proceeded to the edge of the foot-hills of Santa Catalina, about six miles.

#### THE MOUNTAIN CABIN.

Here stood a stick-and-mud cabin, deserted a short time before by a Mexican who had been detected stealing horses. The cabin was a simple affair. Nine crooked posts of mesquite upheld the roof, formed of giant cactus ribs, overlaid with weeds, and coated with mud, raised highest in the center to shed rain. A mud chimney formed a part of one corner. The sides were composed of the thorny poles of the candle-wood thrust into the ground, and plastered outside with mud. It was evident that the premises were not totally deserted. A round ash pole divided off a portion of the floor for a deposit of weeds and "grama," upon which blankets were spread, and the bed was ready.

The worst feature of housekeeping at this place was the great distance to water, nearly three-fourths of a mile. So much water is required to cook with, and cool your faces in that terrible heat, and you crave so much to quench thirst, drinking it by the pint, that regular trips had to be made over the hot sands, which were only to be crossed after nightfall; and a tiresome task it was to pack oil-cans of water, and wade through the sand and weeds.

From this cabin they sallied out every day at sunrise, to be gone all day, scouring the foot-hills for plants. These hills skirt the mountains proper with a border of about six miles; then commences the steep uprise of the mountains, and very forbidding they look at close range. It took a week to explore the approaches, and find supposed vulnerable places where the crest could be surmounted. Every way deep, inaccessible ravines, with polished sides, were seen separating projecting ridges, barred at intervals from bottom to top with vertical, sometimes beetling walls, the red fiery earth glaring between, sparsely clothed with cacti and Spanish bayonet, under which crouched starved grasses, and silver-coated or hairy ferns.

#### THE CAVE RESIDENCE.

During one of the last approaches, the base of a dry creek-bed, they fortunately discovered a cave in the side of a ravine, at a point where a curve brought the south side of the ravine squarely facing the grand uprise of the mountains. It was the merest horizontal crack in the vertical wall, approached by a perilous climb up a zigzag stairway of rocks; then a swing around huge boulders breast-high, holding on by the fingers; lastly, a narrow passage through angular rocks to the mouth of the cave. The interior of the cave resembled a half-open clam shell. They could only sit upright in one limited place. It had been inhabited, for in the dust floor were bits of pottery. They crawled in first, carrying a torch to drive out the

bats and moths that thronged the ceiling. Piles of rubbish, cactus burrs, etc., along one side, betrayed the presence of wood-rats. They found no crumpled snake skins in the skirting crevices, so justly concluded that this cave was not like many other rock clefts, a den of serpents.

Into this small cave his brave little wife crept, and gleefully commenced to put her house in order. Wooden pins were driven into cracks, and cords stretched therefrom, copper wires attached, and soon rations for a week's stay were suspended safe from rats, mice, or lizards, in little bags and cans.

How warm and dazzling was the morning light! How fragrant the odor of flowers! How brilliant the plateau of candle-wood beyond the ravine! How stately the giant cacti, standing like sentinels on the bluff, and how precipitous and forbidding the old mountain rose behind all!

Though refreshed by their comfortable bed, and actually strengthened by the severe toil of the previous day, they were yet too sore for extended explorations in the morning. So they sat on the stone porch of their cave, dug the thorns and spines out of their hands and feet, repaired garments, discussed events of the past few days, and planned the next day's ascent of the mountain.

#### ASCENT OF THE MOUNTAIN.

Not an ounce of weight was allowed in their packs that could be avoided. Only a portfolio of botanical papers and half as many dryers; a sack for roots of ferns, in which were wet towels rolled into hard balls to keep them damp till needed; the botanical pick; for food and drink, a little tin pail of broma, with crackers crumbed in to prevent slopping, and in it one spoon. Grasping their staffs, and locking the door of the cave by drawing a brush before the passage, they started out early, and in ten minutes were tugging and panting, snatching flowers and ferns, gasping for breath, and exclaiming upon the new glories revealed at every landing-place of the steep mountain rib.

#### BOTANIST DELIGHTED.

On the way up Santa Catalina, what bounteous discoveries were made! Whole banks and rock clefts of the two new ferns, bits of which were first collected on this mountain just a year before, by J. G. Lemmon—the *Notholaena Grayi* and the *N. Lemmonii*. Other rare species of the same beautiful but fragile genus were found, and a half-dozen hairy species of the large family of *Cheilathes*. Also, the flowering plants that came into view as they surmounted the ledges, one after another, put on strange appearances. Some were rarely met with, perhaps only a few on the whole mountain, evidently estrays from their home on a distant mountain range. Of these, one is a large, strong-leaved plant, having all the hurtful qualities of

the Spanish bayonet family, the *Yucca*, but which required a second visit, a month later, to determine that it was a little-known, but beautiful, yellow-flowered, sweet-scented *Agave*, the pericarp being *below* the floral envelope, and not *above*, as in the *Yucca* and others of the lily family.

Another is a beautiful member of the mallow family, and immortalizes a distinguished botanist, as *Thuiberia*. Another shrub commemorates another of the early explorers, *Fendlera*.

Other plants having strange faces were seized, carefully put into the portfolio, and pressed hard, to await the day of examination. Some have been already determined and named as new species; others await the decision of special experts. The higher they climbed, of course, the more interesting the flora became; but just as sure as they became excited over a discovery, and quickened their movements, so surely their eager hands and feet would be wounded by certain cruel guardians that menaced every step of the way.

#### CACTUS AND RATTLESNAKES.

Chief of them was a cactus, called by the innocent name of *Opuntia Fulgens*, because of its long, shining spines. The plant is often four to eight feet high, with wide-branching arms divided into limbs, each bearing clusters of buds about the size of a hen's egg. These are shed off by the parent plant in profusion, and if on level ground, they pile up and make a high mound all around the plant; but if on a declivity, they fall and roll to a distance. It is those sharp-spined balls, like hand-grenades around a fort in war times, that at any moment may receive your searching hand.

Another menacing danger, constantly to be feared in that hot climate, is the rattlesnake.

#### AN EXTENDED VIEW.

By ten o'clock they were well up the first bluffs of the ridge, giving them an extended view of the plain. Near at hand, seemingly, lay the square parade-ground of Fort Lowell, surrounded by tall, green poplar trees, half hiding the line of officers' houses on the upper side, and the soldiers' quarters, hospital, commissary buildings, etc., on the other three sides; the tall flagstaff bearing the stars and stripes aloft, above the four silent cannon parked about the base—a beautiful revelation by their field-glass. Farther out on the plain, and to the westward, all in a bunch, for protection against Indians, is the old city of Tucson. The protecting presence of the railroad has, indeed, caused enterprising Americans of late, to buy outlying lands, and build up suburbs with houses in modern style.

Over the city, cutting the sky in the distance, lay Bobaquivera, a famous peak of south Arizona. To the south, fifty miles, rose the isolated, compact mountains of

Santa Rita, the locality of the earliest silver mines of the Territory, once yielding fabulous quantities of metal. To the east stretched the Whetstone Mountains, leading towards Tombstone, with its most famous mines of modern times. The northern horizon was hidden by the mass of rock, one of the ribs of the Santa Catalina.

By eight o'clock in that latitude, on a still day, the sunlight takes effect with the intensity of noontime in Michigan and New York. But by ten o'clock you are made aware that you are in a torrid climate. On they struggled, snatching plants and putting them into the portfolio, carefully rolling the roots of ferns in their wet towels, and



VISITORS IN THE SANTA CATALINA MOUNTAINS.

putting them into their sack, talking in monosyllables, with bated breath, for most attention must be given to selecting the best routes around the obstacles, if a choice presented, or the safest inclined plain through rock clefts. Often they had to return, and try other passages, and once they were obliged to make a *détour* of more than an eighth of a mile.

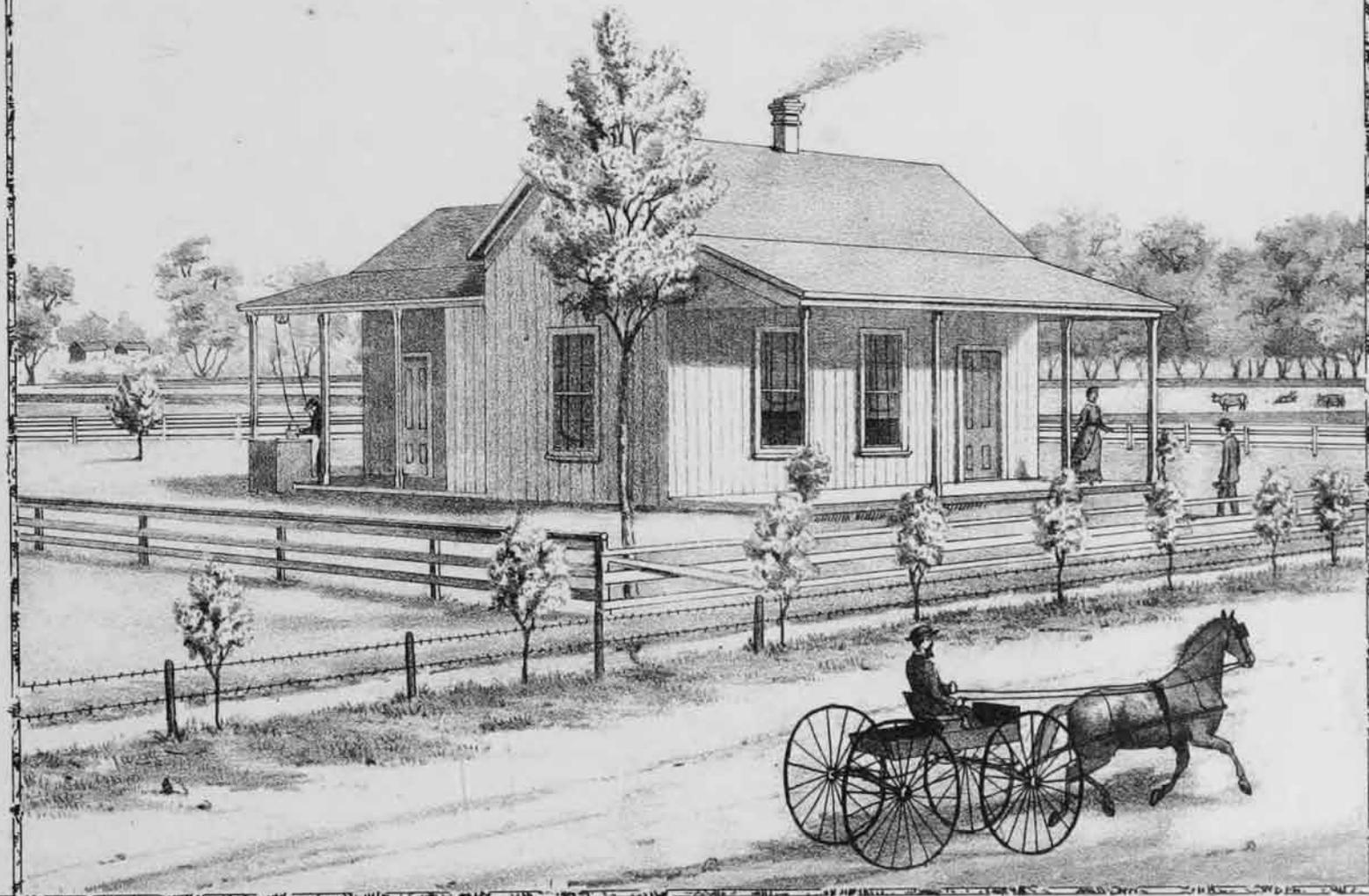
#### REPEATED ATTEMPTS TO CLIMB THE MOUNTAIN.

This was an abyss two thousand feet deep, and twice as far across, that everywhere separated them from the main mountain, no intimation of which had been conveyed up to



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the last moment, when they found themselves standing near the verge.

"There was no help for it. We must return, baffled. Beneath us yawned the chasm. Beyond, and far above, stood the guardian pinnacles, between which lay the narrow saddle through which we could not pass that day, for it was now three o'clock, and we had neither food nor blankets with us for passing the night on the mountain.

"To the west, a ridge running parallel to ours could be seen, leading away quite to the base of the pass. 'Too bad!' we both exclaimed, 'that we could not perceive this from the plain below.'"

Baffled, dejected, wounded, and prostrated! But there was no time to waste in recuperation. To reach the cave before dark, it was necessary at once to commence the descent of the mountain. They took a direct course, that often led to the verge of precipices whose presence could not be seen from above; and haste often subjected them to impalement upon the spreading points of the Spanish bayonet, or to fresh contact with the dreadful cacti and cat's-claw.

#### DESCENT MORE DIFFICULT.

When near the base of the ridge, they slid down a chute of dissolved rock to the ravine below. Here they found that floods had channeled a narrow passage along the ravine, and polished the floor as smooth as glass; and at every decline had formed pot-holes with revolving boulders, some of which were several feet deep, and still partially filled with stagnant, filthy water, that only tempted thirst. They had to pick their way, as best they could, down these declines, often compelled to slide, not being able to hold fast, even with hob-nailed boots. Twilight closed in early, for the deep ravine was on the east side of the ridge.

One after another of the sliding descents had to be taken, for there was no retreat, and no chance to flank the enemy. At last they came to a declivity of twenty feet direct, with a large caldron of yellow, grimy water at its base. This would not do.

Fortunately, the wall was splintered, affording narrow shelves, along which they groped, helped by shrubs and tufts of grass, to which they clung—after examination for cacti. Soon the way became easier, and it was plain that the cañon was opening out on the desert. A few minutes' scramble, and a horse track imprinted the soft soil; and a few steps farther, a trail. How they jogged along now, scarcely noticing the heavy bundle of plants, and the full sack of fern roots!

Of course, the day following such an adventure finds one too fatigued and sore for extended excursions, so they spent it drying out plants, completing notes of localities, attending to the multifarious details of camp life, and preparing for the next day's attempt; for, though baffled,

bruised, and routed so thoroughly during this attempt to reach the pass, they were by no means disposed to relinquish the project. They had discovered the way to do it, the proper ridge to follow, and so diligently prepared to commence the ascent at an early hour next morning.

#### IMPOSSIBLE TO ASCEND.

Being a longer ridge, and rising a thousand feet higher, the obstacles, dangers, and trials were proportionately greater. Again they were defeated, and by a similar chasm. From its top, however, they made sure that the next higher ridge to the westward led without a break to the pass, and two days afterward climbed *its* rugged sides.

Will the reader believe it?—*that* ridge also terminated in a narrow, beetling bluff, as high, to be sure, but still widely separated from the near pass by a sheer rock cleft of fifteen thousand feet.

This third failure disheartened them. It seemed vain to spend more than two weeks' time, or to try more than three of these innocent-looking ridges.

It is inferential that they all end in spires, like the *yucca*, *agave* and *cacti* that clothe them.

#### A CONSULTATION HELD.

They returned to Tucson, and a conference was at once had with Colonel Poston and General Rice, gentlemen interested in certain mines on the north side of Santa Catalina, and a plan was soon formed to assault from that quarter, as it was reported to be less steep—in fact, that animals could climb up, if led judiciously.

So they took the stage for a ride of forty miles around by the west side to Oracle Camp, where they stopped and botanized two weeks, learning the situation, inquiring for information, and completing preparations. From here they pushed on farther round to the east on foot, their things packed on a "burro," until they reached the lone house of Mr. Stratton, a stock-man, whose family, a sprightly Bay State lady of excellent education, with two bright little girls, had not seen the face of another white woman for eight months.

Having long desired to go on a hunting expedition, Mr. Stratton regarded this as a good provocation; and the next morning he equipped them with large American horses, and himself guided, rifle in hand, as much to defend against roving Apaches, as to bring down the deer that might be started from their coverts. On the way, they reached, a little after noon, a valuable copper mine, since sold for \$28,000. It was the first time a white woman was seen upon the mountain, and the miners celebrated the event by a social visit in the evening to the superintendent's cabin, where they were domiciled.

From Copper-mine Camp, which lies in a little valley, a trail had been made up the steep mountain beyond, for a

short distance, to get mining timbers. Along this they walked the sure-footed horses, sometimes on the shelves of jutting ledges, alternately of lime and granite. Soon the trail gave out, and dismounting, each led his horse by the best way to be found, often being compelled to turn about. Mr. Stratton had never been up so high before, but his experience in mountain climbing enabled him to select a passable course and so hour by hour they toiled on, occasionally to a short level space where they could rest and breathe a moment by riding.

#### NEW TREES AND PLANTS.

On the way up they passed two species of juniper found in the South, one with thin bark shredding off in long strips, the other with thick, persistent bark, deeply checked into squares, like a white-oak. Mistaken for the latter, and so uncollected until lately, is a beautiful new cypress, which the sharp-eyed Mr. Green detected on the San Francisco Mountains, and has named *C. Arizonica*. Near the summit, a pretty little pine comes in from Mexico—*Pinus Chihuahuana*—about ten to twenty feet high, and with smooth cones, like boys' tops. Just where the brow is reached, and the desert vegetation is left, another pine sends its long arms over the verge. Though it closely resembles the yellow pine of California—*Pinus ponderosa*—yet the leaves looked peculiar. The leaves are in fascicles of fives, instead of threes as in yellow pine, and this character distinguishes the new *Pinus Arizonica*, for which Professor Lemmon had been so long in search. This was the precursor, a specimen product of the storehouse about to be opened.

#### PLENTY OF GAME.

Tall trees standing in solid array, grass-covered hillocks dotted with radiant flowers, long vistas, barred with light and shade, leading to secluded dells, rushing streams and distant banks of snow, startled deer, fleeing like sheep, squirrels stopping head down upon tree trunks, to question the intruder, fresh bear and lion tracks deeply indenting the moist ground, turkey and parrot feathers scattered about—it was a most enticing game-park for sportsmen, and a very paradise for botanists.

Mr. Stratton's rifle rang on the air, but ineffectually this time, for the noisy approach had driven the deer too far away. Mule tracks soon were met with, and following them around a hill, a column of smoke, then a rude cabin, came suddenly into view. In response, a grizzled hunter came forth, with a startled look that changed to amazement when he perceived a lady dismounting.

This was the retreat of two hunters, for a long time lost to the world; enterprising men, who had conceived the project of making a flume and sending lumber and wood, some day, down into the desert.

Here was a wonderful *dénouement*—a park, a conservatory, a museum, a cool retreat, and a hospitable hunter's cabin! Having but thirteen cartridges at the start, Mr. Stratton killed ten deer. He hung one up by a tree one night, intending to bring it in next morning: A lion helped himself to it, in his absence, the lion being so large that he carried it away in his mouth, raised so high that the full-grown buck dragged neither feet nor antlers on the soft ground.

Wild turkeys were killed that weighed forty pounds, a drove of fifty birds being seen almost every day. A



DWARF DEER OF ARIZONA.

new species of parrot that feeds on pine seed, as evidenced by the crushed cones, was heard chattering among the tree-tops. As they are short-winged birds, it is supposed that this species is limited to this park. Wild cats, wolverines, and animals unknown were reported by the hunters.

#### A FAVORABLE PROSPECT.

Perhaps no more vivid and pleasing contrasts, no more new and valuable floral treasures, no more interesting zoological discoveries, can be met with elsewhere in the large Territory of Arizona, than in this *terra incognita*, this forest in the mountain tops, this museum of natural history, this heart of Santa Catalina.

## THE PRINCIPAL VALLEYS.

Three Divisions of Land; Agricultural Valleys; Dry Plains; Elevated Plateaus; Soil of Valleys; Agricultural Capabilities; Mesa Lands; etc.

### DIVISIONS OF THE LANDS.

THE lands of Arizona exclusive of the mountains, may be divided into three classes: First, agricultural, valley, or bottom lands; second, dry plains; third, elevated plateaus, or table-lands.

The table-lands are covered with a short and luxuriant grass, upon which immense herds of cattle have been and may still be raised. Formerly herds of thousands existed in Chihuahua, which then included the eastern portion of Arizona. On the *haciendas* where there were no ponds or streams the cattle obtained their water from the *pozos*, or simple wells, and the *norias*, or draw wells, where the water was drawn up by a wheel worked by mules. Owing to the incursions of the Apaches, the great herds of northern Arizona disappeared, and the *haciendas* are everywhere in ruins.

### THE DRY PLAINS.

The dry plains are generally level, with a hard surface, and are admirably adapted for the purposes of a wagon road or railway. Experience has shown, too, that, with artesian wells, water may be obtained. One of these extensive districts lies south of the Gila, between the headwaters of the Gulf of California and the valley of the Santa Cruz; the other west of the Rio Grande, at intervals between that and the San Pedro Valley. This extensive plateau south of the Gila, is broken by two well-defined ranges of mountains, the Chiracahui and Santa Rita, and by a number of isolated peaks, which assume something the form of a sugar-loaf, and are called by the Mexicans *Picachos* and *Peloncillos*.

Toward the coast the plains are barren and arid deserts, and the traveler may ride hundreds of miles without seeing other plants than dry and thorny cacti and scattered bushes of grease-wood.

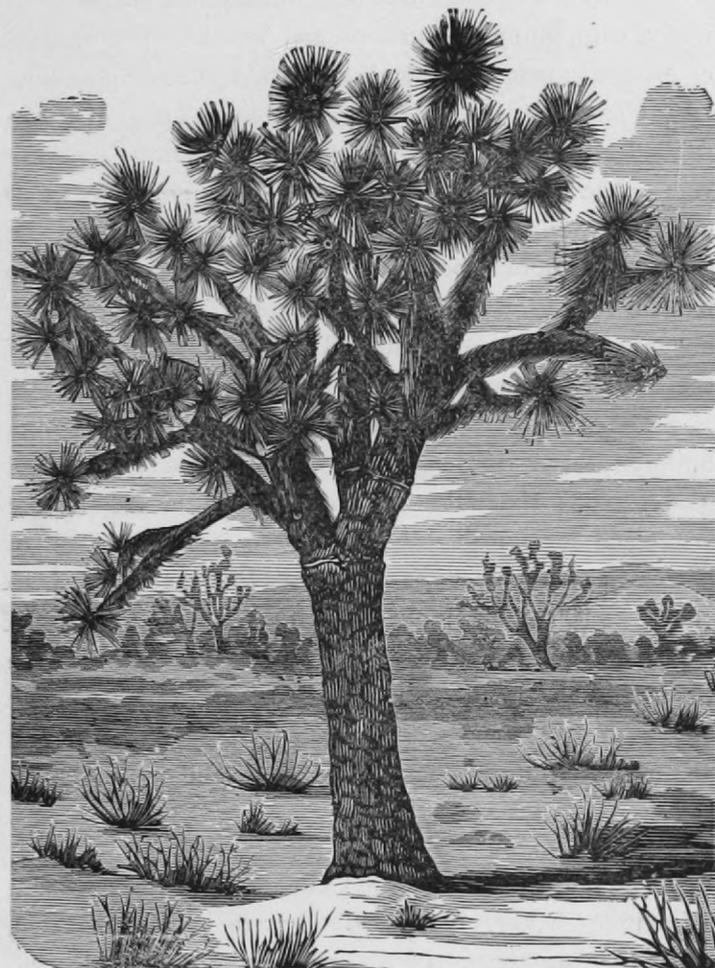
The granite mountains bordering these deserts are even more barren. Not a tree, nor even a cactus, can be seen on their sides. They tower high above the plains, great masses of white, reflecting the rays of the sun with dazzling brilliancy. The only water to be found over an area of many miles of the plains, is at a few points in the mountains, where the rains have collected in natural tanks sufficient to last for a few months. During the rainy

season, which often nearly fails, shallow pools are formed in slight depressions on the surface, but a few days' sun is sufficient to exhaust these sources.

Of the valleys we shall here mention, in a general way, are a few of the principal ones of the Territory.

### THE COLORADO VALLEY.

The valley of the great Colorado River is not like that of most streams, one continuous valley, but is cut up by cross mountain ranges into many smaller valleys. From where the river enters Arizona, until it reaches the Nevada



YUCCA DRAGONIS OF ARIZONA.

line, for 200 miles, there are only little patches of valley capable of cultivation, and these liable to overflow. From the Black Cañon south, there are numerous valley lands on and near its banks. Some of these could hardly be classed as valleys, like that of the Sacramento Valley, which is about 4,000 feet above sea level. Other side valleys are too high to receive benefit from the waters of the river.

The Great Colorado Valley proper, is terminated at the south by the Chocolate Range, through which the river passes and comes through the Purple Hills into the wide valley, which then continues to its mouth. In the lower valley there is a large amount of land which could be made productive if irrigation were practicable, but so far all efforts have been partial failures. Some years ago, above

Ehrenburg, an irrigating canal several miles long was dug, but the soil was so porous and unstable that the banks were constantly undermined, causing them to cave in and fill the canal. After repeated trials, it was decided that fluming was the only plan, but this was found too expensive. Even then the overflow of the river would most likely destroy the flumes.

#### SOIL OF COLORADO VALLEY.

The valley of the Colorado is fertile, and will produce all the tropical fruits, as well as the cereals. The Indians, favored by the annual overflow, raise abundant crops of wheat, corn, pumpkins, melons, and beans. The remains of extensive irrigating canals show that, at some day long past, a large agricultural population lived here. The extreme heat of the climate in the summer months will prevent white labor from agricultural pursuits to any great extent. Rice, sugar, and cotton are best adapted to the soil of the Colorado bottom. There is, in places along the bank, a fine growth of cottonwood, and the whole valley abounds with the mesquite. This is the only portion of the Territory where the heat is excessive.

The greater part of the valley is a desert plain, a hundred feet or more above the river, limited by clay and gravel bluffs that often abut close upon the edge of the water and form little cañons. There is a good deal of bottom land, and some of it is fertile, but much of it is so charged with alkali as to be unproductive.

The Yumas cultivate the better portions, which are watered during the summer overflow. A well-conducted system of irrigation would wash out the salt from the soil and increase the amount of productive land.

#### A FERTILE VALLEY.

The bottom lands of the Colorado at Fort Yuma, and a few miles below, are exceedingly rich, are well wooded, and bear the marks of a former cultivation, irrigating canals being seen in all directions, even in the densest part of the forest.

Where there is little alkali, the Indians successfully cultivate corn, beans, pumpkins, wheat, and melons. Little rain falls here, and the necessary moisture is supplied to the cultivated lands from the annual overflow of the river. If a larger amount of water could be secured at intervals throughout the season, by irrigation, a portion of the salts would be removed, and much of the alkaline soil be redeemed from its sterility.

Close to the river is an occasional growth of mesquite, cottonwood, or willow, which furnishes abundant materials for fuel; but the hills are bare, and the gravelly beds of the valleys sustain only desert shrubs. There are many varieties of cactus, among which the fluted columns of the *cereus giganteus* stand in conspicuous relief.

#### UPPER COLORADO BASIN.

The upper part of the Colorado basin rises from 400 to 800 feet above sea level. It is set about with snow-clad mountains, varying in altitude from 8,000 to 14,000 feet. The lower portion of the basin is but a few hundred feet above the sea, but the river, here and there, runs by and forces its way through ranges of eruptive mountains, ranging from 200 to 600 feet. On the north side of this portion of the valley is a line of bold and vertical cliffs, often thousands of feet above the waters that foam and run below.

The rain-fall is often but three to six inches per annum, but the winter's snows are abundant, and when the summer comes they melt easily, and, flowing down, they swell the Colorado as it rolls a red and turbid stream on its way to the Gulf of California. It is these rapid torrents whose abrasions have cut away the rocks for centuries, and formed the series of marvellous cañons whose great depths and wonderfully weird wonders of form and color have made the course of the Colorado so famous and sublimely picturesque.

#### THE GILA VALLEY.

First in an agricultural point of view is the Gila River Valley, extending from the Gila Cañon, at the junction of San Pedro River, to its mouth, a distance of some 250 miles, but the most valuable part of the valley is a section of which the junction of Salt River is the center. The valley of the Gila embraces the larger portion of continuous productive lands of Arizona. These lands produce large crops of grain, vegetables, grass and fruit. In fact anything in the fruit line can be raised.

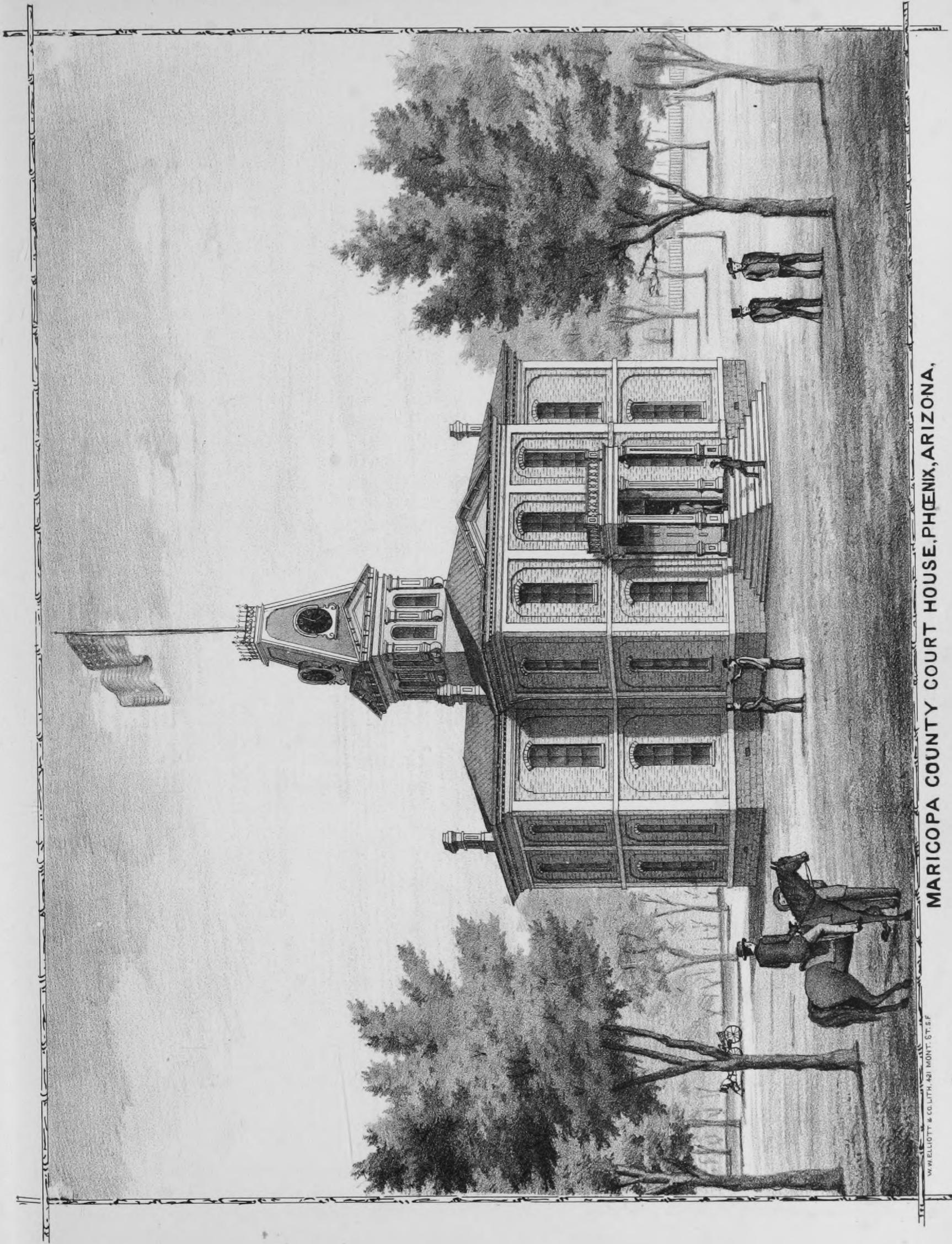
The Gila Valley, in which Florence is situated, is about sixty miles long to the junction of the Salt River, and varies from one to three miles in width, with a rich loam soil. But a large part is now an Indian reservation. At present not more than 6,000 acres are under cultivation by whites. The land cultivated by the Pimos on the Gila seems inexhaustible. Year after year they cultivate the same crops on the same land, with nothing but water to enrich it, and there is no sign of failure.

There is also a large valley of good land near the Gila Bend, which is capable of irrigation, and will produce all the grains, fruits, and grasses. This section is about being opened up by irrigating canals.

The lower Gila Valley in Yuma County has large tracts of bottom lands, which, with water for irrigation, can be made productive. From Gila Bend to the mouth of the river very little land is occupied, and there is plenty of room for settlers.

#### PRODUCTIVE AND BEAUTIFUL VALLEY.

The valley of the Gila, whose waters flow from east to west, divides the Territory nearly in the center, and it



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may be said nearly all this strip of valley may be cultivated to a greater or less extent. Hundreds of acres of rich lands have been put under cultivation. The same soil, in colder climates, that would be barren, here, under the Arizona sunshine and water, becomes fruitful.

At Florence the land is very rich and productive, and nearly all the land that can be supplied with water is under cultivation. The soil is mostly a rich, heavy, dark loam, of remarkable fertility. The land, however, requires a large quantity of water. The result of cultivation in this valley will be particularly mentioned in the descriptions of the county.

In the Upper Gila are many small, park-like valleys, and one of them is thus described in the "Marvellous Country:"—

"A beautiful valley, carpeted with a rich greensward, extending fully three miles in length and nearly if not quite a mile in width, through which a stream, with water clear as crystal, meandered over its bed of pebbles, its banks skirted with a kind of small willow, whose foliage of yellowish-green contrasted strangely with the darker shade of the grass, and all surrounded by a range of bluffs, fully a hundred feet high, worn into representations of castellated forts, with bastions, scarps, lunettes, gorges, and curtains, till one could almost fancy the whole encompassed by an impregnable fortress."

#### SANTA CRUZ VALLEY.

The valley of the Santa Cruz, from Tucson to the Sonora line, seventy-five miles, is a soft volcanic or alluvial soil, with occasional alkaline traces, and cottonwood, mesquite, cactus, and palo-verde here and there, which, with occasional fields of socaton and scout-grass, form the vegetable growth.

The Santa Cruz Valley is quite extensively cultivated at and near Tucson. Some of this land has been under continuous cultivation for over one hundred years, generally producing two crops each year.

The Sonoita Valley unites with the Santa Cruz, about sixty miles above Tucson. It is a rich but small valley, and contains several good farms.

Above Tubac the valley broadens into a great plain, in which the little river meanders until it strikes the hills at Tucson, along the base of which it flows northwardly for miles, when it sinks and is lost sight of perpetually. It is supposed to enter the Gila by some subterranean channel near Florence, about 230 miles from the *potrero*, or gateway, by which it enters Arizona.

#### SANTA CRUZ RIVER AND VALLEY.

The valley of the Santa Cruz River is unquestionably the finest agricultural district in the whole of the Gadsden Purchase, said Mr. Bartlett, after leaving the

bottom lands of the Rio Grande. It is also the best wooded of any portion of the Territory, and in other respects presents many advantages for settlers; indeed, this valley, with its adjacent districts, where there are several rich and highly cultivated haciendas and missions, must become the granary for the future State of Arizona.

The Santa Cruz River rises in a broad valley, or rather plain, north of the town of the same name. They reached it at the base of a mountain range, where an open country, studded with oaks, lay before them. Passing these was an open plain covered with luxuriant grass, without a tree or shrub; crossing which, after being contracted between low ranges of hills, they reached Santa Cruz. This is an old town and presidio, and is about ten miles south of the Mexican line. Flowing south nine miles to San Lorenzo, an old deserted rancho, the river takes a northerly course, winding its way through a beautiful valley, until it is lost in the desert plain or sands, some ten or fifteen miles north of Tucson. Its entire length in a direct line, without reckoning its sinuosities, is about a hundred miles. Its width varies from 20 to 100 feet, and during very dry seasons portions of it disappear.

#### A HISTORICAL VALLEY.

The valley of the Santa Cruz, south from Tucson, comprises that portion of Arizona which is the most historical, and in which the Spaniard and Anglo-Saxon have struggled the hardest to maintain themselves against the sullen and desperate onslaughts of the destroying savage. This valley supported a number of missions, pueblos, and presidios, between Tucson and the Mexican line, showing its productive qualities in times past.

The valley of the Santa Cruz at Tubac is at least 3,000 feet above the sea level, while the Atascoso Range, to the west, brown, bald and bare, looks down upon the old town, and the lovely valley in which it lies—a very rugged specimen of an Arizona range—has an altitude of about 6,000 feet. In many places the valley is picturesque, and in others is a broad and open plain in which grow the *maguey*, the *yucca*, and various kinds of cacti, together with small oaks. The valley often spreads out from six to eight miles in width and some twelve or fifteen in length. Unlike the desolate and barren plains between the mountain ridges, this valley is covered with the most luxuriant herbage, and thickly studded with live oaks; not like a forest, but, rather, like a cultivated park.

The valley of Santa Cruz is formed by an extensive marine deposit of the quarternary age. The sea, which once covered it, has vanished, and the valley now receives only the drainage of central southern Arizona.

Finer farming land than is seen in the Santa Cruz Valley near Tucson is rarely found. Here and there the

Santa Cruz River runs under-ground, but water can always be obtained by surface digging; and for more than a century this valley has produced two crops a year without enrichment. The grazing on the slopes each side of the valley is superior. Westward from the Santa Cruz Valley to the line of Yuma County extend grassy, rolling plains, intersected here and there by isolated mountain ranges.

#### VALLEY OF LITTLE COLORADO.

The valley of the Little Colorado, throughout its entire extent, is destitute of trees, and, emerging from the dense pine forests of the *mesa*, your eyes sweep a hundred miles of its course, and grasp at a glance all the great features of its structure and relations to the country surrounding it.

On the west the view is everywhere bounded by the forest-covered summit of the high *mesa*, which stretches away in an unbroken line from the Colorado to the point where it is crowned by the snowy peaks of the San Francisco Mountain and its subordinates. On the eastern side of the valley the long lines of *mesa* walls, converging in perspective toward the southeast, fill the horizon and give to the landscape that linear character so common to table-lands, but never seen elsewhere. In the northwest the high *mesa*, at the junction of the two Colorados, forms a most conspicuous object, though, at a distance, subtending so large an angle and covered with a glittering sheet of snow, it resembles the line of a lofty and snow-covered sierra.

The area intervening between the objects described is, for the most part, a smooth and grass-covered plain. Such it doubtless was at one time, but when you attempt to cross to the opposite side of the valley, you find that beneath its modest surface are concealed some of the grandest and most surprising physical features met with, and impediments to progress more insurmountable than any of the snow-covered *mesas* or mountains. The plain is cut by a series of cañons scarcely less profound than that of Diamond River, forming a labyrinth of difficulties effectually arresting progress.

#### MESA OF LITTLE COLORADO.

The high *mesa* does not terminate on its eastern as on its western border, but, following the curve of the underlying rock, the surface falls off in a nearly uniform slope of about one hundred feet to the mile for twenty miles. This slope is succeeded by a level plain, having a width varying from twenty to forty miles, and bounded on the east by *mesas* of different elevations. Towards the southeast, whence the valley has a perceptible descent, its eastern wall, though a marked feature in the landscape, is not more than one thousand feet in height. Near the mouth of the Little Colorado, however, the relative altitude of

the *mesa* is increased by the depression of the surface of the valley, and its absolute altitude enhanced by the addition of two great terraces to its surface.

The angle of the *mesa* included between the Great and Little Colorados, on the north side of the latter stream, combines all the formations of the table-lands, and, having an absolute altitude of eight thousand feet, overlooks the valley in a nearly perpendicular wall of some four thousand feet in height, of which the base is, apparently, washed by the waters of both streams at least six thousand feet below its summit.

The wide valley of Flax River can be recognized a long way off by the line of cottonwoods that skirt the banks of the stream. The river is smaller than the Colorado, but when the water is becoming high, much resembles the other at its low stage. There are the same swift current, chocolate-colored water, shoals, snags, sand-bars, and evidences of a constantly shifting channel.

The banks and bottom are composed of quicksand. The bottom lands are in places several miles wide. Here and there are to be found patches of coarse grass, which in spring is green and nutritious.

There is a sandy beach at the confluence, which renders it practicable to follow up the river above its mouth, seventeen miles, where an Indian trail, on the north side, makes the plateau accessible. The cañon, however, continues thirteen miles farther up the stream. This cañon is 2,000 to 3,000 feet deep, but has no falls.

#### COLORADO PLATEAU.

This vast plain extends over the whole of northern Arizona, from near Hualapai Valley to the east. Throughout its whole extent, the rolling hills are covered with grass. This plain has an elevation of 6,000 to 7,000 feet, and many peaks of great height.

These mountains are mostly covered with excellent timber, and the mountains and high table-lands are covered with grass. It may be truly said that these mountains have been not only a home, but the stronghold of the Apaches. The country is difficult of access, and contains caverns and perpendicular gorges with which the Apaches were familiar, and from which, for centuries, they have sallied forth to murder and rob the people of Arizona.

The northeastern part is a high plateau, well timbered and covered with grass, and contains many productive valleys. The most prominent mountain ranges or peaks are the Bradshaw, Granite, and Antelope. The country gradually descends on the west over the rolling hills, then broad plains, with, here and there, isolated, ragged mountains, to the Colorado River, the country being mostly covered with grass, and well adapted to stock-raising; and south, with a gradual descent, over about the same kind of country, into the valleys of the Salt and Gila Rivers.

The country south of the Gila to the Sonora line, and east of the Colorado to New Mexico, may be described as composed of vast plains, with numerous broken mountains, in every shape, and running in all directions. The Santa Rita is the highest of these mountains, and is about ten thousand feet above the level of the sea. Many of the above mountains are covered with forests of excellent timber, while the plains are well wooded with mesquite and live oaks. Nearly the whole country is covered with grass, and gold, silver, copper, and lead abound in all of them. Many old abandoned mines are found that were worked centuries ago, the work probably having been stopped by the hostile Apaches. The agricultural valleys will be described hereafter.

#### JOURNEY ACROSS THE PLATEAU.

Lieutenant Ives gives a graphic account of their journey across the Colorado Plateau in Yavapai County, south of the Colorado River. He says:—

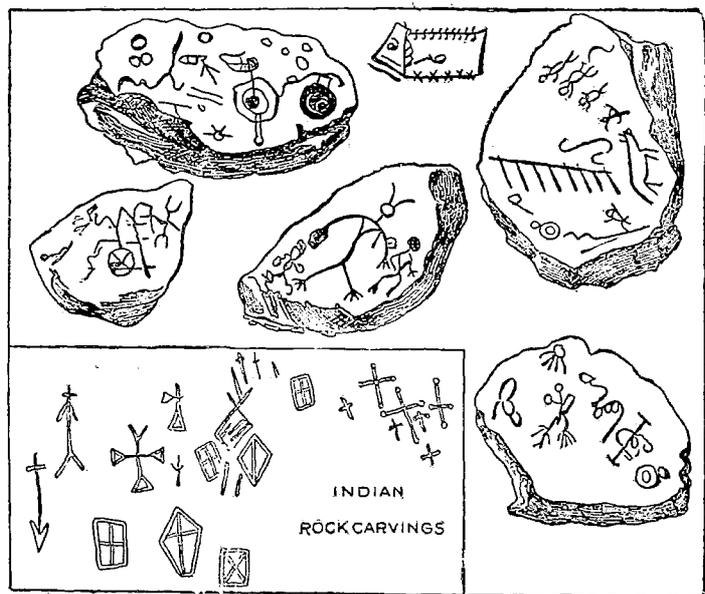
"Our altitude is very great. During the last march the ascent was continuous, and the barometer shows an elevation of nearly seven thousand feet. A still higher plateau rises towards the north. The Colorado is not far distant, and we are opposite the most stupendous part of the Big Cañon. The bluffs are in view, but the intervening country is cut up by side cañons and cross ravines, and no place has yet been seen that presents a favorable approach to the gigantic chasm.

"The snow-storm, April 12th, had extended over but a limited area, and the road, at first heavy, in the course of an hour or two became dry and good. The pines disappeared, and the cedars gradually diminished. To our regret, the patches of grass also were less frequently met with, and the little seen was of poor quality. Each slope surmounted disclosed a new summit similar to that just passed, till the end of ten miles, when the highest part of the plateau was attained, and a sublime spectacle lay spread before us.

"The extent and magnitude of the system of cañons in that direction is astounding. The plateau is cut into shreds by these gigantic chasms, and resembles a vast ruin. Belts of country miles in width have been swept away, leaving only isolated mountains standing in the gap. Fissures so profound that the eye cannot penetrate their depths are separated by walls whose thickness one can almost span, and slender spires that seem tottering upon their bases shoot up thousands of feet from the vaults below.

"We had to camp without water, and it being the second day that the animals had had nothing to drink, a great part of them broke from the herds as soon as their saddles were removed, and made a stampede for the lagoons. Barely enough were left to pack the few articles that had been brought.

"The next day a southeast course was followed, which led over an undulating surface, where the traveling, for a while, was tolerably good. A thick growth of cedars and pines offered occasional obstructions to the pack animals, who would get their loads tangled among the low branches. As the day advanced, the heat became more oppressive, and a tract was entered where, the soil being loose and porous, the animals sank to their fetlocks at every step. Finally a small but impassable cañon was reached. After several ineffectual and fatiguing attempts to cross, we had to head the ravine by climbing the face of a high bluff in which it rose. The growth on the side of the ascent was dense, and the ground strewn with sharp rocks. Darkness came on before we had quite accomplished the descent upon the opposite side, and it was necessary to camp, not only without water, but on very short allowance of grass. All the mules had to be



ANCIENT CARVINGS IN "PAINTED DESERT."

hobbled to prevent them from stampeding back to the lagoons, which rendered it still more difficult for them to pick up enough to eat.

"We had made as much haste as possible, being in constant fear, however, of meeting some insurmountable cañon that would require a long *détour*, and lengthen the distance to the belt of country south, where we were expecting to find water.

"In spite of all the precautions, some of the mules strayed, and, while hunting for them, a man got lost. By the time all were found, the sun was high in the heaven, and shining with even more fervor than on the previous day. The face of the country continued much the same. The trees generally intercepted the view, and the landscape, where seen, was sufficiently monotonous, consisting of interminable slopes, broken here and there by a line of low bluffs that marked the edge of some higher plateau.

At the end of ten miles of weary travel a steep ascent brought us to the summit of a table that overlooked the country towards the south for a hundred miles.

"The picture was grand, but the cedars and pines kept it shut out during most of the time, and the road was heavier than ever. No place could be descried, far or near, that gave promise of containing water.

#### FRIGHTFUL AND ARID REGION.

"A more frightfully arid region probably does not exist upon the face of the earth. Some difficult ravines were crossed a little before nightfall. The wretched and broken-down animals, now forty-eight hours without drinking, and that, too, while making long marches under a burning sun, were brought to a halt. They had to be tightly hobbled, for, in their frantic desire for water, nothing else could have restrained them from rushing back to the only place where they were certain of finding it. Too thirsty to graze, they stood all night about camp, filling the air with distressing cries. In the morning the weakened brutes staggered under their packs as though they were drunk, and their dismal moaning portended a speedy solution of their troubles should water not soon be found.

"For the third time the sun rose hot and glaring, and, as the great globe of fire mounted the heavens, its rays seemed to burn the brain. The condition of things was desperate should no water be discovered during the day. A single bad cañon or ravine, to turn us from the course for any great distance, would be unquestionably the destruction of the train. The scanty supply brought in kegs and canteens was exhausted.

"In this hot, dry atmosphere, when exercise is taken, the evaporation from the system is very great, and, unless this is compensated for, the body soon becomes intensely parched. The men now suffered as well as the beasts. Mile after mile the dreary ride continued, and the flagging pace of the mules showed that they were on the eve of exhaustion, and still the unvarying character of the plateau held out no promise of relief. The ground, fortunately was smooth and level, and the traveling easy. While unconscious of the vicinity of any break in the surface of the plain, we came to the edge of a steep declivity, at the bottom of which was a ravine, whose sides displayed the volcanic rocks that are met along the thirty-fifth parallel, but from which we had been so long absent. Our hopes rose upon seeing surfaces not composed of loose pebbles or porous earth, and we urged the fainting animals down the hill. A fresh bear trail crossing the slope was a good sign that the almost despaired of element was not far distant.

"Green grass carpeted the bottom of the ravine, and a few hundred yards from its mouth a projecting ledge threw a deep, cool shadow over an extensive pool of clear,

delicious water. The crazy beasts, crowding and huddling upon one another, plunged into the pond and drank till they were ready to burst. A few yards above smaller basins of rock filled with the delightful beverage furnished an ample supply for the men.

"A large grizzly bear—the animal whose tracks we had observed—was seen quietly ascending a hill near by, and half of the company rushed after the grim monster. He was unconscious of pursuit till the party was close upon him. Then he commenced to run, but the hill retarded his pace, and a volley of balls made the fur fly in all directions from different parts of his hide. Twice he turned as though meaning to show fight, but the crowd of pursuers was so large, and the firing so hot that he continued his flight to the top of the hill, where he fell dead, riddled with bullets. His skin was taken off to be preserved, and the flesh divided among the party. It is rather too strong flavored to be palatable when roasted or broiled, but makes capital soup."

The only difficulty now to be apprehended was that the sharp and vitreous masses of hardened lava overspreading the ground might injure the feet of the animals. The rough country traversed had been so hard upon shoes that nearly all of the mules were unshodden.

A few miles south is Mount Floyd that forms one of the most prominent objects in this region.

"Go where you will," says Hodges, "in all parts of the Territory, in the foot-hills, through the mountains, pleasant and delightful valleys are continually attracting the attention of the explorer, many of them having springs of clear, crystal water, and often one will find small rills and rivulets which are sufficient to supply the wants of many horses, cattle and sheep."

There are scores of smaller valleys in different portions of the Territory, somewhat similar in character to those mentioned, most of which will, no doubt, in time, be utilized and made productive by means of artesian wells. Many of these smaller valleys are now being located and settled on by immigrants from all parts of the Union, and are being improved to some extent, especially in the mountain region, where much of the soil can be successfully cultivated without irrigation.

Williamson's Valley, near Prescott, contains not less than 500,000 acres, together with 300,000 acres of adjacent foot-hills, well furnished with bunch grass. Around Mount Hope, in Yavapai County, there are scores of beautiful valleys containing from 40 to 400 acres of land each; in fact, wherever a river runs, there, at some portion of its course, may be found as lovely depressions as exist anywhere in the United States.

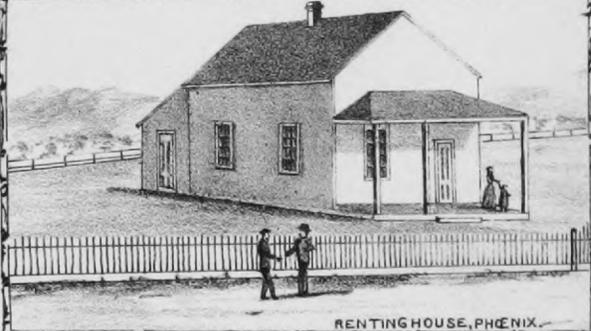
All the smaller valleys are described in the various counties where they are located.



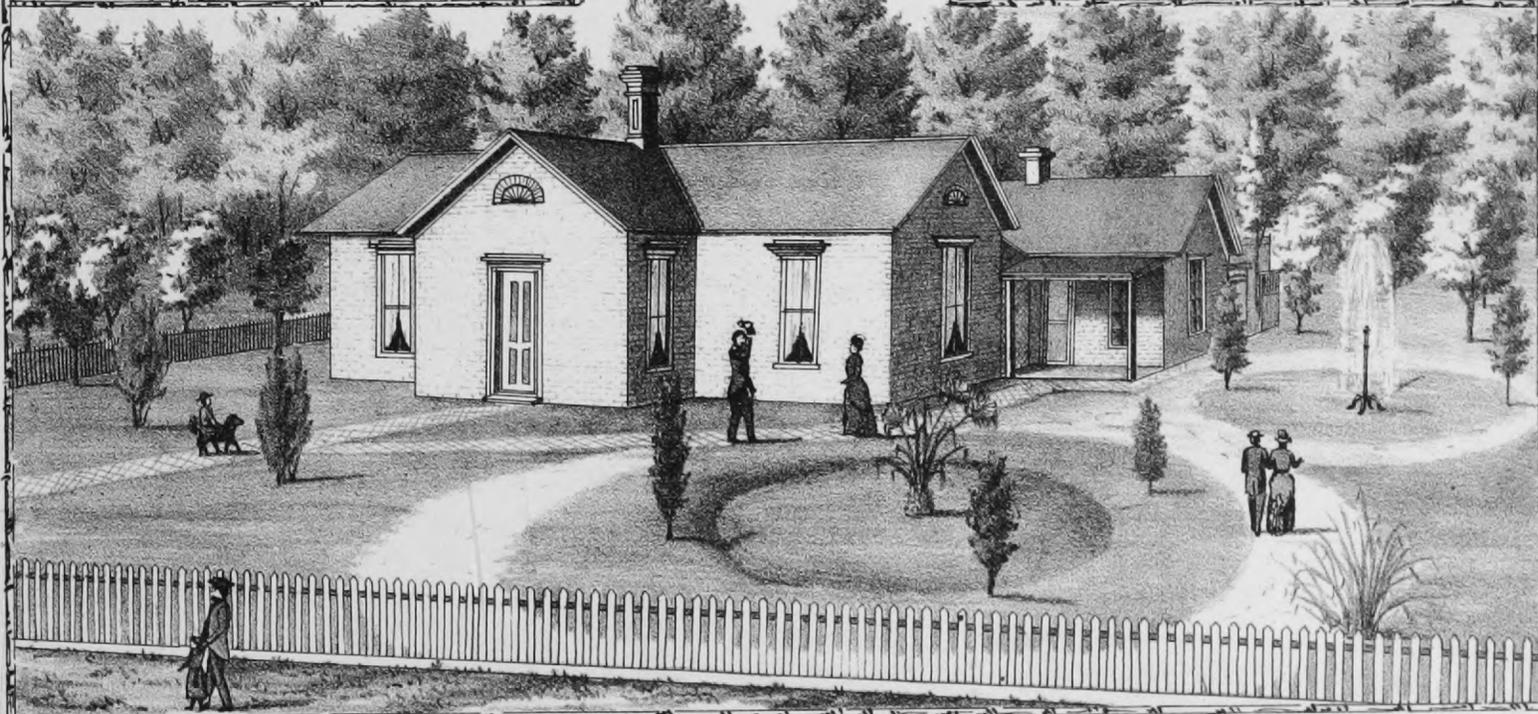
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## CLIMATE OF ARIZONA.

Variety of Climate; A Sanitarium; Two Rainy Seasons; The Hot Season; Pure Air; Healthfulness; Rain-fall; Temperature Tables, Etc.

### CLIMATE DETERMINES SETTLEMENT.

CLIMATE, more than any other one property, determines the comparative and intrinsic worth of a country for habitation. Every other condition may be, to a less or greater degree, altered by human agency; climate remains a steadfast servant to its mistress, Nature. The soil may be unfruitful, timber wanting, the waters unfit for use—man remedies such defects, and nations are planted in the midst of these adverse surroundings. Climate, unaltered, outlasts the labor of races.

In the location, then, of a permanent settlement and the choice of a home, climatic conditions form the first and chief factor. Men pierce the frozen barriers of the North, or brave the wasting torrid heats in pursuit of wealth, only that they may dwell in comfort where the seasons come and go mildly. Human adventures are not found by frost and heat; and yet homes are not made of choice too near the extremes of either.

Enough seasonable variation exists to make the race vigorous, to produce grains and fruits of the finest quality, and the best varieties of domestic stock. At the same time out-door labor suffers little interruption by reason of weather stress in Arizona.

The small amount of rain during the winter, the light fall of it during the summer, the warmth of the sun, and the great number of cloudless days, render this climate a very dry one. As one consequence of accompaniment of the dry climate and clear sky, it may be worth while to observe that near the ocean the clouds are rarely picturesque or sublimely beautiful. The magnificent sunsets, where the god of light goes down amid curtains of gold and crimson—those high-piled banks of clouds which adorn the heavens before and after thunder-showers in the Mississippi Valley—are rarely seen.

Dew is rare or slight over a great part of Arizona. During the summer and autumn, many of the rivers sink in the sand soon after leaving the mountains in which they rise; the earth is dry, and baked hard to a depth of many inches or even feet; the grass and herbage, except near springs or on swampy land, are dried up, and as brown as the soil on which they grow.

New York has scarcely half so many perfectly clear days. From the first of April till the first of November,

there are, in ordinary seasons, fifteen cloudy days; and from the first of November till the first of April, half the days are clear. It often happens that weeks upon weeks in winter, and months upon months in summer pass without a cloud.

### VARIETY OF CLIMATE.

The general impression of Arizona climate is that of a hot, unendurable place to live. Nothing could be further from the truth. Its climate is varied, embracing every variety from that of the Northern States to that of the sunny South. On the mountains the snow-fall is considerable where the elevation is 8,000 feet. At an altitude of 6,000 feet, like that of Prescott, there is generally a snow-fall of a few inches, lasting, sometimes, a few weeks, but generally melting as it falls. Nights are very agreeable and cool the year around at this elevation.

In the great plains and valleys of the southern part of Tucson, Florence, Phoenix, etc., snow is almost wholly unknown, the winters are mild and pleasant, and the summers warm and dry, with continued warm weather for many months. At this altitude the climate in summer, though quite warm, is not oppressive or debilitating, as in many parts of our country.

Arizona and the portion of California southeast of the low San Geronio Pass, have the same seasons as Mexico, that is to say, the rains fall in the summer, while northward they fall in the winter and spring. The thunder-storms on each side of the mountains are plainly visible to the other, but never pass this limit.

The heated term is during June, July and August, but the air is so pure and dry that no injurious effects are experienced. Sun-stroke is unknown. The hot, muggy weather of the East is never felt in Arizona.

The winter climate of southern Arizona is very enjoyable, having a mild, balmy air, with cloudless skies as a rule.

It has been said that very hot days are less oppressive than equal heat in the Eastern States, because the cool nights serve to invigorate the system, and the extreme dryness of the climate favors the evaporation of sweat, and thus keeps the body cooler than in districts where the earth is always moist. Evaporation is so rapid that a beef-steak hung up in the air will dry before it commences to putrefy. A dead animal will dry up, and its stiff hide and meat will lie during a whole summer in a mummy-like condition. In many places, steel may be exposed to the night air for weeks without getting a touch of rust.

To most people the name of Arizona suggests a country devoid of vegetation, hardly endurable by man or beast, and where out-door labor is impossible.

But this erroneous opinion is fast passing away under accumulated statistics and actual observation and state-

ments of residents of many parts of the Territory. We would not be understood, however, that there are not hot, uncomfortable places in Arizona. There are plenty of them, and, on the other hand there are as delightful climates as can be wished for, climates suitable to all constitutions, ranging from the soft semi-tropic mildness of the south to the cool, bracing air of the north. The winters of northern Arizona have a cool, bracing quality, with a wonderful purity. Even sleighing is sometimes indulged in on the streets of Prescott. A person can find any kind of climate he desires at different elevations. Even in the rainy season there is scarcely a day when the sun does not show itself for a part of the day. The summer nights are always cool and comfortable, blankets on the beds being invariably acceptable. This feature of the climate is of the greatest importance, as it enables the exhausted invalid or tired laborer to sleep as soundly in midsummer as on any winter night. Winds are infrequent, and are very seldom an annoyance.

The following table shows the extremes of temperature for twelve months, as well as rain-fall. This table is made from the records of the army officers at the places named.

Arizona, resulted more favorably than at any other place, and I can safely say that its climate is superior to that of any spot on the American continent for the cure of Bright's disease of the kidneys, consumption, rheumatism and neuralgia. While the heat is high, as exhibited by the thermometer, yet from the dryness of the air one does not feel oppressed, and breathes easily, and can, by using the proper means, keep in a most comfortable condition. Another great desideratum of the climate of Yuma is the complete absence of malaria, thus affording every quality necessary to entitle it to the name of the great sanitarium of the North American continent.

The distinguished surgeon of this coast, Dr. A. F. Sawyer, has been in the habit of sending there his patients afflicted with the diseases named, and is perfectly satisfied with the results, many having recovered their health, and all finding relief from their symptoms. It is nature's Turkish bath, and will relieve many of 'the thousand ills that flesh is heir to.' I cheerfully bear testimony to the good effects of the climate of Yuma, and if any invalid who has abandoned 'all hope' shall give it a trial, and obtain relief, this will be sufficient recompense for me to have written this.

TEMPERATURE AND RAIN-FALL TABLE.

MONTHS.	CAMP MOJAVE, MOJAVE COUNTY.		CAMP VERDE, YAVAPI CO.		FORT WHEELER, (PRESCOTT) YAVAPI CO.		FORT YUMA, (YUMA CITY) YUMA CO.		CAMP GRANT, GRAHAM CO.		CAMP LOWELL, YUMA CO.		CAMP McDOWELL, MARICOPA CO.		CAMP APACHE CO.		FORT BOWIE, COCHISE CO.	
	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.	Tem- pera- ture.	Rain- fall.
July	Deg. 47-112	Inch. 0.00	Deg. 48-113	0.14	Deg. 65-91	1.56	Deg. 69-112	0.00	Deg. 58-109	1.70	Deg. 39-113	0.08	Deg. 72-113	0.00	Deg. 60-104	Deg. 71-103	Inch. 0.50	
August	52-116	3.80	58-102	2.52	64-85	4.78	71-106	1.60	55-102	5.20	46-104	2.73	65-108	0.56	66-88	64-97	1.34	
September	45-108	0.00	41-97	0.26	50-82	0.30	59-104	0.00	53-99	2.50	32-103	0.62	54-110	0.00	52-92	67-99	0.01	
October	27-105	0.00	21-95	0.00	33-81	0.00	48-100	0.00	35-100	0.46	21-101	0.00	33-108	0.00	28-92	42-96	0.03	
November	36-80	0.50	20-74	0.74	29-72	0.80	46-86	0.00	31-81	3.38	30-91	1.32	33-99	0.21	25-81	33-85	1.12	
December	29-67	2.80	6-57	3.26	10-65	2.55	39-61	0.64	21-82	1.75	25-78	0.97	27-83	4.70	6-62	20-70	2.02	
January	27-70	0.19	5-59	2.65	17-67	3.51	37-72	0.55	20-85	1.58	19-78	1.76	24-83	3.10	6-68	21-67	2.33	
February	29-69	5.00	12-60	2.05	10-55	5.68	35-70	0.85	16-80	2.87	21-75	1.66	18-78	2.86	10-65	20-67	5.40	
March	39-80	0.20	19-72	1.05	20-65	3.56	40-82	0.20	28-86	2.45	30-79	1.19	31-79	1.06	18-72	32-79	1.50	
April	54-95	0.10	27-87	1.48	34-75	1.70	45-95	0.00	30-93	0.58	34-97	0.43	43-97	1.30	31-88	32-82	0.35	
May	63-107	0.90	34-102	0.08	41-82	0.63	50-102	0.00	30-101	0.07	42-103	0.07	43-105	0.30	38-94	48-100	0.00	
June	75-111	0.00	43-107	0.00	55-88	0.00	66-103	0.00	54-105	0.00	44-108	0.00	54-114	0.00	57-101	67-100	0.00	
		13.40		14.19		27.09		3.84		22.54		10.83		14.09			14.60	

If the reader will consult the map he will notice that their observations are taken at points in every county in the Territory. By comparison of months and localities, a good idea of the difference in heat of various places may be learned. As, for instance, it will be seen that Fort Mojave is a warmer place during the summer months than Fort Yuma, and about the same temperature during the winter season. The rain-fall is least at Yuma and greatest at Prescott.

SANITARIUM OF NORTH ARIZONA, THE NATURAL HEAT CURE.

Dr. A. M. Loryea, of the Hammam Baths, San Francisco, says: "Having traveled all over the world to investigate the effect of heat upon the human body in health and disease, my experiences and experiments in Yuma,

Well informed persons at Yuma claim that all the effects of heat there are beneficial; that the air being dry and pure, no malaria is absorbed. The temperature being uniform, free perspiration is exposed to no sudden checks. The passages through the system of copious draughts of water by exudation from the pores, rush out all effete and diseased matter; "the skin here throws off that which would elsewhere clog tubercular lungs, and gives them a chance to heal up. The same friendly office it here performs for diseased kidneys." Yet in July the thermometer reaches 110° or more in the shade, for days in succession, sometimes reaching 114°. The heat, however, is said not to be oppressive. The rapid evaporation from the skin in the dry air cools the body, and makes a heat of 110° there more agreeable than one of 90° in New York, or 80° in Wash-

ington, while the low elevation gives an atmosphere sufficiently dense to amply oxygenate the blood, without gasping, as in elevated mountain districts.

SUMMER IN COLORADO VALLEY.

A traveler relates his experience of the summer climate in the Colorado River Valley: "From the middle of June to the first of October panting humanity finds no relief from the heat. As soon as the sun appears above the horizon, its heat is felt, and this continues to increase until a maximum is reached about 3 o'clock in the afternoon, after which the temperature falls slowly, and oftentimes very slowly, until sunrise. During the hottest part of the day exertion of any kind is impossible; even while lying perfectly quiet, the perspiration oozes from the skin and runs from the body in numerous streams. Everything feels hot to the touch, and metallic objects cannot be handled without blisters upon the skin. The white sand reflects the heat and blinds the traveler by its glare.

"Rain scarcely ever falls during the summer months, and not more than three or four inches of rain the year round. The atmosphere is so dry and evaporation so rapid that the water in our canteens, if the cover was kept moist, kept a temperature of 30° below that of the air. Great quantities of water are drunk during these hot days, and no uncomfortable fullness is experienced. One gallon per man, and sometimes two, was the daily consumption. Notwithstanding the excessive heat, no sun-strokes occurred, although we were at one time exposed in a narrow cañon to a temperature of 120°. All of the party preserved good health during the summer. There is no danger of catching cold in this climate, even if wet to the skin three or four times during the day or night.

HOT WINDS.

"No dew or moisture is deposited during the night, hence no covering is required. The hot wind which blows frequently from the south, is the most disagreeable feature of the climate. No matter where you go, it is sure to find you out, and give you the full benefit of a gust that feels as if it issued from a blast-furnace, and parches the skin and tongue in an instant. Then there is no recourse but to take copious draughts from the canteens to keep up the supply of moisture in the body. If water cannot be obtained, the delirium of thirst soon overpowers the unfortunate traveler, and he dies a horrible death."

MONTHLY TEMPERATURE AT YUMA.

As Yuma City has been considered the hottest spot in Arizona, the following statistics for a series of years will be valuable as giving the exact temperature. This is from the records of the United States Signal Corps, and gives the mean monthly temperature exclusive of fractions.

TABLE SHOWING THE MONTHLY TEMPERATURE AT YUMA.

Year.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Mean
1876	50	59	61	72	81	89	93	90	86	77	65	59	74
1877	60	65	71	68	75	88	94	92	83	71	58	54	73
1878	54	59	64	66	76	85	93	91	83	73	62	53	72
1879	53	63	70	71	77	85	92	92	87	72	59	52	73
1880	55	52	58	67	76	85	89	90	83	71	56	56	70
1881	52	62	63	72	78	84	91	88	82	70	58	57	71
1882	50	54	62	67	77	83	93	92	82	69	59	58	70
Mean.	53	59	64	69	77	86	92	91	84	72	60	56	72

RAIN-FALL TABLE AT YUMA.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Anl Amt.
1876	0.44	0.46	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94
1877	0.09	1.72	0.00	0.00	0.06	0.00	0.50	0.06	...	0.00	0.00	1.23	3.66
1878	0.00	0.06	0.13	0.02	0.00	0.00	0.55	1.50	0.37	0.00	0.02	0.14	2.88
1879	0.59	1.21	0.48	0.55	0.00	0.00	0.00	0.00	0.11	0.33	0.15	0.27	3.29
1880	...	...	0.00	...	0.00	0.00	...	...	...	...	0.00	0.10	0.74
1881	0.00	0.00	...	0.15	0.00	...	0.20	0.08	0.05	...	0.00	0.14	0.98
1882	1.35	0.01	0.00	0.00	0.05	0.20	0.03	0.04	0.01	0.09	0.00	...	1.78
Mean	0.35	0.49	0.09	0.10	0.01	0.01	0.21	0.25	0.08	0.04	0.03	0.31	2.04

It naturally follows that where there is so little rain there must be much sunshine. It is truthfully said that there is no portion of the Union that can show so many cloudless, sunshiny days as the southern part of Arizona. There is scarcely a day in the year when the sun is not visible at some time during the twenty-four hours. A cloudy day is the exception in this region, and, except during the rainy season, the warm sunshine bathes hills, mountains, and plain every month in the year.

There is no doubt that much of the healing power of the air of Arizona and New Mexico is due to its extreme dryness, of which one is curiously reminded many times in each day. In every cigar-case is seen a large, wet sponge without which, it is said, the cigars would warp themselves to destruction, or would burn like tinder. Houses, rooms, beds and garments are always dry, and the invalid need fear no cold nor shivers from dampness. It often happens that weeks upon weeks in winter, and months upon months in summer, pass without a cloud. The earth is dry, and baked hard to a depth of many inches or even feet; the grass and herbage, except near springs or on swampy land, are dried up, and as brown as the soil on which they grew.

THE TWO RAINY SEASONS.

There are two rainy seasons each year in Arizona, one of which is usually the months of February and March, and the other the months of July and August, but these rainy seasons sometimes come earlier and sometimes later. Occasionally they will continue for three or four months, and some years there is a rain-fall during every month, more especially in the mountains. The amount of rain-fall differs much in different localities of the Territory, and the reader is referred to the table showing the rain-fall of the different counties heretofore given.

The following article on the theory that the "rain follows the plow" is from the *Flagstaff Champion*:—

"There is the prominent notion that the annual rain-fall is yearly increasing in proportion to the advancement in years and area cultivated. For the last quarter of a century the farmer has persisted in crossing the eastern line of the Great American Desert, until far beyond its boundary we find abundant crops, furnishing, in short, the most practical and comprehensive proof of its non-existence.

"Many plausible and attractive theories are advanced in support of this popular belief, but seeking for facts and observations on which they are based, it is difficult to find anything to justify the confident acceptance given them. It is a matter that applies directly to our own and immediate interests, as well as to future generations.

"In the year 1861, we find the annual rain-fall 32 inches; passing to the year 1869, we find a fall of 48 inches, falling away in 1871 and 1872 to 31 and 32 inches, respectively, and again as late as 1879, we find but 32 inches, equal only in volume to that of 1861 and much less than that of 1869.

#### ANNUAL RAIN-FALL OF COLORADO PLATEAU.

"According to the records of the Smithsonian Institution, the average fall of rain in our immediate section of country during a period of six years was twelve inches. It will be noted that this volume is not half that of the section between the Missouri River and the 100th meridian, and would seem to destroy the very theory that we are endeavoring to defend. Glancing again at the table of statistics, Wilber's Northwest, we find something of an average fall of rain for each month throughout the year in that section. The rain-fall of the Colorado plateau, our own section of country, comes after the snow has passed away and is confined almost entirely to the months of June, July and August, stimulating and aiding vegetation to a wonderful growth in a remarkably short period of time.

"It will be found that the precipitation of moisture during these months is equal to that of the most favored localities west of the Missouri River during the same period. In this estimate for the Colorado plateau country, no account is taken of the blanket of snow that for two months or more covers our valleys and foot-hills, nor of the permanent bodies that remain for nine consecutive months on the higher peaks, and are a source of moisture to our lower levels.

"As a matter of fact, we have the necessary amount of moisture for all vegetables and cereals that can mature in this altitude and climate. There is more comfort in the knowledge that we can sow and reap bountifully in the present, than in following a theory, however popular, that teaches us that we are tilling the desert of to-day that it may bloom as a garden for our great, great grandchildren."

#### A SUPERIOR CLIMATE.

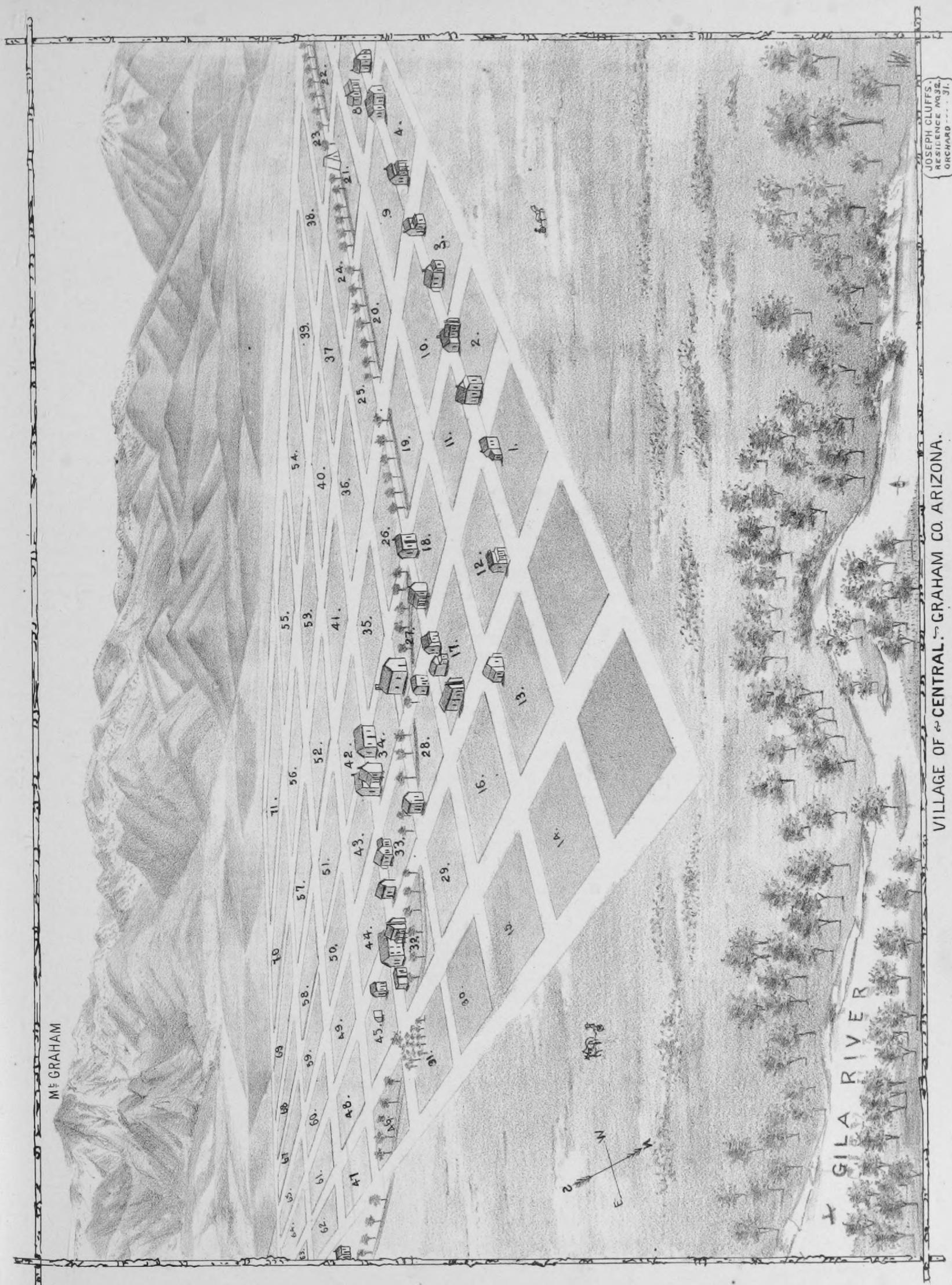
The late Governor Safford said that his observation and residence in Arizona, during eight years, convinced him that the climate is superior to any found elsewhere for cure of pulmonary diseases. He says: "I have known a large number of people to come here who were in rapid decline, who have been restored to excellent health. For several years before coming here I had been afflicted with a severe cough, and my lungs were undoubtedly badly diseased. I traveled extensively, which only gave me temporary relief.

"I commenced improving as soon as I reached this warm, dry climate. Within six months the cough left me, but for several years afterwards would return as soon as I changed from this climate to that of California or the Eastern States; but now I consider myself completely cured, and do not find any difficulty upon going to San Francisco or elsewhere, as I formerly did. My experience is the same as that of nearly every person who has given this climate a fair trial. It is an admitted fact that no medical treatment has yet been discovered that will cure pulmonary consumption. The strong hold of the disease, where it germinates and most successfully carries on the havoc of death, is found in cold, damp climates, where every respiration feeds the disease, and the victim is hurried to a premature grave. It is reasonable to suppose that a different climate will correspondingly benefit the afflicted.

"In Arizona the warm, dry atmosphere acts as a healing balm to the bleeding, diseased lungs, while the pores are kept open and the impurities of the system, that in harsher climates make a combined attack upon weak lungs, are allowed to escape through the skin. It is true, to insure a cure, the patient must expect to undergo privations and often hardships. An out-of-door life is very necessary. Constant traveling and sleeping out-of-doors at night have been found very beneficial. The patient needs something to constantly divert his attention from the disease. Traveling and seeing new scenes do this to a great extent, while exercise insures a good appetite, and the pure, warm atmosphere affords a curative application to his diseased lungs as often as he breathes.

"Yuma, during a greater part of the year, is probably the best place for this class of invalids; while perhaps, during the warm season, the patient could travel to advantage, and live in the interior. While I am aware that, should Arizona become a resort for invalids afflicted with pulmonary diseases, it would be the means of adding much profit to the business of the country, still I hope and believe this consideration has not induced me to make prominent the advantages of this climate. These unfortunate people have enough to contend with without being lured away from home and friends by our holding out

M<sup>E</sup> GRAHAM



GILA RIVER

VILLAGE OF CENTRAL - GRAHAM CO. ARIZONA.

JOSEPH CLIFFS.  
 RESIDENCE NO. 32.  
 ORCHARD ..... 31.

false hopes; but the universal relief given to persons afflicted with these diseases that has come under my observation warrants what I have said."

HEALTHFULNESS OF ARIZONA.

This table gives the rate of mortality in several localities. It will be noted that Arizona is the lowest of any in the Union, while the District of Columbia (Washington), has the greatest number of deaths to each 1,000, and New Mexico the next greatest. This is from United States Official Tables of tenth census.

States or Territories.	Population.	Deaths, 1880.	Rate per 1,000.	Deaths from Consumption.		
				Total.	Rate per 1,000 of population.	Rate per 1,000 of total deaths.
Arizona.....	40,440	291	7.20	18	.40	61.85
California.....	864,694	11,530	13.33	1,820	2.00	156.28
Oregon.....	174,768	1,864	10.67	226	1.30	121.24
Idaho.....	36,610	323	9.90	22	1.50	68.11
Colorado.....	194,327	2,547	13.11	210	1.00	82.45
Massachusetts.....	1,783,085	33,149	18.59	5,207	2.90	157.07
New Mexico.....	119,565	2,436	20.37	60	.40	24.63
Dist. Columbia.....	177,624	4,192	23.00	793	4.40	189.16

There is probably no country in the world with a purer, healthier climate than Arizona, and the sick, the debilitated, the worn-out and enfeebled constitutions of other climes and countries, can here find a climate of exceeding purity, ranging through all the degrees from hot to cold, according to altitude, from which each and every one can select that locality in summer or winter, that is required by their constitution or ailments. In summer the mountain regions are favorable to consumptives. The purity of the atmosphere and the continued sunshine everywhere makes Arizona a desirable place for curing the sick. Owing to the pure and rarefied condition of the atmosphere, and the cool nights, the human system keeps in a healthy tone.

SOUTHERN ARIZONA CLIMATE.

The Tucson *Star* says: "Southern Arizona has a superb winter climate. It is about as near perfection as it is possible to conceive of. To one who has always spent his winters amid the frost, and snow, and blustering storms of the north, it is indeed a luxury to live here. The dry, balmy air, and the ever-present sunshine, together with the green foliage and merry songs of birds, renders it difficult to realize that it is cold anywhere. The peculiar dryness of the climate makes this a most desirable locality for those suffering from pulmonary diseases. From personal experience and a most careful observation, extending over a term of years, we have become convinced that there are hundreds of persons in the Northern and Eastern States suffering from throat and lung troubles in their incipient stages, who could be permanently cured by coming

to southern Arizona. When this fact becomes known, and is as fully appreciated as it ought to be, this region must become a popular sanitarium for those afflicted with these troubles."

The climate of this entire section is unexceptionable during ten months of the year. The winters are as mild as Florida's, the summer, though warm, is not oppressive, owing to the dryness of the atmosphere. Hence many come here for pulmonary and other similar ailments and in almost all cases find relief or permanent cure. Consequently the health record of Tucson will compare with any health resort in the United States.

By tables furnished us by E. L. Wetmore, it is found that the rain-fall at Tucson during nine months, ending March 1, 1884, was 8.37 inches, as follows:—June, .71; July, 1.80; August, .96; September, .00; October, .48; November, .04; December, .95; January, .83; February, 2.58; total, 8.37 inches.

CENTRAL ARIZONA CLIMATE.

The following table is carefully prepared by O. C. Wheeler from the records of the United States Signal Service at Phoenix, for one year, from December 1, 1882, to December 1, 1883. The table indicates great extremes of heat, yet sunstroke is unknown, and farmers work in the fields with little inconvenience, and enjoy good health. The dryness of the air prevents malaria.

Month.	THERMOMETER.			WEATHER.				WIND.					
	Maximum.	Minimum.	Mean.	Clear.	Fair.	Cloudy.	Rainy.	Southerly.	Westerly.	Northerly.	Easterly.	Variable.	Calm.
December...	94.6	23.5	59.05	11	19	11	0	12	9	0	0	0	10
January.....	86.7	13.2	49.95	6	22	1	2	11	6	0	0	2	12
February....	80.2	22.7	51.45	10	14	3	1	12	7	0	0	3	6
March.....	91.6	38.4	65	9	20	1	1	6	9	0	8	1	7
April.....	98.6	30.1	64.35	21	9	0	0	14	6	0	1	1	8
May.....	107.2	40.7	73.95	20	8	0	2	12	9	0	0	0	9
June.....	119	55.2	87.1	NO REPORT.									
July.....	112	65	88.5	4	6	1	5	15 DAYS NO REPORT.					
August.....	116	68	92	3	10	2	LAST 16 DAYS NO REPORT.						
September...	114	51	82.5	15	7	FIRST 16 DAYS NO REPORT.							
October....	96.7	33.6	64.85	18	8	4	NO REPORT.						
November...	89.8	25.9	57.85	22	6	2	NO REPORT.						

Days Clear, 139; Fair, 129; Cloudy, 15; Rainy, 11; No report, 71.  
Days Windy, S., 67; W., 46; E., 9; Var., 7; Calm, 52; No report, 184.

CLIMATE OF THE SOUTHWEST.

The following table gives the average temperature and rain-fall at Camp Grant, about sixty miles north of Tucson and Tombstone, and 3,985 feet above the level of the sea:—

TABLE SHOWING CLIMATE OF THE SOUTHWEST.

Month.	Temperature.			Rain-fall, inches.	Month.	Temperature.			Rain-fall, inches.
	Mean.	Maximum.	Minimum.			Mean.	Maximum.	Minimum.	
August, 1881..	71	93	57	3.73	August, 1882..	72	93	55	4.73
September....	71	91	52	1.01	September....	67	88	51	.80
October.....	61	88	35	.47	October.....	59	77	34	.00
November....	47	68	20	.00	November....	50	76	31	.79
December....	45	69	18	1.57	December....	44	65	22	.17
January, 1882.	41	65	21	.86	January, 1883.	40	64	10	1.21
February....	43	62	23	1.26	February....	43	65	17	1.40
March.....	51	79	21	1.84	March.....	52	75	37	1.27
April.....	56	85	32	.07	April.....	55	78	32	.03
May.....	65	86	37	.81	May.....	64	89	39	1.16
June.....	72	94	51	1.47	June.....	77	101	54	1.26
July.....	77	99	61	2.02	July.....	75	95	61	2.90
Total.....				15.11	Total.....				15.72

## RESIDENCES OF ARIZONIANS.

Few wooden buildings are used in Tucson. The adobe houses that were used throughout semi-tropical Arizona were not comely or inviting in aspect; but with the improvements as to light, ventilation, etc., which Americans have already introduced, they are made exceedingly comfortable.

These adobe, or unburned brick, are a curious looking sight to one who has never seen the like. Usually of one story, with flat roofs, and rough grey walls, they seem anything but inhabitable. But in this climate, in the summer, these thick walls and dirt roofs help to keep out the intense heat.

A temperature of 110 degrees in the shade is not uncommon during midday of July and August. It is then that the peculiar virtues of the adobe house become apparent. Floors are sprinkled copiously in the morning and the doors closed, thus keeping the air inside cool during the day, while it is nearly blistering outside, the thick mud walls resisting the heat. By evening, however, they have become so heated through that it becomes almost out of the question to sleep in-doors, and the spectacle is presented of hammocks and cots in streets, yards, and porches, and a city sleeping out of doors.

## SAND-STORM ON THE PLAINS.

A sand-storm on the *mesas* of southern Arizona, is not a pleasant affair to encounter. If caught in one on horse-back or afoot, imitate the animals, put your face close to the ground and turn your back to the blast.

Major Cremony thus describes one he encountered. He says: "We were overtaken by one of those dreadful sand-storms which prevail on the desert. The day was intensely hot, and the most oppressive silence seemed to reign absolute. Suddenly a dark, dense and singular-looking cloud arose in the west and moved toward us with incredible velocity. Great masses of heavy sand were lifted as if they were so many feathers, and carried high into the air

with extreme violence. The places formerly occupied by huge hillocks containing many thousand tons of sand were swept clean as if by magic in a few moments, and the vast banks removed to other localities in the twinkling of an eye. Our mules fell flat upon their bellies and thrust their noses close to the ground; our horses followed their example—none of us could stand against the force and might of the storm—and we, too, lay down flat, hauling a tent over us. In a few moments the tent was so deeply covered with sand as to retain its position, and every now and then we were compelled to remove the swiftly gathering mass, to avoid being absolutely buried alive. Amidst the distress, the terrible sensations, and the suffocating feelings occasioned by this *sirocco* we entertained the grateful sense of protection from our savage pursuers, who were quite as incapable of facing that terrific storm as we were. For forty-eight hours we had not tasted food, and were more than a day without water in the hottest climate known to man, and our distress heightened by the intense craving for water invariably attendant on those scorching blasts of the desert. These sensations were not alleviated by the fact of knowing that we had yet a journey of forty miles before we could find water.

"About 3 o'clock P. M., the storm passed off, and we instantly resumed our way without cooking food, for eating could only add to our already terrible thirst."

## SEVERE WINTERS OF ARIZONA.

The Smithsonian Report, of 1855, page 287, says: "The winter of 1855-56 was more severe than any one known for many years. The wintry weather commenced on the 1st of November, 1855, and continued up to 1856. The Rio Grande, at Albuquerque, was frozen over, and with ice sufficiently strong to bear a horse and *carreta*. Those Indians who live habitually to the north of Fort Defiance were obliged to abandon that portion of the country and move south, with their flocks and herds, in quest of grazing, on account of the depth of snow, which, in the mountains, at whose base the fort is situated, was over two feet in depth in March, 1856."

At Fort Defiance, in Apache County, the maximum and minimum temperatures were, respectively, for the month of December, 1851, 62°, 4°; 18 inches snow. For 1851-53—in December, 50°, 2°; January, 55°, 7°; February 56°, 6°. For 1853-54—in December, 57°, 6°; January, 49°, 20° below zero; February, 54°, 2°. For 1854-55—December, 65°, 10°; January, 59°, 17° below zero; February, 61°, 13°. For 1855-56—December, 56°, 25° below zero; January, 54°, 8° below zero; February, 51°, 3° below zero.

From these reports it was concluded that a railroad could not be successfully operated for at least four months of the year, and the report further says: "The imagination

can readily picture the terrible calamity which would inevitably befall a train-load of passengers *en route* for the Pacific, if an accident should stop the progress midway upon one of those desolate *artemisia* districts between Ojo de Gallo and the Little Colorado, where no human habitation can ever exist. Over it broods a forbidding sterility, and across it the winter winds sweep with a degree of cold scarcely less intense than that found in any portion of our country."

It is sufficient to say that none of these terrible predictions have occurred and the road has been operated during the past severe winter, with very little delay.

The *Champion*, published in the above-described region, said on March 10, 1883: "Snow has fallen to a depth of at least two feet in this section, and the nights are extremely cold. During Monday and Tuesday of this week, there was a strong wind, which drifted the snow to great depths in some places, completely blocking the railroad, which has caused the trains to run several hours behind."

#### THE RAINY SEASONS.

The southwest trade winds, after sweeping over northern Mexico, reach Arizona about the first of July, when the rainy season commences, and lasts until the middle of September. With the coming of these rains, the summer proper of Arizona begins; grass and vegetation spring up as if by magic, flowers cover the valleys, plains, *mesas*, and mountain-sides, and all nature rejoices at the watery dispensation.

In the mountains of northern Arizona the snow-fall sometimes reaches a depth of four or five feet. It rapidly disappears from the plains and valleys, but on some of the lofty mountain peaks, like the San Francisco, it remains until the middle of summer. During the snow-fall in the upper regions, the plains and valleys of central and southern Arizona are blessed with copious showers.

The spring, though dry, is one of the most delightful seasons of the year. In the northern part of the Territory vegetation takes a rapid start from the moisture caused by the winter snows, grass becomes green and often continues until started again by the summer rain. Then the gramma and other grasses are started into new life.

#### ADVANTAGES OF ARIZONA CLIMATE.

All the defects of the Arizona country of which people complain, and all the disadvantages they find fault with, can easily be remedied or removed—they are merely questions of dollars and cents—but all the wealth of the world is impotent to mend a bad climate. All the advantages of culture, refinement and society possessed by the most polished neighbors of the East, will come with wealth and numbers, but all the wealth of Cræsus and all the numbers of the world could not give to New England, the

Middle States, or the Mississippi Valley, the equable temperature, or the exhilarating atmosphere, or the bright sunshine and cloudless skies of Arizona.

Climate has a greater influence than anything else in rendering life enjoyable, or otherwise, and it is the one feature of a country that modern science and modern engineering cannot change. If the country is rough, we can make it smooth; if it is sandy, we can pave it; if it is marshy, we can drain it; if there are hills, we can cut them down; if there are hollows we can fill them up; if there is a sluggish stream, we can cut through, as they did in Chicago, and make it run the other way; if there is a lack of schools, of churches, of good society, all this can be remedied; but for a disagreeable climate there is no cure.

Take the equable temperature of the valley of which Phoenix is the center—hardly ever too warm in summer to prevent work in the sunshine, and rarely too cold in winter for men to work out-of-doors with comfort—and compare it with the uncomfortable and injurious extremes of heat and cold to which most other parts of the country are subjected, and it will make a balance in favor of Arizona that will outweigh a multitude of small objections.

Consult the table showing the number of clear days and compare it with the months of gloomy, cheerless weather of the East.

#### CLIMATE LIABLE TO CHANGE.

Lieutenant Wheeler considers it probable that were five millions of acres in Arizona and adjacent regions brought under cultivation, by means of the streams that rise in the Sierras, the local surrounding climate would "undergo slow changes, so that the atmosphere charged with humidity from this immense evaporation (that would take place in a cultivated region) will bring about its own deposit of rain, thereby causing a temporary vacuum, as it were, into which would fall portions of the moisture at that time on its passage to the higher regions." The present rain-fall is known to vary all the way from half an inch to thirty-two inches, and much higher at a greater altitude than 6,000 feet. As bases of comparison, it may be stated that the usual annual rain-fall in San Francisco and the lower Sacramento Valley is from twenty to twenty-five inches, which is about that in some of the interior portions of New York and the driest parts of England. In the eastern cities near the sea-board it is from forty to forty-five inches. There are large areas in Arizona where it is from twenty to twenty-four inches—double that of the inhabited portions of southern California, with the advantage as to season.

It is on an extensive area naturally destitute of water, and in hot climates, that the great danger of the desert is manifested in a thirst that, painful elsewhere, is very liable

to become fatal. Dr. Oscar Loew, of Wheeler's expedition, has reached some very interesting data and conclusions on the *modus operandi* of excessive thirst, from which we extract the following: "It is in but comparatively few regions of the earth that the temperature of the air rises above blood-heat for weeks and months in succession; hence our knowledge of the physiological changes produced by it are quite meager. When it is considered that under ordinary circumstances the whole tendency of the human system is directed toward keeping its temperature above that of the surrounding air, the task is suddenly reversed in the hot deserts, where the thermometer rises for considerable periods daily up to 110 degrees to 116 degrees Fahr., in some cases up to 120 degrees, while the normal temperature of the blood is 98.5 degrees Fahr. What a change in the conception of hot and cool is undergone in such a climate, when it is found agreeably cool in the evening when the thermometer has descended from 110 degrees to 94 degrees Fahr.! Observations on pulsation and respiration which were made, proved that the former was generally much increased.

#### VARIATIONS IN SEASONS.

But Arizona, like all other places, is subject to unusual seasons. The following extracts from different papers show the extremes of the season of 1884 at different places.

Prescott *Journal*, April 1st., says: "Snow commenced falling on Friday afternoon last, and has fallen almost continuously ever since. At the time of the commencement of the storm the ground was in a somewhat soft and muddy condition, and the snow melted almost as rapidly as it fell. On Saturday morning, however, it covered the ground to a depth of about four inches, the result of the night's storm. This disappeared on Saturday, and on Sunday morning the ground was only slightly covered.

#### THE SNOW CONTINUES.

"All day Sunday the snow continued to fall, and towards night again began to cover the ground, and the storm began to increase, continuing the entire night, and this morning there was about ten inches of snow. It has been melting during the day, although the storm has continued with but few intervals. Should there be another rapid thaw, streams will again be swollen and roads impassable. Just as we are beginning to see out of this blockade of mud and water which has surrounded us for nearly two months, we are now overtaken with another. The "oldest inhabitant" is so thoroughly nonplussed over the weather that he will not allow a newspaper man within hailing distance of him, and positively refuses to be interviewed."

The same paper says: "Private dispatches from Ash Fork, received this morning, state that the passenger train due there yesterday was reported snow-bound at Flagstaff. The stage that left there this morning was compelled to leave passengers behind on account of the condition of the road, which is described as 'ghastly.' Rain and snow fell there all last night, and it is still storming. Colonel Martin and Captain Bourke, from Whipple, had a hard time in getting through, and their baggage was left behind in the mud in consequence of the team being stalled.

"It is reported by those who passed over the road yesterday that no freight can possibly get through to Prescott for three weeks.

"An incipient hurricane blew throughout the whole of Sunday, and those who ventured on the streets had their eyes, noses, and ears filled with dust and gravel. It was the most disagreeable day experienced in this region in a long time.

"During the latter part of last night and this morning snow fell to the depth of six to eight inches in this locality. But few felicitous expressions were heard to-day in regard to this sun-kissed portion of Arizona."

The Florence *Enterprise*, of October 7, 1883, says: "On the nights of October 9th and 10th, there was a light frost on the low bottom-lands of the valley. We generally have a light frost each year on the low bottom-lands about this time."

#### RECORDS KEPT AT FLORENCE.

"Mr. H. S. Ballou, who has kept a record of the fall frost, informs the *Enterprise* that the first frost, in the fall of 1877, was on the night of October 31st; in 1878, October, 15th; in 1879, October 8th; in 1880, October 12th; in 1881, October 15th; in 1882, October 15th. None of these frosts were sufficient to kill the hardier vegetables. We have no destructive frosts even on low bottom-lands. Onions, lettuce, peas, radishes, cabbages, etc., will grow the year round."

"The snow was so deep on the Pinal Mountains last week," said the *Enterprise* of February 3, 1884, "that the axles of wagons and the stage dragged in it. This makes quite a change in the climate in the short distance of about fifty miles. At Florence flowers are in full bloom, and the trees and fields green, all kinds of fresh garden vegetables in the market daily, and a coat is uncomfortable during a good portion of the day. The messenger and rider leave Florence in their shirt sleeves; at the Cottonwoods they feel chilly and put on their light coats; at Riverside they need an overcoat, and when they get to the summit of the Pinals they are nearly frozen. On the last trip Mr. Banks, the messenger, said he never witnessed a harder snow-storm than was then raging on the Pinals.

## SCENERY AND PLEASURE RESORTS.

Grand Canons; Sublime Views; Curious Scenery; Casa Grande; Petrified Forest; Hot Springs; Castle Dome; Painted Desert; Cliff Dwellings; Carved Rocks, etc.

## UNPARALLELED SCENERY.

ARIZONA furnishes unparalleled scenery of a new character. None anywhere can compare with the Grand Cañon of the Colorado. Of the many remarkable things to be seen in Arizona, we may name the Casa Grande, Moqui Indian villages, homes of the cliff dwellers and mound builders, the pueblo of the Zuñis, the lava beds and extinct craters in the San Mateo Mountains, the new "Garden of the Gods," near Chaves Station; that wonderful piece of natural architecture, the Navajo Church, near Wingate; Cañon Diablo, that great gorge on the face of the level plain; the petrified forest near Holbrook, Cañon Diablo Railroad Bridge, the Painted Rocks, the Eroded Valley, the Painted Desert, and dozens of other interesting subjects for examination. On every side lie the ruins of ancient cities and dried-up canals that only remain to whisper the story of a people whose history perished with them, whose traditions no gray-haired sire ever relates to eager grandchild, whose altars lie buried under the dust of centuries, whose ruined homes stand in the shadow of the mountains, untrod by mother or child for countless generations.

Among the principal objects of tourist travel are health, rest, recreation for over-taxed brains and wearied or diseased bodies. But, leaving out the question of health, it is fair to presume that, as a rule, the chief aim of the tourist is to find something new, interesting, and instructive. No one can be expected to see much satisfaction in traveling over the same ground year after year, if he can be made as comfortable in newer and more interesting fields.

Arizona is now attracting more attention from capital and labor, more attention from men of business and men of science, more attention from health-seekers, more attention from tourists, than any other part of our country.

So far as landscape beauty is concerned, Arizona cannot properly be said to have any, the "magnificent distance" constituting the only element that charms, even for a moment. But the scene changes when at sunset the eye sweeps the expanse of Arizona's sky—thin clouds, drifting like waifs and estrays of infinity up toward the zenith, in a grand transformation of colors, at once the poetry of

heaven and the despair of the artist. From the white, scarcely less fleecy and pure than the snow, they catch the blue, yellow, scarlet, and cardinal in rapid succession, and then take on the imperial purple, as if to rule in royal grandeur over the night. This results from the remarkable purity of the atmosphere. As on most of the plains of the Union, dead bodies for the most part desiccate in the air.

## SCENERY EVERYWHERE.

In addition to the cañons, Arizona is also filled with

many other natural curiosities and scenery, sufficient to keep the explorer in a continued state of wonder and surprise.

The southern portion of the Territory has numerous sugar-loaf mountains, which rise abruptly from the surface of the great plains and valleys to a height of hundreds and thousands of feet, and are called there *picachos*. Many of them are entirely isolated, and have no connection with any mountain range.

Their formation is a mystery, and a subject of deep thought and much study.



CLIMBING RIM OF GRAND CAÑON OF COLORADO.

They may have had, originally, a connection with other mountains, but the degradation of the connection is so complete that not a vestige now remains.

An interesting formation is that known as Castle Dome, thirty miles northeast of Yuma. On the highest point of the Colorado River range of mountains, about ten miles east of the river, is a rock formation hundreds of feet

square, which, at a distance, looks like a great castle. This can be seen for a hundred miles or more in different directions, and is a noted landmark of the country.

Another noted landmark is the Four Peaks, which are four mountain peaks near Salt River, but a few miles from Camp McDowell. They rise to a height of several thousand feet, and can be seen for hundreds of miles.

#### EARLY EXTRAVAGANT STORIES.

In less than fifty years from the discovery of America, soldiers and priests had explored the Colorado River for a considerable distance above its mouth. The stories of a gigantic people, walled towns, and impassable cañons a mile or more in depth, were consigned to the same fate as the stories of mermaids and other sea monsters. Cervantes, in Spain, and Dean Swift, in England, had poured unsparring ridicule on the fabulous stories and achievements of the age succeeding the discovery of America. Since the exploring expedition sent out by the United States, the accounts of the great Colorado River have been overhauled and read with avidity, and what was then deemed a pleasant after-dinner fiction of some bibulous priest, has proved to be substantially correct, though the Mojaves, who, doubtless, are the persons described as giants, do not quite come up to their ancestors of 350 fifty years ago.

The history of Coronado's expedition states that after a march over a desert of twenty days, they came to a river, the banks of which were so high that they seemed to be three or four leagues in the air. The most active of the party attempted to descend, but came back in the evening, saying they had met with difficulties which prevented them from reaching the bottom; that they had accomplished one-third of the descent, and from that point the river looked very large. They averred that some rocks, which appeared from above to be the height of a man, were higher than the tower of the cathedral of Seville. This is the earliest notice in any work of the celebrated cañon of the Colorado, the most astonishing of all mountain gorges, and which may, without doubt, be reckoned the greatest wonder of the world. This meager account of the great cañon is about all that is on record previous to the acquisition of Arizona by the United States, though trappers and hunters sometimes related incredible stories of a country where great rivers ran in cañons so deep that daylight never reached the bottom.

#### GRAND CAÑON OF THE COLORADO.

The Grand Cañon is over 400 miles long and from 1,500 to 6,000 feet deep. Of this cañon, Major Powell, who explored and described it, says: "A thousand feet of this is up through granite crags (see colored diagram in frontispiece), then slopes and perpendicular cliffs rise, one above another, to the summit. The gorge is black and

narrow below, red and gray and flaming above, and crags and angular projections on walls, which, cut in many places by side cañons, seem to be a vast wilderness of rocks. Down through these gloomy depths we glided, always listening—for the mad waters kept up their roar; always watching and peering ahead—for the narrow cañon was winding and the river was closed, so that we could see but a few hundred yards, and what might be below we knew not. We strained our ears for warning of the falls, and watched for rocks, or stopped now and then in the bay of a recess to admire the gigantic scenery; and ever as we went, there was some new pinnacle or tower, some crag or peak, some distant view of the upper plateau, some deep, narrow side-cañon, or some strangely-shaped rock. On we went, through this solemn, mysterious way. The river was very deep, the cañon very narrow and still obstructed, so there was no steady flow of the stream; but the waters wheeled and rolled and boiled, and we were scarcely able to determine where we could go with greatest safety."

The Powell Exploration Party, whose adventures have been related, had a wild experience in this cañon in 1869. But a second trip was made the next year. On the first trip Powell says: "It rained from time to time. Between showers the mercury went up to 115 degrees. It was very cold at night. The little canvas we had was rotten and useless; more than one-half of the party were without hats; none had an entire suit of clothing, nor a blanket apiece. The rain put out the fires, made of driftwood, and they sat and shivered during the night. Only a little musty flour, a few dried apples, and a quantity of coffee was left."

#### BIG CAÑON OF THE COLORADO.

The famous Big Cañon was before them, says Lieutenant Ives, and for a long time they paused in wondering delight, surveying this stupendous formation through which the Colorado and its tributaries break their way.

The guides, becoming impatient of detention, plunged into a narrow and precipitous ravine that opened at their feet, and the party followed as well as they could, stumbling along a rough and rocky pathway. The descent was great and the trail blind and circuitous. A few miles of difficult traveling brought them into a narrow valley flanked by steep and high slopes; a sparkling stream crossed its center, and a gurgling in some tall grass near by announced the presence of a spring. The water was delicious. The grass in the neighborhood was sparse, but of good quality.

They left the valley and followed the course of a creek down a ravine, in the bed of which the water at intervals sank and rose for two or three miles, when it altogether disappeared. The ravine soon attained the

proportions of a cañon. The bottom was rocky and irregular, and there were some jump-offs over which it was hard to make the pack animals pass. The vegetation began to disappear, leaving only a few stunted cedars projecting from the sides of the rugged bluffs.

The place grew wilder and grander. The sides of the tortuous cañon became loftier, and before long they were hemmed in by walls two thousand feet high. The scenery much resembled that in the Black Cañon, excepting that the rapid descent, the increasing magnitude of the colossal piles that blocked the end of the vista, and the corresponding depth and gloom of the gaping chasms into which they were plunging, imparted an unearthly character to a way that might have resembled the portals of the infernal regions. Harsh screams issuing from aerial recesses in the cañon sides, and apparitions of goblin-like figures perched in the rifts and hollows of the impending cliffs, gave an odd reality to this impression.

At short distances other avenues of equally magnificent proportions came in from one side or the other; and no trail being left on the rocky pathway, the idea suggested itself that were the guides to desert them their experience might further resemble that of the dwellers in the unblest abodes—in the difficulty of getting out.

Huts of the rudest construction, visible here and there, in some sheltered niche or beneath a projecting rock, and the sight of a hideous old squaw, staggering under a bundle of fuel, showed they had penetrated into the domestic retreats of the Hualpais nation. The party being, in all probability, the first company of whites that had ever been seen by them, they had anticipated producing a great effect, and were a little chagrined when the old woman, and two or three others of both sexes that were met, went by without taking the slightest notice. If pack-trains had been in the habit of passing twenty times a day, they could not have manifested a more complete indifference.

Seventeen miles of this strange travel had now been accomplished. The road was becoming more difficult, and they looked ahead distrustfully into the dark and apparently interminable windings, and wondered where they were to find a camping place. At last they struck a wide branch cañon coming in from the south, and saw with joyful surprise a beautiful and brilliantly clear stream of water gushing over a pebbly bed in the center, and shooting from between the rocks in sparkling jets and miniature cascades. On either side was an oasis of verdure—young willows and a thick patch of grass. Camp was speedily formed, and men and mules had a welcome rest after their fatiguing journey. They camped just on the verge of the Big Cañon of the Colorado.

A short walk down the bed of Diamond River, on the morning after they had reached it, disclosed the famous

Colorado Cañon. The view from the ridge, beyond the creek to which the Hualpais had first conducted them, had shown that the plateaus further north and east were several thousand feet higher than that through which the Colorado cuts at this point, and the cañons proportionally deeper; but the scene was sufficiently grand to well repay the labor of the descent. The cañon was similar in character to others that have been mentioned, but on a larger scale, and thus far unrivalled in grandeur. One of the party took a sketch, which gives a better idea of it than any description. This has been re-produced as a frontispiece to this work. The course of the river could be traced for only a few hundred yards, above or below, but what had been seen from the table-land showed that they were at the apex of a great southern bend. The walls, on either side, rose directly out of the water. The river was about fifty yards wide. The channel was studded with rocks, and the torrent rushed through like a mill-race.

The day was spent in an examination of the localities. Here were opportunities for observation seldom afforded to the geologist. This plateau formation has been undisturbed by volcanic action, and the sides of the cañons exhibit all of the series that compose the table-lands of New Mexico, presenting the most splendid exposure of stratified rock there is in the world. We give in diagram this formation in front part of this work.

#### BLACK CAÑON OF THE COLORADO.

This cañon is formed by the passage of the Colorado River through the Black Mountain Range. This chain is here about twenty miles wide, and the cañon, which cuts it diagonally, about twenty-five miles in length, its northern entrance being a short distance below the mouth of the Rio Virgin. Throughout the entire interval between its northern and southern termini, the cañon holds the same general character. Nearly perpendicular walls rise on either side to the height of a thousand feet or more, with few interruptions and no open valleys or alluvial land. The structure of the Black Mountains is masses of granite, exposed at several points in its section; but in magnitude they are far surpassed by the towering heaps of trap, porphyry, trachyte, etc., which make up the bulk of the chain.

#### FINE DISPLAY OF ROCKS.

Probably nowhere in the world is there a finer display of rocks of volcanic origin than may be seen about the southern entrance to the cañon. The beetling crags which form its massive portals are composed of dark brown porphyry of hardest and most resistant character. Just within the cañon, on the west side of the river, this porphyry is mingled with huge, convoluted masses of light-brown trachyte; tufa, pure white or white veined with

crimson, and pale blue obsidian (pearl-stone); amygdaloids of various kinds, their cavities filled with different zeolites; black and gray basalts, sometimes columnar; scoria, red, orange, green, or black, and of every grade of texture; porphyries in great variety, including some of unequalled beauty; trachytes and tufas of all colors; obsidian in its various forms,—all these are abundantly exposed in the immediate vicinity.

Elephant Hill, so called from an elephant's tooth found in valley drift, is scarcely two miles from the stupendous gateway which forms the southern entrance to the Black Cañon, the walls of which rise in perpendicular precipices of porphyry from 800 to 1,200 feet in height. When the Colorado began the task of cutting down the gigantic wall at the point where its accumulated waters, in greater volume than now, poured down its southwestern declivity, the cascade which it formed must have surpassed any similar exhibition of nature's forces of which we have knowledge at the present day. The legitimate and inevitable effect of such a cascade would be to excavate a deep basin or channel at its foot, and, subsequently, as the fall was diminished, to fill that excavation with bowlders of gravel and sand.

#### BLACK CAÑON DESCRIBED.

Black Cañon contains twenty-five or thirty rapids. The presence of large rocks in the center and along the edges of the channel renders many of these rapids dangerous. At two or three, and at Roaring Rapid in particular, the fall is considerable, and the rush of water violent. Over any one of them, however, a steamboat of proper construction; partially or entirely lightened of the cargo, could be taken with the assistance of lines, but the passage of the cañon, at low water, would be tedious, and attended with labor, hazard, and expense.

In some of the narrowest portions of this gigantic defile, drift-wood is seen lodged in crevices fifty feet above the surface of the river, an evidence of the astonishing height to which the water has banked up during the summer freshets. The attempt to go through the cañon at any season when a sudden rise might be apprehended, would be accompanied with grave peril. At the beginning of the warm weather, when the water has risen only one or two feet, the cañon might be navigated without serious trouble or danger; but the uncertainty and risk attending the passage, for the greater portion of the year, are such that the mouth of the cañon should be considered, for all practical purposes, the head of navigation of the Colorado. Above the Black Cañon the river soon becomes a continuous rapid, utterly impracticable to be ascended in boats.

At the mouth of the cañon there is a short, deep rapid, above which, in the center of the channel, is a sharp,

conical rock, the top of which is about four inches below the surface. During the season when the river is high the current in this part of it would be swifter than below, but, excepting for this, the navigation of this section of the Colorado would present little difficulty or hazard after the position of the sunken rock should become known. A boat drawing not more than eighteen or twenty inches could at all times ascend or descend, without being lightened of its cargo, and perhaps experience less trouble from the rapids than from the sand bars in the lower part of the river.

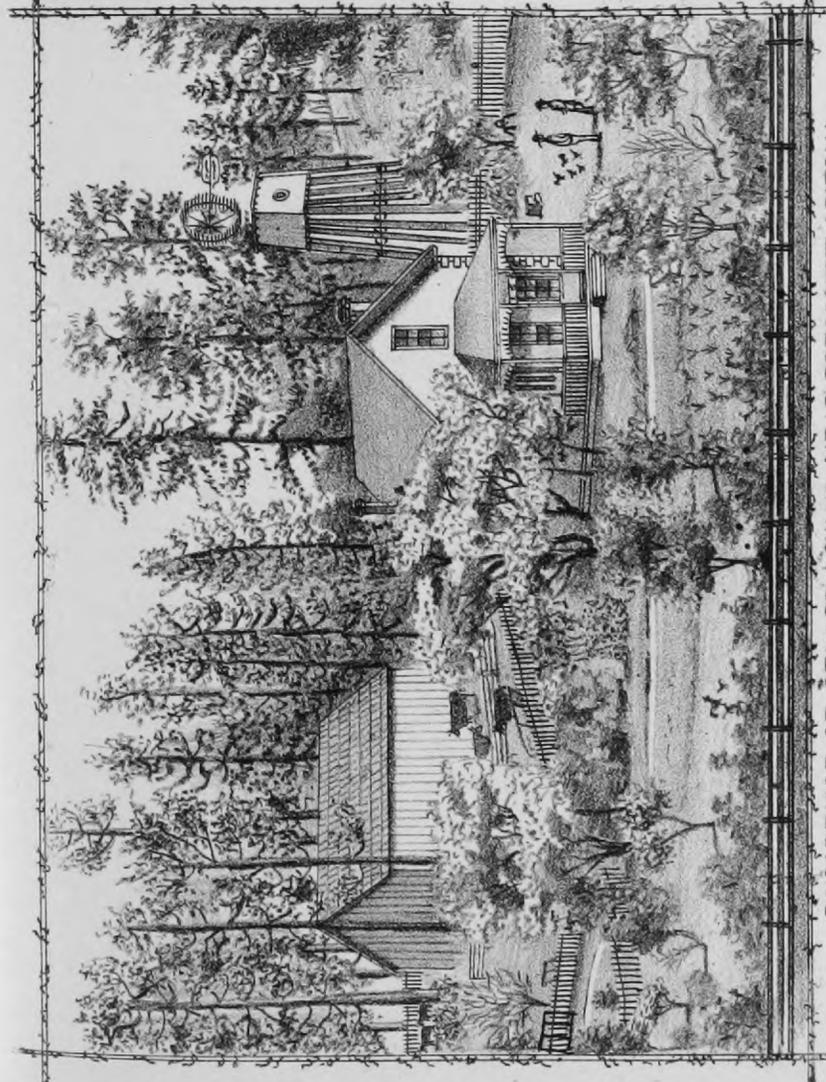
In the cañon not a trace of vegetation can be discovered, but the glaring monotony of the rocks is somewhat relieved by grotesque and fanciful varieties of coloring. The great towers that form the northern gateway of the cañon are striped with crimson and yellow bands; the gravel bluffs bordering the river exhibit brilliant alternations of the same hues, and not far to the east, mingled with the gray summits, are two or three hills, altogether of a blood-red color, that impart a peculiar ghastly air to the scene.

#### EXPLORING THE BLACK CAÑON.

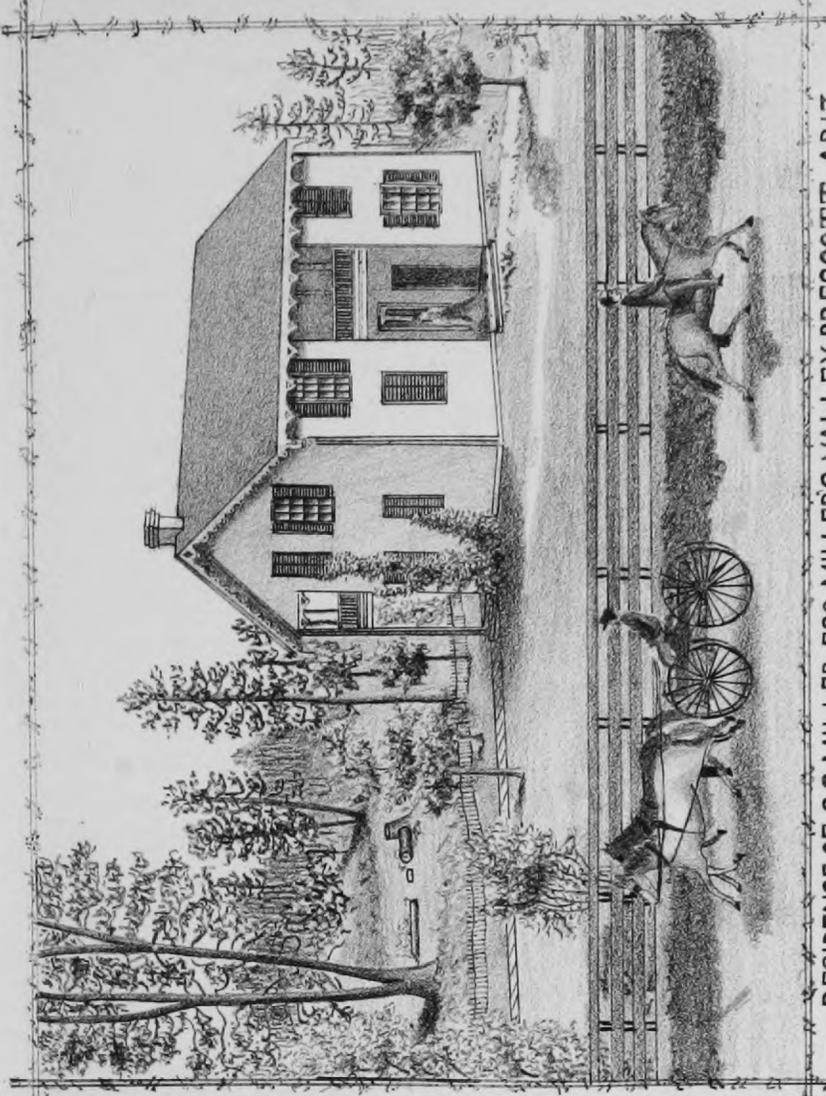
After passing with difficulty many rapids, they reached the "Black Cañon," and entered its gigantic precincts, and commenced to thread the mazes of this cañon, far exceeding in vastness any that had yet been traversed. The walls were perpendicular, and more than double the height of those in the Mojave Mountains, rising, in many places, sheer from the water, for over a thousand feet. The naked rocks presented, in lieu of the brilliant tints that had illuminated the sides of the lower passes, a uniform somber hue, that added much to the solemn and impressive sublimity of the place. The river was narrow and devious, and each turn disclosed new combinations of colossal and fantastic forms, dimly seen in the dizzy heights overhead, or through the sunless depths of the vista beyond. With every mile the view became more picturesque and imposing, exhibiting the same romantic effects and varied transformations that were displayed in the Mojave Cañon, but on an enlarged and grander scale.

Rapids were of frequent occurrence, and at every one they were obliged to get out of the skiff, and haul it over. Eight miles from the mouth of the cañon, a loud, sullen roaring betokened that something unusual was ahead, and a rapid appeared. Masses of rock filled up the sides of the channel. But after much labor this spot was passed.

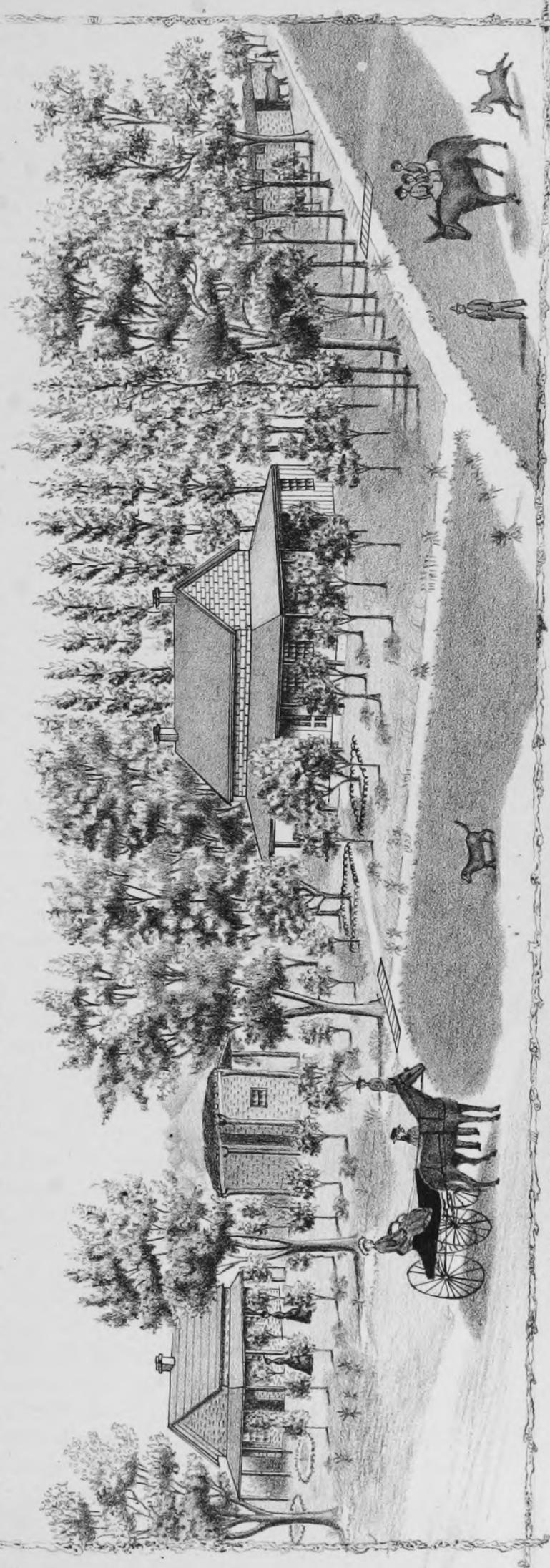
The constant getting out of the boat, and the labor of dragging it through these difficult places, made their progress for some miles exceedingly tedious and fatiguing. As sunset was approaching, they came to a nook in the side of the cañon, four miles above the Roaring Rapid, where a patch of gravel and a few pieces of drift-wood,



RESIDENCE OF GEORGE LOUI. T. NEAR PRESCOTT, T. ARIZONA.



RESIDENCE OF S.C. MILLER ESQ. MILLERS VALLEY, PRESCOTT, T. ARIZ.



VILLAGE PROPERTY OF CHARLES INNES ROBSON ESQ. MESA, MARICOPA CO. ARIZONA.

lodged upon the rocks, offered a tolerable camping place, and there they stopped for the night. There was no need of keeping a watch, with two grim lines of sentinels, a thousand feet high, guarding the camp. Even though they could have been seen from the verge of the cliff above, their position was totally inaccessible.

Darkness supervened with surprising suddenness. Pall after pall of shade fell, as it were in clouds, upon the deep recesses about. The line of light, through the opening above, at last became blurred and indistinct, and, save the dull red glare of the camp-fire, all was enveloped in a murky gloom. Soon the narrow belt again brightened, as the rays of the moon reached the summits of the mountains. Gazing far upward upon the edges of the overhanging walls was witnessed the gradual illumination. A few isolated turrets and pinnacles first appeared in strong relief upon the blue band of the heavens. As the silvery light descended, and fell upon the opposite crest of the abyss, strange and uncouth shapes seemed to start out, all sparkling and blinking in the light, and to be peering over at them as they lay watching from the bottom of the profound chasm. The contrast between the vivid glow above, and the black obscurity beneath, formed one of the most striking points in the singular picture.

In the morning, as soon as the light permitted, they were again upon the way. The ascent of the river was attended with as much labor as it had been the day before; for though none of the rapids were of so violent a character, they were of constant occurrence.

The cañon continued to increase in size and magnificence. No description can convey an idea of the peerless and majestic grandeur of this water-way. Wherever the river makes a turn, the entire panorama changes, and one startling novelty after another appears and disappears with bewildering rapidity. Stately *facades*, august cathedrals, amphitheatres, rotundas, castellated walls, and rows of time-stained ruins surmounted by every form of tower, minaret, dome, and spire have been moulded from the cyclopean masses of rock that form the mighty defile. The solitude, the stillness, the subdued light and the vastness of every surrounding object, produced an impression of awe that ultimately became almost painful. As hour after hour passed, we began to look anxiously for some kind of an outlet from the range; but the declining day only brought fresh piles of mountains, higher apparently than any before seen. We had made up our minds to pass another night in the cañon, and were searching for a spot large enough for a resting-place, when we came into a narrow passage between two mammoth peaks that seemed to be nodding across the stream, and unexpectedly found at the upper end the termination of the Black Cañon. The length of the Black Cañon is about twenty-five miles.

#### THE CATARACT CAÑON.

Lieutenant Tipton, Mr. Egloffstein, Mr. Peacock; and Lieutenant Ives, with a dozen men, formed the party to explore this cañon. It was about five miles to the precipice. The descent of the latter was accomplished without serious trouble. In one or two places the path traversed smooth inclined ledges, where the insecure footing made the crossing dangerous. The bottom of the cañon, which from the summit looked smooth, was covered with hills thirty or forty feet high. Along the center they were surprised to find an inner cañon, a kind of under cellar, with low walls at the starting point, which were soon converted into lofty precipices, as the base of the ravine sank deeper and deeper into the earth. Along the bottom of this gorge they followed the trail, distinctly seen when the surface was not covered with rocks. Every few moments, low falls and ledges, which they had to jump or slide down, were met with, till there had accumulated a formidable number of obstacles to be encountered in returning.

Like other cañons, it was circuitous, and at each turn we were impatient to find something novel or interesting. They were deeper in the bowels of the earth than they had ever been before, and surrounded by walls and towers of such imposing dimensions that it would be useless to attempt describing them; but the effects of magnitude had begun to pall, and the walk from the foot of the precipice was monotonously dull; no sign of life could be discerned above or below. At the end of thirteen miles from the precipice an obstacle presented itself that there seemed to be no possibility of overcoming. A stone slab, reaching from one side of the cañon to the other, terminated the plain which they were descending. Looking over the edge, it appeared that the next level was forty feet below. This time there was no trail along the side bluffs, for these were smooth and perpendicular. A spring of water rose from the bed of the cañon not far above, and trickled over the ledge, forming a pretty cascade. It was supposed that the Indians must have come to this point merely to procure water, but this theory was not altogether satisfactory, and they sat down upon the rock to discuss the matter.

#### ADVENTURES IN CATARACT CAÑON.

Mr. Egloffstein lay down by the side of the creek, and projecting his head over the ledge to watch the cascade, discovered a solution of the mystery. Below the shelving rock, and hidden by it and the fall, stood a crazy-looking ladder, made of rough sticks bound together with thongs of bark. It was almost perpendicular, and rested upon a bed of angular stones. The rounds had become rotten from the incessant flow of water. Mr. Egloffstein, anxious to have the first view of what was below, scrambled over the ledge and got his feet upon the upper round. Being

a solid weight, he was too much for the insecure fabric, which commenced giving way. One side fortunately stood firm, and holding on to this with a tight grip, he made a precipitate descent. The other side and all the rounds broke loose, and accompanied him to the bottom in a general crash, effectually cutting off the communication. Leaving the rest to devise means of getting him back, he ran to the bend to explore. The bottom of the cañon had been reached. He found that he was at the edge of a stream ten or fifteen yards wide, fringed with cottonwoods and willows. The walls of the cañon spread out for a short distance, leaving room for a narrow belt of bottom land, on which were fields of corn and a few scattered huts.

A place was found near the ledge where one could clamber a little way up the wall, and thus get a view of the valley. The river was nearly as large as the Gila at low water, and, with the exception of that stream, the most important tributary of the Colorado between its mouth and our position. The cañon, Mr. Egloffstein saw, could not be followed far; there were cascades just below. He perceived, however, that he was very near to its mouth, though perhaps at a thousand feet greater altitude, and an Indian pointed out the exact spot where it united with the cañon of the Rio Colorado.

Having looked at all that was to be seen, it now remained to get Mr. Egloffstein back. The slings upon the soldiers' muskets were taken off and knotted together, and a line thus made which reached to the bottom. Whether it would support his weight was a matter of experiment. The general impression was that it would not, but of the two evils—breaking his neck or remaining among the Yampais—he preferred the former, and fastened the strap around his shoulders. It was a hard, straight lift. The ladder pole was left, and rendered great assistance both to us and the rope, and the ascent was safely accomplished.

#### A NIGHT IN THE CANON.

The examination being finished, it was time to return. On leaving camp it had been expected to be back before night, and they brought along neither provisions nor overcoats. An hour or two earlier, finding that the day was rapidly slipping by, two of the party were directed to go back and tell those who had remained that they might be detained till the next day, and in that case to forward in the morning something to eat. They walked as fast as possible, in order to get out of the cañon before dark, but the ascent was laborious, and the trail, made in coming down over the rocks, difficult to follow. Numerous branch cañons, all looking alike, would have rendered it easy to become lost had the trail been once departed from. Night came before the foot of the precipice where the train had stopped was reached. It was impossible to distinguish

the way in the dark, and they had to halt. A few minutes previously the tracks of the two men that had been sent ahead had been noticed diverging from the proper course, and it was concluded that they were wandering astray somewhere in the labyrinth. After night fall, as is always the case in these regions, it became bleak and cold. Some of the party, attired for a walk under a hot sun, had not even their coats. The cañon was as dark as a dungeon. The surface of the ground being covered with rocks, a recumbent position was uncomfortable, and the rocks being interspersed with prickly pear and some other varieties of cacti it would have been unwise to walk about. The choice, therefore, lay between sitting down and standing still, which two recreations they essayed alternately for twelve hours, that might have been, from the sensations of the party, twelve days. As soon as it was light enough to see the way, they put their stiffened limbs in motion. Climbing the precipice was severe work. The summit once attained, it was but five miles to camp, but the violent exercise of the ascent, coming after a twenty-four hours' abstinence from food and rest, and a walk of more than thirty miles over a difficult road, proved a severe task.

#### PAINTED CAÑON.

Above Cottonwood Valley, on the Colorado, in Mohave County, is an interval of about twenty miles extending to the entrance of Black Cañon, which is entirely without alluvial land, is set with several isolated mountains, and is traversed by many lines of upheaval, marked by protruded ridges or masses of volcanic rock. The first of these lines of disturbance crosses the Colorado with a northwest trend. The river has cut through this ridge in a cañon of limited extent, whose walls are nowhere more than a hundred feet in height, having none of the grandeur of many of the cañons of the Colorado; yet the variety and intensity of the colors which the rocks forming it display, render it one of the most picturesque and interesting of the series, and well deserving of the name of Painted Cañon.

The materials composing its walls are traps, trachytes, tufas, and porphyries, blue, white, brown, crimson, purple, etc., all the colors remarkably vivid, and the contrasts striking.

The detached mountains are usually composed of trap. They are nearly black in color, and, rising abruptly from the slopes which descend from the distant granitic chains, form peculiar features in the landscape. They suggest comparisons, in the minds of different persons, with colossal whales, raising their black and massive heads above the ocean.

#### ARIVAIPA CAÑON.

The Arivaipa Cañon has its head about thirty miles northwest of Camp Grant, in Graham County, and twenty-

five miles south of San Carlos, and is about thirty miles in length to its junction with the San Pedro River and Valley. The upper twenty miles is a deep, wild gorge, with steep and abrupt cliffs on both sides of from 400 to 1,000 feet in height, reaching back to a height of 2,000 feet. The cañon has been cut out by running water in the long ages which have passed away since the deposition of a drift that is plainly to be seen is mostly a conglomerate. The whole upper part of the cañon is a cemented conglomerate, and the lower part a sandstone conglomerate. The face of the cliff, the angles, the side cañons, the jutting and overhanging cliffs, are worn into all sorts of fantastic forms, such as forts, towers, churches, houses, thrones, pulpits, etc., which meet the eye at every turn for miles. At many points in this valley are the stone foundation walls of old ruins, surrounded by the same mystery attending similar remains so freely scattered throughout the Territory.

#### MARBLE CAÑON.

Of Marble Cañon Powell writes: "The limestone of this cañon is often polished, and makes a beautiful marble. Sometimes the rocks are of many colors—white, gray, pink and purple, with saffron tints. The walls of the cañon, 2,500 feet high, were of many beautiful colors, often polished below by the waves, or far up the sides where showers had washed the sands over the cliffs. At one place I walked for more than a mile on a marble pavement all polished and fretted with strange devices, and embossed in a thousand fantastic patterns. Through a cleft in the wall the sun shone on this pavement, which gleamed in iridescent beauty. Up to this cleft I found my way. It was very narrow, with a succession of pools standing at higher levels as I went back. The water in these pools was clear and cool, coming down from springs. Then I returned to the pavement, which was but a terrace or bench over which the river ran at its flood, but left bare at this time. Along the pavement in many places were basins of clear water, in strange contrast to the red mud of the river. At length I came to the end of this marble terrace, and jumped aboard the boat. Riding down a short distance, a beautiful view was presented. The river turned sharply to the east, and seemed inclosed by a wall set with a million beautiful gems. What could it mean? every one wondered. On coming nearer, we found a fountain bursting from the rock high overhead, and the spray in the sunshine formed the gems which bedecked the walls. The rocks below the fountain were covered with mosses and ferns and many beautiful flowering plants."

#### GRAY CAÑON.

The plateau through which Gray Cañon is cut, says Powell, terminates abruptly on the south in a bold escarpment known as the Book Cliffs. The river below the

cliffs runs, for a time, through a valley. Extensive sand plains reach back from the immediate river valley as far as we could see on either side. These naked, drifting sands gleamed brilliantly in the midday sun of July. The heat reflected from the glaring surface produced a curious motion of the atmosphere; little currents were made, and the whole seemed shifting and unstable.

One moment, as we looked out over the landscape, the very atmosphere seemed to be trembling and moving about, giving the impression of an unstable land; plains and hills and cliffs and distant mountains seemed vaguely to be floating about in a trembling, wave-rocked sea, and patches of landscape would seem to float away and be lost, and then reappear. Just opposite our camp there were buttes, composed of rock, that were outliers of cliffs to the left. Below they were composed of shales and marls of light blue and slate colors, and above the rocks were buff and gray and then red. The buttes are buttressed below where the azure rocks were seen, and terraced above through the buff and gray and red beds. A very long line of cliffs, or rock escarpment, separates the table-lands through which Gray Cañon is cut, from the lower plain. The eye can trace these azure beds and cliffs on either side of the river in a long line, extending across its course until they fade away in the perspective. These cliffs are many miles in length, and hundreds of feet in height, and all these buttes, great mountain masses of rock, seen through the shifting atmosphere, seem dancing and softly moving about.

The cañon walls are buttressed on a grand scale, and deep alcoves are excavated; rocky crags crown the cliffs, and the river rolls below. The sun shone in splendor on the vermilion walls, shaded into green and gray where the rocks were lichened over; the river filled the channel from wall to wall, and the cañon opened like a beautiful door-way to a region of glory. But at evening, when the sun was going down and the shadows were setting in the cañon, the vermilion gleams and roseate hues, blended with tints of green and gray, slowly changed to somber brown above, and black shadows crept over them below; then it seemed the shadowy portal to a region of gloom. Lying down, they looked up through the cañon and saw that only a little of the blue heaven appeared overhead—a crescent of blue sky with but two or three constellations peering down upon us. They did not sleep for some time, as the excitement of the day had not worn off. Soon they saw a bright star that appeared to rest on the very verge of the cliffs overhead on the east. Slowly it seemed to float from its resting-place on the rocks over the cañon. At first it appeared like a jewel set on the brink of the cliff, but, as it moved out from the rock, they almost wondered that it did not fall. In fact, it did seem to descend in a gentle

curve, as though the bright sky, in which the stars were set, was spread across the cañon, resting on either wall, and swayed down by its own weight. The star appeared to be in the cañon, so high were the walls.

The rocks below were red and brown, set in deep shadows, but above they were buff and vermilion. The light above, made more brilliant by the bright-tinted rocks, and the shadows below, made more gloomy by the somber hues of the brown walls, increased the apparent depth of the cañons, and it seemed a long way up to the world of sunshine and open sky, and a long way down to the cañon floor.

#### VERMILION CLIFFS.

Near Pipe Spring, there is a long line of cliffs, many hundreds of feet high, composed of orange and vermilion sandstones, named Vermilion Cliffs. Powell describes them in these words: "The morning sun was shining in splendor on their painted faces. The salient angles were on fire, and the retreating angles were buried in shade. I gazed and gazed until my vision dreamed, and the cliffs appeared a long bank of purple clouds piled from the horizon high into the heavens."

"Through crevices we worked, still toiling up, till at last we were on the mountain; a thousand acres of pine lands spread out before us gently rising to the other edge. There are two peaks on the mountain, called Mounts Turn-bull. We walked two miles to the foot of the one that seemed the highest, and then made a long, hard climb to its summit. And there, oh! what a view was before us. A vision of glory! Peaks of lava all around; below us, the vermilion cliffs to the north, with their splendor of colors; the Pine Valley Mountains to the northwest, clothed in mellow perspective haze; unnamed mountains to the southwest, towering over cañons bottomless to my peering gaze; and away beyond, the San Francisco Mountains, lifting their black heads into the heavens!

#### GILA RIVER CAÑON.

The grand cañons are not confined to the Colorado River. Almost every river or stream has some, and all of great grandeur and beauty. The cañon of the Gila is thus mentioned by Mr. Cozzens: "We commence to descend the banks of a deep ravine, our mules carefully picking their way along the path, constantly impeded by huge boulders of granite, blocks of sandstone, fissures and chasms worn into the earth by floods ages ago. Around you are to be seen mountain peaks, ranges, *mesas*, pinnacles and crags, bald and gray. We suddenly find ourselves upon the edge of a cañon two thousand feet deep. The walls are perpendicular and of blood-red color. No vegetation is anywhere to be seen; nothing but the stones around us and the grayish-white alkali on the surface of the plain on which we stand, with its surroundings of crag,

pinnacles, towers, and *mesas* of rock rising far above us until the summits pierce the clouds on the one side, and this black, yawning abyss before us."

The Little Colorado is characterized by a cañon system not unlike the larger river, except it is not so extensive or massive. The cañons of the Colorado-Chiquito make their appearance not far above its junction. They are from 1,000 to 2,500 feet in depth and of marvelous grandeur. These are reached by the railroad, as well as many others that are now made accessible to the public.

#### CASA GRANDE RUINS.

Probably the most noted place to visit, next to the Grand Cañon, is the Casa Grande, near Florence, and reached by the Southern Pacific Railroad. It is the most interesting of all the ruins left by the prehistoric people. Although there are many other ruins of less note which are worthy of careful study, this one is the best known, and is identified with the history of the country. The events which led to the discovery of Casa Grande have been already related.

Coronado wrote that he was especially afflicted to find this Chichilticale, of which so much had been boasted, to be but a single ruined, roofless house, which at one time seemed to have been fortified. It was easy to see that this house, which was built of red earth, was the work of civilized people, who had come from afar.

This seems to be the first historical notice of Casa Grande.

Father Kino, in 1649, one hundred and fifty years later, visited the Gila River and Casa Grande. He found traditions among the Pima Indians dating back 400 years. It was then a ruin. Another priest, whose name is not given, visited these ruins in the year 1764.

Father Font was at Casa Grande on the 3d of October, 1775. He says:—

"The Casa Grande must have been built 500 years previously, in the thirteenth century, if we may believe the accounts given by the Indians. The house is seventy feet from north to south (Spanish feet), and fifty feet from east to west. The interior walls are six feet thick. We found no trace of stairways. We think they must have been burned when the Apaches destroyed the edifice."

#### MODERN CASA GRANDE.

In modern times, Casa Grande has been more frequently visited, and descriptions of it given. An interesting account was given by W. H. Emory, published in Washington, in 1848. On the 11th of November, 1846, Lieutenant Emory was encamped, with his command, eight or ten miles from the Pimos Villages. A party visited the Casa Grande, called by him Casa Montezuma.



60 FEET LONG 40 FT. WIDE & 40 FT. HIGH.  
CASA GRANDE RUINS. FLORENCE, ARIZONA.



RESIDENCE OF M.W. KALES, ESQ. PHOENIX, ARIZONA.

While riding, Lieutenant Emory asked the interpreter if the Indian knew the origin of these buildings. The reply was, "No; in truth we know nothing of their origin. All is wrapped in mystery." The following is from his narrative:—

"About the time of the noonday halt, a large pile, which seemed the work of human hands, was seen to the left. It was the remains of a three-story mud house, sixty feet square, pierced for doors and windows. The walls were four feet thick, formed of layers of mud two feet thick. Stanly made an elaborate sketch of every part, for it was, no doubt, built by the same race that had once thickly populated this Territory, and left behind the ruins. We made a careful search for some specimens of household furniture or implements of art, but nothing was found except the corn-grinder, always met with among the ruins and on the plain. Marine shells, cut into various ornaments, were also found here, which showed that these people either came from the sea, or trafficked there. No traces of hewn timber were discovered; on the contrary, the sleepers of the ground-floor were round and unhewn. They were burned out of their seats in the wall to the depth of six inches. The whole interior of the house had been burned out, and the walls much disfigured. What was left bore marks of having been glazed. On the wall, in the north room of the second story, were found some hieroglyphics, which were carefully drawn, but the drawings have been lost."

Lieutenant Emory visited other interesting ruins, at one of which he found sea-shells worked into ornaments, and a large bead an inch and a quarter in length, of bluish marble, exquisitely carved or turned.

Casa Grande stands on a wide-spreading *mesa*, rising slightly from the main road. The mesquite trees, although low, hide the building until it is nearly approached. For miles distant from the ruin the ground is spread with fragments of broken pottery, in such quantities that it is impossible to reject the idea that the site was at one time densely populated, where now utter desolation reigns. It is natural, under such circumstances, to speculate as to how the people lived; for, if the country was in the same state then as now, the question would be a difficult one to answer.

The visitor has ample time to think the matter over from the time he first begins to observe the signs of human habitation until he reaches the building. Henry G. Hanks, in company with Prof. George H. Cook, State Geologist of New Jersey, and S. P. Van Winkle, also of New Jersey, visited Casa Grande in April, 1879. With this party the conclusion reached was that the Colorado Desert may have been once an inland sea, and the climate widely different from the present. It must be a consolation to those who

intend to reside in that part of Arizona to feel assured that no violent earthquake could have happened for centuries, for the walls of Casa Grande are in such a condition that they could not withstand even an ordinary shock.

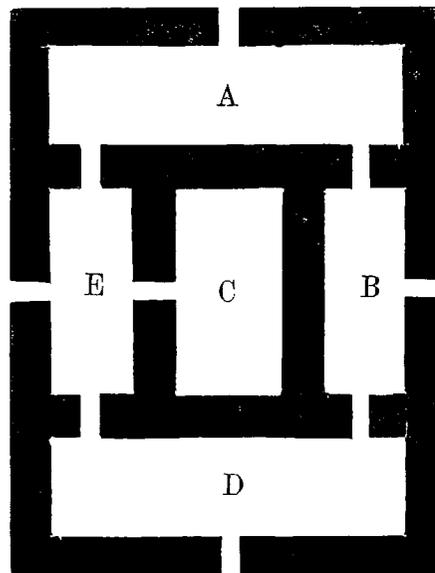
#### CASA GRANDE IN RUINS.

As the traveler approaches Casa Grande, he cannot fail to be somewhat disappointed, the more so if he has taken a romantic or poetical view of the published descriptions of that noted building. Instead of the stately edifice he has pictured in his imagination, he beholds only a huge, dun-colored, almost shapeless mass, looming up strangely from the desolate plain. There is nothing architectural about the structure. It is, at best, but a mud house, though, as he examines it more closely, it seems more and more wonderful, and the mind is filled with conjecture as to the uses to which this great building may have been put and why it stands so lonely and isolated. But, on examining the ground around about, it will be discovered that Casa Grande is but one of many similar buildings that were scattered, city-like, over the *mesa*. Fallen walls of houses older, or which were thrown down by some unknown cause, may be traced out, or detected by the characteristic concrete which lies in heaps at various points.

#### PLAN OF CASA GRANDE.\*

The accompanying illustration is a plan of Casa Grande on a scale of twenty feet to the inch.

The walls were originally, as near as may be, four feet in thickness, the exact measurement being three and seven-tenths feet. The highest point, as the building now stands, is thirty-five feet. It was originally four or five stories high, each of which was eight feet from floor to ceiling. The extreme length, carefully measured, is fifty-eight and a half feet, and the width forty-three feet. In the north, south, east, and west faces of the building there were narrow doors, centrally placed, through which entrance was made into the main compartments, and over each door narrow port-holes, decreasing in width from the bottom upward. The foregoing cut gives the form of them. Scale of half an inch to the foot.



PLAN OF CASA GRANDE.

\*See elevation view of Casa Grande on adjoining page.

## PORT HOLES OF CASA GRANDE.

Some of these port-holes have been built in with concrete, as if they had been found to be unnecessary, or had been filled up for defense. The building faces nearly the cardinal points of the compass, the north and south walls bearing north, ten degrees east, which is nearly the true meridian. The interior must have been dark, as the light was admitted only through the before-described port-holes. The inner room was, presumably, like a dungeon.

## ANALYSIS OF CONCRETE FROM CASA GRANDE.

A chemical analysis of the concrete of which the walls are built reveals the secret why the building has for so many years, not to say centuries, withstood the action of the elements, and also the probability that the ancient builders had acquired the art of burning lime, although they were still in ignorance of the use of iron.

Sand and matter insoluble in hydrochloric acid.....	74.00
Carbonate of lime.....	17.00
Iron and alumina.....	1.10
Water.....	4.80
Organic matter and loss.....	3.10
Total.....	100.00

It will be seen by the above analysis that the concrete contains seventeen per cent. of carbonate of lime, and it is fair to assume that part of the insoluble portion may be silicate of lime, a substance which forms in the hardening of mortars. There is no reason to think that the builders made use of the limestones so abundant in the immediate vicinity, but the scattered fragments of shells lead to the opinion that sea-shells were brought from the shores of the Gulf of California, although when the fact is considered that seventeen per cent. of the massive four-foot wall is lime, the expenditure of labor seems almost incredible. It may be that the soil of the *mesa* is in itself calcareous, and that the concrete was prepared much as ordinary adobe is at the present day. But this is not at all likely. It is more probable that lime was burned to mix with the building materials.

The inner surface has remained these long years intact, the smooth face showing no sign of decay. The little wrinkled marks, left when the surface dried, remain the same as when, centuries ago, the builder laid aside his tools and the work was declared finished. Readers of works written by travelers in Egypt wonder at the accounts given of temple and tomb, whose pictured walls remain as fresh as if newly painted. They are inclined to think, if at all skeptical, that these statements are exaggerated. Yet here in Arizona we have evidences that, in the warm, dry climate, changes take place slowly. It is not easy to understand why the concrete walls should not last a thousand years as well as a hundred. Some parts of the outer

surface remain as smooth as when left by the builder, while in others the tooth of time has gnawed unsightly cavities, like cancer spots.

For centuries occasional rain-storms, and the continued action of the natural sand-blast, have gradually worn away the surface, and left their records on the old dun-colored walls. We are apt to overlook the importance of little things, and may forget that an incessant bombardment, lasting for centuries, may produce great changes, even if the missiles be only grains of sand.

Prof. William P. Blake read a paper before the California Academy of Sciences, January 15, 1855, describing the action of drifting sand as seen by him in the San Bernardino Pass. Even quartz was cut away. Hard minerals, like garnets, were found, in some cases, to have protected softer stones under their lee.

## INTERIOR OF CASA GRANDE.

The central series of rooms was at least one story higher than the others. From A into E there is a port-hole in the second story, from room to room. From E into D there was originally a port-hole of the same size, but it has been filled in. From E to C there is a door, but none from C to B, instead of which there are several curious circular openings, from eight to ten inches in diameter, extending through the thick walls, and resembling modern stove-pipe holes. They are still perfectly smooth on the inside. What use these singular openings were put to can only be conjectured.

After making an examination of so remarkable a building, it is perfectly natural to speculate as to the uses to which it could have been put. It is amusing to remember how many suggestions have been made, and how absurd some of them are. We are obliged at last to admit that no clew to the mystery has been discovered. One suggests a grain warehouse, as the extensive irrigation works and the signs of a dense population indicated that large crops might have been raised; but this theory was rejected when it was seen how small the floor rafters were. Any one of the many rooms full of grain would have crushed the floors, if not the walls themselves. Another thought that the building had been a temple or some kind of religious edifice; but the smallness and multiplicity of the rooms, and the still greater number of doors and port-holes, argued against such a supposition, although the mysterious central rooms and the unexplained cylindrical openings were suggestive of pagan rites.

The interior of the building has been burned out long ago; still the ends of the rafters are well preserved, having been deeply imbedded in the walls. On digging them out, it may be seen that they have been cut with a blunt instrument, the marks of which are, to all appearance, just as they were made by the hand of the workman. It may be

argued that the floor joists, being of wood, and showing but little, if any, mark of decay, the age of the building may be overestimated.

Wood has been found in Egyptian temples which is known to be 4,000 years old. Considering these facts, it is fair to admit the possibility of this remarkable antiquity having been built at a period very remote.

Several attempts have been made to discover a clue to the age and uses of Casa Grande by digging, but with indifferent success. A gentleman at Florence informed Mr. H. G. Hanks that he had a piece of gold, resembling a coin, found within the ancient walls. A Mr. Walker made some excavations on an appropriation granted by the Legislature of Arizona. Others, from time to time, have made similar attempts, resulting, as before stated, in disappointment. Some visitors have said that a hollow sound could be heard in the inner room by jumping on the floor. It is quite evident that a portion of the walls have fallen inward, which may account for the sound, if it is true. Steps should be taken to preserve Casa Grande from the vandalism of visitors. Unless something be done to effect this end, it will eventually be carried off piecemeal.

#### PETRIFIED FOREST.

The petrified forest is one of the wonders of the world. It is on the Atlantic and Pacific Railroad line, twenty miles from Holbrook. At a reasonable expense teams can be secured for visiting the trees, which cover an area of some eighteen hundred acres. Among the petrifications are those of California redwood, pine, cottonwood, and palm. Trees have been measured that are seventy feet long, and have a diameter of five feet. Specimens of the amethyst and topaz are frequently found in the heads of the fallen giants, and in many cases the tree is one translucent agate. Two days are required to visit the forest, where a hotel has been erected for tourists. Few natural curiosities are more worthy of attention.

Immense quantities of silicified wood have been brought to light. Fragments of all sizes are thickly strewn over the lowlands, and have accumulated in piles of many hundred cords at the bottom of some of the slopes, where they have precisely the appearance of so much drift-wood. These fossil trees are apparently all coniferous, though belonging to several species and probably representing more than one genus. They have not yet been critically examined. They exhibit considerable variety in their mode of preservation, but frequently retain in great beauty and perfection the details of their anatomical structure. Some of the trunks are converted into red jasper, and look like huge masses of red sealing-wax. Others are composed of agate or opalescent chalcedony, often showing a variety of bright colors and forming

beautiful specimens for the cabinet. As generally found, these silicified trunks are broken into pieces from one to six feet in length, as though they had been sawed through transversely. These pieces have usually been separated from their fellows and lie scattered about in the greatest confusion. There are found a number of trunks of which the fragments were all in opposition, and the tree complete from root to summit. Of these, some have a diameter of at least three, and a length of more than forty feet.

A visitor says: "I examined these specimens with some care to determine, if possible, whether they had grown on the spot, as those of Lithodendron Creek are supposed to have done by the members of Captain Whipple's party, or whether they had been transported to their positions. In all that came under my observation, I failed to find any evidence that they had grown in the vicinity. All the trunks are stripped of their branches and exhibit precisely the appearance of those transported to some distance by the agency of water.

#### HOT SPRINGS.

These are numerous in all parts of the Territory, but do not seem to have been brought into notice or have attracted attention as places of resort. The Monroe Hot Springs are in Castle Creek Cañon, about sixty miles south of Prescott. Hinton says the spring issues from granite rock at the head of a small cañon, in which flows about twenty inches of water for about half a mile through a dense growth of cane and tule to the mouth, on Castle Creek, where it sinks in the sands. The temperature of the water at the spring is 150 to 160 degrees, but sinking to 130 degrees at about two hundred yards below. It has not been analyzed, has a very agreeable taste when cooled, can be drunk in large quantities without inconvenience, resembles snow-water in taste and feeling, and will wash clothes with no soap and very little labor. It has no disagreeable smell or nauseous taste, yet is believed to be curative. In summer the temperature of the air is high, but a cool breeze blows up Castle Creek Cañon. The altitude is about fifteen hundred feet. Two hundred yards below the springs the water flows over a rock about six feet in height, forming a natural shower-bath, into a pool in solid rock about four feet in width, ten feet in length, and four feet in depth.

In the Grand Cañon of the Colorado River are hot springs, often of eighty-nine degrees.

Bitter Springs, of Mineral Park, are somewhat noted. They contain in one hundred thousand parts, 118.5 calcium sulphate, 65.3 magnesium sulphate, 5.4 magnesium chloride, together with traces of the sulphates of sodium, manganese, and iron, but no trace of potassium or lithium.

North of these, in Detrital Valley, is a gypsum spring, the water from which has a faint odor of sulphureted

hydrogen, and a strong saline and disagreeable taste. The geological formation consists of a red triassic sandstone and conglomerate, with gypsum and salt deposits. In 100,000 parts of the water are contained chlorate of sodium, 397.8; sulphate of sodium, 51.6; sulphate of magnesia, 172.8; sulphate of calcium, 130.1; carbonate of calcium, 12.0, with traces of chloride of potassium, and carbonate of magnesium.

Governor Trittelle says: "Arizona contains several thermal springs, whose waters possess curative powers equal to the famous ones of California, Nevada, New Mexico, and Arkansas. That the use of natural mineral water effects cures of disease in various forms, is universally acknowledged. It would, undoubtedly, be a blessing to many people, and result in benefit to the Territory, if means were provided to reliably ascertain the number of these mineral springs, their locality, and the chemical contents of their waters, for official record and publication."

#### ERODED VALLEY.

Near White Rock Spring, in Apache County, is an extensive and beautiful valley, eroded in the cretaceous and underlying rocks. The bottom of the valley is a grassy plain, stretching far away to the north, and bounded in that direction by picturesque *mesa* walls, which rise above it to the height of eight or nine hundred feet. The sandstones here exposed are of a chalky white and greenish yellow, and in the erosion of the valley a number of isolated buttes have been left, resembling in their forms churches, castles, gates, and monuments of various kinds. These are surrounded by a green and level plain, with which their various outlines and colors strongly contrast, the whole picture vividly recalling the ruined structures of the Old World.

Like most of the other phenomena of erosion in the Colorado country, this great valley was principally formed in an epoch in which the annual amount of rain was much greater than at present, for no stream now flows through it.

From Cottonwood Fork toward Pottery Hills is a labyrinth of hills of all conceivable forms and sizes, which had been shaped by the erosion of the lower portion of the marl series. The colors of the strata are as vivid as would ever be used in the construction of a geological diagram, and the scenery formed by the combination of these brilliant and varied colors, with outlines quite as unusual in natural objects, produced a picture as unlike

those presented by most portions of the earth's surface as could well be imagined.

A few miles distant the character changes and there is a series of detached buttes, which rise from its surface to the height of several hundred feet.

#### PAINTED DESERT.

The peculiar physical aspect and geological structure of the Painted Desert prevail over a wide belt of country bordering the Little Colorado on the east, and extending far northward. Ascending the *mesa* wall which bounds the valley north of the Colorado-Chiquito River, is entered a region to which the above name is appropriately given, as indicative of its barrenness and desolation, as well as of the peculiar scenery which it exhibits.

All the area is occupied by the *mesa* of which the edge forms the eastern boundary of the valley of the Little Colorado. It is traversed by a series of broad valleys of erosion, which seem to have been formed by a more abundant supply of moisture than now falls upon this surface. These valleys are bounded by abrupt and usually perpendicular walls, composed of the blood-red strata of the saliferous sandstones and the variegated marls which overlie them. In the process of erosion many



MESA WALLS OF RED SANDSTONE IN PAINTED DESERT.

buttes and pinnacles have been left standing, which, by their forms and colors, closely imitate, upon a colossal scale, the structures of human art. The geological horizon is here precisely the same as that of much of the country lying between the Mississippi and the Rio Grande, of which the peculiar scenery, so frequently described by travelers, seems also to be very similar to that of the region under consideration. Variegated marls compose the upper portion of the *mesa*, when unbroken, throughout the Painted Desert, and usually cap the walls of sandstone, the deep red of which affords a strong contrast.

Hinton says: "This is a land of marvels. Between the Moqui Villages and the lower portion of the Little Colorado lies the Painted Desert. Here are thousands of colossal columns, the remains of layers of earth of great thickness, carried away by slow denudations, extending over many eras and leaving behind these landmarks of their former extent. The columns are streaked with bright red layers, the deep color attributed to the oxydation of particles of feldspar in the granite from which the sediment-



VIEW OF BUZZARD MINE WITH PROPOSED WORKS AND TUNNELS, FROM THE SOUTH.



PROPOSED WORKS AND TUNNEL OF BUZZARD MINE, FROM THE WEST.

ary rocks of which these columns are composed were obtained. From these red layers the desert derives its name.

"On its air are depicted palaces, hanging gardens, terraces, colonnades, temples, fountains, lakes, fortifications, with flags flying on their ramparts, inverted houses, towers, walled towns on conical hills, with flags flying on their roofs, beautiful lawns and promenades, landscapes, spacious woods, groves, orchards, meadows, with companies of men and women, and herds of cattle, deer and antelope, standing, walking, lying, etc., and all painted with such an admirable mixture of light and shade that it is impossible to form an adequate conception of the picture without seeing it."

#### PAINTED ROCKS.

In the southwestern part of Maricopa County, near the bend of the Gila River, and reached by the Southern Pacific Railroad, are the famous "Peidras Pintados," or Painted Rocks. "They stand," says Hinton, "entirely alone in a gravelly plain, a singular pile of huge boulders heaped up to the height of some forty or fifty feet. It does not seem possible for human agency to have brought them here, and yet their singular isolation and character almost induces the belief that they are an artificially raised pile. The smooth sides of these boulders are covered with rude carvings—grotesque hieroglyphics. Some of them are painted over, and none appear to be of very great antiquity. Mr. Bartlett believed that many of them are very old. There is evidence that some have been made over older symbols. The Pima Indians date them, as they do everything else, back to their mythical Montezumas. Hundreds of them are inscribed and carved. So far as tradition will bear sifting, the strong probabilities are that this mass of boulders, left by the subsidence of some great flood, has been chosen for generations past as a place of record for such tribal engagements, battles and other events as have marked the contentions of the Yumas, Cocopahs, Maricopas, and Pimas. This particular place was probably the scene of some fight or council great in Indian annals. Some of the carvings are amusing, aiming as they do to express all the facts of human life, fighting and passion alike. Many of the largest boulders have, it is evident, fallen from the pile, and stand alone on the arid *mesa*."

A recent writer thus describes this notable curiosity: "This mass of rock rises from the surface of the plain to a height of perhaps fifty feet, the uppermost being a broken ledge, from which masses have fallen off, and the whole covering less than an acre of land. On the standing ledge, and on the broken masses at its base, are carved, deep in the surface, rude representations of men, animals, birds, and reptiles, and of numerous objects, real or

imaginary, some of which represent checker-boards, some camels and dromedaries, insects, snakes, turtles, etc., etc.; and on the broken rocks at the base of the ledge are found on all sides like sculptured figures, some of which are deeply imbedded in the sand."

#### MONTEZUMA WELLS.

This is a noted place to visit and is found very interesting. The well is in limestone formation, on a bare, rocky, level plain. The opening to the well is circular and about six hundred feet across, and its inner walls are perpendicular. From the surface of the *mesa* to the water is seventy feet. The water in the well is clear and pure and about one hundred feet deep.

On one side are three or four cave dwellers' residences, midway between the bottom and the level of the *mesa*. These dwellings are from twelve to twenty feet across in front, and about the same depth, and are walled up in front. They were evidently inhabited by the old prehistoric people, says "Arizona as It Is." The eastern and southeastern borders of the well approach Beaver Creek within thirty to one hundred feet, and it is separated from the creek by a rim of the inclosing limestone rock. This rim of rock was built up with stone buildings its whole width, and about one hundred feet in length. The walls of these old buildings are yet standing to a considerable height.

On the southeast side of the well is another old cave dwelling, which can be explored fully one hundred feet. It is near the surface of the water of the well, which runs off under the cave and discharges the water into the creek some two hundred feet to the south, in a pretty cascade of about one hundred inches of water.

This stream is continuous the whole year. The whole surface surrounding the well is strewn with broken pottery ware of various sizes, forms, and patterns. In walking around the rim of the well, the limestone rock gives forth a ringing, metallic sound, as though it had at some former time been subjected to extreme heat. Below the well, on the creek flat, are two or three dykes of volcanic lava. From all the surroundings, it is quite evident that the well was at one time the crater of a volcano.

#### CLIFF AND CAVE DWELLINGS.

The homes of the cave dwellers are worth a visit. There are several of these located at different points. Beaver Creek is lined with perpendicular bluffs of limestone, in which are many old cave dwellings. They are mostly walled up in front, and at a distance look like the natural stony bluffs. In two of these cañons, some six miles up the creek on the north side, are several caves some twenty feet above the creek, in two of which are perfect cisterns, made of cement, and almost as hard as marble, and as perfect as when made.

"On one of them are prints of the hands of their makers, indented in the cement while in a plastic state, and also the print of the tiny hands of a small child, no doubt made by the little one in childish glee and play. Three miles below these caves are numerous others in a high bluff on the north side of the creek. This bluff is nearly or quite four hundred feet high, and is almost perpendicular."

The largest of the caves is ninety feet across in front, walled up to its very top, a distance of over fifty feet, and difficult and dangerous to enter, as the opening is nearly one hundred feet above the base of the cliff. The *débris* from the cave is piled up against the foot of the perpendicular wall rock for nearly one hundred feet, from which point explorers must climb the face of the vertical wall rock nearly the same distance to reach the opening to the cave. This must be done by clinging to poles and jutting points of rock, and occasionally obtaining an insecure foothold a few inches wide. When once in the cave it is found to be divided into many rooms. The extreme height is fifty to seventy-five feet, as near as one can judge. The wall in front is laid in mortar, or cement, and near its uppermost part are two port-holes, from whence the dwellers within could obtain a view of the country for a great distance around. Few whites have ever succeeded in exploring this cave, and it takes several hours to accomplish the feat in safety. When first explored there were found in it a few stone axes, *metates*, and other stone implements.

The cliff dwellings most easily reached by tourists are those of Cosnino Cañon, which is nearly two thousand feet deep, and from three hundred to nine hundred feet across at the top. Along the wall of the cañon ledges of rock project ten to twenty feet. Between these layers of rock seven tiers of buildings can yet be traced, many of them in a good state of preservation. Several thousand people must have made their home here at one time. From the lower tier to the bottom of the cañon is 200 feet. The front and side walls are of solid masonry and are well preserved.

On Coon Creek are many cliff dwellings and on the south side of Salt River, near Tonto Creek, are many caves. On the Río Bonito, on the shelving rocks, are the ruins of dwellings reached only by ladders or ropes.

#### CLIFF DWELLERS.

The *Prescott Journal* thus speaks of a trip lately made to the cliff dwellers: The party of ladies and gentlemen left Prescott and had a picnic in a picturesque glen near the military post, and General Crook went out for a hunt, while the Governor and Lieutenants Morgan, Maus, and McCreery procured a small boat and were ferried part way

across the river, wading the balance of the way, and proceeded a distance of five miles on foot, when they came to a place where well-preserved ruins of these cliff dwellers are to be found.

#### MEANS OF DEFENSE.

They are built well up on the sides of the cliffs, the dwellings having been excavated from the soft sandstone, some of them being four stories in height. They are built with manifest evidences of having been used for places of defense. They are only accessible by means of ladders at present, the former means of ingress having been either destroyed, carried away, or ruined by the storms of ages which have swept over the country since the occupancy of their dwellings. A small raised platform extends around the sides of the rooms, which were evidently used for sleeping purposes. The rooms even yet are found entirely free from any dampness, the excavations for the buildings having been made so as to allow a free circulation of air for ventilation. The ruins, as stated, were found in a good state of preservation, the wood used for rafters being yet sound. The theory of those who have visited these ruins is that they were occupied by a race of people who cultivated the soil of the valleys, and built their dwellings in the cliffs in order to protect themselves against their enemies.

A very finely preserved dwelling in the vicinity has as yet been unexplored on account of a lack of means of reaching it. It has openings large enough to admit a man standing erect, and Lieutenant Morgan intends at an early day to construct a ladder of sufficient length to enable him to reach it.

A series of these villages extends for a distance of twenty-five miles along the valley. In some of the ruins are yet to be found remains of corn and other evidences that they were occupied by an agricultural class of people, the dwellings having rooms which were evidently used for their storage.

#### COSNINO CAVE.

These caves are situated near Cosnino Station, in Yavapai County. They are fourteen in number, situated on a steep slope. Their walls are formed by flows of basaltic lava. They are partly side by side and partly above each other, and were formerly occupied by the Cosnino Indians. This region, through which the Atlantic and Pacific Railroad passes, is one of the most attractive in the country, and Dr. Parry says: "We have, in these elevated districts, a climate favoring the growth of trees, with a more equal distribution of rain and dew throughout the year.

Desirable climatic features are especially noticeable along the elevated slopes of the San Francisco Mountains."

## SOIL AND PRODUCTIONS.

Character of the Soil; Its Fertility; Irrigation; Agriculture Successful; Wide Range of Productions; Cereals, Fruits, Vines, etc.

### CAPABILITIES OF THE SOIL.

ARIZONA was long looked upon as a barren waste, valuable only for its minerals. All this is rapidly being changed and agriculture is becoming one of the leading industries, and the capabilities of Arizona soil are beginning to be understood. True, the farming lands have been confined mainly to the valleys of the principal rivers of the Gila, Salt, Verde, Blue, Santa Cruz, San Pedro, Colorado, and a few others. But now that artesian water is probable, the *mesa* lands will, in time, in many places, be brought under cultivation.

"It has only been a few years," says Tucson *Star*, "since the people of Arizona came to the realization of the wonderful vitality of the soil of our valleys, and their agricultural possibilities; in fact, it was generally believed by the world at large that Arizona was a barren waste with naught to recommend it, save its mineral resources. But the opening of Salt River, Gila, and many other valleys by thrifty farmers has dispelled this idea, and Arizona is now coming to the front as an important field for agriculture. The area of land now under cultivation is not less than 75,000 acres, most of which will produce the finest wheat and other cereals in the world, and most all vegetables peculiar to the northeast are successfully cultivated. For fruits, especially the peach, apricot, pear, fig and grapes, the soil and climate are admirably adapted.

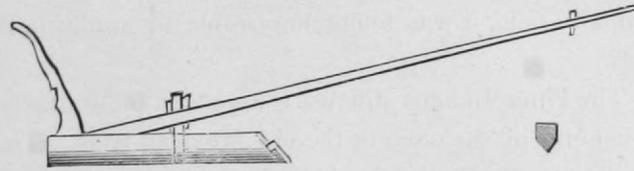
"No country in the United States opens a more inviting field for the farmer than the valleys of Arizona. Thousands of acres of fine agricultural lands in Maricopa, Graham, Gila and Pima Counties still remain unclaimed, with water sufficient, if properly husbanded, to raise millions of pounds of grain, and other agricultural products, as well as making homes for hundreds of industrious, happy families."

### EXTENT OF FERTILITY.

It has been estimated that there are nearly 3,000,000 acres of the best quality, with surface water sufficient to irrigate, when the requisite number of ditches are constructed. Possibly 10,000,000 more can be redeemed by artesian wells. Even the deserts are not continuously sandy and barren, for through them run valleys in various directions.

### AGRICULTURE IN EARLY TIMES.

Before the advent of the Americans in Arizona, the science of agriculture was in a very primitive condition. The plow used by the Mexicans was a very crude contrivance, and their vehicles unwieldy. Such articles as mowers, reapers or headers had not entered their heads. The



PLOW USED BY NATIVE ARIZONIANS.

plow used was a very primitive affair. It was composed of two pieces of wood, the main piece, formed from a crooked limb of a tree of the proper shape, constituting both sole and handle. It had no mould-board, or other means for turning a furrow, and was only capable of scratching the surface of the ground. A small share, fitted to the point of the sole, was the only iron about the implement. The other piece was a long beam, like the tongue of a wagon, reaching to the yoke of the cattle by which the plow was drawn. It consisted of a rough sapling, with the bark taken off, fixed into the main piece, and connected by a small upright on which it was to slide up and down, and was fixed in position by two wedges. When the plowman desired to plow deep, the forward end



OLD-FASHIONED SPANISH OX-CART.

of the tongue was lowered, and in this manner the depth of the furrow was regulated. This beam passed between the two oxen, a pin was put through the end projecting from the yoke, and then the agricultural machine was ready to run. The plowman walked on one side, holding the one handle or stilt with his right hand, and managing the oxen with the other.

The yoke was placed on the top of the cattle's heads close behind the horns, tied firmly to the roots and to the forehead by thongs, so that, instead of drawing by the shoulders and neck, the oxen dragged the plow by their horns and foreheads. When so harnessed, the poor beasts were in a very deplorable condition; they could not move their heads up, down, or sideways, went with their noses turned up, and every jolt of the plow knocked them about,

and seemed to give them great pain. Only an ancient Spaniard could devise such a contrivance for animal torture.

From the rude construction of the plow, which was incapable of turning a furrow, the ground was imperfectly broken by scratching over, crossing and recrossing several times, and, although four or five crossings were sometimes given to a field, it was found impossible to eradicate the weeds.

The Pima Indians still use the wooden plow attached to the horns of the oxen in the old Mexican style. They have lately obtained a few light iron plows and American wagons. Notwithstanding such drawbacks, they have, since the American occupation of the Territory, raised considerable surplus grain, from which the military in southern Arizona, as well as the mail stage company and others, have been largely supplied.

As the plows are equal on both sides, the plowmen have only to begin at one side of the field and follow about five feet apart, the seed being deposited by hand, from three to five grains in a place, which were slightly covered by the foot, no hoes being used.

#### SPANISH OX-CART.

The oxen were yoked to the carts in the same manner, having to bear the weight of the load on the top of their heads, the most disadvantageous mechanical point of the whole body. The ox-cart was composed of a bottom frame of clumsy construction, with a few upright bars connected by smaller ones at the top. When used for carrying grain, it was lined with canes or bulrushes. The pole was large, and tied to the yoke in the same manner as with the plow, so that every jerk of the cart was torture to the oxen. The wheels had no spokes, and were composed of three pieces of timber, the middle piece hewn out of a log of sufficient size to form the nave and middle of the wheel, all in one; the middle piece was of a length equal to the diameter of the wheel, and rounded at the ends to arcs of the circumference. The other two pieces were of timber naturally bent, and joined to the sides of the middle piece by keys of wood grooved into the ends of the pieces which formed the wheel. The whole was then made circular, and did not contain a particle of iron, not even so much as a nail.

#### MEXICAN GRIST MILL.

The method of grinding is seen in the picture of the Mexican mule-mill, whose revolutions were not over a score per hour, accomplished by the untiring patience of a much abused *bronko* or *burro*; this not a remarkable piece of machinery, as a product of 300 years of cogitation. After the corn is crushed at the *metate*, it is moulded into a

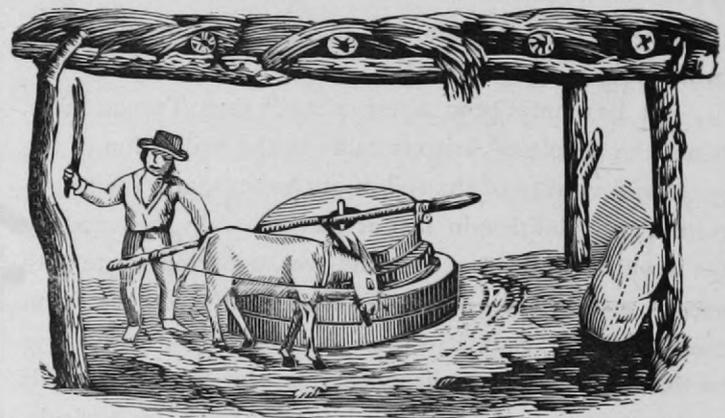
kind of pancake, and baked on a heated iron or stone. Meat rarely forms any part of the ordinary Mexican *cuisine*.

The tortillas are made of corn, which is first soaked in a weak lye, and then boiled until it is perfectly soft, when it is crushed at a *metate*, consisting of two flat stones. The work is in all cases done by women.

The grains mostly cultivated were Indian corn, wheat, barley, and a small bean called *frijol*, which was in general use throughout Spanish America. The beans, when ripe, were fried in lard, and much esteemed by all ranks of people. Indian corn was the bread staple, and was cultivated in rows or drills.

#### THE NATIONAL DISH.

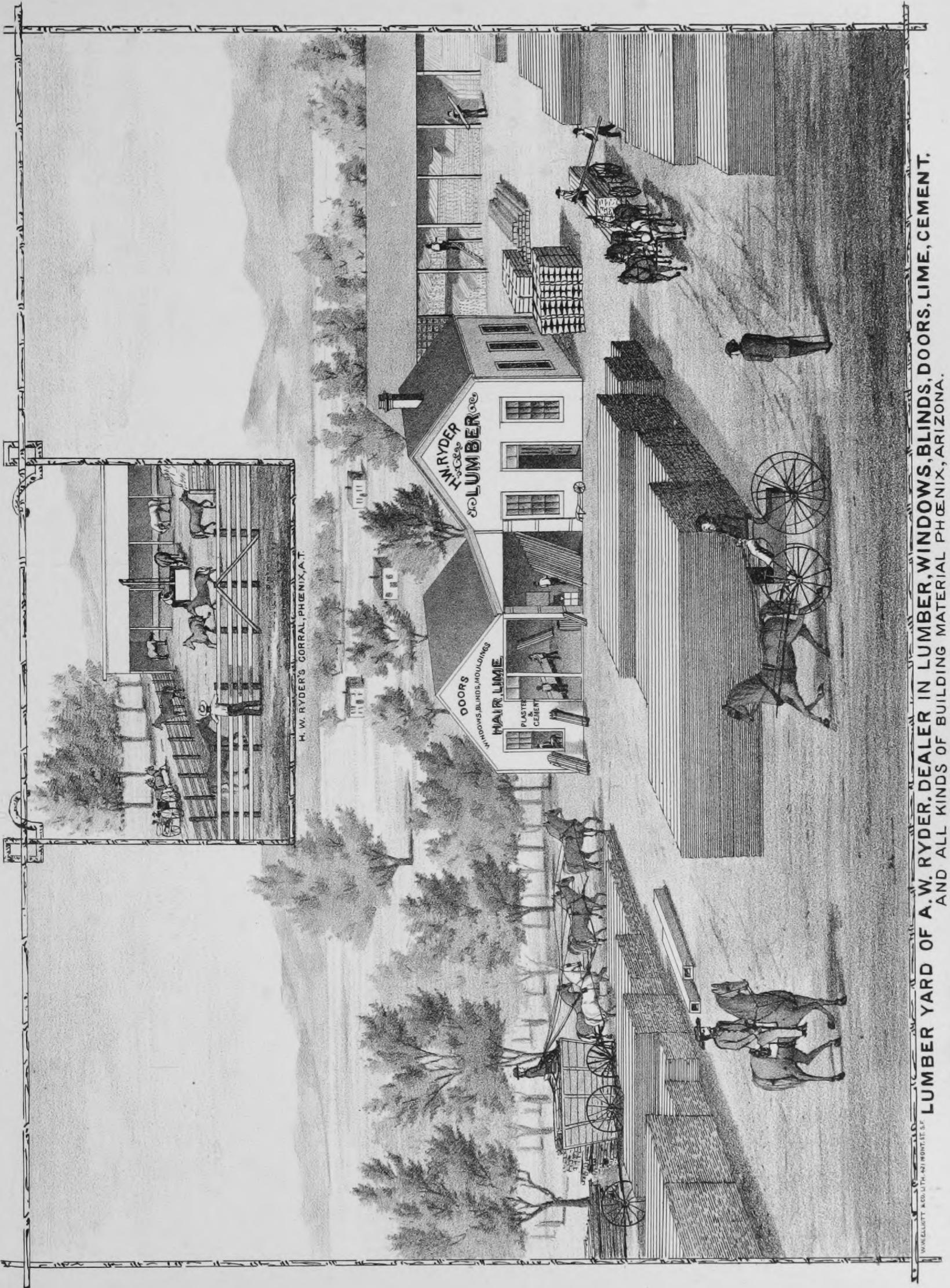
*Frijoles* are the natural dish of Mexican population. While the raw vegetable, in size, color, and general direction of taste, resembles the southern peas, under Mexican



GRIST-MILL OF THE MEXICANS.

manipulation they acquire a flavor the others never attain. The Mexican cook directs her almost undivided science to this dish. The *frijol* is wholesome and nourishing, and fattens like beer.

"This morning," says a traveler in southern Arizona, "we had a real Mexican *posta* breakfast—not one of those flanked by American adjuncts, and its individuality destroyed by the presence of the foreign elements. It was distinctively Mexican and strictly patriotic. The *Guarda de la Estacion* had a wife and five children that ranged along down from a six-year old, like little stairs, to the wee dusky-limbed fellow rolling about the dirt floor. There was no chimney, fire-place, or range. A fire burned among some rocks in the center of the house; a piece of sheet-iron lay across them, upon which the *senora* cooked *tortillas*. These are their wafers of wheaten bread, and are good, when one gets to liking them. The *frijoles* were warming in an earthen pot. She scrambled a dozen eggs, and made coffee in an antique tin. There were no chairs nor tables in the house, no beds, no furniture. The only comfortable things we saw were a pig and two hens sitting in one



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corner. Breakfast was served on a palm mat, spread on the ground; we crouched about it in the best way we could, and while we ate, felt that we were living in the third century before Christ. All that day we kept a lookout for a Rebecca at a well, and would, perhaps, have found her—had there been a well. Two and a half dollars would have been a good price for everything in the room. Here, at last, I found a family prepared for burglars. They had only to say, 'Help yourselves, gentlemen,' and the burglars would have been poorer. One of the party said he liked *tortillas* in the abstract, but, in a practical way, they made him think he was eating his napkin."

#### AN AGRICULTURAL COUNTRY.

Governor Trittle in his late message says:—

"A few years ago, Arizona was looked upon as being chiefly a grazing and mining Territory. Whilst those interests are proving valuable, they are not the only ones.

"It has been demonstrated that, by the proper and careful use of the water known to exist, there can be such abundant harvests gathered as to equal if not exceed the yield of the richest lands of such States as Pennsylvania, Illinois, Ohio and Iowa.

"The valleys of Salt River, San Pedro, Santa Cruz, Verde, Gila, Colorado, Williamson, Big Chino, Little Chino, Peeples, Skull, Kirkland, Agua Fria, Sacramento, Cullen's, Little Colorado, Round Valley, Hualpai, and others, have yet unappropriated to use hundreds of thousands of acres of the richest sort of land, which only await the irrigating ditch and the plow to make beautiful farms and homes possible, and such returns as will give a fortune in a few years to those who may hereafter occupy them.

"There can hardly be named any of the products known to the temperate zone but that can be profitably grown. Corn, wheat, barley and oats are raised most successfully, and it is not uncommon for the yield to reach 2,000 pounds to the acre. Of the grasses, alfalfa is the most profitable, and as many as five crops per year are being gathered. Of the fruits, apples, pears, peaches, plums and apricots are most prolific. Grapes, figs, oranges and lemons are well suited to parts of our soil.

"Much of the land in our Territory is known as desert land, and Congress should be most earnestly urged to aid, by means of artesian wells, an increase in our water supply. We have also large sections of country which are now only useful for grazing purposes, and that only to the limited extent that the present water supply will permit, that would be fitting homesteads for those who engage in both agriculture and grazing, if only the addition of artesian water could be made. Let fitting memorials be passed by you on this subject, and you cannot but succeed in getting the desired aid."

#### FARMING CERTAIN IN ARIZONA.

The *Phoenix Gazette* says: "One great advantage which Arizona presents to the settler, and which must be appreciated by every visitor, is the absolute reliability of her seasons, and the certain yield of crops and the increase of herds. While it was a favorite boast with the web-foot people that 'crops never fail in Oregon,' fields are frequently drowned out by an excess of water, ruined by frost, and the wheat afflicted with 'rust', which results in great loss. As high as 60 per cent. of the live-stock have been known to perish in a single severe winter. The periodical droughts in California are most destructive to agricultural and pastoral interests.

Twelve years experience in farming the Salt River Valley has proven conclusively that we have nothing to fear from want of water. There has been one 'dry' year in that time, and then the system of irrigation was very imperfect, and in itself greatly responsible for the inconvenience.

Experience has also demonstrated that a much less amount of water is necessary for the successful irrigation of crops than was at first employed, and we speak from our own observation when we say that in no season during the past four years, notwithstanding the rapid increase of agriculture, has there been a shortage of water; but on the other hand, large quantities of it have been permitted to go to waste. No disease has ever affected our grain, and the annual yields are as certain as the advent of the seasons themselves.

It is this certainty of yields that particularly commends our Territory to the careful investor, or to the man of little means who desires a home in a country where the result of years of labor will not be swept away in the caprices of a single season. The further fact that growth of vegetation in Arizona is more rapid and prolific, and that comfortable and beautiful homes can be built up in a year or two, while a life-time must be devoted to the work in a northern clime, further renders our Territory an attractive field. These facts need but to be made known to insure us an increase of population that in a few years will more than entitle us to Statehood, outside of any allurements that our great mineral resources may present.

#### WHAT ARIZONA CAN PRODUCE.

Grape culture is receiving considerable attention, especially about Mesa City, where are many thousand vines growing remarkably well. The soil of that section seems to be especially adapted to the vine. Considerable wine has been manufactured of a good quality. There are probably 300,000 vines set out in the Territory, mostly Mission, Muscat and Black Hamburg.

Pears, plums, apricots and quinces all thrive, and yield large returns. There are hundreds of acres devoted to fruit in the Gila Valley. Peaches begin to bear the second year. The soil and climate seem favorable. Fruit trees require to be irrigated about every two weeks. Other fruits, like the apple, pear, nectarine, fig and pomegranate seem to thrive and do well. Year after year the area devoted to fruit is being enlarged. Small fruits, like the strawberry, blackberry, currant and gooseberry, thrive and give large yield.

Cotton culture is an old industry of the native Arizonian. The Pima Indians manufactured goods from cotton of their own production, raised in the Gila, before it was known to commerce in the Southern States. No doubt exists about its successful cultivation. Rice, cotton, sugar cane and tobacco can be raised on the Colorado bottoms. Not much corn is cultivated.

Vegetables of all kinds yield well, especially squashes, pumpkins, turnips, beets, onions and cabbages. Potatoes do not do so well, except sweet potatoes, which are large and of fine flavor.

Alfalfa and Chilian clover is cultivated extensively. Four crops are cut per year, generally two tons per acre per cutting, or eight tons per acre per year. Alfalfa is one of the most profitable crops of the Arizona valleys.

Ornamental shrubs and plants, like the rose of every variety, the oleander, honeysuckle, geranium, heliotrope, fuchsia and most plants, grow in the valleys to perfection.

#### THE GARDEN OF ARIZONA.

From the *Phoenix Gazette* we condense the following very valuable items, showing the productions of Maricopa County for the year 1883. These statistics were carefully obtained by the editor, and actual amounts will exceed these figures:—

“GRAPES.—The total of grape-vines under cultivation is 213,420.

“FRUIT.—Of the various kinds of fruit trees under cultivation in Maricopa County there are 30,200. The trees and vines growing within the limits of the city of Phoenix are not enumerated, and their number cannot be arrived at except approximately. As almost every householder has some, it would not be too much to suppose that there are 2,000 of each. This would swell the aggregate of vines to 215,420 and fruit trees to 32,260. For a country where fruit culture only began about six years ago, and that too where it was thought at that late date that neither fruits nor vines could grow successfully, the above showing is remarkably good.

“ALFALFA.—There is within the Salt River Valley 3,975 acres of alfalfa. This is cut from five to six times during the year.

“WHEAT.—The product of wheat is 13,686,780 pounds, or an average of about twenty-five bushels per acre

“BARLEY.—The yield of barley was 18,792,081 pounds, or 26½ bushels per acre.

“POTATOES.—The common potatoes are not a great success, but sweet potatoes are very fine, and probably 3,000 sacks were raised.”

Grain is large and plump wherever raised. Small grain on the Gila and Salt Rivers is flooded about four times per season. Harvest-time begins about June 1st. All the latest farming machines, such as headers and steam threshers, have been introduced into these grain sections.

#### AGRICULTURAL ADVANCEMENT.

Five years ago it was generally believed by the outside world that Arizona was a barren country, without water or agricultural advantages. This error is now fully dissipated. “During the year 1881,” says the *Tucson Star*, “the five southern counties produced over 42,000,000 pounds of grain. During the year 1882, the quantity was increased about twenty-five per cent. The Pima Indians produced 1,790,000 pounds of wheat and 4,500,000 pounds of barley; Graham County, 3,000,000 pounds barley, 1,500,000 pounds of wheat, 1,500,000 pounds of corn and 200,000 pounds of potatoes; Pima County, wheat, 675,500 pounds; barley, 375,000 pounds. Large quantities of fruit, such as peaches, grapes and apricots, were marketed. For 1884, at 75,000,000 pounds, it is fair to estimate the entire product, including wheat, barley and corn.

The outlook for 1884 is more flattering than ever. It is believed that there will be an increase of at least 10,000,000 pounds, of wheat in the Salt River Valley, this year. A lack of good transportation keeps the price at a somewhat lower figure than would be the case if better accommodations were offered. Up to the present the supply has been used mostly at home, but from this season relief must be given from some quarter. The times of the present are vastly different from those of six or eight years ago. Instead of a patch of wheat or barley here and there, the good people of that section have many thousand acres in waving grain.

Several irrigating canals are now being constructed in the Salt and Gila River Valleys, which, when completed, will cost not less than a quarter of a million of dollars and will bring under cultivation over 100,000 acres of soil capable of producing any or all farm products.

The successful raising of some kinds of productions differs for different localities, and in the article on “Counties” these are especially enumerated.

As to the character of the soil of the Gila and Salt River Valleys, “There is,” says the *Phoenix Herald*, “none better for fruit and grain growing, and we predict that fruit culture will rapidly become the leading industry.

"Nowhere under the sun are the conditions of soil and climate more favorable for tropical and semi-tropical fruits.

"The grape, fig, olive, lemon, lime, peach, pear, plum, and all the small fruits should flourish most luxuriantly, and so far as they have been tried, prove most successful.

"Grain, under the system of irrigation, is a never-failing crop. There is no freezing out or drying up, and the berry of the grain is perfect and numerous.

"Trees of all kinds grow rapidly. In the valley to-day are dozens of homes with fine shade trees, orchards, gardens and broad fields of grain where two years ago was nothing but an apparently solitary desert.

"There are homes in the Salt River Valley of three years' growth that are not equaled by homes in the Middle and Eastern States of twenty years' growth so far as nature's favors go.

"Some of the homes at Gila Bend serve as an illustration of the advantages that Arizona climate and soil afford, as well as the beauties and pleasures that life in this Territory present, when a little care is taken to make it so. Mr. Nunan has a comfortable and elegant residence, and he is beautifying his premises with choice trees, ornamental shrubbery, and flowers. It will eventually become a garden of such luxuriance and beauty as to prove the wonder of every visitor that may see it. In his yard he has a half-dozen young orange trees that are as thrifty as any that grow in Los Angeles County; two trees of magnolia, *grandi flora*, are also flourishing in open air, while a number of pepper trees, two years old, are showing great vitality and rapid growth.

"M. A. Ruffner, who owns a ranch at Gila Bend, is prosecuting operations in a methodical manner. His orchard now numbers 400 young trees, and he has just completed the setting out of 5,000 grape cuttings, and of the very best variety of vines. It is his intention to establish an extensive nursery, the character of the soil and climate being particularly favorable to such business, in addition to the cultivation of the soil."

#### RAISING OF SORGHUM.

"Sorghum," says the Phoenix *Herald*, "cannot fail to be a most valuable crop wherever grown, and especially so in the fertile valleys of Arizona. Here in the Salt River Valley sorghum grows almost spontaneously, but the fact remains that those who tried their hands at raising it and manufacturing sirups—we believe there has been no attempt at the manufacture of sugar—have made a failure of it. The reason is obvious to any one who will take the trouble of informing himself on the matter of sorghum culture and manufacture. There is no half-way business about the matter that will bring forth profitable results. The proper conditions must be observed, and the proper

processes and machinery for manufacture, and then the results are most satisfactory, and sorghum sugar and sirup from these proper processes take their place and hold it in the market beside the syrups from any other variety of cane.

"What our valley needs is some man to invest his means in a manufactory for sorghum sugar and sirup—and it would prove a most excellent investment both for himself and for the valley. We know of no more promising opening anywhere to-day than just here in the manufacture of sorghum.

"As matters now stand, our ranchers are raising grain at a profit of probably \$5.00 per acre. They would no doubt be glad to raise sorghum at a profit of \$25.00 per acre to themselves, and this would leave a wide margin for the manufacturer. If a few of our wealthy ranchers, who have money to invest, would form themselves into a company for the purpose of manufacturing sorghum, they would, doubtless, find a more profitable investment than in mines, or anything else they might choose to handle.

"Sorghum can be raised wherever corn will grow, and with about the same amount of cultivation, except that the cane stands thicker upon the ground, and where hoed by the old hand process, of course requires more hoeing."

#### ARIZONA COTTON.

Felix G. Hardwick, of Phoenix, whose ranch is near Tempe, Maricopa Valley, made an application to Governor Trittle, for the reward of \$500 offered by the last legislature for the successful cultivation of cotton in this Territory. The application sets out that Mr. Hardwick raised, by means of irrigation, during the season of 1883, from five acres of land, 3,390 pounds of cotton, the seed of which had been planted in rows four feet apart. A sample of the cotton accompanied the application. It was unginned and of a very fine fiber, and equal in quality to the famous product of the Sea Islands.

Governor Trittle, after having thoroughly examined his claim, decided to award to Mr. Hardwick the reward on condition that the cotton became the property of the Territory. It was turned over to Commissioner F. M. Murphy, and by him sent to Galveston, Texas, over the Southern Pacific Railroad, which has generously agreed to transport free all Arizona products intended for exhibition at the World's Fair, at New Orleans. At Galveston it will be ginned and combed, and thence sent to the cotton exposition and World's Fair at New Orleans for exhibition.

#### NATIVE POTATOES OF ARIZONA.

It is now settled that Arizona is the home of the potato. It has been found in its native condition growing wild in southern mountain ranges. Professor Lemmon, the California botanist, first discovered it while on a botanical expedition.

As soon as this discovery became known, by means of communications to several horticultural journals, applications for tubers came from all points of the Union and Canada. These were distributed to those who have promised to cultivate the new-found tubers, and to dwell upon the probabilities of future economic importance, in view of the degeneration of old varieties, of the introduction of new potatoes derived from this new and presumably better northern stock.

The first of these native potatoes were found on the southwest side of the mountain range bordering the Mexican boundary, hid away in the rich bottom-land dell of one of the high valleys. Professor Lemmon says, he "suddenly came in sight of a small garden, fenced round with stakes, bushes, and fallen trees; a rude stick-and-mud cabin stood by the trail, and a dug-out showed its door in the side of a hill. All proved to be the property of a daring, genial, generous Irishman, named Malony. He located there three years previous, broke up the land along the creek, mostly with a spade, under-drained a springy portion of it, fenced it from deer and cattle, and planted it with corn, cabbage, and potatoes.

The mining town of Harshaw, in the Patagonia Mountains of the west, furnished a ready market, and he realized eighteen hundred to two thousand dollars annually from his little patch of but three or four acres, though, for safety, he must keep up the appearance of extreme poverty. To the Mexican renegade or the army deserter he appears to be too poor to rob of anything but the vegetables, while his defense from the Apaches is to flee to the dug-out, and fire at the red-skins from its dark recesses.

"Climbing over the slopes about Malony's premises," says Professor Lemmon, "imagine my delight at seeing, in a loam-covered flat along a cañon side, a few plants in full bloom of the white species of *Solanum*, the same as found last year, and a few steps farther the blue one, also in bloom.

"Hastening down to Malony's cabin, with face aglow, I triumphantly exhibited the trophies. 'Potatoes do you call them?' said he, 'it would take a peck of them to make one of my Snow-flakes; I have to clean out a wheelbarrow load of those weeds from my garden every year.' I bade him to show me the spot; and there, to be sure, trying to thrive amidst the frequent weedings and hoeings of the vigilant gardener, were several dozen robust plants of both species, peering out from under a cabbage, or stealing a living from the midst of a hill of immense Oregon Blues, by reason of their close resemblance.

"Malony avers that the locality was perfectly wild when he settled upon it, and that these 'weeds' came up with his first crop. The plants in the garden were very much larger than those on the hill-side, evidently showing improvement under the chance cultivation received."

#### SEVERAL NATIVE POTATOES.

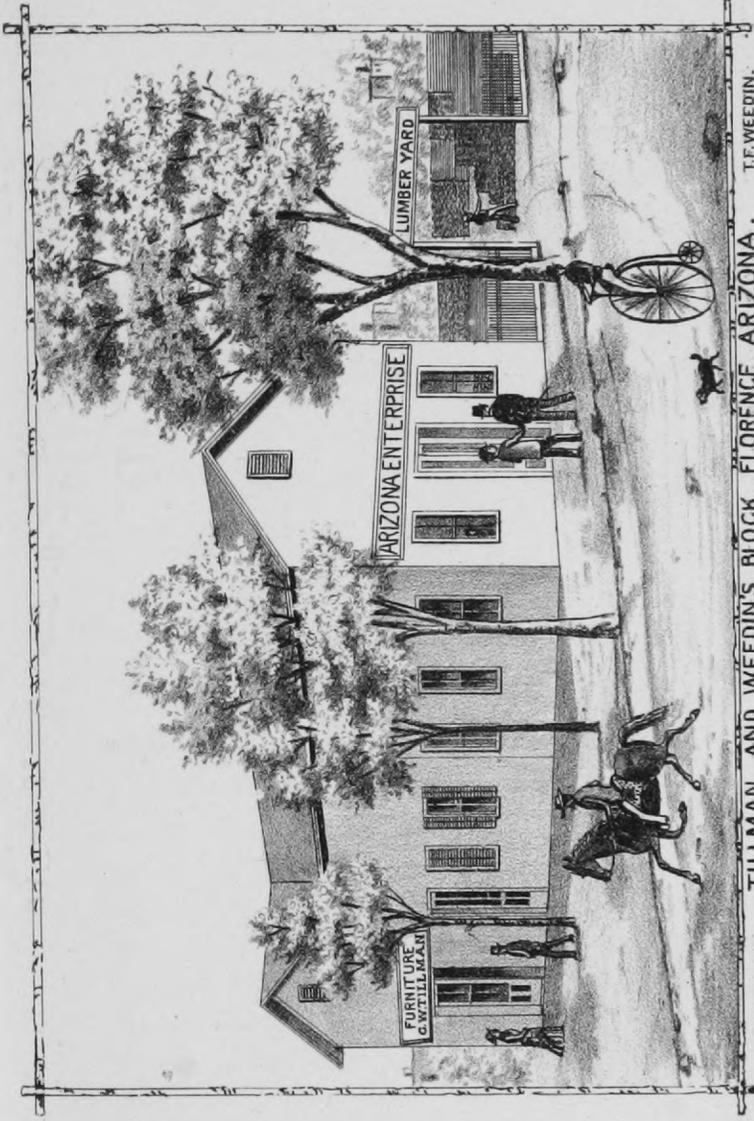
Two species were found, *Solanum tuberosum* and *Solanum Jamesii*. The leaves of the two species generally differ considerably, those of the white one being pinnate with five to nine similar pairs of leaflets; the leaves of the blue species are also pinnate, but the *pinnae*, or leaflets, are of two kinds, large and very small, alternating—in this respect resembling the long cultivated potatoes of our fields.

The largest specimens of this purple potato we found July 27th, only a day's trip from camp, and near Tanner's Mill, in the upper end of Tanner's Cañon, at an altitude of about eight thousand feet. They were having the benefit of a cultivation extraordinary, by mulching. Mr. Tanner stated that an Arizona cloud-burst, as they call it, occurred on the mountain the season before, tearing down the soil and carrying the *débris* down past his mill in torrents. We found the plants below the mill just laughing with vigor, as they pushed up through four to six inches of sand and sawdust. Some of the plants were two feet high; the comparatively large, white, underground stems ran along amidst the *débris* two and three feet, and then formed large tubers; nearly all the flowers perfected their balls of fruit, which were of unusual size.

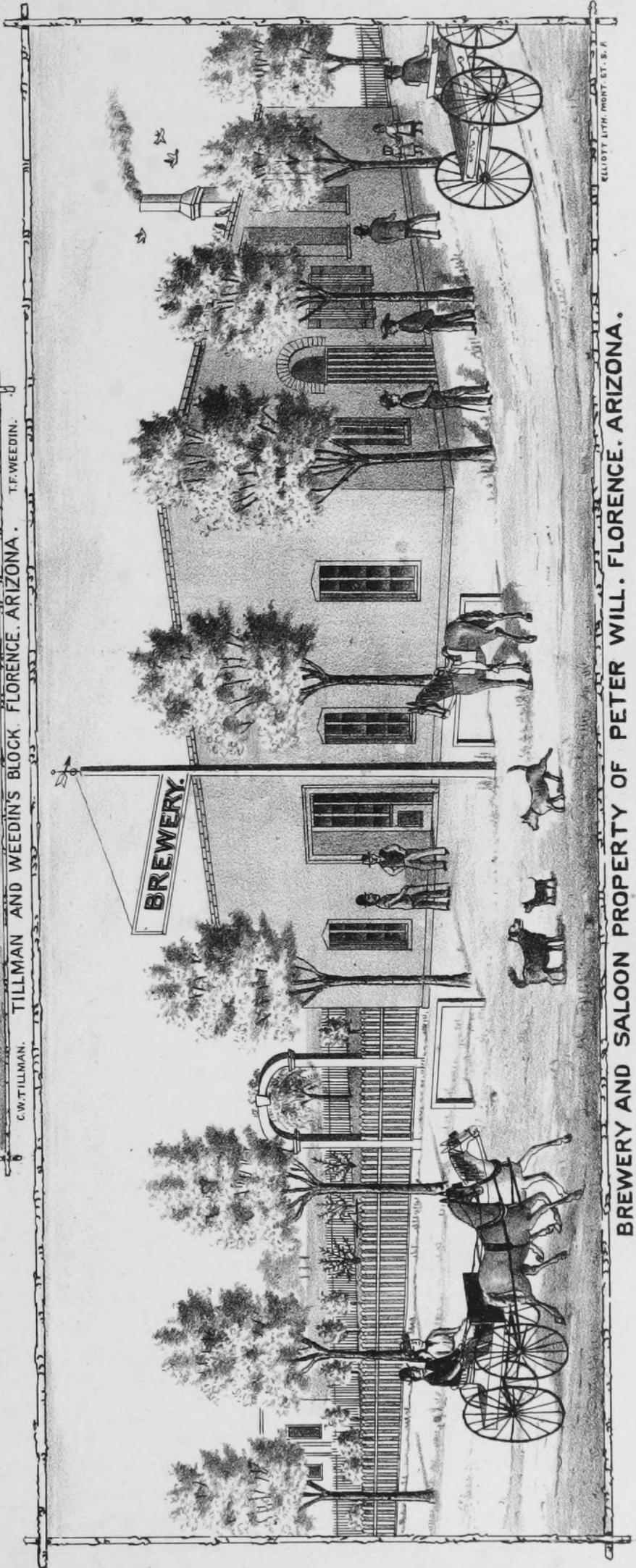
The third kind of wild potatoes of Arizona was not so easily found. It was only after a long day's climb (during which I was assisted by Ben. Rheinhart, a stalwart miner of Maple Cañon), that I reached the summit of the highest peak of the Huachuca, a little over ten thousand feet altitude. This peak is steep and rugged, besides being beset with a dense clothing of thorny bushes covering most of its surface. In the shade of the north side a spire of timber, sharply defined at the sides, ascends to the very top. Here, in the very highest point, under the shade of fir, pine, and poplar trees, kept moist by melting banks of snow for a great part of the year, were found several plants of this little species, widely scattered among the rank herbage, which were bravely lifting their mostly simple and nearly orbicular leaves and nodding balls of seed from under the golden-rods and brilliant asters.

#### COLLECTING THE TUBERS.

During the last days of October we set to work collecting tubers of these interesting plants. Except the one limited patch at Tanner's Mill, the localities were not less than two days' journey from camp. Localities had been detected and marked, completely encircling the mountain, often high in the cool forests. At Igo's our little potato harvest was most satisfactory. By digging over the whole space, a rod square, some three quarts of tubers were secured of both kinds. There were none of them over the size of a large cherry, but perfect little well-formed potatoes.



C.W. TILLMAN. TILLMAN AND WEEDIN'S BLOCK. FLORENCE, ARIZONA. T.F. WEEDIN.



BREWERY AND SALOON PROPERTY OF PETER WILL. FLORENCE, ARIZONA.

ELLIOTT LITH. MONT. ST. S. P.

## POTATOES IN GILA VALLEY.

The Phoenix *Gazette* makes the statement that the climate of the Salt River Valley is too cold for the successful production of Irish potatoes. While the potato vines in a northern climate will withstand all the rigors of frost, snow, etc., here the slightest cold-snap will kill the vines and destroy the crop entirely. It is necessary to plant potatoes early here that they may attain full growth ere the warm weather causes them to mature. The result is that they grow very fast at first, and the rapid growth makes them so tender that they are invariably killed by the late frost. It is therefore quite probable that this valley will continue to depend upon the production of northern Arizona and California, for this very necessary vegetable for all time to come, unless, indeed, a variety of seed be procured that is adapted to this climate.

Now it is very probable that the new native potatoes just mentioned may be the desired kind for introduction into this valley, as they are naturally from a cold mountain climate.

It is hoped that the experiments being made with these tubers in all points of the country will settle its adaptability to Arizona fields.

## SOUTHEASTERN ARIZONA.

Probably the best general statement of the soil and capabilities of southern Arizona, is given by Rothssock, who sums it up as follows:—

“The soil, particularly that resulting from the decomposition of volcanic and sedimentary rocks, possesses the elements of vegetable growth, and with enough water will produce crops. 2. That wherever there is water enough for herds, the adjacent land can be utilized for grazing. 3. That the forests, though localized, are abundant. 4. That large areas, now abandoned for want of water, could be cultivated by a system of tanks for its storage. 5. That by agriculture and forest culture the excessive waste of water in surface draining and rapid evaporation could be lessened. 6. The prevailing diseases are of less than usual fatality, and can in many cases be absolutely prevented or readily cured; and that these diseases will diminish in frequency and severity as the country is brought under cultivation. He also claims that the effects of cultivation generally would be to utilize the water and prevent floods; also to diminish escape by evaporation; that the seeds of nutritious native grasses, now growing so sparsely, could be, by sowing and care, made to furnish a turf, the interlacing of which would confer the needed protection to the soil against washes.

Cereals and vegetables, especially tomatoes, are raised in this section with success. Irish potatoes fail on account of the richness of the soil. Irrigation is indispensable.

## AMOUNT OF WATER AVAILABLE.

The volume of water in the mountains is much greater than in the plains below, which is principally owing to the character of the soil—generally a disintegrated granite, which is open and porous, permitting the waters to sink in, and percolate through it to a great depth—and, to a less extent, to evaporation in a dry and hot climate. Some of the larger rivers, such as the Gila, are at times, during extreme hot and dry weather, dry in their beds for many miles, rising and sinking at intervals as the bed rock comes near the surface. Nearly all of the smaller streams that enter the great valleys and plains present this peculiarity.

The Colorado River drains the western and extreme northern parts of the Territory; the Colorado-Chiquito, the northeastern part; the Gila and Salt Rivers, the central part east and west, and the San Pedro and Santa Cruz, the southern part of the Territory. As there is not sufficient water in the rivers, owing to the sinking of the water as before stated, a large portion of the lands lie waste, and must continue in that state until water is obtained by artesian wells or otherwise, for the purpose, which it is confidently believed is being accomplished most successfully.

In the mountains and foot-hills contiguous to, and surrounding all of the great plains and valleys, there are many springs and small rivulets where a good water supply can be obtained for horses, cattle, and sheep; but these waters will sink soon after entering the plains and valleys.

## IRRIGATION REQUIRED.

Irrigation in almost all parts of Arizona is required. This the farmer considers an advantage. He is entirely free from solicitude in regard to drought or flood while his grain is ripening, and is sure of pleasant weather during harvest-time. Irrigation enables him to keep his pastures green in autumn, or start them early in the spring; it enables him to produce heavier crops, and to secure a larger growth of fruit trees, shrubbery, etc., in one season than can be obtained by any unaided process in nature. The same stream that beautifies and fertilizes his soil can be led by his door, and be made to furnish power for his churn, grindstone, saw, fanning-mill, etc. Better than all these, it carries to his land just such qualities of mineral and gaseous matter as is needed to keep it productive for years.

In New Mexico, lands have been regularly cultivated in this way, without any other fertilizer, for 200 years; in the valley of the Nile it has been the principal fertilizer on lands cultivated continuously for over 3,000 years.

## ADVANTAGES OF IRRIGATION.

"It is an unquestionable fact," says the *Gazette*, "that the countries which resort to irrigation for the production of crops are the most prosperous and contain the most intelligent and happy people. There is a steady return—no years of an inflated feast to give way to successive seasons of famine and squalor. A profitable and unflinching production brings contentment and comfort, promotes frugality, which in its turn is conducive of refinement. Agricultural pursuits, and particularly the cultivation of vines and fruits, are yet in the incipiency in Arizona. The advantages we have mentioned, which pertain in such a marked degree to the soil and climate of the 'sun-kissed land,' are as yet but little understood by the inhabitants themselves.

"The construction of the great Arizona canal—an enterprise of greater magnitude than any similar project which has been undertaken west of the Rocky Mountains—is but a precursor to many more systems that science and intelligence will develop in the history of the great southwest. As yet our people have not begun to master the principles of irrigation, and sixty per cent. of the water now used in producing crops is virtually wasted. But when the time comes when the value of this life-giving element is thoroughly appreciated and understood and every drop is carefully hoarded, hundreds of people will pursue their vocations and provide comfortable means of existence where now one lives. Vast reservoirs, as in Italy and Spain, will be provided in the mountains, to hoard the flow of the many streams, and to reserve the water until it is necessary to give life to the crops upon which the people must depend.

"At this time, it is impossible to predict what the fertile valleys of Arizona will bring forth. It is evident, however, that the prehistoric races who occupied this section of our Territory, exceeded by scores the present population, and yet it is hardly probable that they had a clearer comprehension or a more scientific understanding of the principles of irrigation than we now enjoy, although remains yet show that their system of canals was much more extensive.

## HEALTH AND IRRIGATION.

The supposition that malaria follows irrigation is not necessarily a true one. It is true, however, that stagnant water, wherever found, render the atmosphere unwholesome, and people living in that vicinity are likely to be troubled with malarial diseases. But in irrigation there is no necessity of this extreme carelessness in the use of water. With little effort the water can be kept flowing through the ditches in such a manner that no harm will result. Running water, clear and pure—running water

such as is found in the ditches throughout the county—does not carry with it impurities, and will not produce disease unless improperly handled.

Nothing is more productive of health than bright, sparkling water, running in channels here and there, dancing in the sunlight, imparting, as it does, strength and vigor to all around. Italy has no superior in regard to health, yet her system of irrigation is far more extensive than any part of the Pacific Coast. Carry water in snug little ditches to every part of the ranch, use it, and then return it to its proper channel again, and such a thing as chills and fever will not be known.

Between the Colorado and Gila Rivers is a broad alluvial deposit containing 40,000 acres under cultivation by irrigation. The canals on this tract are many miles in length. The work was commenced in 1871. Successful experiments have been made on this land with sugar-cane and cotton. Figs, oranges, and dates thrive well. Strawberries, by proper cultivation and care, can be had every month in the year.

There is no living stream north of the Little Colorado River; even that stream is dry a part of the year.

## ARTESIAN WATER IN ARIZONA.

Application having been made by Mr. W. J. Sanderson, of Sulphur Spring Valley, in Cochise County, claiming the reward offered by the Legislature of 1875 to the person first finding a flowing stream of water by means of an artesian well, Governor Tritttle appointed the following Commissioners to examine the wells and report: Hon. E. B. Gage, Supt. Grand Central M. Co.; Prof. John A. Church, Supt. Tombstone M. and M. Co.; and Isaac E. James, Esq., Supt. Contention M. Co., Tombstone.

The Commission reported to the Government November 27, 1883, that they had visited the wells and inspected five of them, all on Mr. Sanderson's property. They also heard reports of three others sunk by the same gentleman on the land of adjoining proprietors.

The first well visited was finished, and flowing water struck on the 12th of May, 1883, and forms the basis of Mr. Sanderson's claim for the reward. It is thirty-eight feet deep, very nearly six inches in diameter, and tubed all the way to the bottom. The upper edge of the tube stands a few inches above the ground, and a steady stream of water, amounting, probably, to 40,000 or 50,000 gallons in twenty-four hours, runs from it.

Southward from this point four other wells are sunk within a distance of three miles, all of which were visited by the Commissioners. Three others are found on the Abbott, Jones, and Lang ranches, extending to a distance of seven miles southward.

Thus artesian water has been obtained along about ten miles of this valley's length, by eight wells.

The wells vary in depth from thirty-eight to eighty-three feet, and they gain depth the further they are southward from Sanderson's, the deepest well bored so far being that at Jones', the most southerly of all. Their flow is from 25,000 to 50,000 gallons each in twenty-four hours.

The conditions under which flowing water is obtained appear to be quite uniform along the whole distance.

The wells are situated in the sink of the valley. Other wells were first sunk on the valley slope about four miles east of the successful line, but no flow was obtained, though the wells filled with surface water. The conditions there were different from those at the flowing well.

At the unsuccessful wells no clay was reached, though it may lie at greater depth.

Water is found in the sand or third stratum, but it is probable that the coarse, loose gravel underlying this bed is the real source of the flow. The large spaces between the coarse gravel stones probably give room for thirty or forty per cent., by bulk, of water, and if there is a flow southward, as seems to be probable, this gravel bed undoubtedly offers the easiest and freest line of flow.

In any case boring into the gravel is necessary, as the sand is so fine and flowing as to rise in the wells if the open tube ends in it. By driving the tube into the coarse gravel a filter is obtained, which keeps back the sand and allows the water to pass. Small holes are made in the lower lengths of the pipe, within the sand stratum, which also give the water entrance.

#### STEADY FLOW OF THE WELLS.

The flow is steady, the water perfectly clear and pleasant, though slightly flat to the taste. This flatness is not due to minerals in solution, but, on the contrary, probably indicates unusual purity of the water.

Mr. Sanderson's ranch lies almost exactly midway between Wilcox and the Mexican line, and about forty miles from either. As before said, the wells stretch for ten miles southward. None have been sunk north of the ranch, but he has several applications to sink wells for other proprietors, and when sunk these new wells will extend entirely to the Mexican line, thus covering forty miles of the valley.

The water already obtained in this way is sufficient to water at least 30,000 head of cattle, besides affording sufficient irrigation to maintain the gardens that a population attending to this stock would require, and perhaps tree plantations for the relief of stock from sun and wind. If the success which has attended the former operation continues to the line, the artesian wells of this part of Sulphur Spring Valley will supply water sufficient for at least 100,000 head of stock.

Since sinking the first flowing well, Mr. Sanderson has had no failures, a fact which appears to be due to the

conditions of Sulphur Spring Valley as a great water-shed, and to the first unsuccessful efforts which showed where to find the water belt.

The valley runs north and south from Aravaipa Cañon to and beyond the Mexican line, and varies from twenty-five miles to more than forty miles in width. On the east, beginning at the north, are the Graham, Chiricahua and Swisshelm Mountains, on the west the Gallura, Limestone, Dragoon and Mule Ranges.

#### DIAGRAM OF ARTESIAN WELL.

The materials passed through in boring were found to be of the same character in all the wells, and were as follows:--

DEPTH.	CHARACTER OF VARIOUS STRATA.
60 feet.	
15 feet.	This first layer is composed of a variety of surface soil and sandy loam, from 8 to 15 feet thick.
30 feet.	The second strata is a tough clay, and of various colors, but mostly red or white, according to locality. These layers of colored clays vary in thickness in different localities, from 4 to 10 feet. The whole strata of clay is from 22 to more than 40 feet thick.
6 feet.	The 3d strata is found to be sand, from 2 to 6 feet thick.
Thickness unknown.	The 4th strata is a coarse gravel, of unknown thickness, which forms the bottom of all the wells. Into this strata the well tube is forced, generally 18 inches.

#### CHARACTER OF THE VALLEY.

The valley is usually free from hills, presenting a surface that slopes gently from the mountains to the center, and appears otherwise level. Lengthwise it slopes from a point a few miles above Hookers' ranch, and about eighty or ninety miles from Sanderson's.

There are no streams running into the valley in any part, and few springs are found on the mountains. In the valley itself surface water lying above the clay is readily obtained by ordinary wells, and a few water holes exist.

In all respects Sulphur Spring Valley appears to be of the common type of dry valleys which are so abundant in Arizona, and the Commissioners consider that this fact gives double importance to the discovery of flowing water by artesian borings within it.

There can be no doubt that all the water of this valley is obtained from the rain-fall upon an area included within the mountains on the east and west, and between the divide above Hooker's and the southern boundary of the valley in Mexico, probably about 3,000 square miles. No other sources of supply are apparent on the surface, and none are suspected under-ground. The conclusion is therefore reached that the flowing wells are supplied by the rain-fall of the region.

This fact the Commissioners consider to be very important, both as an indication of what Arizona may hope to obtain in water supply in other valleys from the ordinary established operations of nature, and also as a guide to them in reaching an intelligent decision under the Territorial law.

From the Hooker Divide the water flows northward to the Gila, and southward to Mexico, and the water obtained in the wells under consideration probably comes from the north. Though occupying the center and lowest portion of the valley, the inequalities of the surface are sufficient to permit the irrigation of thousands of acres from the wells, if sufficient water is obtained.

#### MODE OF BORING WELLS.

The mode of operation in sinking is as follows: The start is made with a surface auger, similar to a post-hole auger, and this tool is used until the clay is reached eight to fifteen feet deep. Sand loosened by the boring is removed by the sand pump, and usually the distance mentioned is passed in one day's work.

The clay is pierced by a clay auger, which brings up the clay chips with it. If very tough, as much of the clay in the valley is, it is frequently necessary to bore a small hole first and follow it with a reamer, which enlarges the hole to the proper dimensions.

Water is poured in the first day, but when the surface water on the clay is reached the hole keeps itself wet.

When the sand is reached the hole will fill up with sand, as much, sometimes, as fifteen feet. The well must then be tubed and the tube driven through the sand to the gravel. The sand within the tube is then removed with the sand-pump, and the tube forced into the gravel.

Considerable force is sometimes necessary to drive the tube through the tight clay, and this is applied by hanging pieces of 4x6 timber, 20 feet long, within a low derrick, and weighing them. They press upon the tube and force it down.

The tube is made on the ground, from sheets of No. 18 or 29 galvanized iron, about eight feet long and two feet or twenty inches wide. These are cut, rolled to shape and riveted. The joints are also riveted together. All this work requires a double set of tools; first, the boring tools, and second the tinner's tools, for making pipe. Altogether the complete set costs about \$500, of which about \$300 go to the boring tools and \$200 to the tinner's tools.

The boring tools are obtained from Visalia and other places within the artesian districts of California.

When finished, the wells keep themselves clear, requiring the use of the sand-pump perhaps four or five times a year, for but a few moments only. Sand rises with the stream grain by grain, and this clearing from the foot of the tube appears to increase the flow, which Mr. Sanderson states is stronger than when the wells were first bored.

Mr. Sanderson bores wells for his neighbors on contract, his price being \$150 for the first 50 feet of water, and \$3.50 per foot below that, if necessary to go deeper, he furnishing the tube, tools, and labor.

#### THE ARTESIAN WELLS A SUCCESS.

The Commissioners reported the following conclusions and recommendation as the result of their examination:—

1. That flowing water has been obtained in Sulphur Spring Valley by boring.

2. That the wells which furnish it are true artesian wells, in that they derive their supply from subterranean sources distinct from the surface supply by an impervious stratum; in this case the clay is twenty-two to forty feet thick.

3. That each of the wells inspected by them throws out water enough to supply 5,000 to 10,000 head of stock, and therefore it is an important addition to the resources of the Territory.

4. That the finding of water is not accidental and doubtful, but is quite as regular and certain as can be expected of such enterprises.

5. That no reasonable doubt exists of the possibility of carrying the same system of improvement into other valleys of Arizona, and thus greatly extending her means of industry.

6. That the moderate depth at which this water is obtained is a great advantage in point of economy, and cannot fail to attract the attention of land owners in other parts of the Territory, and encourage their action.

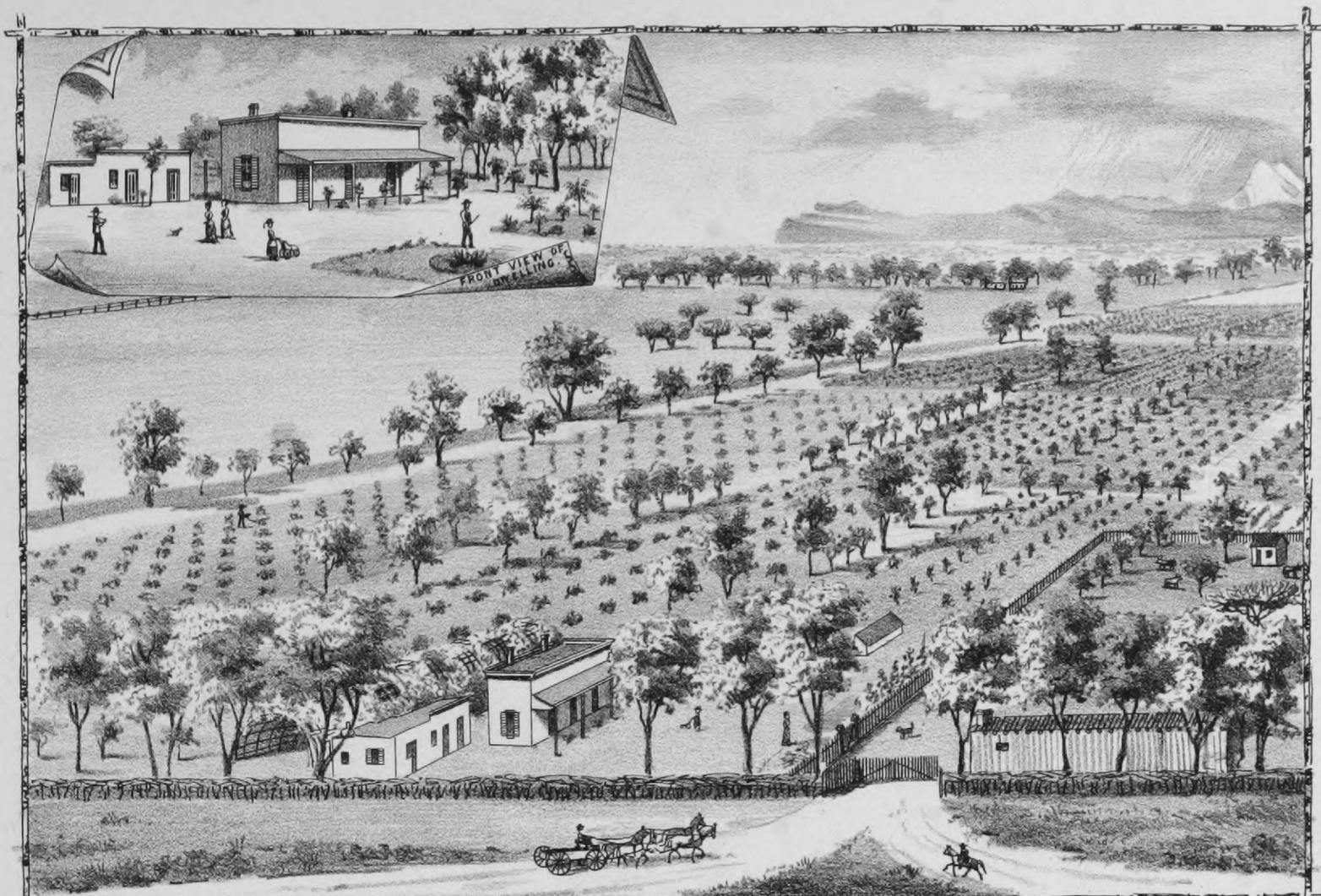
The Commissioners recommended the award to Mr. Sanderson of the bonus offered by the Legislature, on the ground of his success in obtaining flowing water by artesian wells, under circumstances which give assurance of great benefit to the Territory.

"The most important event of the year," the *Tucson Star* says, "was the development of artesian water in Arizona, which was made in the Sulphur Spring Valley by W. J. Sanderson. These wells have continued to flow without diminishing in quantity since they were first struck, thus establishing beyond any question of doubt that artesian wells will become one of the great factors in making thousands of acres of land capable of cultivation, and opening vast stretches of pasture lands for stock ranges which cannot be made available without water.

Even the so-called deserts of Arizona may be reclaimed, if the necessary effort is made to bring the subterranean streams to the surface. In this, Congress will doubtless give aid, by way of an ample appropriation to be expended in testing the artesian water question on our deserts.

#### OTHER ARTESIAN WELLS.

Flowing wells are reported in other parts of Arizona. The *Quijotoa Prospector* says: "Saxe has struck a big flow of water in his well, thirty-five miles south of Casa Grande, on the Quijotoa road. At a depth of 164 feet they have



FRUIT FARM & RESIDENCE OF T. B. REMY, ESQ. NEAR FLORENCE, ARIZONA.



RESIDENCE OF WILLIAM E. GUILD, FLORENCE, ARIZONA.



These three are the largest bodies of cultivatable land at present, but there are a large number of isolated valleys and mountain slopes. From the mountains issue numberless small streams naturally soon lost in the dry plains, there depositing the materials for artesian wells, but which might also be utilized at trifling cost before sinking into the ground.

Everywhere we find resources rarely paralleled for either successful cultivation or profitable pastoral enterprises, needing only moderate investments of labor and capital to make productive. Probably nowhere in the world can be found combined to the same extent the natural facilities for production from the soil, and the market which alone can render that fertility available for civilized uses.

Arizona for agricultural purposes may have its lands divided into three classes:—

1. Valleys which can be irrigated by streams flowing through them.
2. *Mesa* or table-lands that can be reached by long irrigating canals or by artesian wells.
3. The mountain slopes and small valleys that are watered by streams or melting snows.

#### RAILROAD LAND GRANTS.

The land grant of the Atlantic and Pacific Railroad Company, in alternate sections, extends entirely across the Territories of New Mexico and Arizona, between the thirty-fourth and thirty-sixth degrees of north latitude. It is 650 miles long and 80 miles wide, and includes some of the best grazing lands of both Territories. In the valleys are many desirable tracts of agricultural land, susceptible of irrigation. A sufficiency of water has been found wherever cattle and sheep have been grazed, and large herds have been grazed in the country ever since the coming of the Mexicans.

In Arizona the grazing areas are supplied with good water, and the United States surveyors, who made the official surveys of the country, say they are as good, if not better, than those of Wyoming and Montana. The Navajo Indians grow corn without irrigation, in the valley of the Puerco of the West, on the company's lands; and in the valley of the Little Colorado, also on the line of the road, good crops of corn, sorghum, oats, barley, and garden vegetables are grown by irrigation. The finest of potatoes, oats, wheat, barley, and garden vegetables of large size and fine quality have been successfully grown without irrigation, on the slopes of the San Francisco Mountains.

On these mountains there is an extensive timber belt, diversified by beautiful valleys and parks, with good water and wonderful cañon, through which the road passes. In fact, the whole of the country traversed by the road is very picturesque and beautiful, and many towns are being built along its route.

The passes of the Sierra Madre and the San Francisco Mountains, in Arizona, have an elevation of 7,300 feet, with a depression at Winslow, on the Little Colorado, where the altitude is 5,000 feet. The climate is mild and salubrious. Cattle and sheep graze throughout the year and do not need to be sheltered or grain fed during the winter. The nights are cool during the summer.

The company is now prepared to make sales of its grazing lands in quantities of 50,000 acres, or more, at prices ranging from one dollar (or even less for larger quantities), to one dollar and a half an acre, upon payment of one-fourth the purchase value at date of contract of sale, the remainder in payments as may be agreed upon, bearing six per cent. interest; and irrigable agricultural lands in sections of 640 acres.

The belt of the Atlantic and Pacific Railroad Land Grant includes the only available grazing land in the country south of the Missouri River that can be purchased in large areas; and the section of country through which this road passes will become the best beef producing region of the United States.

Maps of the Land Grant will be forwarded on application, and properly accredited persons desiring to inspect grazing lands, with a view to purchase and establish stock ranches, will be given facilities for that purpose.

#### MAMMOTH STOCK ENTERPRISE.

There is a large stock company formed in Boston, whose aim is to acquire from the Atlantic and Pacific Railroad Company about 3,000,000 acres of odd-numbered sections of land, and, under the laws of the United States, to secure such even-numbered sections as may be desirable; to stock the same with horned cattle, sheep, horses, and hogs; and to market, work, lease or otherwise dispose of the agricultural and other lands of the company. The lands which it is proposed to purchase are lying along and across the thirty-fifty parallel of north latitude. The capital stock is 30,000 shares of \$100 each—\$3,000,000.

#### SIZE OF ARIZONA.

The distance by the Southern Pacific Railroad across Arizona from Yuma to New Mexico line, is 387 miles. Across the Territory by the Atlantic and Pacific Railroad to New Mexico line, is 382 miles.

The length of the Territory, on the line bordering on New Mexico, is 390½ miles. The boundary monument on this line and cornering on Mexico is placed one mile south of Guadalupe Cañon.

The extreme length from east to west, measured on the second standard parallel south, is 338 miles.

The area of the Territory is given at 113,916 square miles, or 72,268,240 acres. Of this vast amount not 100,000 acres is under actual cultivation by the plow.

## THE LIVE STOCK BUSINESS.

Extent of Stock Business; Immense Stock Range; Native Wild Grasses; Experience of Stockmen; Climate Favorable for Stock; Sierra Bonita Stock Ranch; Branding; Rodeos, etc.

### ARIZONA A GRAZING COUNTRY.

ARIZONA is rapidly establishing a reputation as a grazing country," says the *Star*, "and well it should, for there are thousands of square miles of as fine pasture land as can be found in any quarter of the globe—with natural advantages for stock raising which cannot be found elsewhere save in the Southwest. Grasses cover the *mesa* lands far and wide, upon which cattle feed and fatten during the entire year. The mild climate in the winter season makes shelter unnecessary, and the grasses which are cured by the sun continue to be nutritious at the roots during all seasons, which saves the expense and trouble of cutting or saving hay or other fodder for stock. Cattle are as fat in January and February as in July or August, with nothing to feed upon save the natural grasses. Already many have made fortunes in Arizona in the short period of from five to ten years, starting with a handful of stock cattle, which increased to magnificent herds in a few years. These facts are being appreciated by stockmen from all sections. During the last three months thousands of cattle have been driven into the Territory from Texas and Colorado and many sheep from California. So rapid has this increase become that stock ranges are in great demand at large figures.

"One of the most encouraging features of the live stock industry is the fact that all of the leading stockmen are introducing the finest bloods in the country and grading up their cattle. Thus, in a few years, Arizona can boast of as fine blooded stock as the most advanced stock section in the United States. Another feature worthy of note is the full co-operation of those engaged in the industry. An organization of the cattle men of southern Arizona has been recently effected, which will result in great benefit to all, as well as to the Territory at large, for anything which will protect and advance the interests of the stock business means additional prosperity for all. The outlook for this industry in the Territory is certainly encouraging, and we predict that its importance and growth during the present year will more than double."

Arizona has also one other great advantage for the stockman. While in other countries the area of grazing

ground is becoming narrowed, and its limits circumscribed by the steady advance of the farmer, here, the immense plains, table-lands, and foot-hills will never be utilized for any other purpose than grazing. The agricultural industry will always be confined to the valleys bordering the streams, and the vast area included in the rolling plains and elevated hill-sides will always be devoted to cattle.

Arizona offers one of the most promising fields in the West or Southwest for the stock-raising industry, for here there are no cold winters that necessitate giving extra care or attention to stock, while every advantage is offered to make it a desirable and paying investment.

### NUMBER OF STOCK IN ARIZONA.

The census of 1880 gives the number of head of cattle at 145,000; sheep, 1,326,000 head; hogs, 9,700 head.

From the most reliable estimates at hand, it is safe to put the cattle at 320,000 head for 1884, and sheep at 1,500,000 head. Horses, 35,000; mules, 15,000; and hogs, 12,500. We may say, however, that no reliable information is attainable since the census of 1880. It is only a careful estimate from data furnished us by stockmen.

The *Benson Herald* says: "A gentleman of this county, well informed on the live stock statistics of Arizona, states that the value of live stock in the Territory must be nearly \$10,000,000 and that the live stock in every county in the Territory exceeds the mining property in assessed value, and that, taken as a whole, the Territory receives from seven to ten times more revenue from taxes on stock than from the mining industry, and of other enterprises more than all combined.

There are over 10,000 cattle in Sulphur Spring Valley. This is encouraging. The cattle business differs from many others, in that small herders need have no fear that larger ones will crowd them out. Owners of hundreds have the same rights as owners of thousands, and a kindly feeling exists between those who own and control the stock, and each honest man's rights are respected.

During the next four weeks there will be shipped from Pantano Station over one hundred cars of cattle to the California market. These cattle will all be taken from the Empire ranch, and the shipment will be the largest ever made in the Territory, and in fact, on this coast. Special trains will be run to accommodate the shipment, and arrangements will be made to run a train each day until the shipment is completed. The cattle to be shipped are all fat cattle—called by cattle men, beef steers—and are the finest lot of cattle ever shipped in the Territory.

### EXTENT OF STOCK BUSINESS.

The *Tucson Star* says: "The grazing land of Arizona is estimated to embrace an area of 55,000,000 acres, but there being a scarcity of water in many localities we will

reduce this amount one-fourth, or say 40,000,000 acres of grazing lands which can be utilized. It has been estimated that twenty acres per head would be a liberal allowance in Arizona, where we have two rainy seasons and the grass is more or less green the year round. At this rate Arizona is capable of supporting 2,000,000 head of cattle. The annual increase from this number of cattle would not be less than eighty per cent., or 1,600,000 head of cattle. The present price of cattle it is not likely, will be maintained; but it is believed that stock cattle will never fall below \$20.00 per head for any great length of time. But calculating on that price as an average for the future, and the annual value of cattle produced in Arizona, when fully stocked, would be \$32,000,000; but at present, prices would be not less than \$48,000,000.

"The expense of keeping a herd of cattle in this section of the country is so light, the increase is so great, and the loss so small, that after a long and careful investigation it is claimed that the cost of putting a three-year-old steer on the market is less than \$2 50. Computation of the receipts from such an investment may be made by any one interested in the results. Eighty per cent. increase is considered a fair average in this section. About one-half of the number of calves are heifers, and begin to breed when two years old. The steers sell at three years of age, and the cows at ten, and average about \$27.00 per head.

"The general advantage possessed by ranch men of Arizona over those of the north in regard to climate, a never-failing supply of food, and the healthy condition of stock, is too well known to require comment.

"The great demand for cattle ranges in this section during the past year, fully demonstrates how anxious men of limited means are to interest themselves in a sure and profitable business. Companies are being organized and associations formed in all parts of the Territory for the purpose of carrying on the stock-raising business, and with our long experience and knowledge of the country we can safely say we know of no better industry for the investment of limited capital.

"All things considered, our Territory presents a bright outlook as a stock-raising country, in the fact that its sustaining resources are ample, and from the further fact that cattle thrive better and multiply faster in this than in more northern climes."

"In regard to stock-raising," says the *Phoenix Gazette*, "much may be said. There are no severe winters that affect the herds. The fall and summer rains start the grass, which flourishes in the winter months, and in the seasons preceding our summer storms the high grass has been cured on the range, and furnishes a nutritious feed, without care or attention, that far surpasses hay for stock.

Our ranges are comparatively free from disease, particularly of a contagious character, and, consequently, there is no other field, that we know of, where the increase of cattle, horses and swine, can be calculated on with the same reliability as in Arizona."

Arizona has been well called the stock-grower's paradise, and there is no region in the United States that better deserves the name. There is no country where the labor and expense is so light, or where the profits are so high; there is no country where the percentage of loss is so small, or where the percentage of increase is greater, and there is none where a fortune can be more quickly realized.

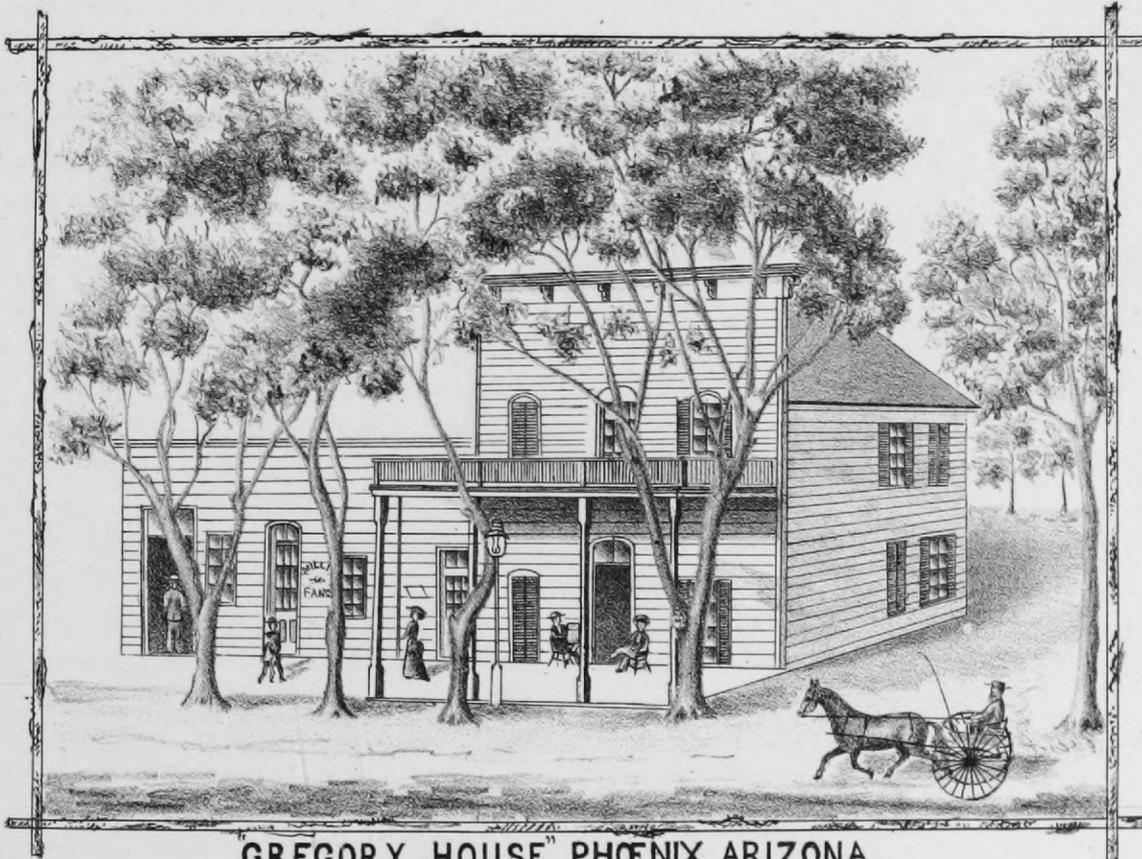
These valleys of Central Arizona, as well as the *mesas* and hill-sides, are covered with an abundant growth of different grasses, forming extensive tracts of grazing country. There are not many localities suitable for cultivation, these being confined to such places as have running water for a considerable distance, which can be conducted in canals for irrigation.

#### NATIVE WILD GRASSES.

The grasses in Arizona nearly all come up from the root, unlike those of California, which grow from the seed. Therefore, in Arizona, if there should be a year without rain, stock would not die of starvation. The nutritious gramma grass does not appear to run to seed at all. In the immediate neighborhood of Tucson, on the table-land outside of its cultivated fields, the traveler meets with the far-famed gramma grass, but on descending from this *mesa*, does not again come in contact with it until he reaches Dragoon Springs. This gramma grass is beyond all comparison the most nutritious herbage ever cropped by quadrupeds. It is much heavier, contains more saccharine in connection with more farinaceous and strength-giving aliment than any other grass known. At least such is the experience of men who have had occasion to test its virtues and time to pronounce upon its merits. It is given the very first rank among all sorts of hay, and considered to be superior to clover, timothy, alfalfa, or all three together. Although no one has ever been able to observe any seed upon this grass, it seems to combine the qualities of grain and hay in the greatest perfection. Horses will live and do well upon it, provided they can obtain it regularly, while doing active duty, without other feed; but they must have it as stated, regularly, in abundance, and be permitted to crop it from native pastures. It bears no flower, exhibits no seed, but seems to reproduce itself from the roots by the shooting up of young, green and vigorous spires, which are at first inclosed within the sheaths of their old and dried-up predecessors, and by their growth split and cast them to earth and occupy their places.



RESIDENCE OF N. HERRICK. PHOENIX. ARIZONA.



GREGORY HOUSE. PHOENIX. ARIZONA.  
JAMES MORGAN GREGORY, PROPRIETOR.

The wild grasses of the country are very nutritious, embracing varieties of the wild clover, wild barley and oats, black, white, and curly gramma grass, sacatone, six-weeks' grass, many varieties of bunch grass, etc., etc.

The mountains, foot-hills, and rolling lands, are literally covered with a velvety green for most of the year, and having two rainy seasons, the hills and mountain-sides do not present that bleak and barren appearance so characteristic of California.

#### ALFALFA FOR STOCK.

Alfalfa is a perennial forage plant allied to the clover family, and seems to be identical with European lucern. Residents of Utah, where so many of them came from Europe, call it lucern. The *Gazette* says: "It is one of the most luxuriant growers that has, so far, been found among food plants, for stock in this country, making a rapid growth throughout the whole year, affording from five to six cuttings for hay during the spring, summer and autumn months. Where a good stand exists, and it is cut but five times during the season, it will yield ten tons of good cured hay to the acre. If cut six times, it will do but little if any better than this, as it has to be cut younger and before so well matured. All kinds of farm stock eat it with avidity, and grow and fatten on it as rapidly as Eastern stock does upon red clover during the brief period of its growth, alfalfa having this advantage that it grows the year round. Hogs keep rolling fat when fed exclusively upon it, either cut and fed to them in pens or allowed to run in the fields and to help themselves. They also eat the cured hay and do quite as well as upon the green fodder. This may sound strange to Eastern ears, but it is a fact, nevertheless, as all Pacific Coast residents know."

#### WHITE MOUNTAIN STOCK RANGE.

The Black River and its tributaries head in the White Mountains and Prieto Range, run southwest and form a junction with White River below Camp Apache. From the junction down it is known as Salt River. Black River, from where it enters the White Mountain Indian Reservation, flows through a valley to the east, some fifteen or twenty miles long, and from one-half to three miles wide, with sloping hills on both sides, extending to the tops of the mountain ranges. The hills are covered with timber, principally pine, oak and juniper. Gramma, crow-foot and mountain bunch grass grow in abundance. The valleys are covered with a strong growth of wild timothy, clover and red top, and will cut from two to two and a half tons of hay per acre.

As yet, there is but one lot of cattle on the river, and this is composed of about fifty head of graded animals.

The first settlement on the river was made in the fall of 1883 by James Horton, Richard Horton, and N. Whiting.

The country is new, and possesses everything needed to make an excellent stock country. There is available land for many farms of from forty to two hundred acres, with running water all the year round.

The west fork for about eight miles after it leaves the mountain, flows a strong stream. There are many smaller streams, fed by springs that never go dry.

The great drawback is that it can be reached by wagon only one way, and that only in the summer. The whole country is rugged, though delightful. Absolutely free from all atmospheric objections, and the altitude is from four to six thousand feet.

Concerning the capacity of this section, as a grazing country, a writer in the *Live Stock Journal*, says: "We only invite parties who think of trying a hand, to come and see. We will not be always so cut off from the main lines of trade, and as soon as a few enterprising men, with some capital, come among us, there will be easy and rapid communication."

To reach this section from the south, the best course is to leave the Southern Pacific at a point nearest Solomonville. From there go to Clifton, to the Frisco River, following it up to the mouth of Blue River, up the Blue to Bushe's old ranch, and from thence to points on the Black River.

In coming from the north or east, leave the Atlantic and Pacific at Navajo Springs, going to Springerville by stage. From the last-named place it is necessary to travel eighteen miles on horseback, to reach points on Black River.

#### AN IMMENSE STOCK RANGE.

"The whole so-called 'Papago country,'" says a writer in the *Live Stock Journal*, "lying between the Gila River and the Gulf of California, as also the whole western portion of the State of Sonora, in Mexico, is, geographically considered, a system of valleys of greater or less width, lying between isolated mountains, or, to put in other shape, one immense plain, dotted everywhere with broken chains of mountains.

"No country that makes any pretensions whatever to being a mountainous country could possibly present a more favorable view for the profitable raising of stock of almost every kind.

"The valleys are for the most part flat or nearly so, along their centers, and in some cases for many miles in width, approaching to roughness only as the ground rises at their sides to meet the foot-hills of the ranges, and this elevation is so gradual, and the ascent so gentle, that it amounts to no more than a succession of undulating mounds and ridges that eventually become large enough to be classed as foot-hills.

"Many of these valleys are twenty, thirty, and even fifty miles wide, and very rarely are they less than ten, from foot-hill to foot-hill.

"The mountain ranges occupy (at a rough estimate) about two-fifths of the surface, leaving about three-fifths for valley land, or what might be termed so, meaning ground that cattle may graze upon with the assurance of feed, and without danger of becoming foot-sore from traveling over stony ground.

"The valleys are all connected with each other so completely that it is a matter of no difficulty to drive a wagon entirely around every range of mountains in the great scope of country that is spoken of above. It is only to the south and southeast of the Baboquivara Range that this becomes impossible to some extent. This fact gives to the stockman all the advantage of easy access possessed by a prairie country, and also any benefits to be derived from a mountain region, and places within his reach the opportunity of changing the pasturage for his herds at such times and seasons as may be most suitable and most profitable, from valley to mountain and *vice versa*.

"Until the Papago country possesses more available and rapid means of transportation, the level nature of the ground would be highly advantageous in driving cattle to the various shipping points on the railroad, as it enables them to be taken long distances without becoming foot-sore and fatigued by long marches over a rough and rocky country, thereby landing them at the cars in as good condition as when they left the ranches."

#### VARIOUS GRASSES FOR STOCK.

The whole of the Papago country is covered with nutritious grasses, the principal of which are known as the white and black gramma, the six-weeks' grass, and a very sweet bunch grass that grows everywhere, both on valley and hill. There is also a fine-bladed, silky-looking bunch grass that grows in profusion in the foot-hills and on the high ranges as well, that is much sought after by stock, and upon which they fatten very rapidly.

The gramma grass is good feed all the year, as is also the bunch grass of the valleys.

The six-weeks' grass is only valuable during the period of the summer rains, when it shoots up rapidly and becomes dry and almost worthless as soon as the rains cease.

During each of the two rainy seasons of the year the soil is hidden by a growth of sweet and juicy weeds and herbs that stock seem to favor particularly, and thrive upon rapidly.

The winter rains in the Papago country for the last three years have been ample to produce a luxuriant crop of grass, which, until the country became over-stocked with cattle, would be all-sufficient to last until the mid-

summer crop was produced by the summer rains. This lasts until the winter rains set in. This, as long as the rain falls, does not become materially reduced. There are really two full crops of grass each year.

This apparent absence of water has diverted the attention of stockmen from this section, so really favorable to their business, and has been hugely exaggerated by those ignorant of the subject upon which they spoke.

Some color is given to the popular idea that the Papago country contains very little water, in the fact that it appears on the surface only at rare intervals, and even then in limited quantities; but experiment has proven that beneath every valley and in the roots of every mountain range, lie hidden vast reservoirs of water, pure, clear, and healthful, the only objection that can be charged against it being the expense of raising it from two to three hundred feet.

The expense of this labor and machinery required, is, of course, to be considered; but in this age of cheap steam and cheap pumping machinery, stockmen will not allow it to become a serious obstacle to the stocking of this immense tract of land, possessing, as it does, almost every other advantage sought after by herdsmen.

#### IMPORTING CATTLE FROM MEXICO.

The *Live Stock Journal* says: "In regard to importing cattle for breeding purposes from Mexico, let it be understood that the custom houses are not placed to harass importers, nor are its officers disposed to put importers to any unnecessary trouble or expense. The regulations provide that animals specially imported for breeding purposes shall be free of duty, otherwise a duty of 20 per cent. *ad valorem* is collected.

"To make a free entry of cattle for breeding purposes, a consular invoice is required, which states that the cattle are imported for breeding purposes. In addition to that, there is a special oath required to be taken by the importer to the effect that the cattle are breeding cattle and that they are intended to be used for that purpose in the United States.

"It is the duty of the customs officer inspecting such cattle, to find out whether the statements of the importer are true, and it is the duty of importers to make a truthful and sworn statement, and the imperative duty of the customs officer to verify the same. If upon inspection the officer finds the statements of the importer true, the entry is then made; if untrue, the consequence is forfeiture, which, added to the crime of perjury, makes a strong case."

The following statement will give an idea of the cattle business between Arizona and Mexico for one month's transactions.

The following stock was imported from Mexico and entered at the Custom House, Nogales, Arizona, between March 22 and April 27, 1884:—

No. animals.	Value.
6 burros.....	\$ 30 00
26 horses .....	674 50
30 bull calves.....	150 00
195 steers and bulls one year and under.....	1,365 00
180 two-year-old steers.....	1,620 00
410 cows with 99 calves.....	9,418 00
75 bulls.....	629 36
234 yearling heifers.....	1,741 00
240 two-year-old heifers.....	3,600 00
Total value stock imported for breeding purposes (free)...	15,378 36
Total value stock importations.....	19,227 80
1,450 head of cattle (1,045 for breeding and 405 for other purposes), 36 horses and 6 burros.	

OLD SETTLERS' VIEWS ON STOCK BUSINESS.

A settler of twenty-two years' experience in Arizona gives his views of the cattle business, then and now, in the *Live Stock Journal* of Tucson, and says: "I shall never forget those early days. Things were not as they are today. Now, we live in a quiet, civilized land; then, it was wild and perilous. I have been here continuously since 1874. I consider the southeastern corner of Arizona the best for stock. It has always been my aim to locate as favorably as possible, and I assure you I would not tarry in Pima County, if it did not suit me. I have made the Territory a special study in these years, and I am more fully persuaded than ever that I am in the right place. Of course, it may go with us as it has with Texas, for there some of the men already begin to turn their attention to farming, saying there is not enough room for the stockman—this especially in the northern part of the State.

"When we shall begin to send cattle in large numbers to market depends largely upon the number of cattle that come into our midst within the coming two years. According to the present increase, in three years we will begin to be heard from, not only in San Francisco, but in New York, Baltimore and Philadelphia.

"I do not like sheep, or consider them a paying investment, but simply because I do not believe it is a good sheep country. I think the greatest objection is the trouble at lambing-time. Every one knows that tender grass, and plenty of it, is very essential at this particular time, and we do not generally have a sufficient supply. In the East they can have patches to suit themselves, but here, in so vast a Territory, and on account of certain circumstances tiding against us, we cannot do it.

"From the reckless days of years ago down to the peaceful days of the present, I can truthfully say we have fared well. True, we now and then lose a cow or two, or perhaps a horse, but this occurs even in the East, and surely we have but little to complain of. Personally, I have never lost any cattle, but I have lost a few horses."

CLIMATE FAVORABLE FOR STOCK.

"Our winter is very mild. In fact, it is not winter at all. Just like an occasional November day in the East, about Washington. Now and then a man has to wrap up a little, but one never experiences any inconvenience. We rarely ever have any snow. We had but three storms the past season, and they were late in March. It usually snows in the night, and by noon next day we see nothing of it. Stock never suffer. Sometimes they shiver a little and go into the woods, or foot-hills. There is not a month in the year when animals could not be taken out of our herds, and driven to the slaughter house. There seems to be more nourishment in the grass all through our section than in some of the lower sections.

"We try to get such cows as are well fitted for breeding purposes, but are not particular whether they are Spanish or American. Just now we are using thoroughbred and grade Durhams. We have Devons of like quality.

"I consider Arizona a superior horse-producing section. It is as good for horses as it is for cattle. I look upon it as second to no place, save Kentucky. I do not even except California. I know it has been whispered around that we can't raise horses here equal to the State west of us, but that is a grave mistake. Young as our Territory is, as a live-stock country, it has produced some of the finest horses in the Southwest. I believe the business will pay every man who goes into it. I do not handle horses myself, because my fancy don't run that way. I think the risk is much greater in horses than in cattle, and they require more and greater care. When a horse is stolen or lost, the loss is severe. Besides they are not of such contented dispositions as cattle."

EXPERIENCE OF STOCKMEN.

Another settler with four years' experience in Pima County gives his reasons for locating in the Santa Catalina Valley. He says: "In the immediate vicinity of Tucson there is but little grass that lasts the whole season round, and not enough to supply the needs of large herds. In the second place, it is not well for a cattle man to be located so near a large city like Tucson, and especially since it is rather close to the Mexican border. Then again, in the third place, it is 1,500 feet higher and the air is decidedly cooler in the summer-time, and perhaps, a little purer, though there certainly can be no objection to this place, save that it gets a little warm in the months of July and August."

His range is about fifty-five miles from Tucson. The range is generally considered to be all that section that can be controlled by the water they happen to have. He is very fortunate in having a never-failing spring on his place, that runs a five-inch stream even in the dryest season of the

year. Of course, after continued and heavy rains the stream is much larger. The result of this flowing water is, that cattle never suffer, and they are saved the labor of pumping or buying windmills. But the location offers several other advantages. One is that the cattle go but little beyond the range. The mountains that surround it are a kind of silent guard, and save much labor and trouble. Ranges are not crowded one upon another, and cattle are always quiet and contented. Of course when strange cattle get on the range, it requires extra work to keep them from going off, and trying to find their old homes.

The range is located on the eastern slope of the Santa Catalinas, and what might be termed the valley of the San Pedro. He believes this whole section will compare favorably with any section of Arizona.

#### SIERRA BONITA STOCK RANGE.

There are some large stock ranges in Arizona, and their owners have made fortunes at the business. A most worthy example is that of H. C. Hooker, the owner of the famous "Sierra Stock Range," located in Sulphur Spring Valley near Fort Grant, in Graham County.

H. C. HOOKER is the "cattle king" of Arizona. His herds range from six to seven thousand head of fine graded cattle, with a large number of the finest blooded, imported Kentucky bulls. Add to this a herd of five hundred American brood mares and six blooded stallions, and a faint idea may be had of Mr. Hooker's stock interests. The range is named from the adjoining Sierra Bonitas—the Beautiful Mount Range—as such it is; for twenty-five miles square, rolling valley and *mesa* lands present one vast area of rich pasturage, with a mountain stream traversing it, fed by a number of mountain springs from different points on the range which gives an endless supply of water to the Sierra Bonita herds.

This vast tract of land alone is a fortune, which Mr. Hooker owns in its entirety. Much of this land can be cultivated. Corn and vegetables are raised with excellent success. A large, comfortable residence, furnished with all the comforts of life, presided over by a queenly wife and made happy by a cheerful family of boys, bespeaks contentment. Stables, gardens, corrals, and outhouses are all in perfect harmony with the general plan of comfort and good order. It is not to be wondered at that so many covet the fortune built up by energy, industry, and good management. Two hundred and twenty-five thousand dollars has been tendered for the Sierra Bonita Range and stock, but was refused.

The raising of horses on this range is gone into extensively. This is the largest breeding farm in the Territory. The colts raised on this farm are being introduced

in many parts of the country, and are noted for their beauty, docility, bottom and speed. For roadsters and the saddle, they are in every way superior to the best grade from California.

The climate, water, grass and ranges are all favorable. Thoroughbred stallions, from the most famous stock, have been introduced, and trotters, running horses and fine roadsters, are being raised from blooded mares. The pure, bracing air and fine grasses are well adapted to the breeding of fine stock. Diseases among them are unknown, and thoroughbred stock can always command fancy prices.

In many of the counties associations composed of stock-growers have been formed for mutual protection, the exchange of views, and the dissemination of intelligence affecting the business. Stringent laws for the protection of stock-raising have been passed by the Territorial Legislature, and severe penalties are imposed on cattle thieves.

#### CATTLE BRANDS.

The manner in which cattle are branded and registered is well illustrated in the accompanying page illustration, taken from an issue of the *Live Stock Journal*, which says: "We express it as our conviction that for the money invested, there is nothing that will give the same returns to stockmen as that paid for the insertion of their brands in the Journal. To-day, the Journal goes to every post-office in Arizona, to a majority of New Mexico post-offices, scattered through the Territory, and has quite an extensive circulation in the State of Sonora, Mexico. We propose to place the Journal in the hands of every man who owns a horse or cow, and to have it a regular weekly visitor to every man that kills a bullock, in every town or country place in the Southwest. No argument is needed to show the wisdom of inserting your brand, and certainly none to show any stock-owner the desirability of having his brand known all over the Southwest."

#### SPANISH CATTLE.

Many of the neat cattle were brought hither by the Spanish missionaries from Mexico, about 1770. At what time their stock came originally to Mexico is not precisely known, but without doubt it was in the seventeenth century, soon after the conquest by Cortez, and they must have been imported from Spain. They are called "Spanish cattle." In Mexico, as subsequently in California, they were allowed to run almost wild, and they took something of the appearance of wild animals. They have nearly the same range of colors as the neat cattle of Europe; but mouse, dun, and brindle colors—almost infallible signs of "scrub" blood—are more frequent; and the deep red, fine cream color, and delicate mottling of deep red and white, found only in animals of high blood, are entirely wanting.



Their legs are long and thin, their noses sharp, their forms graceful, their heads high, their horns long, slender and widespread; and they have a duskiness about the eyes and nostrils similar to that of the deer, between which animal and a young Spanish cow there are many points of resemblance. The general carriage of a Spanish cow is like that of a wild animal; she is quick, uneasy, restless, frequently on the lookout for danger, snuffing the air, moving with a high and elastic trot, and excited at the sight of a man, particularly if afoot, when she will often attack him. In some districts it is, for this reason, unsafe to go about on foot. The herdsmen are always mounted, and to these the cattle are accustomed; but a man afoot is considered to be a dangerous animal, deserving of the same treatment as wolves and coyotes. The Spanish cow is small, does not fatten readily, produces little milk, and her meat is not so tender and juicy as that of American cattle.

The breeding of neat cattle was almost the only business of the country previous to the American conquest, and they were killed for their hides and tallow, which were the chief exports. The meat went to enrich the land; there was too much of it to be eaten. All had the freedom of the country and ranged where they pleased, except that several times a year every man collected his own upon his ranch. There was about one bull to fifty cows. No attempt was made to improve the breed, nor was any profit to be made from an improvement. Most of the calves were born about the beginning of the year, and in March the first *rodeo* was held.

#### CATTLE RODEOS.

The word *rodeo* comes from the same root as "rotate," and means a surrounding, a gathering of all the cattle on a ranch, and the separation and removal of those belonging to other ranches. There are general and special rodeos. A rodeo may be for one ranch, or for several; but every *ranchero*, owning a large ranch, and many cattle, has his own rodeos; at least one rodeo is held in the spring and another in the fall. The general rodeo is held for the benefit of all the cattle-owners in the neighborhood; the special rodeo is held for the benefit of some particular person or persons who desire an opportunity to remove their cattle from a ranch. Every owner of a ranch is required by law to give a general rodeo every spring.

When a general rodeo is to be held, the *ranchero* sends notice several days or weeks in advance to the cattle owners in the vicinity; and in the cattle districts the neighborhood extends forty or fifty miles, for cattle will stray that distance. On the day appointed, the *ranchero* having selected some place where the cattle are to be collected, sends out his mounted *vaqueros*, or herdsmen, at daylight, to drive the cattle to the appointed place, where they are

gathered at ten o'clock. By that time the interested *rancheros* with their *vaqueros* have made their appearance, and are on the ground, all mounted and prepared for the day's work.

The *ranchero* who gives the rodeo is present to entertain his visitors, and his men are instructed to keep the cattle together. The herd may be very large. Sometimes eight thousand head of cattle are in a rodeo, forming a solid body about a quarter of a mile in diameter in every direction. The visiting *rancheros* who have come from the greatest distance are permitted to enter the mass first, select their cattle, and drive them out. Each man has a position chosen at a distance of half a mile or a mile, whither he drives his cattle; and there are several men there mounted, to prevent them from returning to the main herd. When a *ranchero* sees one of his cows in the herd, he calls to a friend, and the two chase her out. She does not wish to go, and tries to hide herself among the other cattle. The horses, accustomed to the rodeo, soon recognize the cow that is to be parted out, and enjoy the work. They turn with every turn of hers, and she is soon tired and compelled to go out. If the cow be accompanied by a large unmarked calf, the latter is often caught with the lasso, thrown down, and then marked.

While these *rancheros* are riding about among the herd, and seeking their own, the cattle are driven by a few *vaqueros* belonging to the ranch, so as to move about in a circular manner. As the cattle are thus moving round in one direction, the *rancheros* of the immediate neighborhood, whose time has not yet come for entering the center of the rodeo, ride round in a direction contrary to the course of the herd, and thus are enabled to see them to more advantage than if they were standing still. After the *rancheros* from a distance have parted out all their cattle, those of the vicinity ride in, and the whole day is thus spent in racing and chasing after cattle.

The man who gives the rodeo does not attempt to examine the cattle which are driven away. He takes it for granted that every one will drive off only his own animals. Sometimes several days are necessary to complete the general rodeo of a ranch, and the work is continued from day to day until finished. All of the rodeos of a neighborhood are usually held in regular and close connection. The *rancheros* from a distance, therefore, stay until they have attended all the rodeos in a district to which they suppose that any of their cattle have strayed; and they are usually the guests of the man upon whose ranch the rodeo is given.

When a cow is driven out, her calf follows. Every *ranchero* knows his cattle by the brand, which law and custom require him to use. Of course, when a man has four or five thousand head of cattle, he cannot recognize

them all by sight; he can only distinguish them by marks. He knows his cows by their brands, and his calves by their following the cows.

#### BUSY TIMES AT RODEOS.

The spring rodeos are the busiest seasons of the rancheros, and are for them the chief occasions of general meeting, exciting adventure, conversation, and festivity, in the course of the year. Frequently three or four hundred men will meet at these places, mounted on their best horses, and ready for fun. All the work of the rodeo is exciting. Lively scenes are enacting at every moment, and in every direction. Calves will try to get away from the herd, and escape to the hills. Cows which have been driven out will endeavor to get back. These must be chased by the horsemen. Frequently the lasso must be used. Many of the vaqueros are fond of showing their skill before so many spectators by performing astonishing feats of horsemanship.

When a rancho returns from a rodeo, with his cattle which had strayed away, he drives them into his corral, and brands and marks his calves; so that if they should return to their former range, he will know them the next year. If those that have been on other ranches are too numerous to be branded and marked in one day, some of his vaqueros stay with them on horseback, and herd them until all can be marked. When a cow has become accustomed to a ranch, she likes to return to it. After all the calves are marked, the owner does not care much whither they go, provided they do not stray beyond the limits of the ranches, the rodeos of which he attends.

There are many large bands of sheep in various parts of Arizona. In the vicinity of Bill Williams and San Francisco Mountains, at the Little Colorado, on the mountains north of Prescott, at Bear Springs, Date Creek, Willow Creek, Williamson's Valley, at the Black Mesa, the Big Sandy, the lower Agua Fria, and the Verde, as well as in many other localities in southeastern Yavapai, sheep-raising is extensively and profitably followed. It has been proved that even in an unusually dry year sheep can be kept fat in Arizona all the year round. The summer rains usually come in time to give its abundance and variety of rich grasses the requisite stimulus to bring them up from the root—not, as in California, from the last year's seed.

There are many large flocks of sheep in the White Mountains. On the Navajo Reservation are probably 300,000 sheep, the result of 10,000 given them by the Government ten years ago. These Indians are very ingenious in the manufacture of blankets and rugs from wool. The texture is firm and they are durable, selling at from \$5.00 up to \$25.00. Generally good ones at \$50.00.

The Apaches were great sheep thieves, stealing from Indians or whites, and would often secure a large band and then manage them in the following manner, to drive them

off: The sheep are formed in a parallelogram, the width of which never exceeds thirty feet, with a length sufficient to accommodate the flock. The strongest sheep are then selected and their horns lashed together in couples, and these couples are ranged along either side of the main flock, forming a sort of animal fence which prevents the inclosed animals from wandering, especially while running by night. Along each side of the mass are stationed a string of Apaches on foot, who preserve regular distances, and animate the sheep to maintain a regular rate of speed. Immediately in front, a small body of select warriors and keen runners lead the way, while the main body of Indians follow in the rear to push forward and urge on the plunder. In this manner the Apaches will run a flock of twenty thousand sheep from fifty to seventy miles in one day, gradually lessening the distance, until they deem themselves tolerably safe from pursuit. They have been known to accomplish the distance of fourteen or fifteen hundred miles in the manner above described.

#### STOCK, HORSE, AND HOG RAISING.

"The time is not far distant," says the *Gazette*, "when Salt River Valley will become one of the finest stock countries in the United States. One has only to travel throughout its length and breadth, as we have done, to convince himself of this. Already horses and cattle, far above the average, are to be met in small bands, where the owners have got forty or more acres of alfalfa pasture upon which to graze them. The ranchmen who have taken this initiatory step are preparing to extend their operations as rapidly as they can increase their stock of breeding animals. This movement is a recognition of the fact that where one dollar can be made by raising grain, five or ten may be made by seeding the same ground in alfalfa and raising horses, cattle, and hogs. There is no land in the world that will produce more feed to the acre than the Salt River Valley, whether planted in perennial grasses or summer crops. When sown in alfalfa and properly irrigated it affords five cuttings of hay, yielding two tons of cured hay to the cutting, per acre, and can be pastured the remainder of the year. Good alfalfa land will carry three head of horses or cattle per acre, or from twelve to twenty hogs per acre—some say as many as thirty. An alfalfa raised steer is better at two years old than the very best range steers at from three to four.

The Salt River Valley must, in time, and a short time at that, become largely stock in its productions, for the simple reason that there is more money in it. Land that will net fifty dollars per acre will eventually sell for such sum, as ten per cent. interest can be made on the money invested. Then land that nets fifty dollars will sell for five hundred dollars per acre, and land that nets one hundred dollars will bring one thousand dollars. It needs no argument to prove the correctness of this proposition.

## PUBLIC SCHOOLS OF ARIZONA.

Superintendent Sherman's Report; School Laws; Lands for Schools; Local Supervision; Number of Children; School Expenses; School Buildings; Private Schools, etc.

### PUBLIC SCHOOLS OF ARIZONA.

THE first organized school of any kind in the Territory was the Catholic school at Tucson, managed by the Sisters of Charity. Up to this time, after the abandonment of the missions, owing to the disturbed state of society, no organized schools were maintained. At first, children were sent to this private school from all parts of the Territory.

In 1868, public schools were first established, but were quite inefficient; they gradually grew as settlements extended, until, at this date, 98 districts have been organized.

Arizona, by the census of 1880, ranks second on the list of Territories, classified according to the percentage who are illiterates. Of a total population of 40,440 possessed by it at the last census, 5,496 were unable to read, being 13.50 per cent. of the entire population. But one other Territory ranks ahead of it in this respect, that being New Mexico, 44.32 per cent. of whose population were unable to read, while the percentage in the other Territories was as follows: Washington, 4.25; Idaho, 4.24; Montana, 3.91; Utah, 3.37; Dakota, 2.29; Wyoming, 2.05.

The great surplus of illiterates possessed by Arizona and New Mexico over the other Territories can, of course, in a measure, be attributed to the presence of a foreign element in them.

### HOW SCHOOLS ARE MAINTAINED.

The public schools of Arizona are maintained by a direct tax, levied on all property. By the new school law of Arizona passed by the Legislature of 1883, the revenue for the support of schools is divided into two separate funds.

First the Territorial school fund of 15 cents on each \$100 valuation, which fund is under the control of the Territorial Board of Education, which meets three times a year and apportions the funds to the different funds according to the number of children shown by the last census, taken every two years.

The second fund is the county school fund. This is 50 cents on each \$100 of property in each county. This fund is more especially under the control of the County Superintendent of Schools. Each quarter in the year the County Treasurer reports to the County Superintendent

of Schools the amount of money in the county school fund, and the County Superintendent at once apportions this money, in connection with the Territorial money, to the credit of said county to the different school districts of the county. This apportionment is made according to the average attendance of persons of school age during the three months immediately preceding the said apportionment.

### TERRITORIAL SCHOOL OFFICERS.

The schools are under the control of a Superintendent of Public Instruction, at a salary of \$2,000 a year, and the Governor and Territorial Treasurer, who form a Board of Education. The Superintendent is required to visit the schools of each county at least once a year. He also apportions the school moneys among the several counties, according to the number of children of school age in each, and is the executive head of the public school system of the Territory.

The law directs the Territorial Superintendent to visit the schools and exercise a general supervision over them, but the Territory is so large, and schools so scattered, that it is a task requiring a great deal of labor, time, and expense.

### COUNTY SUPERINTENDENTS.

The Probate Judge is *ex officio* County Superintendent of schools for his county. Inasmuch as his time is constantly taken up with matters pertaining to his office as Probate Judge, he has no opportunity of visiting schools.

The Hon. M. H. Sherman, late Superintendent of Public Instruction, says: "The law makes the County Superintendents *ex officio* appendages to other important and responsible county offices, which confine the incumbent to his place of business and to a routine of duties, thus rendering the personal supervision of schools impossible. The County Superintendent can only collect and report such information as he may receive from reports made to him by the trustees of the different school districts in his county; his salary is so small that in the large counties it is almost impossible for him to perform the duties as required by law. There is generally, throughout the Territory, a deep interest felt in education itself, and laudable efforts made to maintain good schools, as is evident to all who are acquainted with the different localities; but the importance and necessity of making, promptly and punctually, accurate and full reports does not seem to be so fully appreciated; indeed it may be said that, in this matter, there is a sad degree of negligence and failure. This, and the incompatibility of the superintendency of schools, with the many other duties enjoined by law upon the same officer, give to the reports of County Superintendents the appearance of barrenness of perfunctory performance.

## LOCAL SCHOOL TRUSTEES.

Each school district is under the control of a Board of Trustees, consisting of three members, elected by the qualified electors of the district, including women, who have the right to vote for these officers. The labors of many of the school officers are gratuitous, and the time they devote depends upon their willingness to make sacrifices.

The trustees provide school houses, employ teachers, prescribe rules, and do all other things required for successfully conducting the schools under their charge.

A Census Marshal is appointed for each district, who makes a proper enumeration each year of the number of children. During the year 1882 the Territorial Board of Education adopted a uniform series of text-books. By the use of a uniform series of text-books parents have the benefit of reduced rates, and the same books can be used in other districts in case of removal. In nearly every district in the Territory a cheap, uniform set of books is now in use. No books, tracts or papers of a sectarian character, are allowed to be used in any public school, and any school under the control of any religious denomination or teaching any sectarian doctrine, is not entitled to receive any portion of the moneys set apart for public school purposes.

## PROGRESS OF PUBLIC SCHOOLS.

The late able Superintendent of Public Instruction, Hon. M. H. Sherman, says:—

"The year just closed is memorable for the inauguration of general prosperity and for the development of an abiding confidence in a great future for Arizona.

"Our system of public schools, so freely sustained by the suffrages of the people, gives fair promise of expanding its benefits immeasurably, through the growth in wealth and population which will afford better opportunities for its successful operation.

"Prominent among the causes which prevent best results are sparsely settled rural districts, short school terms, and small but costly schools. These difficulties will find solution largely in growth, under the influence of a wisely administered system of school supervision.

"A condensed statement from the reports of County Superintendents, so far as they have reported to this office, would fall far short of showing the actual condition of schools within the Territory. They by no means represent the flourishing condition of many schools in the Territory, and the deep interest taken in education by the people."

## SCHOOL HOUSES.

Considerable progress has been made in many of the counties in the erection of good school buildings. Much of the expense incurred has fallen on those directly interested. Under the present method of apportioning school money the bulk of it goes into the large towns, and the outside

districts seldom have enough to keep their schools going for more than three or four months in the year. The Superintendent suggests that the Territorial school money to which each county is entitled be divided equally among all the districts. This plan would aid very materially the outside districts, and would work no injury to the schools in the towns and villages. In nearly every town of any importance in the Territory, there is abundance of school money—far more than will be required for school purposes for the present year. Such an amendment, changing the manner of apportioning the Territorial school funds, would not disadvantage towns, and would build up the outside districts.

Fine school houses equal to any of older communities have been erected in many of the larger districts. These are particularly described in each of the towns where located.

## APPORTIONMENT OF SCHOOL MONEYS.

The following are the apportionments of school moneys from the Territorial Fund:—

1st apportionment.		2d apportionment.	
Yavapai County...	\$409 95	Yavapai County...	\$337 07
Yuma " ...	273 60	Yuma " ...	234 96
Mohave " ...	77 40	Mohave " ...	63 64
Maricopa " ...	343 80	Maricopa " ...	241 61
Pima " ...	600 75	Pima " ...	223 85
Apache " ...	279 45	Graham " ...	129 50
Pinal " ...	270 45	Cochise " ...	278 61
Gila " .....		Pinal " ...	93 24
Cochise " .....		Apache " ...	229 77
		Gila " ...	129 13
Total.....	\$2,255 40	Total.....	\$1,953 38

In the apportionment made April 8, 1881, the amount allowed each child was forty-five cents.

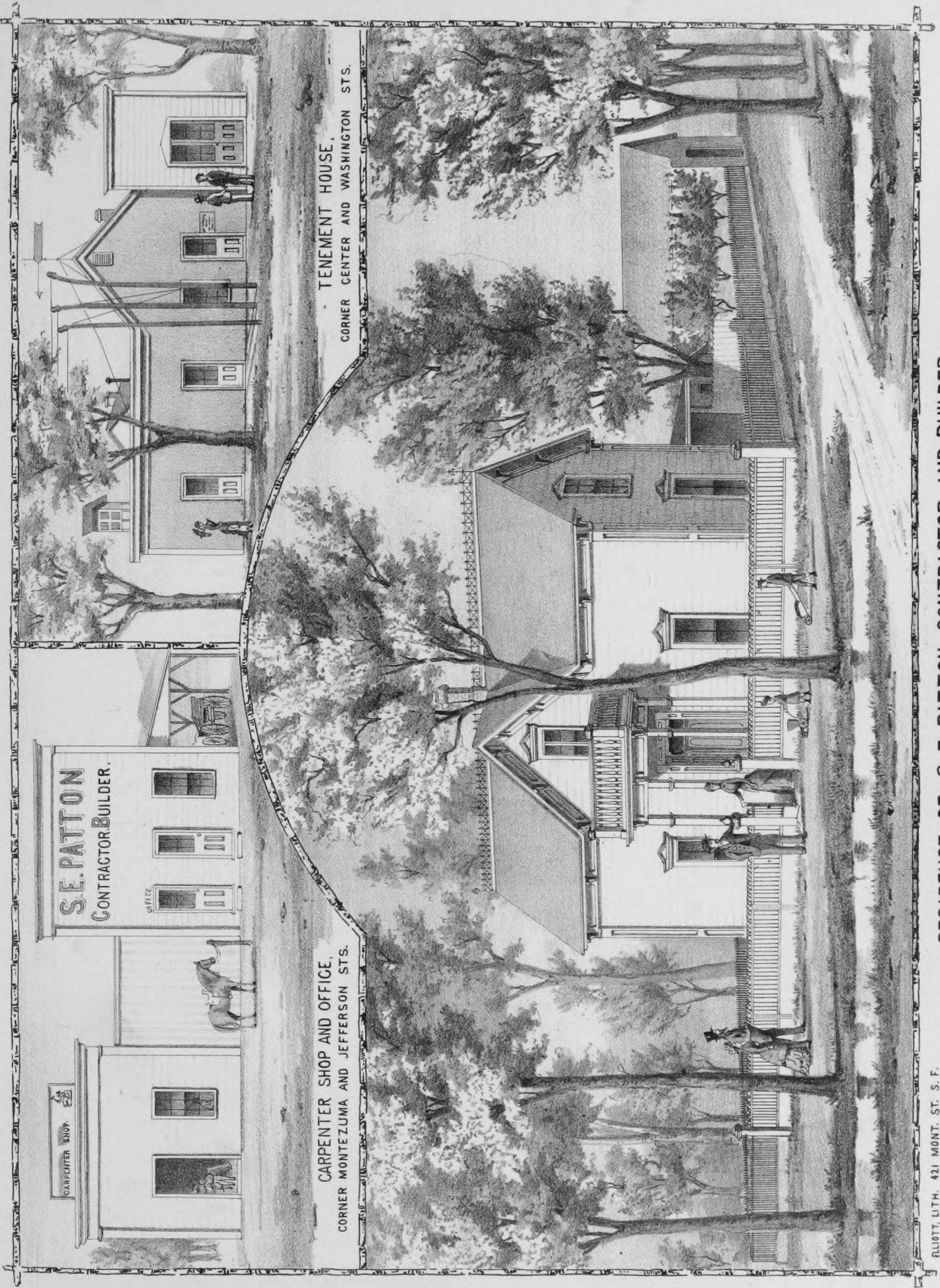
In May, 1881, a census was taken in the new counties of Gila and Cochise, so that in the second apportionment they were allowed school money with the other counties.

For the year 1881, the whole amount of school money apportioned to the different counties was \$4,208.78, to which add the salary of the Superintendent of Public Instruction, \$2,000, gives a total of \$6,208.78.

## COUNTY SCHOOL FUND.

The reports of County School Superintendents show the following:—

	Receipts.	Disbursements.
Yavapai County.....	\$9,783 71	\$8,559 73
Yuma " .....	2,331 76	1,504 17
Mohave " .....	3,462 85	2,189 80
Maricopa " .....	6,229 83	5,139 54
Pima " .....	15,773 31	10,145 45
Graham " .....	1,217 80	1,112 18
Pinal " .....	8,718 14	7,104 95
Apache " .....	2,533 80	2,413 88
Cochise " .....		
Gila " .....	2,508 22	249 25
Total.....	\$52,559 42	\$38,418 95



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RESIDENCE OF S. E. PATTON, CONTRACTOR AND BUILDER,  
CORNER OF MONTEZUMA AND JACKSON STREETS, PHOENIX, ARIZONA.

Amount on hand at the commencement of the year 1882, \$14,140.47.

Whole number of persons of school age in Arizona, as shown by last school census, 5,300.

Whole number of persons of school age reported as attending, 3,844.

Whole number of teachers employed in the public schools of Arizona, 102.

Number of private schools, 9.

Number of teachers in private schools, 15.

RECEIPTS AND DISBURSEMENTS FOR 1882.

	Receipts.	Disbursements.
Cochise County.....	\$19,312 50	\$19,104 25
Yavapai ".....	15,574 00	15,071 89
Graham ".....	4,912 00	4,802 00
Gila ".....	3,080 18	2,927 14
Mohave ".....	4,660 66	2,139 58
Pinal ".....	10,203 66	5,504 16
Maricopa ".....	10,746 43	8,739 05
Pima ".....	18,721 02	18,669 48
Apache ".....	2,533 80	2,413 88
Yuma ".....	3,904 10	3,896 50
Total.....	\$93,648 35	\$83,267 93

The sum of \$8,319 has been apportioned to the different counties by the Territorial Board of Education, making the receipts from all sources, during the year, \$101,967.35. There are outstanding debts for school buildings, teachers' pay, etc., to the amount of \$15,000, which, when paid, will make an aggregate on account of expenditures for the year 1882, of \$98,267.93, leaving a balance on hand after debts are paid of \$3,699.42.

From this statement it will be seen that the receipts for the year 1882 are nearly double those of the preceding year, and the disbursements for the same year nearly triple those of the preceding one.

SCHOOL STATISTICS.

The following table gives the statistics of the schools of Arizona for 1882:—

NAMES OF COUNTIES.	No. of Districts.	No. of Teachers.	No. of Male Teachers.	No. of Female Teachers.	Total No. of Teachers.	No. of School Children.	Valuation of School Houses.
Yavapai.....	28	11	17	28	2,080	\$28,317	
Maricopa.....	11	3	12	15	1,320	23,170	
Mohave.....	3	2	2	4	228	1,100	
Cochise.....	11	5	15	20	1,131	27,000	
Graham.....	7	5	4	9	228	5,026	
Apache.....	15	6	9	15	924	9,027	
Gila.....	3	1	5	6	428	6,204	
Pinal.....	5	5	5	10	620	4,406	
Pima.....	10	5	11	16	2,487	30,000	
Yuma.....	5	1	2	3	608	2,500	
Totals.....	98	44	82	126	10,283	\$116,750	

SCHOOL APPORTIONMENT FOR 1884.

At a meeting of the Territorial Board of Education, held at the office of Governor Trible, the following sums were apportioned to the several counties, on the basis of 86 cents to the child of school age:—

COUNTY.	Children.	Amount.
Pima.....	2317	\$1,992 62
Yavapai.....	1352	1,162 72
Maricopa.....	1317	1,132 62
Apache.....	1126	968 36
Cochise.....	1013	871 18
Yuma.....	649	558 14
Graham.....	635	546 10
Pinal.....	634	545 24
Gila.....	179	153 94
Mohave.....	154	132 44
Totals.....	9376	\$8,096 91

AMOUNT IN SCHOOL FUND.

Hon. T. J. Butler, Territorial Treasurer, received reports from the County Treasurers for the quarter ending March 31, 1884. From him we learn that the amount reported in the school fund from the various counties is as follows:—

Cochise.....	\$3,072 87
Mohave.....	796 57
Yavapai.....	1,329 11
Pima.....	547 27
Maricopa.....	252 00
Pinal.....	155 47
Gila.....	55 31
Graham.....	27 69
Apache.....	
Total.....	\$6,303 10

Out of this amount of warrants the expenses of the Territorial Superintendent are paid, and the balance apportioned among the various counties.

TERRITORIAL UNIVERSITY.

Congress, at its session in 1881, donated, to the various States and Territories, seventy-two sections of public lands, to be devoted to university purposes. The Superintendent of Public Instruction, Hon. M. H. Sherman, made the necessary selections to secure the benefits of this valuable grant and forwarded the same to the United States Land Commissioner, who reserved the same from settlement. The question of Territorial Universities has been agitated but no action has been taken.

The land thus reserved for university aid was located in the San Francisco mountain country, and is heavily timbered, and should yet be a considerable source of revenue to the Territory, and of great value and assistance in education of the children of Arizona.

## CONDITION OF SOCIETY.

Character of Inhabitants; Pioneer Ministers; List of Churches; Mormon Religion; Scenes of Violence; Crimes and Punishments; Law and Order Prevail; Arizona Justice; Prison, etc.

### CHARACTER OF PEOPLE.

ARIZONA, like all prosperous young mining communities, in its early days was the resort of the wild and criminal element, and a spirit of recklessness prevailed. Crime is not more common than in older communities East, and, with few exceptions, infractions of the law meet with as sure and speedy punishment. The exception noted was the failure or inability of the officers of the law in two counties of the Territory to punish violations of the laws.

F. A. Tritle, Governor of Arizona, in a late message, says: "Lawlessness and the depredations of 'cow-boys' and 'rustlers,' which at one time held portions of the Territory in a condition of terrorism, have succumbed in a large degree to law and order. The active measures resorted to by the local authorities early in the spring of 1882, in connection with the proclamation of the President, resulted in much good, and fewer acts of violence have been committed within the Territory. But in view of the comparative security which isolated and unsettled portions of the Territory afford to criminal fugitives from other Territories and States, and the southern boundary bordering upon a foreign nation, the Territory of which immediately adjacent possesses the same peculiarities, it is a very difficult thing for the civil authorities to prevent crime. Cattle-stealing in these localities is carried on to such an extent along the border as to render protection to the citizens a proper subject for the attention of the general Government.

In 1882, when depredations by 'rustlers,' and cattle-thieves were most numerous, the citizens of Cochise County put a company of men in the field to capture and punish outlaws, which had the desired effect and reduced the criminal element considerably.

It must be remembered that Arizona borders on Mexican Territory. The Mexicans of the northern frontier are the very lowest and poorest of their countrymen, living in hovels and sustaining themselves in some manner never yet determined or ascertained by any other people. They contaminate the region near them. They live in any manner except by hard work. The difficulties attending

the punishment of crime committed near the border of a foreign country are always greater than elsewhere. In the nature of things this must be so, even when there is a hearty co-operation between the contiguous nations.

In character the people of Arizona are generous, hospitable, and independent. Being thrown together as strangers from all parts of the world, they know no antecedents of each other, and every one is judged by his own outcroppings. They are strangers by nature. Every man stands on his own merits, and is not much inclined to tolerate any middle-man either in politics or religion.

### ARIZONA JUSTICE.

The following from the *Phoenix Gazette* gives a good idea of the way justice is administered in this Territory:—

"Arizona is a young commonwealth, bounding on a foreign country and far removed from the civilizing influence that Christian Boston is reputed to shed over the country. Under these circumstances, it might be presumed that lawlessness would prove the rule rather than the exception; that the arbitrament of the knife and pistol would be resorted to in preference to law in the settlement of any disputes that should occur, and that Judge Lynch would reign supreme, instead of the usually constituted tribunals for the dispensation of justice. Right here, however, the pride of the Arizonan is asserted more strongly than is ordinary in public matters. In the eradication of crime and the punishment of wanton criminals, Arizona pursues her even way and leaves to the courts of the land the punishment of those who have violated the law in the most trivial or the most atrocious manner.

Our percentage of crime will admit of a favorable comparison with that of the most staid communities of New England. It is useless to deny that, in our heterogeneous population, we have had to deal, and still have to deal with some reckless and dangerous characters. The infrequency of lawless acts, in immediate comparison with our frontier neighbors, may be attributed to the prompt manner in which the law-breaker is pursued and captured, and the speed with which justice is administered in Arizona. Without doubt this Territory has the most fearless, efficient and vigilant set of peace officers that are to be encountered in any part of the United States. More than this, they are supported by the people who have known and met danger, and who do not propose to have the good name of the Territory, the work of their own creation, tarnished by any individual or set of individuals who live by crime. The criminal finds the officer of Arizona a never failing and untiring Nemesis. In the courts they promptly meet with punishment.

It is rare when lynch-law is invoked in this Territory, but when it is, the provocation is so great as to make it as

nearly justifiable as the assumption of law, by a crowd of citizens, can ever be regarded. Arizona's system of dealing with criminals has ever been most successful, and might be introduced into other communities with good effect. Neither money nor mawkish sentimentality have ever been permitted to interfere with swift punishment, and notwithstanding the sparsely settled nature of the country and the proximity of Mexico, few refugees ever succeed in escaping the vigilance of our peace officers.

#### CHURCHES OF ARIZONA.

The religious interests of Arizona are not neglected, but are being forwarded with a rapidity which is even more than keeping pace with the fast increasing population. The different denominations are mostly represented by an active ministry and a vigorous laity, who are on the alert to provide places of worship and religious privileges.

Before the advent of the railroads it was difficult to secure ministers for this then far-off land. The Missionary Boards of the various churches found it nearly impossible to secure men for isolated Arizona, as they were readily doing in more accessible regions of the West. As late as January, 1880, there were but four Protestant places of worship in all Arizona, and these were small, having a combined seating capacity of not more than 1,000 in a population of about 30,000. All this is now, happily, being changed. Ministers of every denomination are coming. Church buildings are being multiplied and now there are houses of worship in nearly all the towns of the Territory, and generally they are neat and commodious. The ministers are, as a rule, more than average men in ability, and the growing congregations are, intellectually, the peers of any assemblies in the East or West.

As in all new countries, the congregations were at first small. Arizona was first settled mostly by men without families, or by men who had left their families behind them. Many of these, young men and men in middle life, came from localities where but few churches existed—the mining regions of the West. They were not generally religious men, but were men of large hearts and generous souls. They have given with a princely liberality to erect churches and establish religious worship in the various towns where they have settled.

The attendance at church was at first small, but the congregations are rapidly growing. Everywhere the people encourage the ministers in their work, and treat them and their mission with marked consideration and respect.

The ministry are faithful in their devotion to their calling. They are not engaged in mining or stock speculations, but adhere steadily to the cause for which they

patiently labor, and are meeting with the success their faithfulness deserves. They, like the people whom they serve, come from every section of the country, and adapt themselves admirably to the exigencies of the situation in the particular field they may happen to till. Their salaries are small as a rule—in some instances barely sufficient, with close economy, to support themselves and their families—but they work on, uncomplainingly, and are doing a service for which they are entitled to the grateful remembrance of all. They not only labor for the success of their churches, but are in the front ranks in educational interests, and the temperance movement. Anything which has a tendency to promote the moral or intellectual culture of the people gets from them a ready endorsement and active friendship; and their services in these fields of usefulness are generally acknowledged and appreciated.

The immigrant to Arizona, on entering any town, will find the house of worship occupying a central location and standing forth the most imposing building of the place. He will find Sabbath-schools organized, and supplied with children's papers, and with libraries, just as such institutions are supplied elsewhere. He will also find that what was supposed to be morally "a howling wilderness" is already in a state of cultivation that will somewhat astonish him; and better still, he will find a field of religious usefulness for himself and family, where, as a Christian man of business, he may do much for the welfare of the community.

The Mormons have the greatest number of churches. In 1880, they reported 35 churches, 178 high priests, and a membership of 5,000, an average of one priest to each twenty-eight members. This church is increasing more rapidly than all others.

The next in point of numbers is the Roman Catholic Church, which reported eight churches, and 48,000 Catholic people, or one priest to each 6,000 Catholics. This is the oldest religious denomination, and had, as related, churches in Arizona a hundred years ago, described elsewhere. They have churches at Prescott, Phoenix, Florence, Tucson, Tombstone, Tubac, San Xavier, and Tumacacori.

The Methodist Episcopal Church comes next in number of buildings, having eight churches. This organization is pushing its way rapidly into every town and community in Arizona. The accompanying cut shows the first Methodist Episcopal Church of Phoenix, built of *ocotella* and covered with brush, which gave place to the new brick church erected near the site of the old one. It has churches at Tombstone, Tucson, Globe, Florence, Prescott, Phoenix, and Pinal, and in other places organizations have been started. The Methodists have a strong organization, and are under the jurisdiction of a Bishop, who lives at Santa Fé, New Mexico.

The Presbyterian Church is next in order of numer-

ical strength. There are four churches now in the Territory: at Tucson, Tombstone, Phoenix, and Prescott.

The Methodist Episcopal Church South, has two church edifices: at Prescott and Phoenix.

The Baptists have four churches in Arizona, located at Phoenix, Prescott, Globe, and Tucson.

The Congregationalists have a church at Tucson, and one at Prescott.

The Episcopalians have churches at Tucson and Tombstone.

There were reported, at the last census, 82 Jewish population but no church.

Description of the church buildings will be found in the history of each town where they are located.

The man who comes to Arizona for its gold and silver, its copper and iron, its agriculture and grazing, will not need to leave his family behind for the sake of churches and schools. He will find both ready to his hand. Churches and Sabbath-schools will be found suited to the tastes, faith and religious preferences of all. Neat, tasteful churches with good music, and also the appliances of Sunday-schools, and, indeed, all the various religious privileges enjoyed by congregations in the East, are here already, and will grow with the increase of the population.

#### THE MORMON RELIGION.

The religion of the Latter-day Saints is probably less understood and more ridiculed than any other religion extant; and while the name "Mormonism" is abhorred by the majority of mankind, it must be admitted that a religious system which has been so successful in colonizing the arid Rocky Mountain regions, which has built towns and cities, and literally converted the desert into a fruitful field, certainly possesses, in this respect, something that commands our admiration.

When we consider their success in proselyting throughout the nations of Christendom, and their successful system of immigration, bringing the poor and down-trodden of the earth by the thousand every year to free America, and finding them homes and employment, there is something presented which is well worthy the consideration of statesmen and philanthropists everywhere. While there are some things in their social affairs which we deprecate, looking at them from a Christian or sectarian stand-point, we yet find many things among them which we cannot help but admire; but we will only allude to one of them in this brief history, and that is their church rules.

#### MORMON CHURCH GOVERNMENT.

The church government is very perfect and far-reaching in its organization. The head of the church they claim to be Jesus Christ, and his authority on earth is

vested in the president of the churches. He is the mouth-piece of God to his people.

The territory occupied by the Mormons is divided ecclesiastically into districts, called by them "Stakes of Zion," over each of which is a president, who is in direct communication with the first presidency of the church, and amenable only to it.

The "stake" is again divided into wards, which generally constitute a small town, with its surroundings, and each ward is presided over by a bishop and his counselors, who call to their aid men who are called priests and teachers. These visit the people at their homes, and instruct and encourage them in their religious or other duties. By this system the most lowly member of the church is instructed at his or her home; the priest and teacher then reports the standing of each member to the bishop, the bishop to the president of the "stake," and he in turn to the president of the whole church. Thus every member is felt after, and the highest authority in the church is fully cognizant of the personal standing of every member, it matters not at what distance from the center he may reside.

The Mormons of Arizona are rapidly increasing in numbers and settling in all parts of the Territory.

#### MORMONS OF MARICOPA COUNTY.

"The Mormons who have so numerously settled in Maricopa County," says the *Gazette*, "are a sober, industrious, mind-their-own-business people, who believe in free schools, a free press, and that liberty of conscience that allows every man, woman, and child to worship God according to the dictates of their own convictions. While firm in the belief that theirs is *the* true religion, they exercise the broadest charity towards those who differ from them upon the methods of salvation.

"The settlement at Mesa City, a view of which is given in this book, as well as many Mormon residences, is about one-third infidel to this belief, but this fact causes no inharmony nor jar in the social relations. The unbelievers who have settled there speak in kind terms of their Mormon neighbors."

#### SUNDAY-SCHOOL ORGANIZATIONS.

The Sunday-schools of the Territory have been rapidly increasing in numbers and usefulness during a few years past.

The Territorial Sunday-school Convention which met at Phoenix, in April, 1884, recommended the organization of County Sunday-school Conventions in all the counties where practicable.

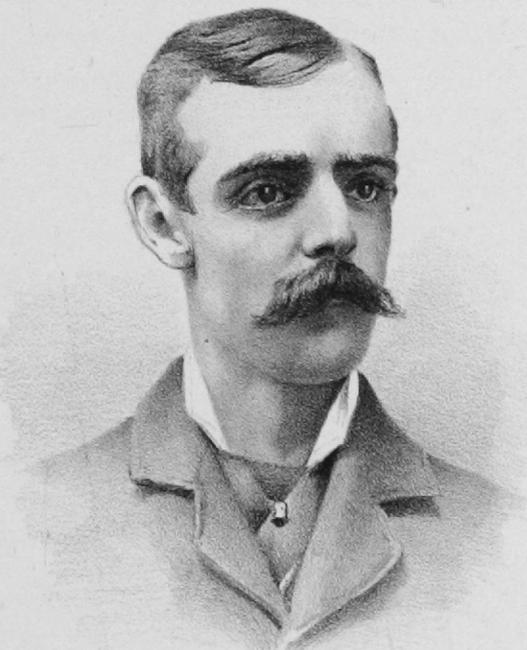
Resolutions in regard to temperance work in Sunday-schools, offered by the Woman's Christian Temperance Union, of Phoenix, were spread upon the minutes by the Convention.



A. H. Hackney



B. V. Pascoe



W. E. Shucrt



Levi Ruggles

Rev. G. H. Adams and Mrs. Hollenbeck were elected delegates and Maj. G. W. Ingalls, as alternate to the International Sunday-school Convention at Louisville, Kentucky, June 11, 12, 13, 1884.

Most of the churches have flourishing Sunday-schools and charitable societies which do much good, and have a humanizing effect on the community, and all must acknowledge the benefits which they confer. A country where churches and schools flourish, always attracts the best and most desirable class of immigration. Such a country also offers the best safeguards against lawlessness.

#### TERRITORIAL PRISON.

This institution is located at Yuma. The last official report gave the number of persons confined in the penitentiary, at 106, of whom two were from Apache County, ten from Cochise, four from Gila, sixteen from Maricopa, six from Mohave, thirty from Pima, and thirty-one from Yavapai.

The Territorial Prison Commission in its recent session adopted the San Quentin uniform for convicts and the new uniform for officers that has recently been in use on trial. A standing reward of \$50.00 is offered for escaping prisoners.

Capt. F. S. Ingals is superintendent, and is a genial, pleasant gentleman, and withal one of great firmness. He makes a first-class officer in the position he now occupies.

The machine-shop is full of men working out the cell gratings and bars, others setting grating in cells and covering them in with massive masonry; others excavating stone building material and carrying the *débris* of the work out of the yard in dump carts on a miniature railway, others grading up, in preparation for heavy outer walls of adobe in place of present palisade fence surrounding the prison on three sides, others making adobes for this part of the construction; in fact a perfect ants' nest as one looks down the point of the hill on the south.

The interior has the correspondence in cleanliness and convenience. Some of the cells are fitted up with great taste by the occupants, who upon entering are deluded perhaps for a second or two with the idea that all this comfort is void of bars, which are on all sides.

The bakery, kitchen, dining-room, laundry and bathing rooms are nice and clean.

The Territory can take pride in the appearance and management of this institution. Great praise is due the commissioners, and the able superintendent, upon whom so much depends, and who appears to have wrought out a system at once useful and humanitarian. The expense of the prison for the last quarter made the rate for each man at \$1.30 per day. The total expenses were \$14,500. Of this amount \$1,600 were expended for machin-

ery, and there is due from the United States the sum of \$500 for the care of United States prisoners at the rate of \$1.63 per day for each one. That reduces the actual cost to the Territory for the quarter, to \$12,400. Taking the present number of prisoners as a basis, 122—there were more during the first month—and we find the rate per man, per day, to be about \$1.12. All this, while the prison is being built. The stone is quarried and the adobes made on the premises. All of the iron work and common labor is performed by prisoners.

Governor Tritle reports visiting the prison many times, and says the prison discipline is perfect in every respect. The prisoners are carefully guarded and properly clothed, and well supplied with nutritious and well-cooked food. The general health of the inmates has been remarkably good.

An appropriation was made of \$20,000 in territorial bonds for the purpose of utilizing prison labor. A portion of the expenditure was for the erection of officers' quarters, dining-room, kitchen, laundry, and bath-rooms; also the erection of a reservoir whereby a large additional supply of water is held for the use of the prison buildings. There has also been erected a small machine shop, which has been supplied with lathes and drills, for the iron work to be used in the erection of the additional cells; also an enlarged enclosure formed by the erection of plank fencing and other improvements.

There is no provision made to teach the prisoners any useful occupation, whereby they may be better enabled to gain an honest living upon the expiration of their term of imprisonment. There is also no provision made for supplying the convicts with books, periodicals or proper literature of any kind, by which useful information can be obtained and the intellectual condition of the inmates made better.

"The prisoners have a great amount of leisure time, which might be properly employed under the instruction of some intelligent inmate, or some teacher employed for that purpose, whereby education may be obtained, which will make their condition better than when they entered the prison. In this humanitarian age, a system of punishment does not look merely to the isolation of the convict for a certain period as a punishment for his crime, but to an improved moral condition when the term of sentence expires and the prisoner is again to take his place in the world. The interest of society demands not alone that he be punished, but that as far as possible reformatory influences shall be thrown around him, so that when he has served his sentence and comes out again into the world he may no longer be an enemy to society but may be improved physically, intellectually, and morally."

## ARIZONA'S INSANE PERSONS.

Governor Tritle lately received a report from Asa Clark, superintendent of the private insane asylum at Stockton, at which the insane from this Territory are treated, for the quarter ending March 31, 1884. During the quarter, fifty-six persons from the Territory have been confined; three have died and one discharged, leaving fifty-two at the end of the quarter. Two of the deaths were from Yavapai County. The expense for the quarter has been \$3,955.55. The cost per week is \$6.00 per patient, "and it only needs an inspection," says the Governor, "of the treatment, food, rooms, and attending conditions, to convince any one that this is a moderate price, and that the asylum is well adapted for the purpose, and that Arizona is fitly caring for this peculiarly unfortunate class of people.

## CRIMES AND PUNISHMENTS.

It would be impossible to give in this work a history of all the scenes of violence that have occurred in this Territory. The history of the Indians elsewhere gives many of the worst cases. We here append a few of the more atrocious crimes among the whites. Stage robberies were frequent. Fights and murders among miners were formerly quite common. The following few cases give a general idea of many:—

On the night of December 10, 1883, one of the boldest robberies ever committed in Arizona took place in Bisbee, Cochise County. Not only was the crime noted for the bold manner in which the robbery was committed, but for the wanton murder of five citizens.

Shortly after 7 o'clock a party of five men, mounted and armed, rode into town, and when within a hundred yards or so of the store of A. A. Castenada, dismounted. Leaving their horses in charge of one of their number, they boldly walked up to the store above mentioned. Two of the party entered the store, and the others remained on the outside. Going up to the clerk, one of the party demanded the money in the safe, accompanying the demand with the remark, "And be damned quick about it." After getting the money, he went into the rear room, where Castenada was lying sick, and, jerking him roughly off the bed, said, "Where is your money?" Castenada replied that it was in the safe. The robber, who was evidently posted, walked to the bed, and turning down a pillow, took from under, a sack containing about \$1,000. The whole amount procured by the robbers did not exceed \$3,000. While the two were robbing the store, the balance of the gang were shooting indiscriminately at every person in sight. The first intimation that the citizens had of what was going on was the sound of rifle shots, desultory at first, but rapidly resolving into a regular fusilade. Wonder-struck at the sound, the citizens hastened to the scene, and

saw the party of men mentioned mount their horses and deliberately ride off in the direction of the way they had come.

Circumstances connected with the affair, together with information obtained from certain parties, pointed to James Howard, O. W. Sample, Dan. Dowd, Wm. Delaney, and Dan. Kelly as the perpetrators of the crime. Officers started in pursuit, and within less than a month all were safely lodged in jail at Tombstone. Associate Justice Pinney called a special term of court, to be held in February, at which they were tried, convicted, and sentenced to be hanged on March 28th. John Heith, an accessory, was convicted of murder in the second degree and sentenced to the penitentiary for life; but being considered equally, if not more guilty than the others, by citizens of Tombstone, he was taken from the jail February 22d, and hanged by an armed mob.

## WHOLESALE HANGING OF MURDERERS.

James Howard, O. W. Sample, Dan. Dowd, Wm. Delaney, and Dan. Kelly were hanged in the jail-yard at Tombstone, March 28, 1884, at 1:15 o'clock, for the Bisbee murder. All made remarks on the scaffold to the effect that they were innocent men, and that Heith, who was lynched a short time before, was also innocent. About 1,000 men witnessed the execution, the houses around the jail being thronged with people. All of them died professing faith in the Christian religion, and made the request that their bodies be handed over to Father Gallagher for burial. All five men were marched up the steps of the scaffold together, walking with a steady and unflinching step, and never flinching, and bore up without a murmur.

They were arranged in a line, allowed to bid good-bye to their friends present, and, after a few brief remarks, the fatal nooses were adjusted around their necks, and promptly at 1:15 o'clock the trap was sprung, and all five were dropped simultaneously. All of them died without a struggle, except Dowd, whose neck was not broken in the fall. There was not a hitch in the plans of the sheriff, and everything passed off quietly and peaceably, no disturbance whatever occurring.

## LYNCHING OF JOHN HEITH.

The verdict returned by the jury in the case of John Heith seemed to be looked upon by the people of Cochise county as purely a compromise verdict—every person in the County believing that if he was guilty at all (which had been proved beyond the shadow of a doubt) he was, if possible, more guilty than his companions who had been sentenced to hang, and were hung on the 28th of March, as just related.

This feeling was general throughout the country. "When Judge Pinney sentenced Heith," says a local

paper, "to be confined in the Yuma Penitentiary for life, for complicity in the Bisbee murders, a conviction seized the people that this man who, in the minds of all, was guilty of planning and carrying out one of the most heinous crimes ever committed within our borders, was not only going to escape his just punishment, death, but that, sooner or later, he would again be at large, breathing the free air of heaven and probably planning more crime, even greater in magnitude, if such were possible, than the late robbery and murders at Bisbee.

"This feeling, coupled with the statement that his attorney intended making an appeal in his case to the Supreme Court, and that his father, who is said to be a man of wealth in Texas, would reach here in a day or two, to enter into the defense of his son, were the causes that led to the hanging of Heith yesterday morning.

"Cochise County people stood quietly by and were willing to see the law carried out to the letter, but when the evidence of guilt was so strong, and a loop-hole had been left by a compromise verdict, through which the guilty one might escape justice, the people of Bisbee and Tombstone rose in their might, and yesterday morning at 8:30 o'clock, headed by some of our most honored citizens, marched quietly to the county jail and demanded the prisoner. No masks were worn, and no one seemed desirous of concealing his identity in the affair.

"When the crowd arrived at the jail, a detail of seven men from Bisbee was made to enter and demand that John Heith be turned over to them. These seven named marched straight to the door leading into the corridor of the jail and one of them knocked. The jailer, Billy Ward, opened the door unsuspectingly, supposing it was the Chinaman who brought breakfast to the prisoners at this time in the morning. Immediately on opening the door, the jailer was covered by revolvers in the hands of the seven, and ordered to give up the keys of the jail. Any attempt at resistance would have been useless, so the keys were accordingly turned over, and in a few moments the man sought for was in the hands of the deputation. As the guards were at this time away from the jail taking breakfast, no resistance was offered.

"A rope was placed around Heith's body and he was brought into the corridor of the Court House. Some suggested that they hang him to the stairs in the Court House. This suggestion was overruled, however, and the crowd, which had now filled the main hall, started for the street. Sheriff Ward met them at the door and called upon them, in the name of the law, to desist. His commands were unheeded, the crowd paying no attention to him whatever further than to take him up by main force and move him down from the Court House steps and out of the way.

"While two or three were doing this, the balance of the

crowd started down Toughnut Street on the run. About twenty men had hold of the rope that was around Heith's body—he keeping pace with the crowd and showing no signs of fear.

"On arriving at the place of execution, which was a telegraph pole below the Court House, one of the party climbed the pole and passed the rope over the cross-bar. Heith drew a handkerchief from his pocket, coolly folded it up, and placing it over his eyes asked one of the bystanders to tie it. He then informed the crowd that they were hanging an innocent man, which 'they would learn when Dowd and the others were hanged.' He then said, 'Boys, I have only one request to make; don't fill my body with bullets when I am dead.' On being informed that his last request would be respected, he notified them that he was ready. The next minute the body of John Heith was swinging in space.

"A placard was posted on the telegraph pole where Heith was found suspended and dead, bearing the following inscription:—

"JOHN HEITH  
was hanged to this pole by the  
CITIZENS OF COCHISE COUNTY  
for participation in the Bisbee massacre, as proved accessory,  
AT 8:20 A. M., FEBRUARY 22, 1884.  
(Washington's Birthday.)  
ADVANCE ARIZONA!"

This act of violence doesn't speak well for the country in some respects, while in others it proves to the outside world that Cochise County proposes to shut out for ever from its borders all lawless and un-principled characters.

#### THE TOMBSTONE HANGING.

"The execution at Tombstone," says the *Phoenix Gazette*, "forms the subject of a remarkable passage in the criminal history of the Southwest. Five men walked fearlessly to the halter and unflinchingly met the Mosaic decree of a life for a life, which has been preserved by all civilized communities. The law pronounced their fate, and each man met it unfalteringly. A more diabolical crime than that of which they were adjudged guilty, it would be difficult to conceive. The robbery of Castenada's store could have been, and virtually was accomplished without bloodshed, but a demoniac disposition led the men who were acting as sentries to open fire on the streets, which had the natural effect of exciting curiosity. As soon as a man was attracted to the scene by these motives, he was sent by the assassin's bullet to solve the problem of eternity without a word of warning, or without even suspecting the danger he was exposed to. The subsequent flight, capture, and evidence adduced at the trial, leave no doubt that the men hanged were the perpetrators of the cold-blooded and cowardly crime.

We do not believe that the men had, in spirit and letter, an impartial trial. Whilst the jury undoubtedly performed its duty conscientiously, the public pulse was so high in indignation and revolt at the horrible outrage, and the pressure of public opinion so great, that the usual conditions of those charged with crime were reversed, and the accused were pre-adjudged guilty and called upon to assert and prove their innocence. Society had been forced into this state, naturally enough, and the failing was that to which human nature is prone. Unquestionably some of the rights due to the accused were abridged, for the hanging of Heith, by a mob, at once demonstrated that if appeals were taken in the cases of the other criminals, summary vengeance would follow at the hands of the people. But the murderers made no attempt to demonstrate their innocence on trial, and the evidence of their guilt was beyond controversy. Throughout, their conduct and stoicism were inexplicable. Not once did they commit themselves by look, word, or deed, to what might be considered an implied confession of their guilt. On the other hand the men made all ostensible show of professing Christianity. To all appearance they made peace with the world and their Creator, and met death firmly, with protests of innocence on their lips.

Their religious professions appear, then, in the light of a pre-arranged plan, and the determination, inspired by desperation, of asserting their innocence to the last. Had the execution been singly and separately performed, their resolution of going into the grave with the acknowledgment of their crime buried with them, might in some instances have been broken.

#### THE CAREER OF JOSEPH CASEY.

Joseph Casey was hanged at Tucson, April 15, 1884. He confessed his crime on the gallows. He was a desperado who for some time harassed the people living along the Mexican border. He is supposed to have been an ex-soldier, and it has been claimed that he was a deserter from the regular army. He was connected with a gang of roughs who infested the Patagonia District and other mining camps in the southern portion of Pima County, engaged in horse stealing and like speculations. He is accredited with several acts of violence, and the taking of human life. In 1882 he was arrested for stealing some stock, having been pursued by officers and taken in Mexico. He was lodged in the Pima County Jail, and an indictment of robbery was found against him by the grand jury. His case was on trial on the 23d of October, 1882. That evening at supper-time there was a general jail delivery—Moyer, Murphy, and Gibson, held for the murder of Leavy, effecting their escape, together with six other prisoners, among whom was Casey, who was afterwards arrested either in New Mexico or Texas, but made his escape. Subse-

quently, and about six months after his escape from the Pima County Jail, he fell into the hands of the officers at El Paso, where Sheriff Paul, of Pima County, secured and brought him back to Tucson.

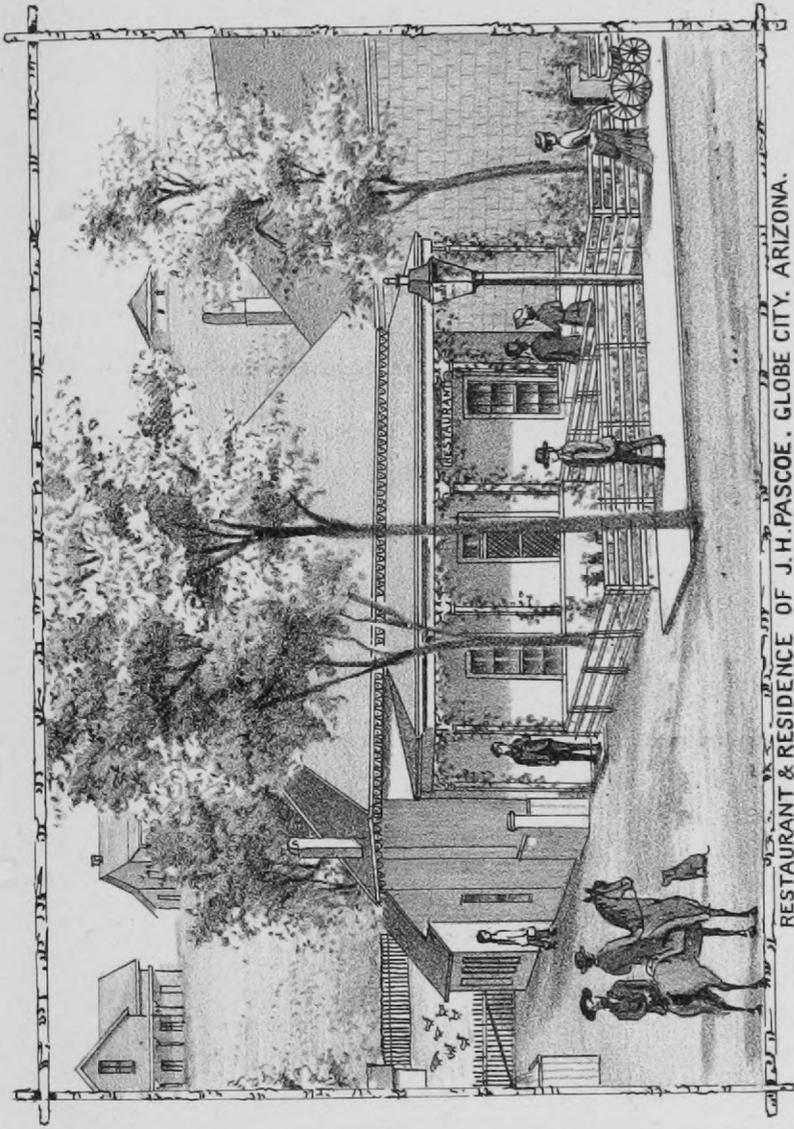
On Sunday, the 29th day of April, 1883, A. W. Holbrook, the jailer, returned to the jail after a few moments' absence and found Casey out of his cell, and in possession of a pistol, which he had secured in the jailer's room. The prisoner demanded that the jailer procure the keys and open the jail so that he could escape. This being refused, and Holbrook making an effort to regain the pistol, Casey shot and killed him. This was about 7 o'clock in the morning, and a few hours afterward a mob made an unsuccessful attempt to gain possession of the prisoner for the purpose of hanging him. A few weeks afterward Judge Sheldon arrived at Tucson and convened court. Casey's case came up and he was promptly convicted of murder in the first degree, and sentenced to be hanged. An appeal was taken, but the Supreme Court last January affirmed the decision of the court below. Judge Sheldon's death resulted in a delay in the execution of this mandate, and upon Judge Fitzgerald assuming his position on the bench, it became one of his first duties to sentence Casey to death.

Casey was nearly six feet high, and his weight was one hundred and eighty pounds. He was about twenty-eight years of age, sallow complexion, with a rather peculiar and piercing eye. Throughout his incarceration and trial, he has preserved the utmost coolness, and maintained a rather suppressed but not subdued spirit of bravado. He had but little to say of his early life, but volunteered the information, simply, that his name was not Casey. He was truly a bad man, and his legal execution produces no loss to the world.

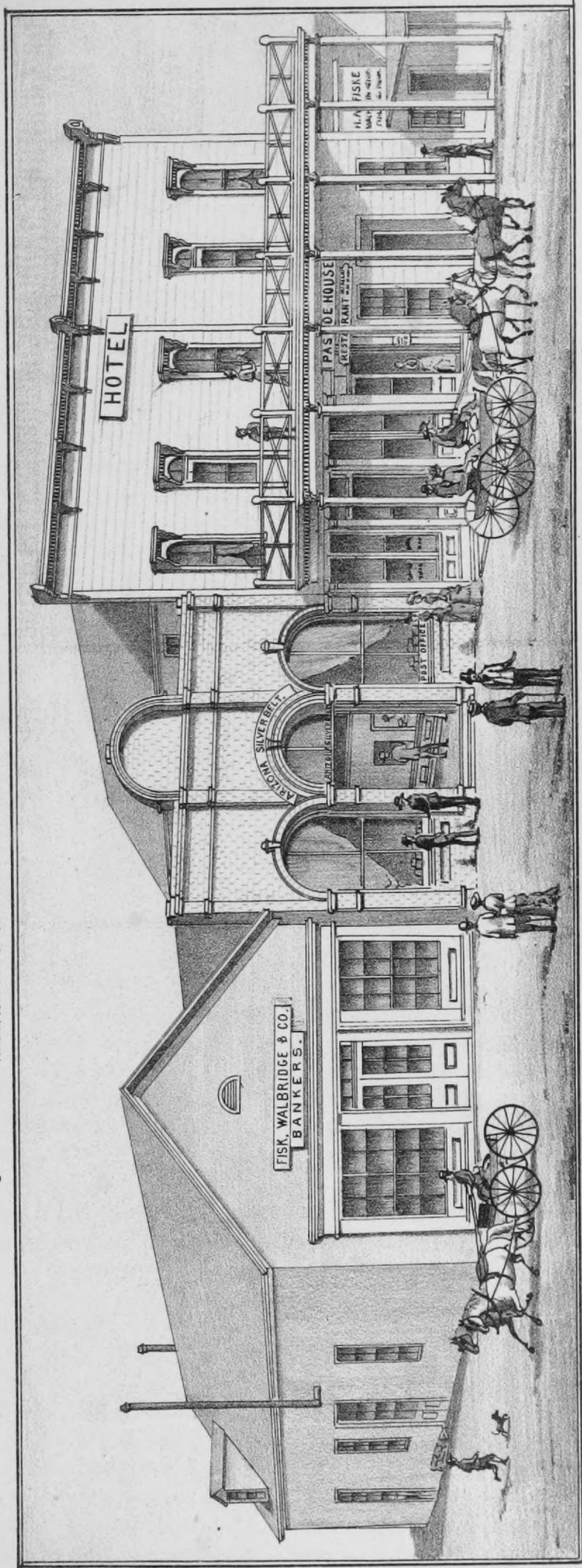
#### PUBLIC SENTIMENT.

As an evidence of public sentiment as to the prevailing condition of affairs, we quote from a few of the leading newspapers of about that date. Tucson *Star*, March 28, 1882: "The officials of Cochise County, with all the available strength which they can muster, seem to avail nothing in putting down the blood-thirsty class infesting that county. Ex-city and United States officials have taken to the hills as so many Apaches. A lot of loose, marauding thieves are scouring the country, killing good, industrious citizens for plunder. The officials are out in every direction, but nothing is accomplished."

Tombstone *Epitaph*, April 4, 1882: "The recent events in Cochise County make it incumbent upon, not only officials, but all good citizens as well, to take such positive measures as will speedily rid this section of that murderous, thieving element which has made us a reproach before the world, and so seriously retarded the industry and progress of our country."



RESTAURANT & RESIDENCE OF J. H. PASCOE. GLOBE CITY, ARIZONA.



BANK BUILDING.

"ARIZONA SILVER BELT" BUILDING.  
VIEW ON MAIN ST. GLOBE, ARIZONA.

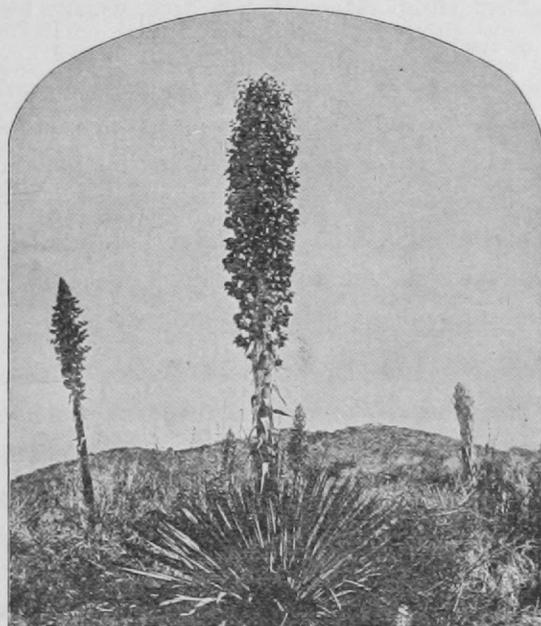
J. H. HYNDMAN'S HOTEL.

## BOTANY OF ARIZONA.

Flora Indicates Climate; Varieties of Trees; Native Trees; Natural Grasses; Wonderful Cactus; Natural Flowering Plants; Beautiful Flowers, etc.

### BOTANY OF THE TERRITORY.

**N**EXT to climate, that feature of a country most interesting and important is its botany. No one thing so enhances the natural attractiveness of a region as does an exuberant vegetation, while the economic value of any section is made or marred by the character, kind, and quantity of plants. Indeed, so accurately does the native flora determine the paternal soil, the water resources, and the prevailing climate, that abounding plants are a sure index of the extent to which a country can be immediately utilized for residence and industry. Temperature, moisture, winds, and other meteorological phenom-



SPANISH BAYONETES. (*Yucca*.)

ena have their records written by the earliest signal service—the size, tissue, fruit, and species of vegetable forms.

To suppose Arizona destitute of natural vegetation is a great mistake. Vast forests of unexplored extent are to be found in the central part. The indigenous plants, shrubs, flowers, and trees are much more numerous in variety and in species than the usual observer might suppose upon a cursory examination.

The lower Santa Cruz Valley constitutes a very distinct botanical district, many of its peculiar plants not being found elsewhere. Cacti are abundant and of various types, the lofty giant cactus towering above all. After

the rains the open plains are carpeted by a profusion of bright colored annuals.

The high annual temperature of the Territory makes the flora in some respects interesting. Some annuals of other climates become perennials here; certain plants, growing elsewhere as shrubs, develop into trees when transplanted to the valley; a few edible roots acquire a woody fiber in place of the usual fleshy tissue. A greater tendency to admixture, among plants of the same family growing adjacent, seems to exist. Several fruits are much impaired in quality, while others are improved in size and flavor. Even in the case of plants confined entirely to the valley, two things, moisture and altitude, effect marked differences in quality.

On the plains when, after the winter rains, the surface ground loses all moisture, few plants survive mid-summer; trees seldom grow at all on the elevated and dryer portions. In favorable places, along the streams, the tree growth is of the most moderate sort. Somewhat above the foot-hill slopes, where the deeper ground retains the water of the winter rain-fall, or receives constant renewals from the melting snows or living streams, the forests are made up of trees of splendid growth, while beneath, the ground is carpeted with rich native flowering plants. The plains, however, are not, on account of the dry season, valueless for pasture or agricultural use.

Many grasses and other plants valuable for grazing mature and ripen seeds in the earlier part of the dry season. So that, while uncultivated fields appear, to Eastern visitors especially, to be parched and barren, they are, in truth, rich very often with seed-laden plants, and prove to be the best pasturage. Much of the seed, too, in the chaff or free, falls on the ground and by the action of the winds gathers into such depressions as stock tracks. These small seed deposits prove to be good feeding to the grateful flocks till the rains come. Here is the mystery of fat stock upon lean-looking fields, as remarked by travelers.

### FLORA A TEST OF CLIMATE.

Aside from rain gauges, hygrometers, thermometers, and such things, all useful in their way, and helps to a correct knowledge of climate, we have a single and more certain test. It can be read and applied at a glance. It is the flora of a country. If we know the plants, we may be able to describe the climate. The botany of the region tells, with peculiar emphasis, the qualities of the climate. As, for instance, there are dense forests in Arizona, but they are all above 5,000 feet in altitude, and hence in a different climate than that which produces mesquite shrubs. Cactus is the representative of a dry and barren soil. The presence of water is indicated by the growth of cotton-wood and willow.

The largest timber is evergreen, and consists of several varieties of fir, pine, cedar, and spruce, much of which grows spontaneously and abundantly both along living natural water-courses, and upon the more rocky and sterile hill and mountain sides and summits. Of deciduous trees and *herbaceous* there are many different families and species of both forest trees, shrubs, and trailing vines, and of flowering shrubbery.

The great Arizona forest consists essentially of five species of conifers, viz: *pinus ponderosa*, called yellow pine; *p. contorta*, tamarac and red pine; *abies engelmanni*, really a spruce, but called white pine, as it has a soft, white wood; *a. menziesii*, called balsam; and *a. douglasii*, known by many names in various localities. These five species are by far the most abundant, large areas often being covered almost exclusively by but one or two of them.

#### SUGAR PINE.

This magnificent tree, *pinus lambertiana*, is abundant on the San Francisco Mountains, and the highlands about Fort Defiance. It is the most magnificent tree of all the pine kind, and, indeed, it has no superior in the vegetable creation, save the mammoth and the redwood, the confessed monarchs of the plant kingdom. It is closely related to the white pine of the Eastern States, "though," as Doctor Newberry says, "like all the conifers on the Pacific Coast, it exhibits a symmetry and perfection of figure, a healthfulness and vigor of growth not attained by the trees of any other part of the world. The mature tree sometimes reaches a height of 300 feet, and a diameter of 20 feet, but it rarely exceeds 200 feet in height and a diameter of eight, in Arizona. The young trees of the sugar pine give early promise of the majesty to which they subsequently attain. They are unmistakably young giants; even when having a trunk a foot in diameter, their remote and regularly-whorled branches, like the stem, covered with a smooth, grayish-green bark, showing that, although so large, the plant is still 'in the milk,' and has only begun its life of many centuries.

The sugar pine conspicuously exhibits one of the most general and striking characteristics of the conifers—the great development of the trunk at the expense of the branches. Nearly the whole growth is thrown into the trunk, which generally stands without a flaw or flexure, a perpendicular cone, all its transverse sections accurately circular, sparsely set with branches, which, in their insignificance, seem like the festoons of ivy wreathing about the columns of some ancient ruin. The leaves are three inches long, dark bluish-green in color, and they grow in groups of five. The foliage is not dense. The cones are large, sometimes eighteen inches long by four thick. The wood is similar to that of the white pine—white, soft, homogeneous, straight-grained, clear, and free-splitting.

The tree derives its name from a sweet resin which exudes from the duramen or hard wood of the tree. This resin is sugar-like in appearance, granulation, and taste, and could not be distinguished from the manna of the drug stores except by a slight terebinthine flavor. The pine sugar is cathartic. It is found in small quantities only, though it is said 150 pounds of it were collected by a man who devoted himself for a few weeks to the business of gathering it.

#### YELLOW PINE.

This valuable tree, *pinus ponderosa*, is found in the San Francisco and Santa Ysabel Mountains.

It sometimes reaches a diameter of seven feet, and one hundred feet high, and is next in size among the pines of Idaho to the sugar pine. Its leaves grow in threes at the end of the branches, giving the foliage a peculiarly tufted appearance. The color of the leaves is a dark yellowish-green. The bark is of a light yellowish-brown or cork color, and is divided into large, smooth plates about four inches wide and twelve to twenty inches long. The piñon (*pinus edulis*) is found at from 5,700 to 6,800 feet altitude. It furnishes food to the Indians and fuel to the whites. It is a crabbed shrub rather than a tree, usually less than twenty or twenty-five feet in height.

The pine family is thus represented by forms from the shrubs to the loftiest trees, giving us our vast forests, a large industry, and a rich material for all building purposes. None can fail to be impressed with the large dominion of the order, and the admirer of nature's mute armies always feels like tribute-making in the presence of these conquerors of seasons and centuries.

#### NATIVE OAK TREES.

In San Pedro Valley are clumps of Emery's Oak growing among the foot-hills. They are just dense enough to afford a shade, and yet do not interfere with the growth of the grass. There is no undergrowth of bushes, so that the scene fairly bears comparison with a park.

In the Santa Rita Mountains, on the slopes, are seen low, broad branched oak trees of the California variety. Scrub oak and live-oak are scattered in all parts of the Territory. In the valleys of the Santa Cruz and Sonoita, the low, broad oak is seen everywhere.

It resembles the white oak of the Atlantic slope in the color of its bark and the shape of its leaves; but its growth is very different. It has a long acorn and is a very large tree. It seldom reaches a greater height than sixty feet and is often wider than high, sometimes measuring 125 feet from side to side. The tree furnishes no straight timber, and the wood is soft and brittle and of no use in the arts. It is not even fit for fence rails. The tree is, however, very beautiful and majestic, and is an important element in those "scenes of quiet beauty which so often

excite the admiration of the traveler." Groves of it resemble the English parks. At the ends are branches which hang down like weeping willows. The acorn once formed the chief article of food of the Indians, and is from two to two and a half inches long.

The mistletoe grows abundantly on the oak trees. The Spanish moss (*Evernia Jubata*), which hangs in long, lace-like gray beards from the branches, also serves to give beauty to the groves in the valleys.

The live oak is a low, spreading tree, much like an apple tree in shape. The foliage is dark and dense. The acorns small, thin, and sharp pointed. The wood is hard, crooked in grain and valuable in ship building.

#### VARIETIES OF PLANTS AND SHRUBS.

Scattered about the valleys, cañons, and streams of Arizona, are a great variety of trees and plants.

Along the creeks of the San Francisco Mountains are the black walnut, sycamore, cottonwood, etc., and in the valleys and on the plains the valuable mesquite. The southern sycamore, with its graceful, drooping leaves, grows along the streams. The bark is very clean and smooth, and almost pure white; the fruit is borne in clusters of four or five.

Cottonwood, willow, and alder grow along the banks of the Rio Verde, intermixed with grape-vines yielding a small acid fruit. Mesquite, iron-wood, palo verde, artemisia, and species of *opuntia* and *cereus* cover the *mesa*, of which the more open parts furnish indifferent grazing. Scrub oak, live-oak, and large pine are found on the mountain ranges.

In the Santa Cruz Valley grow the maguay, the yucca, and various kinds of *cacti*, together with small oaks. The valley spreads out from six to eight miles in width and some twelve or fifteen in length. Unlike the desolate and barren plains between the mountain ridges, this valley is covered with the most luxuriant herbage, and thickly studded with live-oaks, not like a forest, but rather like a cultivated park.

Near Fort Bowie white and yellow pines and firs grow on the mountain-tops in unlimited quantities, and to a considerable height, with trunks some times five feet in diameter.

The juniper tree, the berries of which are used as food by the Indians, also grows on the mountains; and sparingly along the margins of the streams grow the cottonwood, oak, sycamore and willow.

The sacaton and three varieties of gramma grass cover the plain, where there are springs, and water at ten feet deep.

Cottonwood, alder, and sycamore grow on the banks of the streams. White ash and white oak grow on the foot-hills. The mountain mahogany is often over thirty feet high, with a base two feet in diameter; the wood is very

hard, close-grained, dark-colored, and taking a beautiful finish when wrought.

#### MESQUITE TREES.

This is a favorite shrub in Arizona and invariably grows on good soil. Forests of it are found in the southern portions of the Territory. It attains a height of over thirty feet, with proportionate thickness; its wood makes excellent timber for wagon spokes, and as firewood is unsurpassed. The fruit, which is a kind of bean, and called by the natives *peehita*, is splendid feed for cattle, hogs, and horses. From this tree flows, says Hinton, in the summer months, in considerable quantities, a dark liquid which has all the properties of gum Arabic, and when clarified cannot be distinguished from it. It answers for all the purposes the latter is used for, and with exactly the same effect. A small shrub, evidently belonging to the same family, grows at the foot of low hills, has a rather pretty, reddish, feathery and very odoriferous flower, but seems not to attain the size of even a small tree.

"Three species," says Hinton, "or varieties of the mesquite tree (which is related to the acacia and locust) occur in Arizona. The Mexican name is *algarobia*, which is sometimes used as its scientific name; its foliage is similar to that of the locust, but more delicate and sparse. Its wood is available for a great variety of purposes; posts in use for fifty years are still sound; it is fine grained, and susceptible of a high polish. It thrives in hot, dry places in the valleys, degenerates on the *mesas*, and is rare in the steeper slopes; the tree has a spreading habit, the limbs often reaching the ground."

In the Santa Cruz region two varieties are distinguished by the size of the pods, the larger being four to six inches in length, and the smaller, known as the "screw bean," from its screw-shaped pods, two to four inches. The larger kinds, growing in the valleys of Santa Cruz and of the Rillito, are unsurpassed for fuel, and make excellent lumber for some purposes, particularly for wagons. On the *mesa* these trees are very small, stunted, and almost leafless, more like a shrub than a tree, yet having the most stupendous roots, which, both dead and green, make most excellent fire-wood and a natural charcoal. Its altitude does not exceed 4,500 feet, and the large kind is rarely found north of the Gila. Doctor Loew says: "The mesquite, cactus, and yucca are the representatives of a hot and dry climate. It is shown by the structure of these plants that it is necessary they should by every means prevent the loss of water by evaporation from their surface.

The food, consisting of eight to twelve beans in a long sweet, pulpy pod, like that of the carob of the Old World, is a valuable food for animals, and much prized by the Indians as food for themselves, being gathered in the fall, made into meal, and used as porridge.

## SAGE BRUSH.

This shrub is in never ending profusion, and, in general appearance, resembles the cultivated sage, having the same form and color, flower, leaf, and branch, its aroma being similar but stronger and not so agreeable. Its average height is about three feet; sometimes it attains the height of five feet, with a diameter of four or five inches. The sage is strictly the shrub of the desert. From the eastern foot-hills of the Rocky Mountains to the Pacific Ocean, and from Mexico to the British possessions, it occupies nearly all lands too poor and dry to support any other vegetation. It burns even when green, with a quick, bright flame, and in many extensive districts was the sole fuel of the emigrants, miners, and prospectors. A small variety called the white sage is valuable for grazing in winter. Cattle thrive on it, but it imparts a peculiar, though not a disagreeable flavor to beef. The sloughs extending over the Colorado River bottom are bordered by cottonwood, willow, and mesquite timber suitable for fuel. The soil is rich, sandy loam, equal to any on the lower Mississippi, formed by the overflow of the river in May and June, after which the vegetable growths are amazing; pig-weed persistently runs up to twelve feet in six weeks, with a diameter of eight inches.

## VALUABLE GRASSES.

There are not less than five fibrous plants, any one of which can be used as a substitute for hemp and manilla in the manufacture of cordage. The most common and probably the best is the bear grass, which is found growing in almost every locality, and that too where nothing else will grow. The natives have known its value from the earliest date of antiquity. It is a perennial, having long, slender leaves filled with fibers as tough as buckskin. Cut and thrown into a pool of water during the summer months, the fleshy matter rots away in ten days so that it can be cleaned with little labor, the fiber coming out bright and strong, fit for immediate use. Its great length—there being no trouble in getting it to average from eighteen inches to two feet—adapts it to the manufacture of any kind of strong cordage from the smallest rope to the largest cable.

Beside the bear grass there is the mescal, the largest variety of which could be profitably used, for its fiber is exceedingly strong. Then there is the yucca, two varieties, *yucca grandiflora* and the Spanish bayonet—rich in fiber, besides another and more prolific plant that grows in the southern portion of the Territory, the botanical name of which we do not know, that is not inferior to either of the others. No effort has as yet been made to utilize either of these plants, and all cordage is imported at great expense to supply the ever increasing demand. Indian labor could be profitably used in the production of this material, inas-

much as the staple is of natural growth and so wide-spread in its distribution. The man or company who will develop this industry can make a fortune, and at the same time become a public benefactor.—*Gazette*.

Wild hemp grows in abundance six to twelve feet in the same time, its fiber being similar to that from which manilla cordage is made.

The arrowhead, as it is called—clumps of slender, reed-like shoots growing from a common root to the height of six or eight feet, were scattered all over—interspersed occasionally with the greasewood and mesquite tree; the latter is a very useful feature of the Arizona Valley and *mesa* lands.

## VARIOUS USEFUL PLANTS.

The hedeundilla is the bush or shrub which covers the, as yet, dry valleys and high *mesas* of Arizona to such an extent as to be met with at every step, from two to eight feet in height, more or less densely grown. When a branch is broken off, and its small leaves rubbed between the fingers, an unpleasant odor will remain on one's hand until wiped off, to which circumstance this plant is indebted for its non-complimentary name. When merely approached to the nose the bad odor is insignificant. It produces, during May and June, a rather pretty yellow blossom, which turns into seed (a round, white, feathery ball) and is blown away. A most valuable gum is obtained from this plant which is used for medicinal purposes.

A beautiful and useful flowering plant, which adorns, with its lively green leaves and scarlet blossoms, the hills and *mesas* of Arizona, is called *ocotillo*. It rises from the ground in a group of from ten to thirty almost straight poles, which gradually extend outward and attain a height of from eight to fifteen feet. In the month of April the small leaves begin to appear in clusters of five, and gradually cover up the whole stem, which seems to be enveloped in a covering of vivid green. Upon coming nearer, however, and touching this pretty pole, one becomes painfully aware of the hidden, sharp thorns which underneath run along the whole length of the gray and green stem, on whose top a lovely flower of from six to eight inches in length, consisting of many scarlet blossoms, commences to display itself in April. Very good fences are made with the poles of this plant, and, although set in the ground without root, they will continue green for years, never more, however, producing a flower if the tops are once cut off.

## MANY VARIETIES OF CACTUS.

There are over twenty distinct varieties of cacti and nearly all kinds are met with along sandy creek washes. The whole way is beset with cacti of varied degrees of formidable armature, from the innocent pincushion cactus, that only catches to your feet and clothing with its fish-hook spines, while the other straight spines tickle you, to



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DELEGATE TO NEW ORLEANS EXPOSITION.



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ALTERNATE DELEGATE TO NEW ORLEANS EXPOSITION.

the horrid, wide-branching tree-cactus, with its long, glistening, barbed spines, that completely clothe limbs and buds, the latter being shed off so frequently, and in such abundance, that they form high mounds under the trees, and are often scattered about for many rods. Any of these spines are strong enough to pierce through a cow-hide boot-leg, and when it reaches the flesh you are gone. The retrorse barbs cause it to continue entering, the more you struggle. The best thing to do, is to break off at once what you can, and let the rest fester and come away with the pus.

Almost as cruel are the bushes of an acacia, appropriately called "cat's claws," that crowd into the trail, and reach their slender limbs across the way, armed every half-inch with pairs of strong, recurved thorns, that tap your veins unawares, and cause you to add drops of blood to the perspiration that drips almost constantly from your person, while traveling the narrow valleys.

The *cholla* is one mass of spines, barbed on the fish-hook principle. It is considered particularly funny to hear of somebody's having fallen into a *cholla*.

The "deer brush" resembles deer's horns.

The ocotilla is simply a wattle of sticks, fifteen and twenty together, waiting to be cut down and turned into pailings.

The *bisnaga* is a thorny cactus like an immense water-melon set on end. One need never die of thirst where it is found.

#### GIANT CACTUS OF ARIZONA.

The most striking of the Arizona plants is the so-called giant cactus, *cercus giganteus*. It is called by the natives *sahuara*, and is a grand-looking plant, with its enormously tall, pale green and prickly body, from which extend at different places in different specimens gigantic arms, reaching at times the incredible height of fifty feet, although the average may be stated as from twenty to thirty feet. This disparity in size results from the different natures of the ground on which it stands. On the hill-sides, among very rocky ground, where it flourishes in spite of all reasonable expectation, it hardly ever exceeds over twenty feet, while on the high table-lands, where it receives more nourishment from the sandy ground mixed with loam, it attains its most majestic proportions. Many of these giants of the desert grow like an enormous straight column, without extending any branches, which on others issue from the mother trunk in more or less graceful forms, mostly inclining in a general bend upward.

The flower of this remarkable plant is in shape like that of all cacti; in color a pale yellow, blooming during the month of May, when it gradually fades, developing until June into a fruit called by the natives *pitahaya*. This fruit, when ripe, is in shape and size like a small pear.

Its outer covering is of a light reddish-brown, which incloses a dark red pulp with small black seeds. This pulp is greatly prized by the Mexicans, who manufacture therefrom very palatable preserves, or boil it with sugar into a pleasant sirup.

In the *sahuara* the wood-pecker makes his home, and also unwittingly that of other birds, who take possession of the holes he makes. Mr. Stevens, a taxidermist, whose camp is in the neighborhood of the old church of San Xavair, reports having found in one *sahuara* the nest of a Whitney owl, containing an old bird with three young ones, a nest of the Gila wood-pecker with three young, and a nest of Cooper's fly catchers containing four eggs, which, taking all together, was a big haul for any collector to make at one time.

#### GIANT CACTUS A CURIOUS SIGHT.

One of the most curious sights that meet our eyes here in Arizona are the *sahuara*, or giant cacti, which, like a forest of tree trunks, denuded of their branches, cover the plains. They vary in height from a few feet to forty, and even sixty feet high. They are cylindrical in shape, fluted like a Corinthian column, covered with sharp thorns. Occasionally branches shoot out from the main trunk, and then grow parallel with the main stem, like the branches of a candelabra. These grow all over these sandy deserts, seemingly without moisture, and while apparently worthless, afford material for the traveler or the settler, not to be despised. It grows rapidly and soon decays. The fruit somewhat resembles figs, which are gathered and much prized by Indians and Mexicans. In its internal structure, the center is of a pulpy mass; this is surrounded by a growth of woody poles in the form of a cylinder, and the whole held together by the outside skin, or fiber. When dead, these poles are used for covering the roofs of adobe houses, making fences and such like, and also for wood.

We made haste especially to cut down an example of the enormous *sahuaras*, the organ-cactus, which, sometimes rising to a height of sixty feet, bristle over the landscape like masts or columns, and if with branches, like the seven-branched candlestick of the Mosaic law. Inside it consists of a white, juicy pulp, imbedding as a skeleton long wands which, when dried, serve a number of useful purposes. It has a palatable fruit, which the Indians collect in August with long forked sticks.

#### INTERESTING SPECIMENS OF CACTI.

The prickly pear, or *durasnillo*, grows mostly on highlands, attaining an average height of from five to six feet and is easily distinguished by its fleshy, round leaves, issuing almost immediately from the ground, and from one another. The leaves have an average surface diameter of from five to seven inches, and measure a little over one inch in thickness. Every year most of the leaves bring

forth one or more new ones, which, while in their tender state and before the thorns come out, are gathered by the poorest classes and cooked, making a dish that tastes not unlike string beans.

Another interesting specimen is known in common parlance as *choyas*. These scarcely ever attain a height of five feet and branch profusely, the limbs particularly toward the ends, bearing large branches of thorny leaves, whose sharp prickles penetrate the thickest clothing. The unfortunate who runs against them generally carries away every bur he touches, whether he wants them or not.

This cactus is especially the herder's and traveler's nightmare. It is the largest, attaining a height of ten to twelve feet, and probably the best description that can be given of it is, that it rises from the ground on two or three prickly stems about the thickness of a man's leg. These extend at the height of four or five feet into innumerable prongs, so thickly covered with clusters of thorns, which have a constant habit of falling off, that the original greenish color of the fleshy part is totally covered by the pale yellow of these millions of needles. Birds make their nests in these labyrinths of daggers, where no human finger can approach unscathed. All the *choyas* bear a small yellow fruit, but as even these are thickly covered with minute, invisible, and when tasted most disagreeable prickles, no use is made of them.

The aggregated cactus grows in large, dense masses, often 100 or 200 heads from a single base, the whole often of the shape and size of a bushel basket, generally on apparently naked rocks, in the proper season densely covered with beautiful crimson flowers. It is found in flower in April. The flowers are less than two inches long, much more densely covered with bristle-bearing sepals than any other species, and with only five stigmata; the naked space in the base of the tube is nearly four inches long.

*Echinocactus Lecontei*, f. 3-5; *Syn. Cact.*, p. 18, grows in the Colorado Valley, and is in flower in April. Specimens have below eight, and upwards of thirteen ribs. The lowest bunches (those developed probably in the third or fourth year) have eight radial and one central spine, all annulated. The central one is curved, not hooked; one, or even three of the lower radial ones are often hooked. The fully developed bunches consist of four central spines, the upper and lower one of which is quite flat, five or seven lower radial ones, never hooked, three upper ones, and from six to twelve slender, bristly, radial spines. The ovary is covered with about thirty sepaloïd scales.

A very singular specimen of the variegated family of cacti is that commonly called "niggerhead," or by the Mexicans, *bisnaga*; of extremely slow growth, it never attains a height of over four feet, consists of a cylinder

capped by a nicely rounded top, and covered all over by the roughest, sharpest, and in every way most obnoxious thorns and hooks. These have been and still are, in the absence of the mercantile kind, used with success as fish-hooks; they answer for the purpose admirably, lacking only the barb, which would be demanding too much of a plant which produces and gives without cost several thousand freely. When this *bisnaga*, which grows on the foothills and high plains or *mesas*, attains the height of about two feet, it proves a blessing to the exhausted wanderer, inasmuch as all its juice, by surrounding it with fire, will retire into a cavity existing in its central part, whence by opening the plant it may be taken. The diameter of this cactus being generally about three-fourths its height, about one-half gallon of fluid may be obtained.

The Indians collect the fruit of the *petajaya*, a species of cactus. This fruit is dried in the sun and resembles our figs in size, taste, and shape, but the external husk or covering is not edible. They also macerate it in water after being dried, when the saccharine qualities cause the liquid to ferment, and after such fermentation it becomes highly intoxicating. It is upon this liquor that the Maricopas and Pimas get drunk once a year, the revelry continuing for a week or two at a time; but it is also a universal custom with them to take regular turns, so that only one-third of the party is supposed to indulge at one time, the remainder being required to take care of their stimulated comrades, and protect them from injuring each other or being injured by other tribes.

#### TERRIBLE EXPERIENCE.

"While making one of the deflections around a bluff about half-way up the slope," says J. G. Lemmon, botanist, "my wife met with a terrible experience, that came near terminating our trip. We were climbing slowly along, I in advance, when suddenly I heard a cry of pain; and turning, I beheld, to my horror, my wife wildly shaking her gloved hand, in which was a bur of the frightful cactus described, which had dropped and rolled down from an unseen plant somewhere above. 'Don't shake your hand,' I cried; but too late. Every pain-propelled jerk had caused more and more of the long-barbed spines to enter her fingers, the buckskin gloves only aiding their advance. Flying to the rescue, I seized her wrist, placed her hand near a jutting rock, then with my pick pressed the cruel bur into a crevice, and quickly withdrew her hand. Perhaps no torture known exceeds that produced by attempting to extract these spines from human flesh.

"One of the favorite tortures inflicted upon captive whites by the Apaches is to strip their victims of clothing, tie their hands and feet, then hurl them against these cacti, rolling them with their lances over upon the broken-down

branches, until the poor wretches die from the fiendish torment.

"Animals in Arizona impelled by hunger or thirst often expose their noses to these attacks, when they become mad with pain, and die amidst frantic efforts to remove the burs. It is the worst country in the world for sheep. I have seen unsophisticated lambs that had caught a bur from lying down. In attempting to remove it with their teeth, the nose had become attached to their sides, and death from starvation was inevitable.

"Wounds from the *agave*, or *mescal*, and the *yucca*, or Spanish bayonet, plants of which are numerous everywhere in Arizona, differ from cactus wounds in this: The long, smooth, hard point is thrust into the flesh easier, and to a greater depth, usually; but having no barbs, it may be at once withdrawn entire. Not so with cacti. The loose sheath of the spine remains in the wound, and generally all of the brittle spine enters the flesh.

"Not until four long hours after, when all except one of the obstacles that interposed between us and the summit had been surmounted; not until discouragement, induced by that forbidding barrier, prostrated her utterly—did my wife give way to the pain of the accumulated hardships of the trip, sink down upon a rock, toss her hand about to mitigate the throbbing pain, and moan audibly, while tears suffused her cheeks."

#### PALO VERDE TREE.

The most pleasing of all the cactus vegetation is the *palo verde*, a tree frequently growing to the height of twenty feet, and with long, sweeping branches. The bark is smooth and of a greenish hue, from which it gets its name. The fiber is porous and decays after a few months' exposure.

A late writer expresses his opinion of this, that it is the perfect personification of ugliness, ungainliness and uselessness. It cannot give shade, because it has no leaves, but branches out into minute prongs with lazy thorns. Its wood is too soft and spongy to be of any use when green and as it rots and falls to pieces upon the first signs of decay, is never hauled home for fire-wood. To the dirty, greenish color of its smooth bark it is indebted for its name; its blossoms are yellow bunches of minute flowers, which turn into small, round seeds, that soon drop off. The *palo verde* ("green stick") grows as large as an apple tree, but is more like a mammoth sea-weed. It is a native of Arizona and loves the barren desert.

#### YUCCA OR SPANISH BAYONET.

This plant grows in all parts of Arizona. There are several kinds. *Yucca whipple* grows plentifully at the mouth of Diamond River, in tufts on the rocks. *Yucca baccatta* grows from three to ten feet high, with leaves

fifteen inches long; panicle, two feet long; flowers more than two inches in diameter, the segments ovate-oblong, straw color internally, brownish-purple externally.

It grows in profusion on all the dry plains and rolling uplands of the country, and reaches a height of from two to three feet, with long and narrow leaves, which will make excellent rope, paper, cloth, and other fabrics. The roots are used by the Mexicans as a substitute for soap; a heavy lather is made by agitating the crushed roots in the water, which is said to be superior to ordinary soap for the cleansing of flannel fabrics. It is also used as a hair wash, and is said to keep it clean, soft, and glossy.

Upon the rocky ledges a small species of agave grows in abundance. The low leaves, which are pointed with sharp spines, are very troublesome to foot travel. They are of use to the natives, who employ the strong fibers they contain in making coarse ropes. The plant is known as *lechagua*.

#### NATIVE FLOWERING PLANTS.

It is almost humiliating to observe that until a plant takes its place as a simple medicine, or a poison, or is found to contribute in some way to our daily necessities, it is passed over in ignorance by generation after generation of careless folk. People are either too busy or too idle to name the insects and flowers. It is found sufficient to the country folk to call them weeds; and admiring ladies in their summer jaunts are satisfied with such designations as "that yellow thing," or the other "purple thing."

The herbaceous flowering plants are so numerous that we can only speak briefly of the members of a few families.

Of a very extensive flower-bearing class, noted for flowers only, a few characteristic species will be named. This is the larger division of the botanic field common to the hills and valleys, and to the botanist by far the most attractive. The expert, however, would call the attention of any one seeking the general character of the plant life of the region, to the distinguishing forms. Such forms are pretty well agreed upon.

The buttercups are represented by the *Ranunculus Californicus*, which, during the whole year, may be seen with its yellow flowers, in moist, grassy places.

Conspicuous along the shaded streams and moist hill-sides are several species of the "monkey flower." About moist cliffs, the *collinsia bicolor* grows. This has a beautiful flower, and is often cultivated. It has a large, salmon-colored cup, blooming in great profusion on a low, sticky, ragged-looking plant, and the other about as large, but of a soft golden yellow, with reddish spots on one lip. The last always grows in low, wet, sunny places, and has a weak stem and coarse leaf. You always stop to pick and ad-

mire the golden velvet cup of this "yellow thing." It is the golden monkey flower.

The lupines are numerous, and nearly all handsome.

Two wild roses, one in the woods and the other on the open lands, are found. They are both very fragrant, both beautiful, but not as showy as cultivated roses.

Every child must stop to gather the bright scarlet flower they call Indian pink. Its love of stone heaps, its sticky stem, and its fiery, fringed petals, easily describe this favorite wild flower. But for very good scientific reasons it ought not to be called a pink, and its stickiness has earned it the name of the old wine-god's attendant, the untidy Silenus, who flourished before the age of pocket-handkerchiefs. So the Greeks called this plant *Silene*, and so should we. The English call it catchfly; but so they miss the classic story and do not improve the name.

There is another conspicuous scarlet blossom, much more common, that is known by the same name. It will be recognized as a brushy-looking tuft of flame-colored flowers, seen on all open, sunny hills, and borders of woods until late in the summer. Painter's brush it was called by early travelers through the far West, and very well named, for it looks like a brush that has been dipped in scarlet. In England, where it blossoms in a few wet meadows, it is called painted-cup. It has received in botany a pretty Spanish name, *Castilleia*, and, to reconcile all differences, it should be called so.

In addition to the forest growths there are many kinds of shrubs, flowers, and grasses. The choke-cherry, the gooseberry, the buffalo-berry, the bull-berry, and black and red currants are found along the streams and in moist places of the middle and lower altitudes. The meadows and hill-sides are spangled with bright-colored flowers, among which may be noted the bee-larkspur, the columbine, the harebell, the lupin, the evening primrose, the aster, the painted-cup and the gentian. It is not uncommon to find daisies, buttercups, forget-me-nots, white ground phlox, and other field flowers flourishing in profusion near the melting snow-banks during the month of July.

Everywhere, both in sheltered and open places, is a rich yellow, daisy-like flower, with finely cut, pale green leaves, like chrysanthemum leaves. Yellow daisy, they call it, but it is more like the *Coreopsis*, and for want of a better popular name let it be called so. Daisies have leaves growing on the ground, and this unusually pretty flower does not.

All our road-sides, and those fields left to a volunteer crop, are adorned with the beautiful azure lilies that hold on patiently through several months of dry weather. They are lilies in a strict sense, waving long, wax-like cups

among the yellow grasses. Let them not be called blue-bells. A blue-bell hangs with its mouth downwards, and these blue lilies stand upright.

The number of plants is so great that to make a full catalogue of them would be of interest to the professional botanist only.

Of grasses, the most important is the grama, which exists in altitudes of 4,000 to 7,000 feet, and is partial to granitic, rhyolitic and basaltic soils, avoiding those derived from limestone, clay, or sandstone. They are frequently accompanied by the mesquite grass. At higher altitudes other grasses occur. The growth of grass in bunches is characteristic, and results from the winds that sweep over a dry soil, carrying away its finer particles, leaving only the coarse ones. The grasses, therefore, mainly spread by their roots.

#### BEAUTIFUL FLORAL SCENE.

Of wild flowers there are a great variety and abundance, and they have their different seasons for blooming, and in cañons, where the soil is always moist, flowers may be seen in every month of the year. In the spring-time the hills are frequently covered with them, and their red, blue, or yellow petals hide everything else. Each month has its flowers. In March the grass of a valley may be hidden under red, in April under blue, and in May under yellow blossoms.

In April, May, or June, whenever we choose to look, there is a glow of bright colors in fields and on hill-sides. The air is perfumed with a pleasant fragrance. There is such a profusion of flowers that we cannot count them. They mingle their colors and fragrance, and we stand enchanted in a field of beauty. Botanical names and terms are but luggage to worry and perplex. We forget it all, and only feel and know the charm that surrounds us.

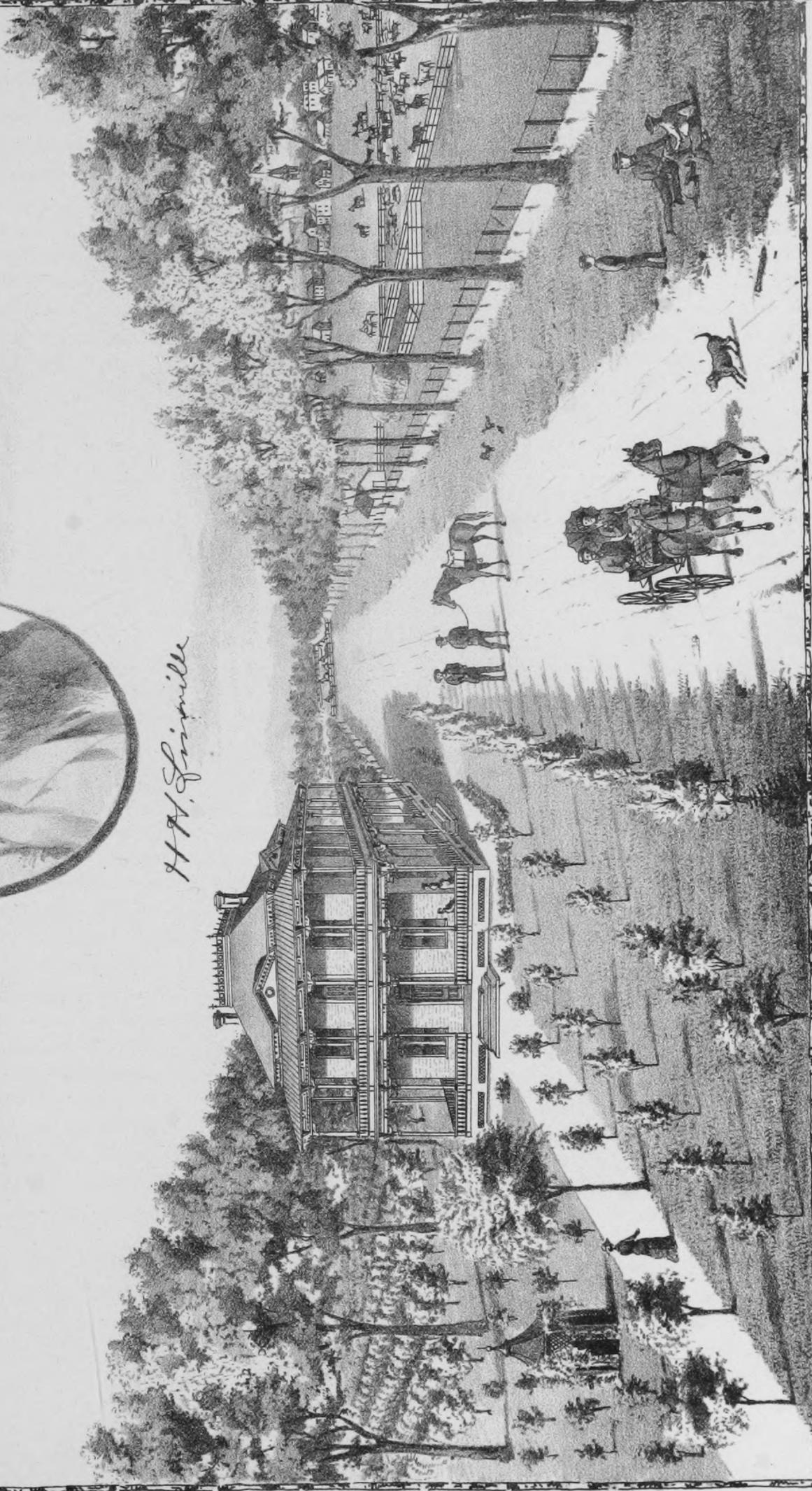
There are great fields in which flowers of many sorts are mingled in a perfect carnival of color; then come exclusive family gatherings, where the blues, the crimsons, or the purples have it all their own way; and every now and then you come upon great tracts resplendent with the most royally gorgeous of wild flowers.

If we go to the woods in summer-time, after the fields begin to brown with age and ripeness, and find some shady brook passing under the alders, the bay trees, the pines, and the oaks, we shall enjoy the scene with no less fervor. Here are the ferns, a numerous family, with mosses and lichens. Here are lilies, saxifrages, equisetæ, orchids, sedges, holygrass, and liverworts.

The above is not overdrawn; yet, in many places in Arizona, it would be far from the truth. In others it is not up to the reality. What is true of one part of Arizona, may not be of another at a different elevation.



*H.H. Linville*



"LINVILLE RANCH," PROPERTY OF H. H. LINVILLE, PHOENIX, ARIZONA.

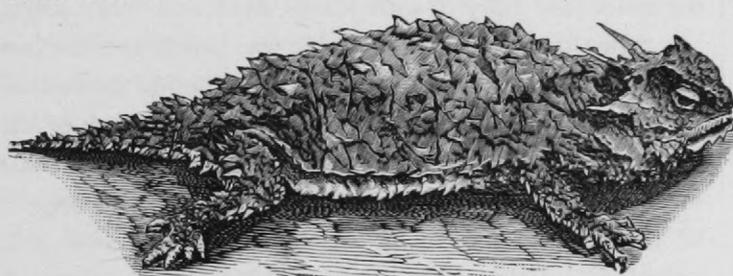
## ZOOLOGY OF ARIZONA.

Principal Animals; Dwarf Deer; Arizona Lion; List of Small Animals; Gila Monster; Numerous Birds; List of Fishes; Fine Hunting, etc.

## ZOOLOGY OF ARIZONA.

WE do not propose to give a scientific description of all the animals of Arizona, but will mention a few of the more common kinds. Many have become extinct. Buffalo were at one time plenty on the head-waters of the Arkansas, and doubtless roamed over the plains of Arizona at an early period.

In Arizona, Doctor Coues obtained, some years since, evidence considered satisfactory of the former presence of the buffalo in that Territory, where it is now entirely unknown.



THE HORNED TOAD OF ARIZONA.

Fishermen find their skulls in Utah Lake, where they were drowned in great numbers at some time.

There are still fine elk to be found in the ravines and glens of the San Francisco and Sierra Blanco Mountains. They were about the first animals to take fright at civilization. They were mercilessly killed by hunters, killed not for their flesh but for the fun of killing. They will soon be exterminated. The meat resembles that of the deer, but is a little coarser in grain. The elk are shy animals, have a very quick ear, and are more difficult to approach than any other game animal, unless the mountain sheep be excepted. They ordinarily lie hidden in thickets during the middle of the day, and feed about sunrise and sunset, at which time the hunters seek them.

Panthers, wild-cats and cinnamon bears haunt the pine forests of the mountains; coyotes are abundant; gray wolves and foxes are often seen; deer are occasionally shot; few birds are permanent residents; the wild turkey is abundant, mountain quail less so, and a few ducks and snipes frequent the streams.

## ROCKY MOUNTAIN SHEEP.

Hundreds of them are seen on the Colorado plateau, especially around Bill Williams' Mountain and vicinity.

The Ives' expeditions reported seeing them by the dozen along the mountains of the Colorado River. This sheep is a dweller of the elevated rocky ranges and loves inaccessible places. Hence he is not often seen nor can the number be well estimated. It is a rare and very shy animal, and is seldom killed. Its length is about five feet, and its weight sometimes 350 pounds, considerably greater than that of the deer or domesticated sheep. The color is white beneath, grayish-brown elsewhere. The horns of the ram are very large, sometimes five inches through at the base, and three feet long. The horns after starting upward turn backward, then downward, and so round with a circular or spiral shape, the tip inclining outward. Mountaineers assert that these horns are used by the sheep in getting down from the high cliffs, which he is fond of frequenting. "Instead of clambering down toilsomely over the rugged and broken rocks, he makes an easy job of it by leaping headlong confidently down over precipices 50, yes, 100 feet high, and alights head first on his horns, which are strong enough to be unbroken by the shock, and elastic enough to throw him ten or fifteen feet into the air—and the next time he alights on his feet, all right."

The wild goats of the mountains are beautiful and hardy animals; living as they do near the snow line in the summer, they are seldom disturbed by hunters, and when pursued are so agile and sure-footed that they easily escape along the ledges and precipices, where man dare not follow. The first that were discovered by white men were very tame, and could be easily approached within pistol-shot. Captured when young, they are easily domesticated, and their fleece is said to compare favorably with the finest cashmere.

## THE BEAR FAMILY.

The grizzly bear is found in the San Francisco Mountains and elsewhere in Arizona. Numerous grizzly bears were killed on the northern slope of Bill Williams' Mountain. Several were killed in this same locality by the party to which Doctor Coues was attached in 1864. They are quite common in the vicinity of Camp Apache, in the White Mountains.

The black bear is very frequently found in nearly the whole of the hilly and wooded country of Arizona. The Coyotero and Mongollon Mountains appear to be the home of this class of animals. Skins are often brought into camp by the Indians at Camp Apache. Cinnamon bears were found at Bill Williams' Mountain, but are chiefly found along the eastern border of Arizona and into New Mexico. Black and brown bear are met with in the Sierra Blanca, Santa Catalina, Santa Rita and almost all the larger mountain ranges.

## THE ARIZONA LION.

A species of California lion peculiar to Arizona, was found by Dr. O. Loew, in September, 1873, in Triplet Mount-

ain. It is second in size of the North American cats, and is tolerably common in New Mexico and Arizona. Its weight is about 100 pounds, and length six to seven feet.

Though not so large an animal as the jaguar, the species stands as high or higher, owing to the much greater relative length of the legs. Kittens are spotted, as usual in this family; but the adults are nearly uniformly tawny, whitening underneath and about the face, where there are blackish markings, and with a black tip to the tail. The crania and skins of two fine specimens were secured, says Doctor Loew, on the southern slope of the Triplet Mountains, near the Gila Valley, close to the San Carlos Indian Reservation in Arizona. In certain localities in New Mexico and Arizona, it wages a terrible warfare upon wild turkeys, destroying hundreds of them, and depopulating their former breeding-places to such an extent that in a few years the race will have become almost extinct in this region, if measures are not taken to prevent the wholesale slaughter.

The California lion is a very rare animal. It is not a roaring lion, like the Eastern. The head is small and much like the head of the tiger, being large between the eyes. The neck is without mane. It is said he seldom attacks human beings.

The California lion and panther are both cowardly animals and will scarcely stand at bay even when wounded, but there are exceptional cases. One made an attack upon Maj. J. C. Cremony, which he shot. It measured seven feet from tip of nose to end of tail. He carried the skin to California.

#### LION AND BEAR FIGHT.

Maj. J. C. Cremony, in his "Life Among the Apaches," says: "We were about to return home, when our attention was attracted by a terrible noise in a rocky cañon, about four hundred yards lower down the river. Hastily remounting, we galloped to the place, and after having dismounted, approached the cañon with caution. Suddenly we came upon a very exciting and interesting scene. A very large lion, probably the one of which we were in pursuit, was engaged in deadly conflict with a well-developed brown bear. The lion was crouched down about twelve feet from bruin, and the bear was standing erect on his hind legs, his forearms protruded, and his back against a large rock. His cries were piercing, and to them we owed the pleasure of being present at the combat, which quickly began.

"The lion watched his adversary with intense gaze, his long and sinewy tail working and twisting like a large, wounded serpent. His formidable claws occasionally grappled the rocks and gravel, and every now and then he would exhibit his terrible teeth and would utter a low but significant growl. Having reached the sticking-point, the

lion leaped forward with a fearful rush and grappled the bear. Then commenced the most frightful cries from both—fur, dust and blood flew in quantities from each combatant, biting, tearing, and hugging were indulged without stint. After about two minutes of this terrific strife, the lion suddenly released himself and sprang away. Each animal then commenced to lick its wounds, the lion having reoccupied his former position in front of the bear, and evidently bent on 'fighting it out on that line if it took all summer.'

"The bear was decidedly anxious to get away, but did not dare turn his back on his more agile adversary. After some ten minutes spent in licking their wounds and repairing damages, the lion reassumed the offensive, and the bear again placed himself on the defensive. The same scene was repeated, but this time the lion had succeeded in tearing open the bear's back and drawing his vitals through the gap. The bear fell dead, and the lion hauled off once more to lick his wounds. Having taken breath, he leisurely proceeded to haul the bear's carcass down into the cañon and bury it with leaves, sand and other *débris*.

"Just then the crack of a rifle was heard, and the late conqueror tumbled over on his side dead, beside the body of his late foe, having received a rifle ball just back of the ear, from the weapon of an Apache Indian. This beast measured seven feet seven inches and a half from the end of his nose to the tip of his tail. His skin was preserved and afterward presented to Major (now General) H. D. Whalen, then commanding Fort Sumner."

#### THE BEAVER.

Beavers were quite plentiful. The Apaches have a great regard for the beaver, which they aver to be by far the most sagacious and intelligent of animals. The Pecos beavers are very large, and in midwinter have an unusually thick, heavy and soft fur. They are growing scarce. In 1837—38 when the old trappers, Joe Walker and Jack Lorsen trapped in Arizona, they were plentiful. The Apaches brought in quite a number of young ones, about a week old, but milk was difficult to obtain, and they only succeeded in raising one. It became quite a pet, and would perform several tricks. It had none of the native fear of man.

#### DWARF DEER OF ARIZONA.

This deer is peculiar to Arizona. The prevailing color of this animal, taken in September, which is still "summer" in Arizona, is a pale, dull fawn color, with a peculiar ochreous shade, brightening into clearer tawny or reddish-brown all around where the color of the upper parts joins the white of the under portions, and on the dorsal area becoming insensibly darkened in tone by an intimate admixture of mouse-gray. On this darkened

area, the color is a blended grizzle of the mouse-gray with pale fawn or nearly colorless ends of the hairs. The tail is rich reddish-brown on the central field above, fringed and tipped with white, and pure white below. Some of the terminal reddish hairs have a slight blackish tipping, but the sum of this scarcely produces a noticeable effect. The fore limb inside is white throughout, and whitish all around the digits; the hind limb is perfectly white inside only above the heel. The ears are dark mouse-grey outside, bleaching at the edges; the hairs inside are pure white. The forehead is extensively dusky; the naked muffle and the abundant eye-lashes are jet black.

"Nowhere else in North America," says Doctor Rothrock, "have I seen deer more abundant than these dwarf deer were in southern Arizona, nor have I anywhere more thoroughly enjoyed the sport of hunting them. True, it was unsportsmanlike to shoot down a doe which, it was morally certain, had a fawn secreted in some clump of bushes near by; but then it was done partly in the interest of science, and partly because, in the absence of other fresh meat, we were obliged to do so. Either reason will probably be sufficient to justify the act, and, with these extenuating circumstances in our favor, the sport was the same as we should have had a month or so later.

"On the low grounds at the foot of the Santa Rita Mountains, Emory's oak is sparsely scattered over the surface, affording sufficient shade to make the intense heat tolerable, and yet is not dense enough to intercept a good shot, either running or standing. In each of these cañons, a small stream of pure mountain water came tumbling from rock to rock, over precipice into chasm, and everywhere churning itself into foam; while, on the banks, luxuriant clumps of willows and scrub oaks alternated with sweet, nutritious gramma grass, thus making numberless retreats in which the deer might find shade, hiding-places, and abundant food. In such places, the does, with their families, were usually found in August, during the heat of the day. The bucks, however, ranged from the foot to the top of the Santa Rita Mountains, thus taking in an altitude of from three to four thousand feet greater, having less heat to endure, and withal a greater security from stray hunters. They are found in great numbers among the rocks and conifers of this higher range, and obtained abundant food in the shorter bunch grasses and the tender twigs of the under-brush.

"As a rule, it was easy to get within fair shooting distance of the game. This was due not more to the conformation of the ground, than it was to the unsuspecting nature of the deer themselves. In fact, they were in this so unlike the Virginia deer, that their general expression was rather that of curiosity and surprise than fear at the approach of the hunter. Part of this may have been due to

the fact that years ago the continual raids of the most relentless band of Apaches have driven out the Mexican civilization, which the stone irrigating ditches show had existed there, and that of late the Indians themselves had been excluded from the ground. In the short interval of tranquility, but few whites have come in. This then allowed the deer to multiply and become moderately tame, as, indeed, they usually do when very abundant. Number appears to give them a sense of security. In fact, any hunter who has the least instinct in approaching game may always get within fifty yards, and have a fair standing shot. It was not uncommon to find, as early as August, small bands of three or four deer; and on such occasions the hunter might generally have killed most or all of them. They usually went to water and in search of food later in the morning, and earlier in the evening than the Virginia deer, and not seldom were found busily feeding at noon.

#### APACHE HUNTING DEER.

When an Apache hunter goes out for a hunt, he dispenses with even the scant attire he assumes in his ordinary daily walk in life. He needs no dog, for his quick eye detects the trail of a deer as readily as the hound's does, no matter how keen its scent. On the trail, he follows it as silently as a shadow, for he knows that he will soon come in sight of the game, either feeding or lying at rest among the bushes. When he sights the deer, he steals to within gun-shot. If the deer's head is turned away from the hunter, the latter, first taking aim, shuffles his foot on the ground. If the deer is lying down, it springs to its feet at the sound, and wheels around, facing the direction from which the sound came. If it is standing, it turns around quickly. The Apache hunter is always desirous of killing a deer by shooting it as nearly in the center of the forehead as he can. So when the deer turns toward him, he fires at that spot. His aim is rarely in fault, but sometimes the deer is quicker to discover the cause of its alarm than the hunter is to fire, and turns for safety in flight. An Apache's gun also, not unfrequently misses fire, and the deer flies on the wings of the wind.

To permit a deer to escape after it is once discovered is something that no Apache hunter is expected to do, and it is against their code to fire a second time. The hunter, failing to kill his game at the first attempt, must run it down, and it is very rare that he fails in this chase. As the deer starts away in its flight, leaping from twenty to thirty feet at a time, the Indian drops his gun, and with hideous yells, starts in pursuit. The deer at first leaves the hunter far behind, putting forth its greatest efforts to that end. But its trail is as plain to the Indian as a turnpike road is to a white man, and he follows it. As is its nature as soon as the deer is out of sight and sound of threatening danger, it stops and waits developments. The sight of the

pursuing hunter starts it on its way again. Every halt of this kind tells against the deer, for it is not of sufficient length to give it any beneficial rest, and every new start it is stiffer and less active.

The Indian never halts. There are runners among the Apaches who can run for twenty-four hours without a stop, and can make five miles every hour of the time. After the deer has run for two or three hours, its thirst prompts it to make for the nearest water. This the relentless hunter knows to be inevitable, and when the deer reaches that stage of the chase, the Indian considers the victory won. There is no hope for the deer after it stops to drink, for it takes into its parched stomach all it can. Having laden itself with this weight of water, the deer is unable to take long leaps, and cannot extend its run between halts more than half the former distance. The Indian's tongue may hang swollen and white from his mouth, and his mouth be as dry as dust, and his stomach burning up with heat, but he never stops to drink. He scoops a handful of water from the stream as he dashes across it, and carries it to his mouth, where he holds it a moment and ejects it without taking a swallow. If he is obliged to swim, he lets the water run in his mouth, but keeps it from his stomach.

After running an hour or so after the deer has quenched its thirst, the Indian knows that it is time to find some evidences of the animal's weakening. These he is sure to find along the trails in the shape of blood-spots on some rock where the deer has stumbled on its knees, or a patch of hair clinging to some sharp projection, showing that the deer's strength has failed so that it cannot turn quickly out of the way of obstacles. Now the Indian increases his speed. He knows that the deer's race is run. In time he overtakes the deer, which is now loping feebly along. A yell startles into a momentary burst of speed. Then, as if appreciating the fact that it is useless to prolong the race, it stops and turns with all the defiance its exhausted nature can assume, and awaits the approach of the hunter. Sometimes, however, the deer runs until it drops dead or dying in its tracks. If it turns upon the Indian, the latter keeps on at full speed. He knows the deer can do him no harm, its inclination to the contrary notwithstanding.

He seizes it boldly, throws it to the ground with ease and cuts its throat. Without a moment's delay, whether the deer is dead or dying, the Indian cuts from behind the fore shoulder a large piece of meat. He sucks the warm blood from it and devours the morsel, keeping constantly on the move. If the carcass of the deer is not too heavy, he throws it across his shoulders, and starts immediately for home. He does not rest a moment, for fear of becoming too stiff to make the return trip. If the deer is too

heavy for him to carry, he cuts out the choicest parts, hides the remainder in a secure place, and brings in the former. In this case another member of the tribe is selected to take his back track on the arrival of the hunter in camp, and bring in the venison left behind.

If a deer is young, an Apache hunter will run it down within a distance of sixty miles, but they have been known to prolong a chase for one hundred miles. The course taken is always devious and circuitous, and may end within a mile or so of the starting-place.

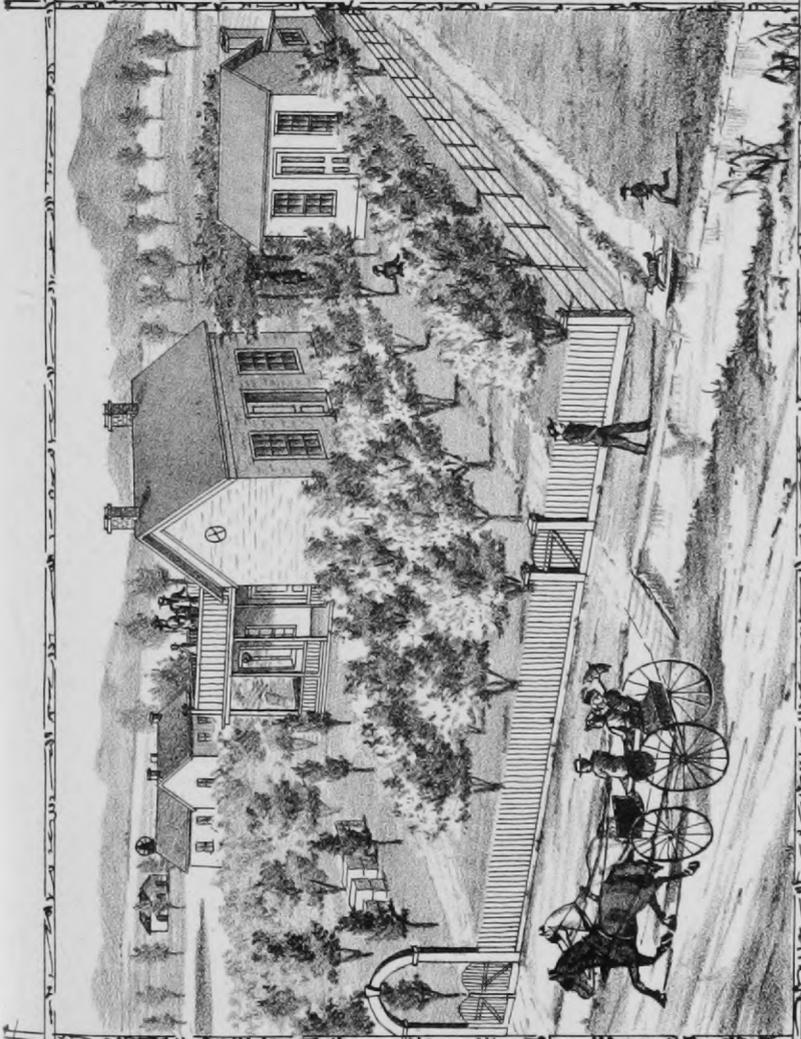
#### BEAUTIFUL ANTELOPE.

This graceful animal is found on the plains in large droves and in most of the valleys throughout the Territory. It is a beautiful sight to see a herd of antelope dash away on the plains, bounding gracefully as the sweep of billows for miles across the open, grassy plain, becoming a scarcely undulating speck in the distance, and thus go out. It almost lulls one to repose to see the graceful sweep of their delicately fashioned bodies, clearly defined against the yellowish-brown of the sacaton, heading across the vast flats for almost an hour in an unbroken gallop, as regular as the movements of an accurately adjusted machine, it seems so without exertion and flurry.

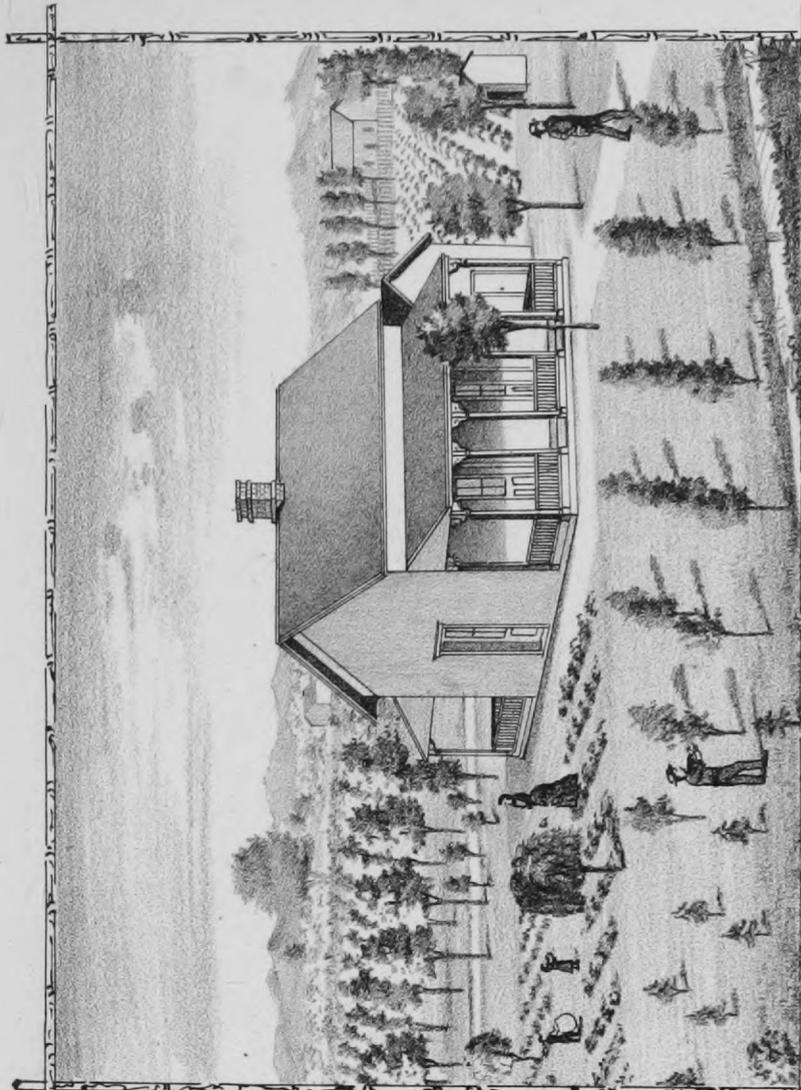
Antelope, however, were formerly more numerous than any other of the larger animals. They furnished meat for all the settlers, teamsters, and travelers. The antelope were a good deal more easily killed than deer. The flesh of the antelope was very good, but they never got fat. It partook more of the nature of the goat than the deer. The young antelope could be tamed much more easily than a calf.

They are shy, but inquisitive also, and are easily enticed to approach the hunter, who hides himself behind a rock, and, fastening a handkerchief to his ramrod, waves it back and forth. One larger than the rest has often been seen by early settlers watching while the main body of the kids were at water, or on the bottom-lands feeding on green grass. Antelope, though not numerous, still make their haunts in the valleys of the rivers. They frequent many of the creeks, but keep mainly in the open regions and plains.

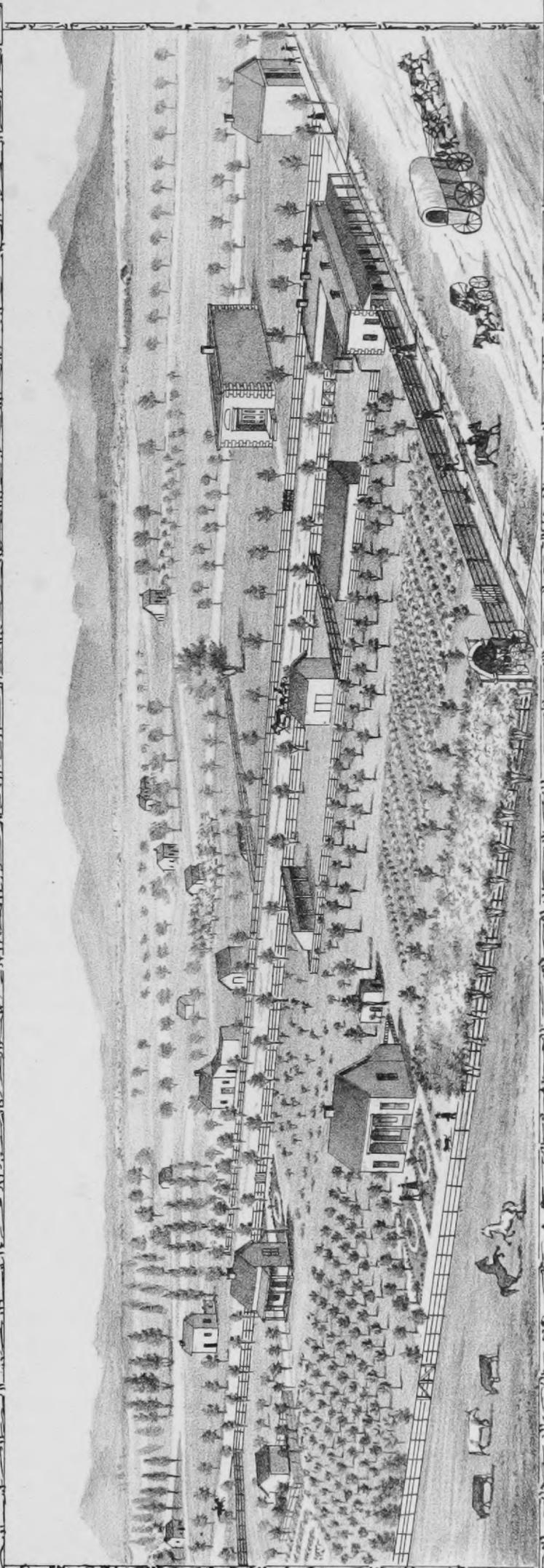
"We came," says Cremony, "suddenly upon a very large band of antelopes, and the men were given permission to ride in among them for a hunt. We had them fairly corraled in such a manner as to compel their passage through our line close enough to pass within pistol range. On they came, probably to the number of two thousand, and dashed by with wonderful speed. The cavalry closed upon them and opened a rapid fire, which terminated in giving us ten fine animals in less than ten minutes. The scene was very exciting, as the men were all splendid riders and excellent marksmen. Had their horses been in



RESIDENCE OF DANIEL BAGLEY. MESA CITY, ARIZONA.



RESIDENCE OF JOHN H. POMEROY, MESA CITY, ARIZONA.



RESIDENCE OF A. F. MACDONALD, PRESIDENT OF MARICOPA STAKE, AND OTHER SURROUNDING PROPERTY, MESA CITY, MARICOPA CO. ARIZONA.

RESIDENCE  
RELIEF SOCIETY HALL.  
HOTEL  
MESA CITY STORE.

good condition, we might have procured many more. Just at the time of the liveliest shooting, an ambulance, containing Lieutenant Newbold and another officer, escorted by four cavalymen, hove in sight and halted on the road about four hundred yards from the theater of operations. They thought, at first, that we had engaged a body of Indians, but catching sight of the scampering herd, they rode forward and were given a fine buck, which was lashed on top of the ambulance."

#### WOLF OR LOBO OF THE MEXICANS.

This animal is said not to be very common in Arizona now. The following account is taken from Doctor Coues' different papers in the *American Naturalist*.

The prairie or barking wolf is by far the most abundant carnivorous animal in Arizona, as it is also in almost every part of the West. Practically, the coyote is a nuisance; theoretically, he compels a certain degree of admiration, viewing his irrepressible positivity of character and his versatile nature. If his genius has nothing essentially noble or lofty about it, it is undeniable that few animals possess so many and so various attributes, or act them out with such dogged perseverance. Ever on the alert, and keenly alive to a sense of danger, he yet exhibits the coolest effrontery when his path crosses ours. The main object of his life seems to be the satisfying of a hunger which is always craving; and to this aim all his cunning, impudence, and audacity are mainly directed.

Much has been written concerning the famous polyglot serenades of the coyote, by those who have been unwilling listeners, but it is difficult to convey an adequate idea in words of the noisy confusion. One must have spent an hour or two vainly trying to sleep before he is in a condition to appreciate the full force of the annoyance. It is a singular fact that the howling of two or three wolves gives an impression that a score are engaged, so many and so long-drawn are the notes, and so uninterruptedly are they continued by one individual after another. A short, sharp bark is sounded, followed by several more in quick succession, the time growing faster and the pitch higher, till they run together into a long-drawn lugubrious howl in the highest possible key. The same strain is taken up again and again by different members of the pack, while from a greater distance the deep, melancholy baying of the more wary lobo breaks in, to add to the discord, till the very leaves of the trees seem quivering to the inharmonious sounds.

It is not true, as asserted by some, that the coyotes howl only just after dark and at daylight. Though they may be noisiest at these times, when the pack is gathering together for a night's foraging, or dispersing again to their diurnal retreats, they give tongue at any time during the

night. They are rarely, if ever, heard in the day-time, though frequently to be seen, at least in secluded regions. Ordinarily, however, they spend the day in quiet, out-of-the-way places, among rocks, in thick copses, etc., and seek their prey mainly by night, collecting for this purpose into packs, as already noticed.

The coyote is a very indiscriminate feeder, and nothing seems to come amiss which is capable of being chewed and swallowed. From the nature of the region it inhabits, it is often hard-pressed for food, particularly in the winter season. Besides such live game as it can surprise and kill, or overpower by persevering pursuit and force of numbers, it feeds greedily upon all sorts of dead animal matter. To procure this, it resorts in great numbers to the vicinity of settlements, where offal is sure to be found, and surrounds the hunter's camp at night. It is well known to follow for days in the trail of a traveling party, and each morning, just after camp is broken, it rushes in to claim whatever eatable refuse may have been left behind. But it cannot always find a sufficiency of animal food, and is thus made frugivorous and herbivorous. Particularly in the fall, it feeds extensively upon *tunas*, which are the juicy, soft, scarlet fruit of various species of prickly pear; and in the winter upon berries of various sorts, particularly those of the juniper and others.

#### ARIZONA BATS.

Bats of various species exist in Arizona, but one called the "pale bat" is only found in Arizona and New Mexico. The only record of the habits of this peculiar bat, of which we are aware, is that given by Doctor Coues in the *American Naturalist*, as above quoted, he having observed it during his stay at Fort Yuma, in 1865: "This species is very abundant at Fort Yuma, where, during the hot months, it becomes a decided nuisance. Numbers take up their abode in the chinks and crannies of the officers' quarters; and the proximity of these retreats actually becomes offensive from the multitudes crowded together. During the day-time, a continual scratching and squeaking, as of so many mice, is heard in their snuggeries; and at night they are even more annoying, fluttering by scores about the room. They are accused of harboring bed-bugs about their bodies. When caught or disabled, they have a harsh squeak, and, if incautiously handled, bite with vigor and considerable effect. This bat, as its name indicates, is much lighter in color than most of our species; and it has, also, a peculiar physiognomy, more repulsive and forbidding than is usual even in this family, none of the members of which have remarkably prepossessing features."

"A bat, or vampire, of uncommon size for this country," says the *Tucson Star*, "was killed in the Cosmopolitan

Hotel. It is now undergoing the drying process of preservation, and although somewhat shrunken in size and appearance, it is yet sufficiently large to deserve mentioning. It measured eighteen inches from point to point of its extended wings. The body measures from the end of the nose to the base of the tail five and one-fourth inches, and including the tail, eight inches. The head, including the ears, one inch in width and one and one-half inches long, unite in front and form a hood extending fully a quarter of an inch over the forehead, and completely shading the nose and eyes. The hood opens flat with the top of the head, to which it gives it a decidedly broad appearance, inasmuch as the ears extend almost entirely around it. From the center line of the face rise two prominent ridges, that, with the exception of the line named, may be said to form the entire face proper. The nose is broad and flat, and much resembles that of a little pig. The chin is short and the mouth and teeth rat-like. The wings at the elbow, including the claw, are three and one-eighth inches deep. The animal, when taken as a whole, is not quite so handsome as it might be.

#### BUSH OR WOOD RAT.

The bush rat is abundant throughout the Territory, and forms no small item in the economy of the Indians. Not only the numerous tribes of the Colorado, but also the various branches of the Apache family make great use of them as an article of food. After the destruction of Apache *rancherias*, were always found, among other implements and utensils, numerous sticks, about as big as walking-canes, one end of which was bent in the shape of a hook, hardened in the fire, and a little sharpened. These we were informed and have every reason to believe, were used to probe holes and poke about brush-heaps for rats, and drag them out when discovered.

This statement may be doubted by those who know of the bush rat only as an arboreal species, building a compact globular nest of grasses and sticks in mesquite and other low, thick trees. While this is certainly the case, there is no doubt that, under different circumstances, it may live under-ground, among rocks, or in brush-heaps. We have seen many heaps of rushes, sticks, and grasses, which could have been the work of no other animal, and formed either the nest itself, or the "vestibule" of a subterranean abode. We have also been informed to the same effect by several hunters and good observers.

The food of these rats is entirely vegetable, and observers agree in noting their particular fondness for mesquite beans, and the curious spirally twisted fruit of the "screw mesquite." As might be expected from the nature of their food, their flesh is excellent eating.

The idea of eating rats is doubtless disgusting to most persons—not Chinese nor Indian; but all such must

remember that they take their notions from the house rat, which is a dirty beast, feeding upon garbage and any decaying animal or excrementitious matter which may come in its way. "The bush rat's food is as cleanly as that of a hare or squirrel, and there is no reason why its flesh should not be as good, as in truth we can assert it to be, having eaten it ourselves," says Doctor Allen.

#### ARIZONA GRAY SQUIRREL.

This squirrel was discovered by Doctor Coues at Fort Whipple, in 1865, and the single specimen then procured remains unique. Its characteristics cannot be reconciled with those of any other United States species known.

Rather smaller than the eastern gray squirrel; of the same form and body-color; the tail longer, fuller, and much broader; ears moderate, untufted, both sides furred; above, from nose to root of tail, a uniform mixture of gray, black, white, and tawny, the latter predominating. On the sides of the body and outside of the limbs, the tawny and black disappear, leaving a clear grizzle of gray and white. The inside of the limbs is pure white, very trenchantly defined against the color of the upper parts and sides. Eyelids, and cheeks, about the nose, white. The tail from above is usually of the same color as outside of thighs, the tawny of the back stopping abruptly at its base; in the rest of its extent it is black, broadly fringed with white, and having white hairs scattered sparsely through its black portion. Viewed from below, the tail is tricolor, being centrally tawny, bordered with black, which is in turn fringed with white. There are other varieties of squirrels about Arizona, both black and gray, but the above is a separate species.

#### LINE-TAILED SQUIRRELS.

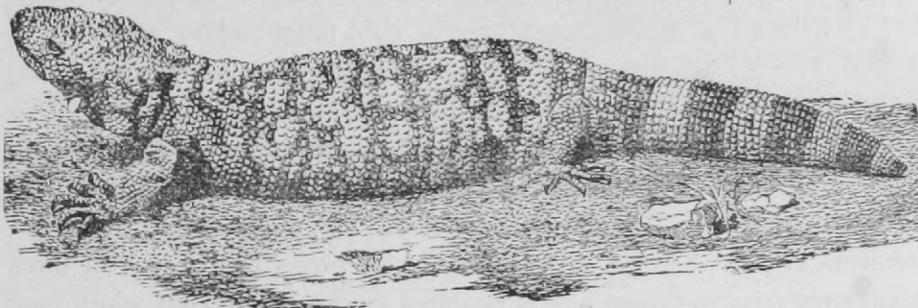
The rocky hill-sides, covered with volcanic *debris*, in the neighborhood of Camp Bowie, Arizona, afford a home for numbers of this species of squirrel, and in the neighborhood we frequently saw them hurrying away to their subterranean burrows, their utmost efforts to progress rapidly resulting in an awkward, scrambling gait. Among the confused masses of rock, however, they are more at home, and pass swiftly and with little apparent effort over and among them. They are gifted with considerable curiosity, and, having gained the mouths of their retreats, will often stop and gaze for some time upon the strange form of the intrusive stranger. This trait, however, never causes them to become forgetful of their own safety, as upon the first show of hostility they disappear as if by magic. Occasionally, we noticed a burrow in the more open ground, partially screened by bushes; this, however, is rare, the broken lavaic rocks being their chosen home. Upon inquiry, we learned that this little animal was well known

in Camp Bowie, for its depredations on the hen-coops, its aim being the eggs, which it was often successful in carrying off. Dr. Freeman informed us that many had been taken in traps set for this purpose, and that he, upon one occasion, himself had detected an individual in the act of taking his departure with an egg in his mouth.

#### AMERICAN BEAVER.

This animal is very common near Camp Verde, Arizona, in the various streams emptying into the Rio Verde, especially Beaver Creek. It also occurs at various places along the Little Colorado and Colorado Rivers, where cottonwoods and willows abound. They are exceedingly shy, seldom being captured. Quite a traffic is carried on in their skins between the Indians and Mormons. A portion of one of their dams was broken down in order that their efforts to replace it might be perceived, but without success, although careful watch was kept for two nights.

The Apaches have a great regard for the beaver, which they aver to be by far the most sagacious and intelligent of animals. Their tails roasted in ashes make a capital



THE GILA MONSTER.

dish and is much esteemed, but rather too fat and musky for most stomachs. The Arizona beaver is not as large as the northern specimen nor the fur as valuable.

#### JACKASS RABBIT.

The mule rabbit is very abundant in the southeastern portion of California, some parts of Nevada, especially the western, and in various places in the lower part of Arizona. It has often been found in the most barren deserts, and many miles from water. It is very common throughout Utah and Nevada, forming a great part of the subsistence of the Indians, the fur furnishing clothing for the squaws in winter. In November it is the custom of the Indians to have a grand hunt, and thousands of these rabbits are thus annually slaughtered. If properly cooked, the flesh is nutritious and tender.

As you journey across the Arizona plains, enjoying the picture fringed in the distance by the dark mesquite, and overlooked by solemn, sun-scorched mountains, a mule-rabbit springs from behind a clump of bushes and strikes off. At first it is an easy gallop, with an aristo-

cratic *nonchalance*, his tall ears reared aloft like small sails, and so thin that the sunlight peeped through them with a pinkish hue, added to the usual gray-white. Bang! goes a pistol and the grass near him quivers. He stops and looks back, his eyes glaring like two small burglar lamps. Bang! goes another shot, that tears up the gravel under him. Then he lays aside the aristocrat and gets to work. By the time the gravel begins to fall, he is twenty yards away, his sails furled, the masts upon which they are rigged are laid upon his back, and buoyant, restless, impulsive life has taken possession of his feet. At every spring, a thin mist of dust flies up behind, through which his long form is seen bounding, six feet at a spring, and too rapid to count. Bang! bang! bang! go the other pistols, but it is no use. He is on fast-schedule time, and in half a minute the white expanse of rump flashed over a distant bunch of grass and was gone. It generally takes one shot to arrest attention; the second one produces the work, while the third and fourth are thrown away.

No man could hit one with a pistol when "down to his knitting," though the ever present flag of truce carried aft is as good a mark as a hunter ought to require.

The rabbit is two feet long from the nose to the end of the tail. Its ears are very large, and have suggested the vulgar name. It was once abundant in all the valleys; it is more rare now. The color beneath is a pale cinnamon; above it is mixed with black and light cinnamon, the longest hairs being of a light smoky-ash color for about half the length, then dark sooty-brown then pale cinnamon-red, and finally black at the tip.

#### VARIOUS SMALL ANIMALS.

Fremont's chickaree is numerous in the mountains of Arizona about camp Apache and the White Mountains.

Gila chipmunk is a different animal and was found first by Doctor Coues at Fort Whipple, and is a distinct species.

Sage rabbit is found in the desert portions of Arizona near the Gila River, but very few are seen, however, at present.

Wild-cat is seen in nearly all wooded ranges, and often attains a large size. It needs no description here.

The raccoon is found here wherever there is timber. While some of the animals here differ from their species of the East, there is no difference that we can see in our raccoon and those of the Eastern States; in fact, he is everywhere "that same old coon." We do not know that civilization has either increased or decreased the number.

The American badger is abundant on the plateau of the mountains, and is occasionally found in other parts. It is very shy, and is rarely seen by the traveler.

There are also to be found otters, minks, martens, sables, ermines, rabbits, hares, moles, mice, rats, musk-rats, porcupines, rock dogs, squirrels, chipmunks, and skunks.

#### THE HORNED TOAD.

This little harmless animal is met with on all the barren plains. He is best shown in the engraving. There are seven species. One peculiarity of the little fellow is the habit of changing color so as to correspond with his surroundings, specimens seen upon the grassy meadows of the marshes being of brilliant colors assimilating to the general tint of the herbage, while those in alkaline plains approach the neutral tints of the ground and sage brush. In such of these as were found near red sandstone deposits, the normal colors were so altered as to lead to grave doubts of the species under observation. Horned toads were observed to bear three different body tints in as many localities, covered by one day's ride.

#### ARIZONA RATTLESNAKES.

Arizona is less troubled as to quantity of rattlesnakes than has been supposed, but it still excels in quality, as a species discovered there by Doctor Coues, and named *crotalus pyrrhus*, is the most brilliantly colored of the genus, now known to comprise eighteen species, seven of which are peculiar to Arizona. The black rattlesnake, to which backwoodsmen attach an unusual degree of virulence, abounds in the White Mountains.

In Arizona and elsewhere not only birds but serpents are more numerous in the proximity of settlements, very few serpents, except the rattlesnake, being encountered on the barren plains. Its rattle is easily mistaken for the noise made by the *cicadas*, though readily distinguishable by the difference of rhythm, that made by the *cicada* being shorter and more uneven. In one exploring expedition through Arizona and adjacent Territories, not over twenty rattlesnakes were observed during a ride of over 2,000 miles.

While the plainsman is dreaming sweetly, after the usual slaughter of tarantulas, not unfrequently the rattlesnake glides his cold length across him, or steals in under the blankets to share the warmth. This latter situation is not enviable, for an incautious movement may rouse the guest to plant his fangs in the sleeper, the result being, not unfrequently, death. A yell of "snakes!" at midnight, in camp, with the lights all out, arouses a form of terror surpassing anything in the spectral visions of Dante.

Travelers over our plains have frequently observed that the prairie dog, rattlesnake, and ground owl live together in one habitation, and, being unable to solve the problem myself, J. C. Cremony asked several shrewd Apache warriors to do it for him. The rattlesnake, said they, is a very wise reptile. He permits the prairie dog

to make a nice, warm nest, and then he quietly takes possession, but does not disturb the safety of the inmates, who retire and fit up another cell, quite ignorant of the snake's intention, who makes it a point never to injure the old pair, unless pressed by dire necessity; but in the most stealthy manner devours one of the young brood every now and then, leaving no evidence of his carnivorous propensity. The parents never seem to entertain any suspicion of their dangerous guest, who always puts on his best behavior in their presence, although capable of destroying them with ease. On the other hand, the snake never devours a prairie dog when he can seize his more legitimate prey above ground, but keeps them as a sort of reserve fund. The ground owls scarcely ever descend into the depths of the hole, but burrow a separate cell close by its entrance, whither they retire for repose and to deposit and hatch their eggs. In the day-time they sit nodding on top the hillocks made by prairie dogs, and at night hunt their prey, such as lizards, bugs, and beetles.

#### THE GILA MONSTER.

There are many varieties of the lizard, but the most noted is the Gila monster so called. It is from fifteen to thirty inches long, a dull, filthy-looking reptile, with black mouth and tongue, seemingly harmless and inoffensive. The Indians, however, say that its breath will cause one to die. This animal, which is found in Arizona, is the only one of the lizard family that is poisonous. It is usually sluggish in its habits and will not bite unless provoked; but when the full-sized lizard (it grows to a length of three feet) does bite, it produces a poisonous wound, which may prove fatal.

Considerable is said respecting the harmlessness of the creature on one hand, and its venomous qualities on the other. It seems the subject relating to the above species of lizard came up for discussion at a recent meeting of the College of Physicians in Philadelphia. Doctors Mitchell and Reichert exhibited a living specimen of the lizard, and the former read a paper on the nature of the poison, in which he arrives at the following conclusions:—

For the purpose of experiment, Doctor Mitchell caused the lizard to bite on the edge of a saucer, and when saliva commenced to flow, it was caught on a watch-glass. Differing from the saliva of venomous reptiles, which is always acid, the saliva of the *heloderma* is alkaline. A very small quantity ejected into a pigeon produced its effect in a tottering gait in less than three minutes, and caused death in less than nine minutes. The specimen presented was fourteen inches long, fat and plump, and presented somewhat the coloring of a rattlesnake.

The northern limit of the reptile's habitat is in southern Utah, and the first reliable account of its lethal powers came from there. The Mexicans call it the *escupion* (the



ELLIOTT. LITH. S.F.

*Ed. Schieffelin*

spitter), and their fear of it has been regarded by naturalists as unfounded. Science has, however, demonstrated its cogency. According to the experiments of the Philadelphia savants, rattlesnakes' poison is a bagatelle compared to it.

## INSECTS PESTS.

Of insects, the chief is the tarantula. It lives everywhere—in the mountains, *mesas*, and even in houses. In the summer, this ugly bundle of repulsive legs and bright eyes invades all places; the weary sleeper turns down the sheet at midnight, and finds the tarantula waiting for him; the plainsman has only lighted his fire for the night, when he finds himself in a colony of them, and they all come out to greet the visitor. Its bite is sometimes as fatal as that of the rattlesnake. Campers on the *mesas* come in close contact with both, but a few drops of boiling water in his house puts the tarantula out of the way.

Their houses are models of instructive art. They are constructed of much the material of an Eastern hornet's nest, set in a hole in the ground, and provided with a lid, or shutter, which, when down, closes up the house, with a contrivance in principal not unlike the hasp and staple.

The centipede is found in the tropical valleys of the Territory, where they often are four to six inches long. When they crawl over the flesh of a person, it causes a stinging, smarting sensation, quite painful, and in sensitive parts of the body would be somewhat dangerous.

The scorpion is found in limited quantities, and its sting is painful but not necessarily dangerous.

The tarantula bug is about the size of a humming-bird, and is so named from its tenacity in the destruction of the tarantula and its nest and eggs.

The common house-fly is numerous in all parts of the Territory, and a great nuisance. A hunter says that, while the meat was drying, immense numbers of the common "blow-flies" were attracted to the neighborhood of the camp, and, in default of some better place to deposit their surplus eggs, would place incredible numbers of them in any fold of our blankets that afforded a sufficiently dark location. In fact, so regularly and systematically was this done that we were obliged to make compact bundles of our blankets during the day to exclude the flies.

## BIRDS OF ARIZONA.

Arizona has a large variety of birds, but no very especial species. The more noticeable of them we here mention. The eagle has his home in all the mountain ranges, and about the cañons, and attains a large size. Mocking-birds are plentiful. At certain seasons, Arizona seems to be the resort of most all kinds of migratory birds.

### ARIZONA QUAIL.

These Arizona birds bear a pretty strong resemblance to the valley quail of California, but are lighter in color, the prevailing hue being about that of the wild dove. On the sides and beneath the wings they are beautifully marked with those brown streaks and mottles that belong to most game species, while the males have a patch of cherry-red covering the crowns of their heads. The other markings are of nearly the same character as those of the California bird, but subdued in color. It is said that these birds lie very close in the rocks and among the stones in the Arizona country, where they have no opportunity for taking to trees—the worst feature of California quail. Hence it is believed they will lie well to the dog, and if they should breed in fields and foot-hills of California, as is being attempted, which we do not doubt, there need not hereafter be any scarcity of quail for shooting or field trials, as any number of birds can be got from Arizona, where they are easily trapped by the Indians.

### WILD TURKEY.

This noble American bird abounds in the principal mountain ranges of Arizona, and often weighs twenty to twenty-five pounds. Its flesh is tender and white, with good flavor. It is shy and difficult to kill. It affords the choicest of hunting. The wild turkey is abundant from Camp Apache throughout the mountainous portions of southeastern Arizona; the cañons near the head of the Gila and New Mexico sometimes swarm with them. They roost at night in the large cottonwoods by the streams, and by day feed on the seeds of grasses and upon grasshoppers on the dry hills. At Stoneman's Lake and other portions of the road from Prescott to Fort Wingate, they were quite numerous.

A late issue of the *Champion* (Yavapai County), says: "One brave hunter brought in this week thirteen wild turkeys, which were purchased by Daggs Bro. & Clark, and have all since been disposed of at retail. Deer antelope, and wild turkey are found in great abundance in this vicinity.

### A MAMMOTH TURKEY.

A miner by the name of Ross, who resides in the vicinity of Evan's Camp, on the west side of the Huachucas, near Tombstone, killed a wild turkey near Evan's Camp one day last week, which weighed, when dressed, forty-eight pounds. This is the mammoth turkey, says the *Epitaph*, whose existence on the western slope of the Huachucas has been known since 1879. Many Tombstoners have seen him at different times, and many have spoken of seeing his tracks at various times and places. He has always been spoken of as the largest turkey ever known, and has been sought by many, but always managed to avoid the hunter until Mr. Ross struck his trail last week

It is claimed that several turkeys have been killed in and about the Huachucas that have dressed thirty pounds, but a forty-eight pound turkey is something never heard of before, Arizona against the world!

#### TURKEY BUZZARD.

This is specifically the same as the bird known by that name in the Atlantic States. From the tip of the bill to the end of the tail it is about thirty inches long, and six feet from tip to tip of the outstretched wings. The head and neck are bare, and covered with a bright-red, wrinkled skin. The plumage commences below that, with a circular ruff of projecting feathers. The color of the plumage is black, with a purplish luster, many of the feathers having a pale border. The bill is yellowish in color.

J. C. Cremony, in his account of war in Arizona, says: "It was curious to remark the immense numbers of ravens which daily directed their course toward the recent battlefield, below the fort. Regularly, about the time of 'veille,' immense numbers of them would wend their way right over the camp toward the south, and as regularly return at the time of 'retreat,' flapping their wings in a sluggish manner, as if gorged with food. Curiosity impelled me to visit the ground and see these birds at their feast. The field was literally black with them, and every corpse was thickly covered with a fluttering, fighting flock of scavengers. This regular flight of crows and ravens was regarded by the Apaches with unmistakable satisfaction, which was indignantly resented by the Navajoes.

The raven is seen everywhere—lazily musing from the limb of a dead tree in solemn stateliness—gazing long and attentively upon the sun-blistered landscape, as if it were the dearest scene on earth—then, with a croak, flapping away in the quiet air.

#### LIST OF ARIZONA BIRDS.

Near Fort Yuma may be found the following birds: Mountain blue-bird, robin, red fly-catcher, Gila woodpecker, Western blue bird, mocking thrush, red-bellied nighthawk, blue-gray fly-catcher, yellow-headed tit, Oregon snow-bird, tit-lark, Albert's finch, red-winged blackbird, etc.

On the Colorado River, above Yuma, may be found mountain plover, Colorado turkey, sand-hill crane, Wilson's snipe, partridge, Woodhouse's jay, chipping sparrow, finch, rock wren, humming-bird, Oregon robin, black fly-catcher, mocking-bird, etc.

In central Arizona, red shafted flicker, ash-throated fly-catcher, mountain mocking-bird, California nighthawk, mountain titmouse, black-throated sparrow, yellow-headed blackbird, Clark's crow.

In northeastern Arizona may be found Colorado turkey, Carolina dove, lark finch, gray titmouse, white rumped shrike, violet-green swallow, gray warbler, blue bird, whip-poor-will and woodpecker.

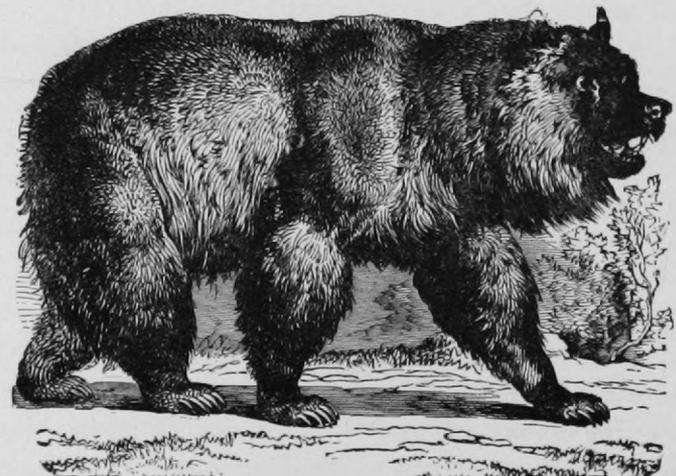
## FISHES OF ARIZONA.

"Experiments elsewhere have shown," says Governor Tittle, "that excellent fish will abundantly grow in waters, and under conditions similar to the streams in Arizona. The value of fish as food can hardly be overestimated. It is at once a luxury and a staple. If our streams were once stocked with fish suitable to each, a trifling cost would thereafter suffice to keep our Territory supplied with this wholesome food, so acceptable to all classes, and so healthful to the poor, but the work will never be satisfactorily accomplished by unpaid commissioners, with but few dollars at their disposal. The great importance of stocking all our streams with fish adapted to each, will hardly be disputed."

Fishes present no unusual features, except in the Colorado River. There is a fish called Colorado salmon, which tastes somewhat like the sturgeon. They often weigh from sixty to seventy pounds. Trout are plentiful in most of the mountain streams which flow from the highlands.

The Legislature of the Territory has created a fish company, who are stocking the waters of many of the streams with young fish. Spawn has already been placed in the Salt, Verde, Gila, and other streams. Two hundred thousand salmon and shad are to be put into the Colorado. The shad will be put into the Colorado at its confluence with Green River, and the salmon at the Needles. From there it is expected that they will reach the ocean by way of the Gulf of California. It is supposed that they will not leave the Gulf, but will, in common with the shad, at stated times, run entirely to the head-waters of the Colorado and its tributaries. A few years will suffice to stock the entire river. The home market can then be supplied with its own production.

Turtles are found along the Colorado and Gila Rivers of considerable size, sometimes twenty inches across. Their flesh is quite palatable.



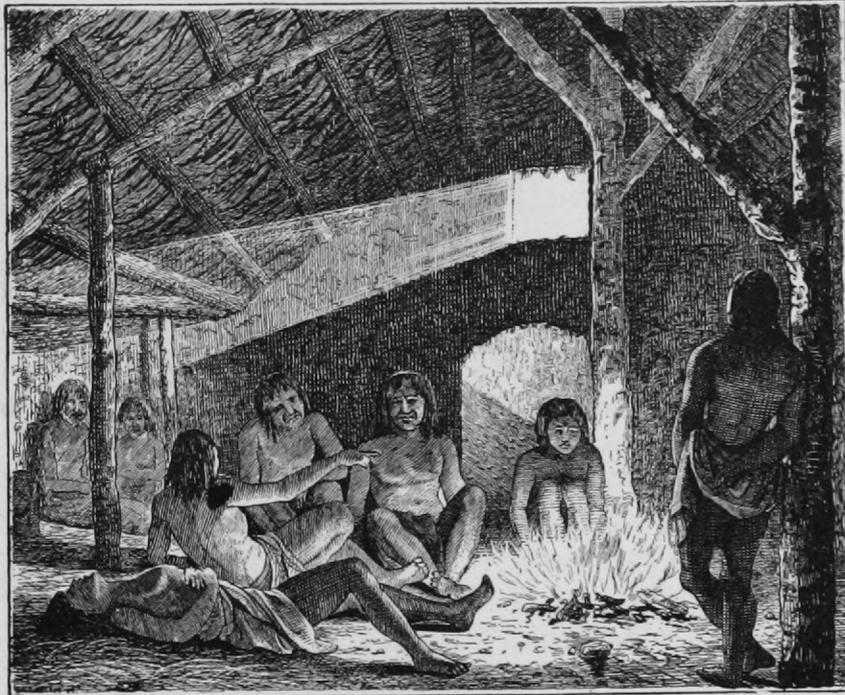
GRIZZLY BEAR OF ARIZONA.

## THE INDIANS OF ARIZONA.

Indians Tribes; Mode of Life; Civilized Indians; Murderous Apache; Indian Wars; Numerous Reservations; Number of Tribes; Outbreaks and Murders; Indian Policy, etc.

### ARIZONA INDIANS.

ARIZONA, up to a late period, has been the paradise of the "red man." Here, for thousands of years, he has angled in its streams, hunted in its glens, roamed over its valleys, lurked in its forests and deep cañons, listened to the wild roar and watched the maddened leap of its



INTERIOR OF THE ESTUFA, OR INDIAN SWEAT-HOUSE.

cataracts. Here he listened to the traditions of his fathers, and buried the bones of his ancestors; and here, with a pertinacity worthy of a better cause, he held on to the grounds with great tenacity.

The Apache Tribe of Indians has been the most war-like, blood-thirsty and fierce enemy of the white man of all the races on the continent. Their "braves" are powerfully built, active, muscular, daring, and savage as a gorilla. All efforts yet made to reconcile these savages to fellowship with their white brethren have been in vain. They are still numerous and powerful, defying the feeble efforts of humanitarian and soldier alike. The mild climate, abundance of game, and the fleet ponies upon which they are mounted, the deep forests, dark ravines, and gulches, whose winding ways are known only to the

Apaches, enable them from their places of security to pounce like wild beasts upon immigrant, miner, or soldier alike.

So determined were these savages to drive the whites out of their country, and in such dread did the people hold the poison-arrow, scalping-knife, and tomahawk of these "red devils," that mines of fabulous richness, rich farming and grazing lands alike were all abandoned.

But the Indian is now being fast confined to reservations. His roaming and murderous days are numbered. Railroads and civilization have sealed his fate. His hunting-grounds wave in rustling corn, and his war-whoop is answered by the shrill whistle of the iron courser, whose voice proclaims the departure of the Indian to his happy hunting-grounds.

The Arizona Indians seem to be a distinct race of savages, differing from those of the Pacific Coast in general characteristics and ferocity.

### INDIAN SWEAT-HOUSE.

About the only thing common to all the Indians of the Pacific Coast was the sweat house. This great sanitary institution was found in every rancheria or village of California. A similar building and institution was used by the Indians of Arizona. Their sweat-house, or, as the Spaniards call it, the *estufa*, consists of a large excavation, the roof being nearly on a level with the ground, supported by heavy timbers or masonry, which is at once bath-house, town-house, council-chamber, club-room and church. Every village has from one to six of them. In some of the ruins they are found four stories in height. In other places it is of one story, 25 feet wide by 30 feet in height. At Bonito it was 175 feet in circumference. In these subterranean temples the old men met in secret council, or assembled in worship of their gods. Here are held dances and festivities, social intercourse, and mourning ceremonies. The *estufas* of Tiguex were built under-ground, both round and square, and paved with large, polished stones. The pueblos displayed much taste in painting the walls of their *estufas*, where are represented different plants, birds, and animals, symmetrically done, but without any scenic effect.

Those of the California Indians were constructed of poles, bark, grass, and mud. The framework of poles is first covered with bark, reeds, or grass, and then the mud is spread thickly over it. The structure is in the form of a dome, resembling a high mound. After being dried by a slight fire, kindled inside, the mud is covered with earth of a sufficient depth to shed rain from without, and pre-

vent the escape of heat from within. A small opening is left at the bottom for entrance. As a luxury, no Russian or Turkish bath is more enjoyed by civilized people than are these sweat-house baths, by the Indians. Hot stones are taken in, and the aperture is closed until suffocation seems impending, when they crawl out, reeking with perspiration, and with a shout, spring into the cold waters of the stream. As a remedy for disease, the same course is pursued, though varied at times by burning and inhaling resinous boughs and herbs.

This treatment was their cure-all, and whether it killed or relieved the patient, depended upon the nature of his disease and the vigor of his constitution. Their knowledge of the proper treatment of disease was on a level with their attainments in all the arts of life.

THE INDIAN QUESTION.

Probably the Indian question in Arizona, says Governor Tittle, has as important a bearing upon the material advancement of the Territory at this time as any other. How to best control, manage, and civilize the Indians has always been an extremely vexatious question wherever advancing civilization has apparently encroached upon aboriginal rights. The experiences of the last few years have been especially painful, and although the warlike spirit of the Indians within this Territory is now subdued, yet we are still confronted by very serious difficulties, which must be met by a wise, consistent, and firm policy.

INDIAN TRIBES IN THE TERRITORY.

There are in Arizona about 25,000 Indians occupying lands reserved to them by the General Government. Quite a large proportion of them are self-supporting, although about 5,000 depend almost entirely upon the Government for maintenance. The tribes occupying the Territory are the Hualapais, Yumas, Papagoes, Pimas, Maricopas, Mohaves, Navajos, Ava Supies, and Moquis; also various branches of the Apache family, who have been placed upon the San Carlos Reservation. With the exception, perhaps, of the Hualapais and Yumas, these Indian tribes occupy some of the finest spots in the Territory, covering in the aggregate a vast area of country.

There has been no serious difficulty in controlling the Indians of the Territory during the last five years, with the exception of those occupying the San Carlos Reservation.

NUMBER OF INDIANS BY TRIBES.

The Indians of Arizona have generally been overestimated, and now that they are on reservations, something like accuracy is attained in counting them. From the best information attainable, we give the following as the total number by tribes. This includes women and children.

NAME.	NUMBER.
Mohave . . . . .	802
Chememission . . . . .	210
Moquis Pueblos . . . . .	2,100
Pima . . . . .	4,500
Maricopa . . . . .	500
Papago . . . . .	6,000
White Mountain Apache . . . . .	596
San Carlos Apache . . . . .	795
Warm Spring . . . . .	275
Coyotero . . . . .	819
Fonto . . . . .	586
Mixed . . . . .	119
Southern . . . . .	171
Chuicahua . . . . .	246
Apache Yuma . . . . .	309
Apache Mohave . . . . .	662
Hualapai . . . . .	620
Yuma . . . . .	930
Mohave . . . . .	700
Iuppai . . . . .	75

Total Reservation Indians . . . . . 20,515

EXTENT OF INDIAN RESERVATIONS.

One-seventh of Arizona is held for Indians. A good part is of choice land. All the tribes are now peaceful except the Apache, who are like wild beasts confined, and who occasionally break out and begin the work of death.

The total area of the several reservations in the Territory is as follows:—

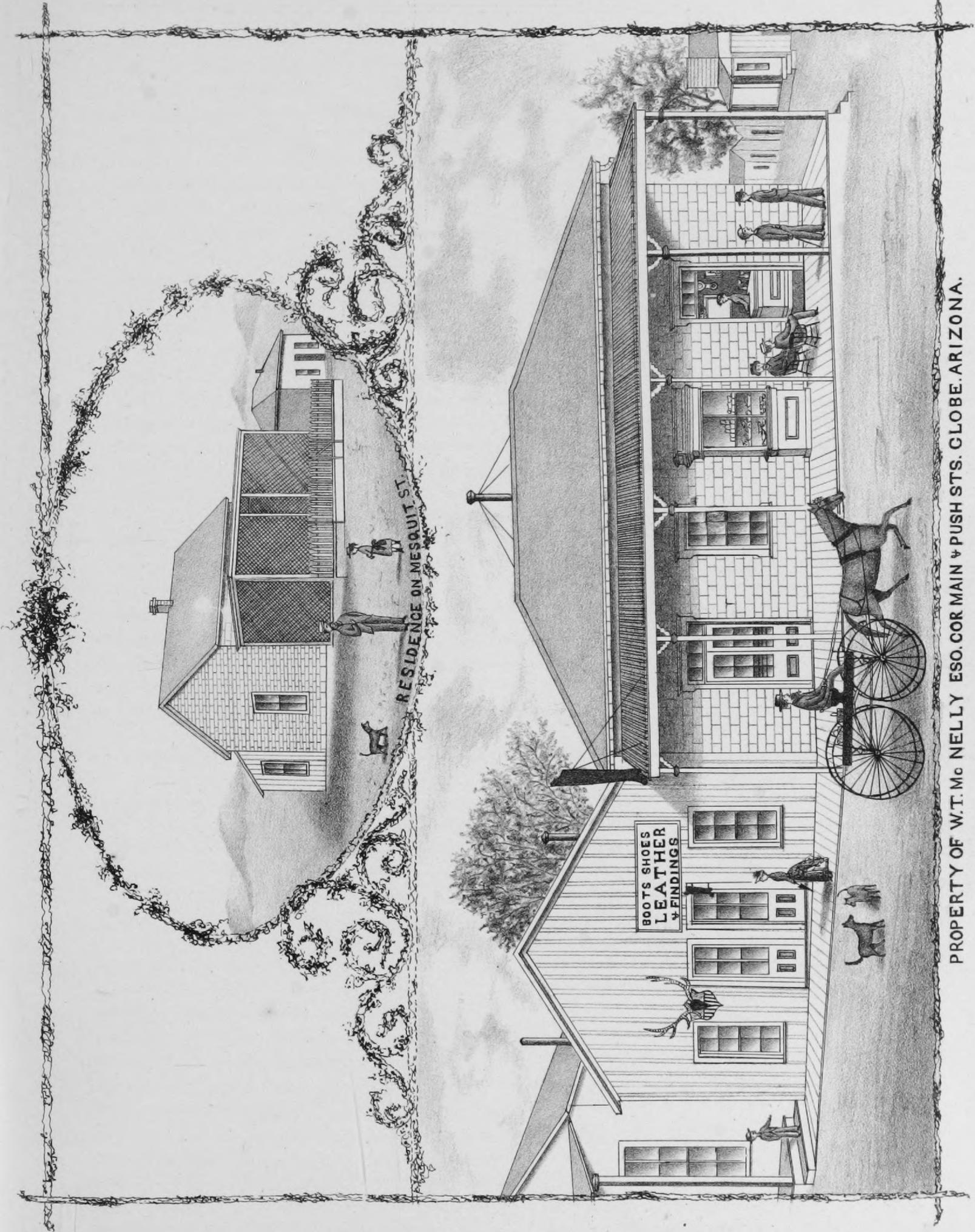
Navajoes . . . . .	4,452 square miles.
San Carlos . . . . .	4,440 " "
Moquis . . . . .	4,000 " "
Colorado . . . . .	600 " "
Pimas or Maricopa, two tracts	475 " "
Papago, two tracts . . . . .	400 " "
Supies . . . . .	60 " "
Hualapai . . . . .	2,000 " "
Yuma . . . . .	300 " "

Total area . . . . . 16,722 " "

We here follow with a description of the various reservations and tribes.

NAVAJO RESERVATION.

The reservation of the Navajoes (nav-a-hoes) is the largest one in Arizona, comprising 4,452 square miles, or 3,328,000 acres. It is located in the northeastern corner of Arizona, in Apache County. It was obtained first by treaty of June 1, 1868, and afterwards enlarged by ex-order October 28, 1868, and January 6, 1880. The Navajoes are a branch of the Apaches and are intelligent, active, and industrious. It was only after the expenditure of millions



RESIDENCE ON MESQUIT ST.

BOOTS SHOES  
LEATHER  
& FINDINGS

PROPERTY OF W.T. Mc NELLY ESO. COR MAIN & PUSH STS. GLOBE, ARIZONA.

of dollars and the loss of many men that they were finally subdued. After being conquered they were removed to a reservation on the Pecos River, but the climate proved unhealthy, and after many had died they were allowed to return to their old home. Since then they have progressed in numbers and wealth. They are said to own as many as 1,500 horses, 500,000 sheep, and 5,000 head of cattle. They manufacture Navajo blankets that sell at from \$25.00 to \$150; also make saddle cloths, sashes, fancy bridles, and other articles, that sell for \$30,000 per year. Their agency is at Fort Defiance, where they have large tracts under cultivation. The tribe is self-sustaining, although the Government promised annuities.

D. M. Riordan, of Fort Defiance, agent of the Navajo Indians of Arizona Territory, has urged Congress to define the boundaries of the Navajo Reservation. He says the Indians were placed on the present reservation by General Sherman in 1865, and not a single promise made in the treaty then has been kept by the Government. He says the Government owes the Navajoes \$800,000, not a dollar of which there is any intention to pay, and no one knows the boundaries of the reservation. Riordan wants a new survey made.

#### YUMA RESERVATION.

This reservation is north of the junction of the Gila with the Colorado River. It was set off July 6, 1883, and comprises about 300 square miles. The Yumas had missions established among them by the Spanish fathers, but they did not take to the new doctrines, and after two years' existence the mission buildings were destroyed and the inmates massacred as related heretofore. Colonel Heintzelman inflicted severe chastisement upon them in 1851, and ever since they have been docile and well disposed. They cultivate small patches on the Colorado bottoms, and raise some corn and vegetables. Their morals are very low. They are becoming fewer every year. They spend most of their time loafing around the streets of Yuma, doing small jobs.

The name "Yuma" signifies, "son of the river;" and they have always made their home in the Colorado Valley. They gave the early settlers much trouble, but now for years past have been at peace with the whites.

The agent has corrected many old abuses, and it is believed that they can soon be made self-sustaining. These Indians have greatly degenerated, and dissipation and loathsome diseases are rapidly doing the work of extermination.

The Indian School at Fort Yuma is now in full blast, with Colonel Clark at its head. There are now thirty scholars. Reservation schools, as a general thing, are not successful; but this one proves an exception.

The agent receives \$1,500; clerk, \$1,000; blacksmith,

\$900; interpreter, \$300; teamster, \$300; school teacher, \$900; matron, \$720, and cook, \$600.

#### CHARACTER OF THE YUMAS.

The Yumas are a quiet, inoffensive set of beings now, though in times past war-like and ferocious. The men are tall, and finely formed, and the women, when not disfigured by tattooing, are not remarkably repulsive. They are all fond of dress, that is, as far as they dress. In distinction from the habits of civilized life the men are much more vain of their personal appearance than the women. They like to wear gaudy colored-jackets and vests. Both sexes content themselves with the avoidance of absolute indecency, and all are literally *sans culottes*. The men wear long strips of bright calico attached to their belts, trailing behind them to the ground, as they march along, with the feeling of a Broadway beau fresh from the hands of his tailor.

Visiting their camp, two miles from town, we called upon Pasqual, the chief of the tribe, a man apparently eighty years old, whose portrait is given on page 61. He sat upon his haunches, looking stolidly on as one of his wives was bruising mesquite beans in a rude mortar. The Yumas live chiefly on this bean, a sort of locust growing wild and abundant in the river bottoms. They also plant corn, squashes, and melons, which they dry and preserve for winter use. These articles constitute their diet excepting an occasional rabbit or fish. They do not care to go on a reservation, but are quite satisfied with their present mode of life.

Pasqual arose from his humiliating posture and assumed at once his natural dignity of mien. He shook hands in the most condescending manner, and uttered a few unintelligible words of welcome. "He has been a great rascal," said Major Ernest, "a brave man, too, for he gave us lots of fighting before he came in and surrendered. Now he is quiet as a kitten."

Major Cremony, while encamped near Yuma, says: "A band of Yumas, about thirty in number, all warriors, came up from the Colorado River to collect stones, and make *metates* for their wives. The *metate* is a slightly hollowed hard stone, upon which soaked maize is laid, and then reduced to paste by the vigorous friction of another oblong and partially rounded stone, in the hands of squaws 'who love their lords.' The paste so formed is then patted between the hands until it assumes a flat, thin, and round appearance, when it is laid on a hot pan and baked into a *tortilla*. As no stones of a suitable character are found in the neighborhood of the Colorado River, nearer than Antelope Peak, the Yumas yearly visit that place to obtain them, as the *metate* is an indispensable culinary utensil. The Yumas proceeded to select stones and hew them into the required shape in their rude manner.

## COLORADO RIVER RESERVATION.

The Colorado River Reservation is 210 miles above Yuma, and was established by act of Congress, March 3, 1866. The boundaries of the reservation were extended by executive orders of the President, November 22, 1873, November 16, 1874, and May 15, 1876, and it now contains 250,000 acres of land, a large proportion of which is first quality farming land.

The reservation extends both sides of the Colorado River, and is partly in California. Its northern limit is Monument Mountain. The Mohave Indians reside on this reservation. They receive some aid from the Government. They raise good crops on the Colorado bottoms, of wheat, corn, pumpkins, melons, etc.

The Mohaves were always rather peaceful. "Their delight to-day," says Lieutenant Ives, "who commanded the first steamboat that ascended the Colorado River, is to mimic the man at the bow who takes the soundings, every call being echoed from the bank with amusing fidelity of tone and accent. At some of the prominent points as many as fifty women and girls would be collected, presenting, with their brilliant eyes and teeth, an agreeable picture. They regard the steamboat with a ludicrous mixture of amusement, admiration, and distrust."

## YAVAPAI SUPIE RESERVATION.

This reservation consists of only about sixty acres, set apart November 23, 1880, and modified March 31, 1883. It is in the bottom of Cataract Creek, in a cañon whose sides rise perpendicularly from 2,000 to 4,000 feet. The valley is from one-fourth to one-half a mile wide, through which runs a clear stream of water. Very few whites have ever seen these Indians, or this remarkably secluded valley. Those that have been there were kindly treated, and furnished with blankets and food. They are communicative upon nearly all subjects, and dispense their hospitalities with ease and grace.

The land is as rich and productive as can be found anywhere on the face of the globe. While the cold blast of winter sweeps over the mountains above, the valley below is a fairy summer land the year through. There are but two points where the valley can be reached, and these places seem to have been made by nature, as a strata of softer material, by the wear of time, has worn away on the side of these perpendicular cliffs from the summit of the mountain to the valley, wide enough for a trail. But it requires a steady nerve and a clear head to pass over these trails.

As you start down, the cliff rises perpendicularly above but a few feet, but below you look down 3,000 feet into what appears to be the last jumping-off place. The trail is from four to eight feet wide, and by constant use for a long time, in many places is worn quite deep into the

rock. Horses and mules that have never passed over the trail do so without fear, and without apparent knowledge of the fearful chasm that lies below them; there are few men that can bear to look upon the giddy sight, and some have to be fastened upon their horses and blindfolded in order to make the descent. Nestled in this deep and beautiful valley, this little band of Supies live. They have orchards of peach trees, and raise an abundance; they also raise all the grain and vegetables they can consume. They exchange with the Moqui buckskins for blankets, and have always a large supply of blankets on hand to trade to the Hualapais and other Indians who come to trade with them. The "Ava Supies" number only 300, all told.

## HUALAPAI RESERVATION.

The Hualapai (wal-la-pais) have a reservation south of and adjoining the Grand Cañon set apart by ex-order, January 4, 1883. It embraces the mouth of Diamond Creek, and is touched by the Atlantic and Pacific Railroad on the south. It consists of 2,000 square miles, mostly table-lands, destitute of verdure or water.

Governor Tritle says the Hualapais occupy a reservation that is almost entirely barren. Last winter, 1883, the Hualapais were reported in a wretched condition, some of them nearly starving. The fact that the Apaches, who had been warlike and murderous, were living in comfort at San Carlos, has a dangerous significance to the peaceable Indian who is living in want.

They were formerly a very brave and warlike people, as the graves that mark the places where most all of the early settlers rest, unmistakably testify. The road from Hardyville to Prescott is lined with graves of men who fell at their hands, and the early miners of Mojave County were waylaid while prospecting, and killed at their cabins, shafts, and tunnels, until for a long time the mines were practically abandoned. But they too found their numbers decreasing; and becoming weary of the constant danger of being attacked, sued for peace, were fed at Camp Beale Springs for a time, and afterwards were moved to the Colorado River and placed with the Mojaves. The heat of the river bottom did not agree with them, and the debauched condition of the Mojaves was a source of annoyance, and they were assigned finally to the present location.

## MOQUI RESERVATION.

The Moqui Indians have a reservation of 4,000 square miles, in a square body joining the Navajoes on the west. It was set apart by ex-order, December 16, 1882. It contains the celebrated "Seven cities of Cibola," heretofore described. It was visited by Lieutenant Ives in 1856, and by many other travelers since, of both ancient and modern times.

The Moquis number 2,100, and live in seven villages, on the tops of three cliffs or head-lands that rise more than six hundred feet above the level of the plains. Why they choose these unhandy places is a mystery. "On reaching the villages," says a recent visitor "one finds one's self on a flat ledge of bare rock, which extends out from the main table nearly half a mile in length, and from ten to perhaps three hundred feet in width." The sides are almost perpendicular. The most populous of these villages, Walapi, is on the extreme end of a rock, where the width is not over a hundred feet. The houses are built of rough stones, laid in mud and fashioned like terraces. These terraces are approached by ladders, the entrance to the dwellings being from the upper story. At night the ladders are drawn up, and all access to the interior cut off. The water for all purposes is carried on the backs of men and women from a spring near the foot of the mountain, a distance of nearly a mile, while the wood is brought eight miles.

Here these people have lived longer than they can tell, even from their traditions; and hitherto they have been averse to a change of location, notwithstanding the difficulty of obtaining their necessary supplies and the distance from their fields and herds. The word *moqui* means death and was applied to them by other tribes at a time long since, when the small-pox killed off large numbers of the tribe. Their original name was Ha-pe-ka. They are small of stature, the men being about five feet and women four feet high. Like the Pimas, the Moquis are partly civilized, cultivate the soil and manufacture many articles of earthenware and coarse woolen fabrics.

The agent of the Moquis Pueblo Indians receives an annual salary of \$1,300; physician, \$720; clerk, \$720; interpreter, \$300; teamster and farmer, \$700; and each teamster, \$700.

#### PAPAGO RESERVATION.

The Papagoes have two reservations; one is on the bend of Gila River in Maniapo County, set off by ex-order, December 12, 1882. The other is south of Tucson, set off July 1, 1874. In all there are about 200 square miles. These Indians were called *papago*, meaning baptized. They were converted to Christianity by the Spanish missionaries, and are still connected with that church. They have mostly embraced the Catholic religion, and are further advanced in civilization than other tribes. They live by cultivating the soil and raising stock. They are peaceable, well-disposed, and have never asked for or received much assistance from the Government. They are docile and kind in their intercourse with the people. They speak the same language as the Pimas. Many of them are employed by the farmers and stock-raisers, and are considered excellent laborers. Their women are virtuous and industrious. The

men, like most Indians, indulge in polygamy, and sometimes drink too much liquor. The Government has recently built a school house for the education of their children, at San Xavier, and the Sisters of St. Joseph have been employed to teach the school. About sixty scholars were at one time in attendance and making good progress.

The following is a complete list of the names of Papago Indian villages and chiefs:—

VILLAGE OR PUEBLO.	NAME OF CHIEF.	NUMBER OF INDIANS.
San Xavier del Bac.....	Ascension Bios.....	100
Santa Rosa.....	Luis.....	400
Coyote.....	Luis.....	50
Quijotoa.....	Conquien.....	300
Cicorimat.....	Joaquin.....	25
Combabi.....	Kaisemoh.....	100
Maqumevoh.....	Cumatam.....	200
Chuquetoett.....	Pensemom.....	100
Anekam.....	Uteniequesom.....	300
Cumaro.....	Antonio.....	300
Quajate.....	Uam-toke.....	400
Kah-kah.....	Algodon Amarillo.....	150
Tecolote.....	Sheramatt.....	150
Quewuoh.....	Techewuopai.....	200
Taisainemoh.....	Juan Miguel.....	150
		2,925

Besides these principal villages, there are many others of less importance, whose chiefs are not known. In the above figures, children are not counted, but it is probable that the total number of Papago Indians reaches about 6,000.

#### PIMA AND MARICOPA RESERVATIONS.

There are two reservations for these tribes, one extending along the valley of the Gila from Blackwater, a point ten miles west of Florence, to the mouth of Salt River, a distance of fifty miles. This was set apart by ex-orders of February 29, 1859, and August 31, 1876, and extended May 5, 1882.

The other one is east of Phoenix on Salt River, and was set apart June 14, 1879. It joins Camp McDowell Military Reservation, and is at the junction of Verde River.

The lands set apart for the Pima and Maricopa Indians in the Salt River and Gila bottoms, comprise a large portion of the very finest of this productive soil. The principal part of these reservations has been cultivated by them and their forefathers for hundreds of years. They embrace about 150,000 acres. They annually yield about two and a half million pounds of grain, chiefly wheat.

#### LAWS OF THE MARICOPAS.

Their disputes are generally settled by arbitration of council of judges; and, although they are not supposed to be governed or influenced by the common law of England, or the decisions of eminent jurists, still, in a decision made recently by one of these tribunals, it will be observed that

if the decision was not in accordance with our enlightened practice, the reasoning was good.

It seems that a man and his wife, having but one child, disagreed, and it was carried to such an extent that they finally agreed to separate, and the terms were all amicably arranged, except as to who should have the child. The wife pleaded that the tender youth needed a mother's fostering care—that the tendrils of affection clung more closely to a mother's heart; but the husband insisted that it required his strong will to launch the frail bark properly on the stormy sea of life. The difference of opinion was finally decided to be irreconcilable, and the case was brought before the council of judges. Both side plead their case with all the ardor of parental love, and each showed strong claims for the custody of the child. The judges having no precedents to govern them, and only being desirous of doing right, were sorely perplexed, and hesitated in their own minds which side of the scales had the most weight. Finally an old, gray-headed, patriarchal-looking fellow arose, and said that it was a certain fact and admitted by all, that the woman was the mother of the child, but there was no positive evidence showing that the man was his father, and under these circumstances, he felt constrained to give the child to the mother. This decided the case, and the mother was awarded the child.

#### HABITS OF PIMAS AND MARICOPAS.

The two tribes number 5,000 souls, and though some of them realize goodly sums of money yearly as the results of their limited labor, few of them save any part of what comes into their hands—spending it usually upon whatever suits their eye in the way of trinkets and dress.

The men are generally tall and well proportioned; and many of the Indian maidens are very comely, some of them having rather intelligent and even pretty faces, with handsome figures loosely arrayed in flowing dresses, chiefly composed of the gaudiest styles of cotton handkerchiefs. Their hair is cut square across the forehead and flows in long tresses behind. The men usually ride on ponies, while the women trudge along on foot, carrying heavy loads. Each family has a store-house for their grain, which is generally better than their dwellings.

They manufacture a species of pottery ware, and also make from grass, baskets capable of holding water, and some of them very beautiful. They live in a most wretched manner, and a visit to an Indian village generally modifies the romantic ideas one is apt to form of the noble red-man from novel reading. Their wigwams are very rudely and simply constructed with poles stuck in the ground, bent, and brought together at the top, and then interwoven with straw, and the whole often covered with brown muslin, while some are covered with mud on the outside. The doors or entrances are so low, in most cases, as to require

creeping to get inside. Those villages have usually a number of half-starved, useless dogs in and around them.

Governor Tritle says: "A sub-reservation, containing many thousand acres of land, was established on Salt River, near Phoenix, to accommodate a small number of Maricopa Indians. Of this reservation only a few hundred acres are arable, the balance desert land and worthless without the introduction of water by means of extensive ditches. Such ditches the Indians cannot construct. These Indians are remote from their main reservation and without the supervising care of an agent. A few months since some fifteen were arrested for assault upon white settlers, and there was danger of serious trouble from an attempt to release the Indians by force." He recommended that this sub-reservation be abandoned and the Indians provided for upon their main reservation.

The agent receives \$1,800; physician, \$1,200, teacher, \$900; blacksmith, \$1,000; matron, \$500,—annual salaries.

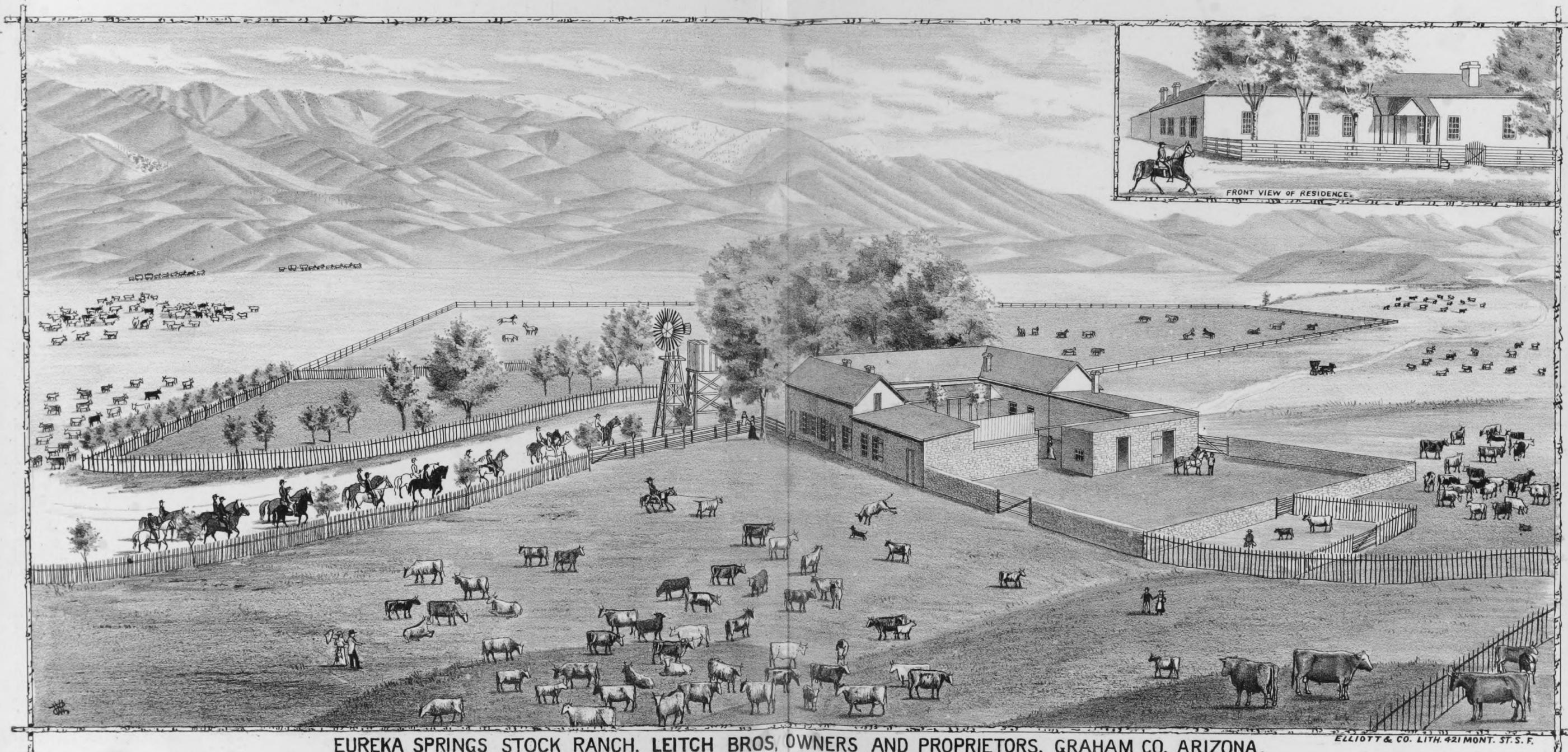
#### THE PIMA INDIANS.

The Phoenix *Gazette* says: "About five miles above Tempe on the north side of Salt River, is a settlement of the Pima Indians. The Government has set aside a small reservation for their use, and a settlement of about 500, old and young, has been established. The name of the chief, who is an old and venerable-looking man, is Cherichecum.

"They have under cultivation, in wheat, about 640 acres, that is estimated to yield 1,500 pounds to the acre. This will give 960,000 pounds, being equivalent to about 1,920 pounds per capita. They will raise a large summer crop of melons and squash. The agent of the Pimas does not exercise any authority over them, he claiming that, being off the reservation proper, they are out of his jurisdiction. This leads to chaos and 'confusion worse confounded.'

"There is constant drunkenness and disorder. The chief alleging that the young bucks will not listen to his counsel, and that he cannot restrain them in their dissolute course, shows a fearful mistake on the part of the Government in allowing them to settle on these lands. Indians are but Indians at best, and until they are so far civilized as to hold their lands in severalty and to be held amenable to the laws like other citizens, they should all be kept together, and under rigid discipline.

"While the aggregate of their crops looks large, when its cash value is divided per capita, it is small. Take the present market price of wheat, \$1.60 per 100 pounds, the total is \$15,360, or \$30.72 per head for old and young. The summer crops will amount to \$10.00 per capita, probably, thus making a total of \$40.72. It must be remembered that these people must live out of this amount, as the Government does not allow them rations as at San Carlos. This is one of the disadvantages of being industrious and semi-peaceable."



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## WHITE MOUNTAIN RESERVATION.

This large reservation is in the region about the White Mountains and embraces about 4,400 square miles. On it is located the San Carlos Indian Agency. It takes a portion of Apache, Gila, Pinal, and Graham Counties. This section was at first set apart as a reservation by executive orders November 9, 1871, and afterward by orders of December 14, 1872, August 5, 1873, July 21, 1874, April 27, 1876, and March 31, 1877. Large additions were made until it reached its present size. It is estimated that 50,000 acres is fit for cultivation. It is rich in minerals and has large forests of timber. On this reservation are most of the Apache Indians, consisting of the Coyoteros, Pinals, Aravaipas, Tontos, Apache-Yumas, Apache-Mohaves, and the Chiricahuans, which include the Cochise Indians.

The following is a list of officers, salaries for the San Carlos Indian Agency: Agent, \$2,000; physician, \$1,200; clerk, \$1,200; chief scout, \$1,000; storekeeper, \$900; head farmer, \$900; blacksmith, \$900; carpenter, \$900; issue clerk, \$900; school-teacher, \$800; two school-teachers, \$600; matron, \$600; seamstress, \$600; assistant farmer, \$720.

## HISTORY AND LANGUAGE OF APACHES.

The history of the Apaches is known for upwards of three hundred years, since Father Quino first explored the valleys of the Salt and Gila Rivers, in search of the "Seven cities of Cibola."

For a long time they were lost sight of, until the immigration of gold-hunters into California took place. Then they were brought prominently before the Americans. Since then they have become well known, eclipsing the Siouxs and the Comanche in the cruelty of their warfare. Among them, at times, have arisen chiefs of extraordinary ability, such as Magnus Colorada, Cochise, and others, whose biographies are given further on.

As far as intellectual ability they equal any race of men on earth. Of course their mental powers have not been educated or called forth as far as books are concerned or the experience of other nations or individuals than themselves. But as far as mountain, plain, desert, oasis, rivers, lakes, trees, plants, and animals of their own country, they are unexcelled. Their origin is in common with other Indian tribes. Their geographical position undoubtedly has something to do with their character. The Indians of the plains and Gila and Colorado Rivers have large, wide-spreading feet. Those of the mountains have small feet. Those of the plains are tame and have ever been at peace with the white man, as the Papago, Pima, and Yuma. Those on the mountains have ever been wild and untamable.

There are about six hundred aboriginal words in the

regular Apache language. These are of the simplest character, and taken wholly from the things of nature surrounding them, or from some habits or description of the thing. Since the advent of the white man, they have added a great many words to their stock by compounding. For example, trail is it-tin, and iron or metal is pesh. Railroad is pesh it-tin. A wagon, running on the ground, is it-zay-knock-eye. Fire is kóong. A locomotive is koong-knock-eye, or, literally, fire wagon. Gold is pesh klet sugee; silver, pesh kleckaiyay; bear, sahss; fox, be dah kleezhay; sheep, ba ba kleczhay; puma; mat to klee zahy; mule, John day zin; burro, doodle kis yay; quail, ish be dee; deer, peeng; one, tot lai; two, knock ee; three, tog gee; four, tee ec; five, est lai; six, goose tah; seven, goose see klee; eight, tsay pee; nine, in do sty; ten, coon ez mahn; twenty, knock teen; thirty, tog teen; forty, tees teen; fifty, es la teen.

None of the Pacific Coast Indians can count much beyond ten, but the Apaches can count to 10,000 as easily as we do.

## CHARACTERISTICS OF APACHES.

As the women are deemed altogether inferior, they are spoken of simply as *ish tia nay*, or woman. Few Apache women are honored with names; but when used they are quite poetical, as *Sous-ce-ah-say*, "Morning Star." *Ish-kay-nay*, "Tom-boy." The warriors take their names from some marked trait of character or act. There was, for instance, *Gian-nah-tah*, which means, "Always Ready," and was admirably descriptive of the man's character. The name given him by the Mexicans was *Cadete*. Then came *Nah-tanh*, or the "Corn Flower," so called from having, on one occasion, while on a raid in Sonora, completely hidden himself and party in a field of corn near the large town of Ures, and succeeded in running off 200 or 300 head of horses. On one occasion he received a kick on the nose from one of the captured animals which had the effect of flattening that feature over a considerable portion of his naturally unattractive countenance. From this accident the Mexicans dubbed him *El Chato*. A tall, stately fellow rejoiced in the name of *Natch-in-ilk-kism*, or the "Colored Beads," of which he always wore a thickly-worked and stiff collar around his throat, and bracelets on his wrists. *Nah-kah-yen* means the "Keen Sighted," and was so baptized because of his wonderful powers of vision. *Too-ah-yay-say*, the "Strong Swimmer," got his title from a narrow escape from drowning in the Rio Grande, while endeavoring to cross it with a band of stolen horses. After a desperate struggle, in which several of the animals were lost, he succeeded in reaching the shore and effecting his escape with the rest, from a large pursuing party of Mexicans, who did not dare venture into the swollen and turbid flood. A quiet, easy-tempered and good-natured fellow was

known as *Para-ah-dee-ah-tran*, meaning the "Contented." One old sagamore received the *sobriquet* of *Klo-sen*, or the "Hair Rope," for having lassoed and killed a Comanche during a fight between the tribes, with one of those *cabestros*. His arrows had been expended, and possessing himself of the arms of his slain enemy, *Klosen* contributed greatly toward winning the fight. *Pindah-Lickyee*, or "White Eye," was so named from an unusual amount of white about the eye.

The above regarding Apache names and character is taken from "Life Among the Apaches," written by J. C. Cremony, to which the reader is referred for the true inwardness of the Arizona Indians. Cremony was for a long time with the Apaches and his conclusions were that "they were the most treacherous, blood-thirsty, villainous and unmitigated rascals on earth, and incapable of improvement."

#### THE WICKENBURG MASSACRE BY APACHES.

"It is an absolute fact," says Maj. B. Truman, "no more cowardly, no more cruel an Indian ever lived than the Apache. Five hundred odd rude graves of pioneers and soldiers mark with dreadful precision the evidences of the deadly work of the treacherous Apache. Hundreds of innocent men, women, and children have been murdered; stages attacked and passengers burned at the stake; gallant army officers have been killed. Major Truman gives an account of one of the characteristic attacks of the Apaches on a stage load of passengers, near Wickenburg, on November 4, 1871, during which Fred Losing, a noted writer, and five others were killed; one man and one woman escaped.

"The people occupying the stage at the time of its leaving Wickenburg, were in high spirits, and anticipated no danger of an attack. Their arms had been stored beneath the cushions of the seats for convenience and safety; and wit, wine, and humor flowed freely, everything going on as 'merry as a marriage bell,' until the moment of attack. Miss Sheppard and Mr. Kruger and three others sat on the inside. Young Loring rode on the outside, in company with the driver. The first notification the inside passengers had of the presence of danger was at a point about nine miles from Wickenburg, when they were startled by the voice of the driver, calling out:—

"Apaches! Apaches! Apaches!"

"Scarcely was the alarm thus given, than a volley was discharged from the rifles of the savages into the stage-coach, succeeded, almost instantly, by a second one. The driver, Loring, Shoholm, and Hamel were killed instantly, Loring groaning slightly for a few moments, Hamel and Shoholm remaining upright in their seats. Mr. Salmon received a shot in the abdomen, and, seemingly in his agony, sprang out of the stage. Mr. Kruger received a

ball in his right shoulder, and two shots in the back. Upon the firing of the first volley, he grasped Miss Sheppard and forced her under the seat, lying down on the floor of the coach himself, having previously discharged the contents of his pistol into the midst of the savages. Miss Sheppard had been wounded in the right arm above the elbow, and two shots had ploughed through the flesh of her shoulder. After the discharge of the second volley everything remained quiet for a few moments, so still that the dropping of a pin might have been distinctly heard. There being no signs of life in the coach, the savages presumed that they had succeeded in killing all, and with one accord sprang, cat-like, from their ambush upon the coach. When within almost an arm's length of it, Mr. Kruger and Miss Sheppard sprang to their feet and yelled with all their might, the former holding his revolver in their faces. This was too much for the cowardly red-skins, and they at once retreated pell-mell to cover. The two then sprang from the stage and called out for all those still alive to follow them. The only response was from Mr. Adams, who was lying on the bottom of the coach. Adams seems to have been paralyzed by the shot he had received, being unable to move anything except his head, which he raised, saying:—

"O God! can't you save me?"

"When asked if he could move, he answered in the negative; Kruger then told him that they would be compelled to leave him to his fate. He was then lying face downwards. When subsequently found, he had been turned over and shot through the head.

"Kruger and Miss Sheppard then left the stage, and struck through the brush, closely followed by the Indians. The Apaches had apparently expended their rifle ammunition at the first attack, as they had pistols only when following the fugitives. These they discharged at them frequently, keeping, however, at a respectful distance, dreading the revolver in the hand of Kruger, which was leveled at them whenever they attempted to close upon them. Miss Sheppard had also armed herself with an empty wine-bottle, furnished to her by Kruger, which also had considerable effect in intimidating them when they approached, mistaking it for a weapon.

"Shortly afterward, they regained the road, and plodded on in the direction of Ehrenberg, dogged by four Apaches on the right and five on the left, Kruger all the while supporting his companion with one hand and intimidating their pursuers with the revolver in the other. Their wounds were bleeding freely during the whole time, and when completely exhausted, having traveled through loose sand for a distance of at least five miles, they were greeted by the welcome sight of a cloud of dust, arising from the buckboard conveying mails to Wickenburg.

The Apaches were not any slower than themselves in discovering it, and almost immediately vanished. The driver of the buckboard was so frightened when he saw the fugitives that it was with some difficulty that he was induced to take them on board, and even then not until Kruger threatened to shoot him.

They were then conveyed a few miles in the direction of Ehrenberg, to the confines of a barren desert, some thirty or forty miles broad, on the other side of which that city lay. Here the driver concluded to leave them, while he rode across the country for assistance, promising to return by 7 o'clock in the evening. An improvised barricade was formed of the mail bags and a trunk, behind which they remained, fearing momentarily another attack from the Apaches. It was not until past midnight that relief came. In the interim, they had suffered fearfully from thirst and cold. At 11 o'clock they saw, in the form of fires, signs on the hills which satisfied them that there was succor coming. A body of about twenty armed men, with an ambulance to convey the dead, had been brought from Wickenburg, and they, with five of the six that had been murdered, were at once taken back to that place. The sixth body—that of Mr. Salmon—was not found until the following morning, as he had crawled some distance away from the stage, where he had fallen into the hands of the savages and had been scalped, the skin being torn off from the chin to the back of the head.

Loring, Lance, Shoholm, Hamel, and Adams, were all decently buried at Wickenburg, but Salmon was interred in the middle of the road near where the attack had been made.

The Indians had rifled all the baggage within the stage, taking therefrom all the valuables they contained, in the way of money and jewelry. Kruger's loss was within a trifle of \$8,000, and Miss Sheppard's a similar amount. The other passengers also had large sums of money, all of which the savages carried away.

The mail bags were packed in the boot of the stage. A demijohn, containing about a gallon of whisky, six bottles of Jamaica rum, and several bottles of porter, were stowed there also. After ransacking one or two of the bags, it is presumed the Apaches discovered the liquor, and abandoned everything for it, leaving the balance of the mail untouched in the forgetfulness of intoxication.

"The wounded man and woman were taken to Camp Date Creek, to receive medical treatment, Dr. Evans being the only physician nearer than Ehrenberg. The lady carried with her for a long time a relic of the tragedy in the form of a fur cape, which contained seven bullet holes. The old hat worn by Loring at the time of his untimely death was forwarded to his father, that being all that was left of his effects unrobbed or unburied."

#### EXTENT OF SAN CARLOS RESERVATION.

"The extent of this reservation," says the *Globe Chronicle*, "is far beyond the requirements of the Indians now in occupancy. The northern portion is well tended and adapted to agricultural pursuits. The southern portion is entirely worthless as to agricultural industries, and of no value to the Indians. The Gila River runs through this section, but so far has been of little advantage to the Indians by way of irrigation. Numerous attempts have been made by the Government, at enormous expense, to utilize the waters of the Gila, but the efforts made were of such a character as to expend vast sums of money to but little purpose, save, perhaps, the agent then in charge and his immediate friends.

"The foolish effort made to convey the waters of the Gila over the San Carlos River in a viaduct but a few feet above low water mark was a signal failure, as any man of medium common sense would have known before the effort was made. The truth is that the waters of the Gila never reached the viaduct erected, which was swept out by the first flood that visited the San Carlos River, on account of the porous nature of the soil that intervened between the dam in the Gila and the viaduct erected by the Government, as no practical calculation was made in this regard by the Government officials. Thousands of dollars were expended in digging the ditches, and when wanted for use the waters percolated through the soil and never were conveyed to the viaduct erected to receive them.

"We state these facts simply to show that the present location of the agency buildings is not suitable for the government of the Indians. It has no attractions for either white men or savages. It is entirely worthless in an agricultural point of view, except as a channel through which to expend thousands of dollars simply to benefit a few contractors and Government employés.

"We would suggest that at least thirty miles of the southern part of the agency be cut off, and if of any value, that the Indians be allowed the proceeds for the purpose of procuring stock and agricultural implements, and that the agency buildings be removed from their present location and established in the northern part of the reservation, where there is an abundance of timber and fine agricultural lands, and the Indians be instructed in the art of self-support, and placed in a locality where self-subsistence is at least practicable, which is not the case so long as they wander on the desert lands of the Gila, or inhale the malarial atmosphere of the present location of the San Carlos agency."

#### PRESENT INDIAN POLICY.

The Prescott *Journal* gives an interview with General Crook about the policy he had adopted of putting the Indians on ranches. He said, "The result was that they sold

and turned over to the Government, from last year's crop, about \$400,000 worth of grain, corn, and barley, and over 600 tons of hay. A large portion of this hay," he continued, "was what is called mesquite grass, which grows among bushes of that name, and where cattle cannot reach it. The Indians crawl through this brush, and with knives cut the grass, or else pull it up, and carry it on their backs into camp. In this way they secured the above amount and sold it to the Government."

At the time of General Crook's taking command of the department, in 1882, the Indians on the reservation were dissatisfied and on the eve of an outbreak.

At present they are satisfied and contented, owing to prosperity attending the wise policy inaugurated by him. At first the Chiricahaus were disposed to complain of the situation on their return, but this dissatisfaction has now passed away, and they express not only a willingness, but a strong desire, to settle down in peace, and engage in agricultural and stock-raising pursuits. During the past year, those on the reservation have accumulated a large amount of stock, from the natural increase of that previously owned by them, as well as by means of trading.

A great industry, formerly in vogue among these people, and one which tended to demoralize them, has been entirely broken up through General Crook. This is the manufacture of "tizwin," an intoxicating drink, which is made from corn. The corn is boiled and placed underneath the ground, and allowed to ferment. Its effect on the average Apache can be easily imagined. So fond were they of it, however, that they would trade their last pony or last blanket to secure enough to place themselves under "its exhilarating influence."

The chief of each tribe is now held to a strict accountability to prevent its manufacture or sale, and, as a consequence, the tizwin business is completely broken up. There are at present about 6,000 Indians in all on the reservation, of which about 1,500 are males. While the military authorities have general supervision over the entire number, General Crook's policy (and there can be no doubt it is a wise one) is to have them govern themselves to the greatest possible extent, without interference from the military. In this manner he has so completely won their confidence that the slightest approach to any serious dissatisfaction which might arise would be completely suppressed.

#### CONDITION OF APACHE INDIANS.

"The White Mountain Apache Indians under the military at, and in the vicinity of Fort Apache are in a fair way to do a thriving business at farming this year," says the *Prescott Journal*. "It is estimated that these Indians, numbering, all told, about 1,500, will raise not less than 150,000 pounds of barley and 500,000 pounds of corn dur-

ing the coming season, and in addition they will be able to put in the market about 1,500,000 pounds of hay. This grain and hay will be purchased by the Government at a fair price, thus insuring to them a market for the products of their labor.

"This is a good beginning, and if the Apaches are to remain with us, there is no better occupation to be found for them, perhaps, than to teach them to earn their bread by the sweat of their brow.

"These Indians are making arrangements for supplying themselves with farming implements, tools, etc., and in this they are assisted by the military officers having them in charge.

"When we take into consideration that not more than two years ago these same Indians were found, by the present commander of this military department, to be in destitute circumstances, and on the verge of a general outbreak against the whites, in whom they had lost all confidence, and whom they regarded as their worst enemy, their present condition and circumstances, as contrasted with their condition then, is something quite noteworthy.

"This is the result of exclusive military control of the Indians, and is a most fitting commentation upon the many unjust criticisms and abusive and malicious misrepresentations by some of the Territorial press, and particularly the persistent and illogical attacks upon General Crook.

"These Indians are under the charge of an officer specially detailed by General Crook, who, instead of indulging in blatant, hypocritical cant about Christianizing (?) the Indians, is endeavoring to teach the industrial pursuits."

#### INDIAN FARMING AT SAN CARLOS.

No doubt one or two years of farming, with good crops and a market, will settle the Indian question as far as Arizona is concerned.

The Indians are all at work on their farms, grubbing, plowing, and sowing barley. The agent is kept in hot water with "me want plow," etc., but always has the last one to give. They are making every preparation to give the Indians all the seed and implements they can use, and the outlook for the year of '84 is very bright.

The Chiricahuas all have farming land given them and are all anxious to work and seize the almighty dollar.

In a communication to the *Live Stock Journal*, P. P. Wilcox, of the San Carlos Indian Agency, says: "A contract was entered into on the 12th of November last between the honorable commissioner of Indian affairs and H. C. Hooker, of Sierra Bonita Ranch, illustrated and described in this work, for the delivery of 900 cows at the agency, for the Indians of the White Mountain Indian Reservation, at \$34.00 per head. A large portion of the cows have been issued to the Indians, who are well pleased, and, in most cases, taking good care of their valuable Christmas

present. The cows are all from Mr. H. C. Hooker's celebrated Sierra Bonita Ranch, and they are superior graded stock, and lend a domestic appearance to the villages along the Gila and San Carlos Rivers, which are full of promise of peace in the future.

"One hundred and fifty cows of this purchase, together with six bulls, have been issued to the White Mountain Indians in the vicinity of Camp Apache, for the purpose of testing their capacity and disposition to engage in industrial pursuits.

"The number of cattle now owned by the Indians of this reservation is something over twelve hundred head,



APACHE INDIANS STARTING ON A HUNT.

and their pride of ownership is a hopeful sign of future prosperity."

The recent purchase was made from funds saved from the last appropriation for subsistence for the Indians under my charge—a saving made without depriving them of an ample supply, issued at regular weekly intervals, in a manner and quality satisfactory to all.

The Government has been supplying these Indians with rations, etc., at an annual expenditure of about \$270,000, at the same time giving them a vast area of country to occupy.

The Apache Indians raised over 400,000 pounds of corn and barley in 1883.

#### INDIAN OUTBREAK OF 1882.

A portion of the Apache Indians, confined upon the San Carlos Reservation, raided upon the settlements adjoining their reservation, dealing death and destruction in all directions. On the morning of April 19th, Loco's band of Chiricahaus broke out, and after killing the chief of police, entered the valley of the Gila, and it is estimated that sixty industrious citizens fell a prey to their thirst for blood. The military force of the Territory was so few in numbers, says Governor Tritle, and so much scattered in the various parts of the Territory, that the raid was continued by the Indians almost without interruption until

they reached the boundary line between Arizona and Sonora. General Wilcox, then in command of this department, moved his forces with great activity, and the general of the army, as well as the Honorable Secretary of war, responded promptly by sending more troops into the field, and several engagements took place within a few miles of the Sonora line, in which a number of the Indians were killed.

General Crook now has those Indians in charge, and he is both feared and respected by them.

All of the hostile Indians who have come into the San Carlos Agency since Crook's campaign, are held as prisoners of war. They are not permitted to mingle with the agency Indians, and receive their rations from the army instead of agency supplies.

The *Arizona Silver Belt* published at Globe, says: "In anticipation of the return of the Chiricahuas to the San Carlos Reservation, the San Carlos Indians, who have been mak-

ing their homes on the east side of the San Carlos River, have removed to the west side of that stream with a view of better protecting themselves and stock from the thieving and murderous Chiricahuas. Other tribes, the Apache Yumas and Apache Mojaves, are no better pleased with having the Chiricahuas as neighbors. These tribes, including the San Carlos, collectively number about 1,800. Already the Coyotero Apaches, George's Band, are manifesting dissatisfaction, not because of the arrival of the Chiricahuas, their friends, but for the reason that they have been refused rations, because of their refusal to work. This band, who were refused food, returned to Cibicu, or that neighborhood. Cibicu, it will be remembered, is

where the White Mountain Indians attacked General Carr's command, and killed Captain Hentig and nine privates.

#### THE LAST OF THE APACHES.

"It affords food for pleasant reflection," says the *Phoenix Gazette*, "to know that the last of the renegade Apaches have returned to the San Carlos Reservation, where they are held as prisoners of war. Hence the Mexican Government cannot carry to our door the complaint that American Indians are responsible for all the devilment committed in their northern States, while our own settlers near the border, will be, for the time being, free from the annoyance and damage resulting from the predatory raids of the savage fiends. If the Government would heed the wishes of the people of Arizona, and conserve its own interests at the same time, the Apaches would at once be removed from proximity with the border. However, we have no reason to expect any such favors; it is foreign to the Indian policy now in vogue and not likely to occur. Under the circumstances, then, the presence of General Crook as commander of this department, must add to the feeling of security among our people.

"It cannot be denied that the outbreak of 1882, which has been so prolific of injury to every interest of our Territory, was directly the result of culpable negligence and inefficiency on the part of the commander of this department. Being unable to suppress the uprising when fully informed in the premises, General Wilcox was also unequal to the task of quelling the insurrection when it had occurred. With Geronimo's surrender, Crook has succeeded in securing the last Apache chieftain still surviving, who has left the reservation during the past few years. The authorities have virtually put him in control of the San Carlos Agency, and it remains to be seen whether or not the general will be able to manage the Indians satisfactorily to our people, viz., to prevent their annual incursions, and the loss of life and property at their hands.

"We have great confidence in General Crook, which has been further strengthened by his recent experience with the Apaches. He fully understands their nature, is not afraid of them, and when it comes to pursuing fugitives, he does not permit the grass to grow under the feet of his command. For these reasons we predict a period of continued peace and attendant prosperity for Arizona, but are willing to admit that time alone will establish the correctness or fallacy of our belief.

#### MANGAS COLORADO.

Probably no better history of the Indians can be here given than sketches of the lives of some noted Arizona Indian chiefs.

Mangas Colorado, or Red Sleeves, was, undoubtedly, the most prominent and influential Apache who has existed for a century, according to Captain Cremony. Gifted with

a large and powerful frame, corded with iron-like sinews and muscles, and possessed with far more than an ordinary amount of brain strength, he succeeded, at an early age, in winning a reputation unequalled in his tribe. His daring exploits, his wonderful resources, his diplomatic abilities, and his wise teachings in council soon surrounded him with a large and influential band, which gave him a sort of prestige and sway among the various branches of his race, and carried his influence from the Colorado River to the Guadalupe Mountains.

Throughout Arizona and New Mexico, Mangas Colorado was a power in the land. Yet he could assume no authority not delegated to him by his people. He never presumed to speak for them as one having authority, but invariably said he would use his influence to perform certain promises and engagements.

Mangas, in one of his raids into Sonora, carried off a handsome and intelligent Mexican girl, whom he made his wife, to the exclusion of his Apache squaws. This singular favoritism bred some trouble in the tribe for a short time, but was suddenly ended by Mangas challenging any of the offended brothers or relatives of his discarded wives. Two accepted the wager, and both were killed in fair duel.

By his Mexican wife, Mangas had three really beautiful daughters, and through his diplomatic ability he managed to wive one with the chief of the Navajoes, another with the leading man of the Mescalero Apaches, and the third with the war chief of the Coyoteros. By so doing, he acquired a very great influence in these tribes, and whenever he desired, could obtain their assistance in his raids.

#### MANGAS' DRESS AND ADDRESS.

His height was about six feet; his head was enormously large, with a broad, bold forehead, a large, aquiline nose, a most capacious mouth, and broad, heavy chin. His eyes were rather small, but exceedingly brilliant and flashing when under any excitement—although his outside demeanor was as imperturbable as brass.

Mr. Bartlett, of the boundary commission, in order to retain the supposed friendship of Mangas, had a fine pair of blue pants, ornamented with a wide stripe down the outside of the legs, made for that respectable individual. To this were added a good field officer's uniform and epaulets, given by Colonel Craig, a new white shirt, black cravat, and an excellent pair of new shoes, such as are furnished to our soldiers. It was my duty, says Major Cremony, to invest Mangas in his new suit, but some difficulty was experienced in getting him to wear his shirt inside of his pants instead of outside. After a time he made his appearance in *grande tenue*, evidently in love with his own elegant person. During the whole day he strutted about the camp, the envied of all beholders, and

as vain of his new dress as a peacock of his feathers. The next day Mangas failed to put in an appearance; but the day after he came, with his pantaloons wrapped around his waist; his shirt dirty and partly torn, outside; his uniform coat buttoned to his chin; one epaulet on his breast, and the other fastened, bullion down, between the hind buttons of his coat. In this guise he fancied himself an object worthy of universal admiration, and, as he walked along, he would turn his eyes over his shoulder to relish the brilliant flashes of his posterior ornament. In less than a week, coat, shirt, pants, and epaulets were sported by another Indian after his fashion. Mangas had gambled them away, and the wearer was the fortunate winner.

#### MANGAS A WONDERFUL INDIAN.

In truth, he was a wonderful man. His sagacious counsels partook more of the character of wide and enlarged statesmanship than those of any other Indian of modern times. His subtle and comprehensive intellect enrolled and united the three principal tribes of Arizona and New Mexico in one common cause. He found means to collect and keep together, for weeks at a time, large bodies of savages, such as none of his predecessors could assemble and feed. He quieted and allayed all jealousies and disagreements between different branches of the great Apache family, and taught them to comprehend the value of unity and collective strength.

Although never remarkable for personal prowess and courage, he knew how to evoke those qualities in others and appropriate the credit to himself. Crafty and skilled in human nature, he laid plans and devised schemes remarkable for their shrewdness of conception and success in execution. In council he was the last to speak, in action he was the last to come on the field, and the first to leave if defeated; yet he had the reputation among all his people of being the wisest and bravest. That he was the wisest has never been denied; that he was the bravest has never been proved. But, take him for all in all, he exercised an influence never equaled by any savage of our time, when we take into consideration the fact that the Apaches acknowledge *no* chiefs, and obey no orders from any source. They constitute a pure democracy, in which every man is the equal of every other.

The life of Mangas Colorado, if it could be ascertained, would be a tissue of the most extensive and afflicting revelations, the most atrocious cruelties, the most vindictive revenges, and widespread injuries ever perpetrated by an American Indian. We read with sensations of horror the dreadful massacre at Schenectady, the bloody deeds at Wyoming, the cruelties of Proctor's savage allies, and others of like character; but they sink into absolute insignificance beside the acts of Mangas Colorado, running through a series of fifty years, for Mangas was fully seventy

when sent to his last account. The northern portions of Chihuahua and Sonora, large tracts of Durango, the whole of Arizona, and a very considerable part of New Mexico, were laid waste, ravished, destroyed by this man and his followers.

A strip of country twice as large as all California was rendered almost houseless, unproductive, uninhabitable, by his active and uncompromising hostility. Large and flourishing towns were depopulated and ruined. Vast rancheros, such as that of Barbacomori and San Bernardino, once teeming with wealth and immense herds of cattle, horses, and mules, were turned into waste places, and restored to their pristine solitudes.

The name of Mangas Colorado was the tocsin of terror and dismay throughout a vast region of country, whose inhabitants existed by his sufferance under penalty of supplying him with the requisite arms and ammunition for his many and terrible raids. He combined many attributes of real greatness with the ferocity and brutality of the most savage savage. The names of his victims, by actual slaughter or by captivity, would amount to thousands, and the relation of his deeds throughout a long and merciless life would put to shame the records of any other villain.

Prior to the time of Mangas Colorado, several disputes of a serious character had occurred between two tribes, but that shrewd Indian statesman managed to bestow one of his daughters upon the most noted of the Navajo chiefs, and finally succeeded in restoring the strictest amity, which continued without cessation during his long life, devoted to his people's good, and until the Navajoes, angered at the surrender of the Apaches at Fort Sumner, made a raid upon their horses, and were driven off with great slaughter.

The most immediate advisers and counselors of Mangas Colorado were El Chico, Ponce, Delgadito, Pedro Azul, Cuchillo Negro, and Collitto Amarillo, and all were prominent Apaches. They were one by one sent to their long accounts by the rifles of California soldiers and Arizona citizens, but not without great loss of life by these Indians, the recital of which would make the blood curdle.

Delgadito, the celebrated Apache, was killed by a Mexican, whom he was endeavoring to dupe and destroy. They were fording the Mimbres River on foot, and upon reaching the eastern bank, Delgadito caught hold of the projecting branch of a tree to assist himself, when the Mexican took advantage of his momentary neglect, and plunged his knife through the Indian's heart from behind. It is an actual fact that the dead savage was found, the next day, still clinging to the branch.

Collitto Amarillo, Ponce, and his son were killed by California soldiers during the Civil War.

## DEATH OF MANGAS COLORADO.

Mangas Colorado returned with his diminished band to the Pino Alto country after his disastrous defeat in Apache Pass, as heretofore related in the account of the Civil War. He had a ball in his chest, fired by John Teal, whose gallant conduct has been related. It was owing to this chance shot that the Apaches abandoned their attack upon Teal in order to give succor to so prominent a man as Mangas. He was carefully conveyed to Janos, in Chihuahua, where he received the enforced attendance and aid of a Mexican physician, who happened to be in that place at the time. It was a case of the practice of surgery under unique circumstances. If the patient survived, well and good; he would return to his native wilds to again renew his fearful devastations; but if he died, the doctor and all the inhabitants were assured that they should visit the spirit land with him. The ball was extracted, Mangas recovered, and the people were saved; but his was a short lease of life. He was soon afterward captured by Capt. E. D. Shirland, of the First California Volunteer Cavalry, and killed while attempting to effect his escape from the guard house. In this manner perished Mangas Colorado, the greatest and most talented Apache Indian of the nineteenth century, according to Cremony; and no person understood him and his influence better than Cremony, who had often met him in peace and war.

His skeleton was prepared for exhibition. The jaws possessed two sets of teeth in each. So wide was the lower jaw that a man could easily put his head inside of it.

## INDIAN CHIEF COCHISE.

Cochise was the famous leader of the Tonto Indians, a branch of the Apaches, but inferior mentally and physically to the others, and were hence called *tonto*, which means fool in Spanish.

Probably the next most noted Indian after Mangas Colorado was the celebrated Cochise, who was the most widely known and the most dreaded of all the Apache Indians. From his standpoint, he believed that he had suffered great wrongs, and most terribly did he revenge them, as the bleached bones and graves thickly scattered over the country will show. During twelve years Cochise and his band carried on the work of death and torture in Arizona, with scarcely a reverse on their part. And when they finally made peace, they were coaxed on the reservation and given their own terms. Cochise, at this time, had become old and in ill health; he appeared to be satisfied with the revenge he had obtained from the Americans, and desired to die at peace with the people of Arizona.

## COCHISE SURRENDERS TO GENERAL CROOK.

After General Crook had, by a succession of vigorous campaigns, impressed them as to his military abilities and

resources, General Howard, in the summer of that year visited Arizona as special commissioner, met Cochise, accompanied only by Mr. Jefferds, and an agreement was concluded, in pursuance of which Cochise ceased hostilities and used his influence with other Apaches to such effect that in October and November over a thousand Apaches had gathered in the Chiricuhua Reservation, established by General Howard's request.

On June 8, 1874, Cochise died on the reservation.

## PIONSENAY, TAZA AND SKINYA.

Taza, the son of Cochise, soon afterwards shot Pionsenay in the shoulder, and the youngest son of Cochise at the same time killed Skinya, the chief of the hostile party. Taza was then chief of the Chiricuhuas and continued faithful to our Government.

John P. Clum says: "All that was mortal of Taza, the eldest son of Cochise, is quietly resting a few squares to the eastward on the bank of the East Branch of the Potomac, within the sacred limits of the Congressional Cemetery," Taza having died while on a visit to Washington with him in 1876.

An Indian named Skinya, a brother of Pionsenay, was head war chief under Cochise. When Cochise died the friends of Skinya thought he ought to succeed as chief, but Cochise had desired that his eldest son, Taza, should be his successor. This state of affairs brought about a bitter rivalry, which resulted in a fight to the death.

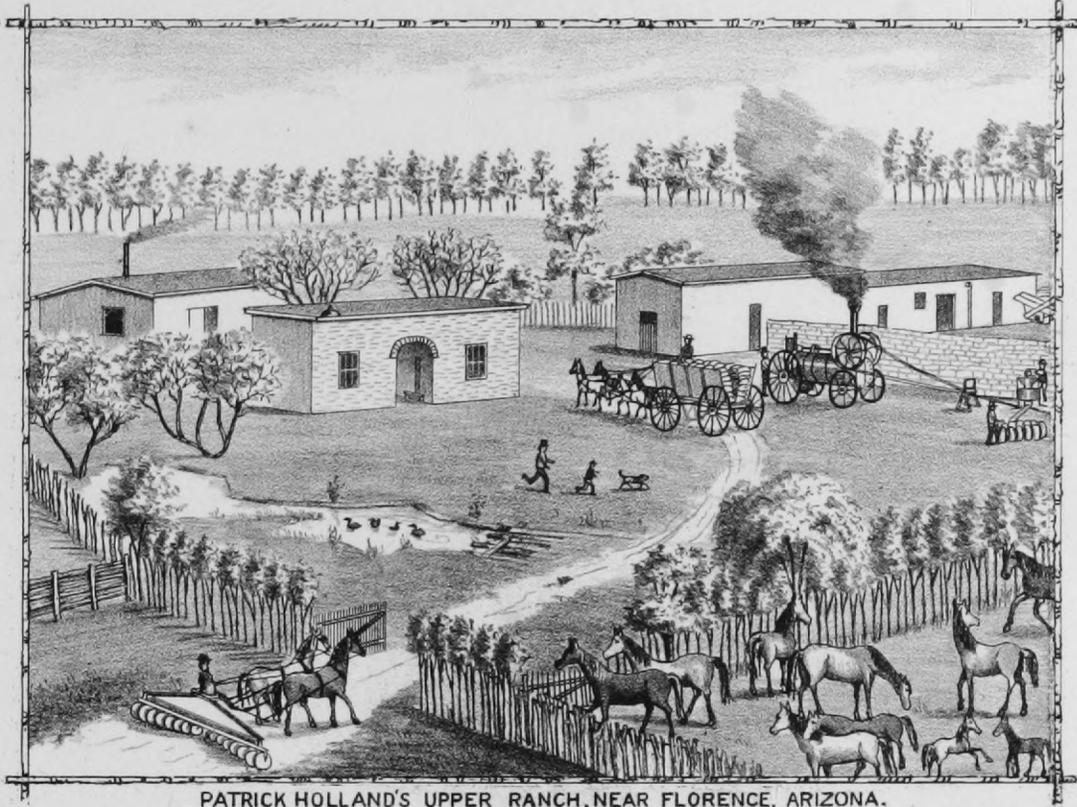
The immediate circumstances which led up to this fight were as follows:—

On April 6, 1876, Pionsenay killed Messrs. Rogers and Spence at Sulphur Springs. He was pursued by the military, but not captured. In May those Indians were ordered removed to San Carlos. A column of troops was sent into the San Simon Valley, and another column into the Sulphur Springs Valley, while another party proceeded to the agency at Apache Pass, with a body guard of San Carlos police.

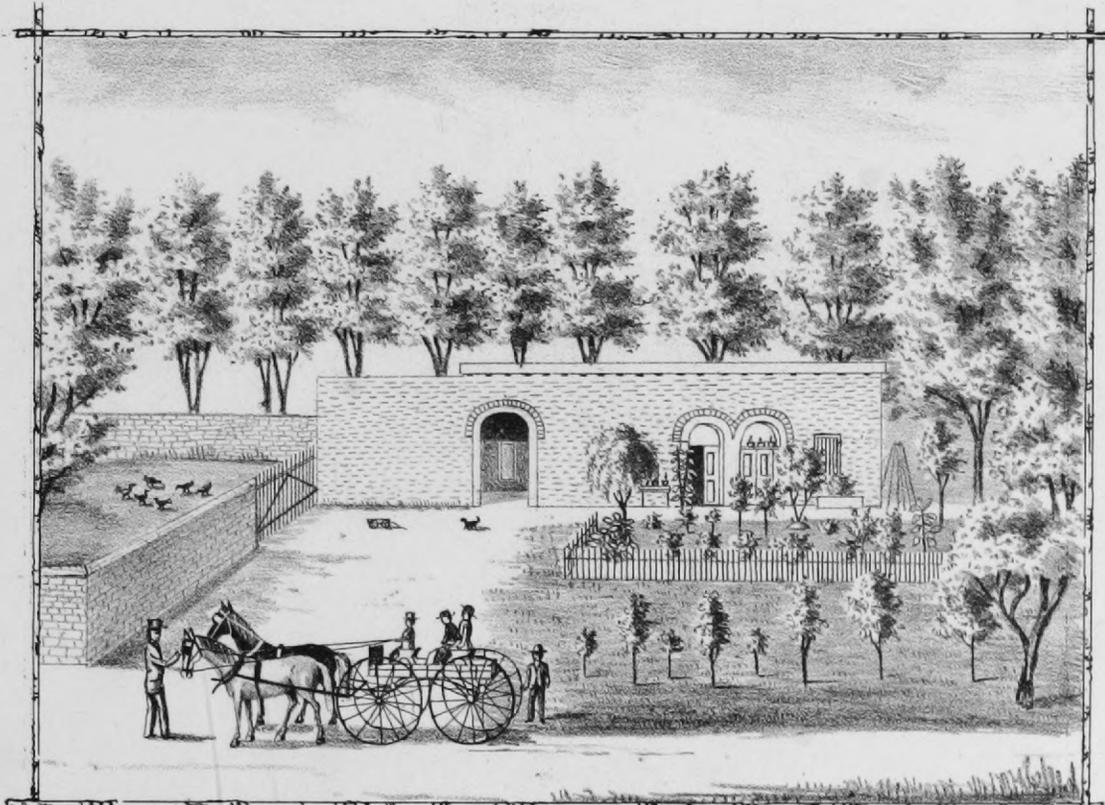
The night before arriving at the agency, the faction under Skinya and his brother, Pionsenay, insisted that all the Indians should leave the reservation and go into Mexico. The sons of Cochise opposed this stoutly, and a bitter fight ensued, in which Skinya was killed and Pionsenay wounded. Skinya was shot through the head by Natchee, the younger of the Cochise boys, and Pionsenay was shot through the right shoulder by Taza, the elder son.

Pionsenay was arrested and started for Tucson; but was turned over to Sheriff Shibell and Deputy A. Lynn, who had a warrant for him. He, however, escaped lately from custody.

[The account of Mangas is taken largely from Cremony's "Life among the Apaches."]



PATRICK HOLLAND'S UPPER RANCH, NEAR FLORENCE, ARIZONA.



UPPER RANCH PROPERTY OF MRS. PATRICK HOLLAND. 2 MILES EAST OF FLORENCE, ARIZONA.

## MINERAL RESOURCES OF ARIZONA.

Mines of Arizona; Ancient Mines; Copper, Coal, and Salt; Placer and Quartz Mines Described; Large Yield; Annual Production; Mines Inexhaustible; Future Prospects; etc.

### FIRST GOLD MINES.

**G**OLD-MINING in the United States is comparatively of a recent date, the first discovery being made in North Carolina, in 1799, in Meadow Creek, a small stream in Cabarrus County. It was discovered by a boy named



ARIZONA PROSPECTORS.

Conrad Reed, who, on a Sunday, was sporting and catching fish in the stream. He saw a yellow lump of metal in the water and carried it home; his father took it to the village silversmith at Concord, but he was unable to tell what it was. For three years the lump, which was about the size of a small smoothing-iron, was used as a weight against the door; when, in 1802, the old man Reed carried it to Fayetteville, there a jeweler pronounced it gold, melted it into a bar, and paid Mr. Reed three hundred and fifty dollars for it, much to his surprise and delight. Meadow Creek was soon thoroughly explored, when considerable gold was discovered. In 1803, one piece found in that stream weighed twenty-eight pounds, another six-

teen pounds. In 1831, a rich quartz vein was discovered in the vicinity of Meadow Creek, and from this period, mining for gold was pushed with interest in North Carolina.

Previous to 1825, but little gold was found in the United States; some small quantities were found in Alabama, and between the Coosa and Potomac. In 1825, a gold-bearing quartz lead was discovered by a Mr. Baringer, at Montgomery, North Carolina. Soon after this, gold-bearing quartz was discovered in Virginia, Georgia, and South Carolina; and gold in small quantities was obtained from many rivers in these States.

In 1824, the first native gold appeared in the United States mint at Philadelphia. The supply increased considerably for a few years. Up to 1827, North Carolina was the chief gold-producing State in the Union.

The entire product of gold of the five Southern States, from 1828 to 1872, is estimated to have been \$40,000,000, as follows: North Carolina \$18,500,000; Georgia, \$14,500,000; Virginia, \$3,000,000; South Carolina, \$3,500,000; Alabama, \$500,000; 1829, the first mint deposit of gold from South Carolina—\$3,500—was made; in the same year, Virginia deposited \$2,500; in 1830, Georgia deposited \$212,000.

The increase of gold from the Southern States was so great that, in 1837, a United States mint was established at Charlotte, North Carolina, and another at Dahlonega, Georgia. It is estimated that the Southern States yielded an average of \$1,000,000 in gold annually, from 1808 up to the discovery of gold in California in 1848. Gold in these regions was generally obtained from decomposed quartz and from slate rock of such a poor quality that it seldom paid for working; and of late years the yield has greatly fallen off, it having been for the last twenty years less than five hundred thousand dollars per annum. Gold has been discovered in Pennsylvania, Maryland, New Hampshire, New York and Vermont, but not in quantities to justify working.

In many parts of Canada gold has been found in small quantities; and, in 1860, free gold in well-defined quartz ledges was discovered in the southeastern part of Nova Scotia; these mines are still profitably worked.

The discovery of gold in California in 1848, and in Australia in 1851, introduced a new era in the production of the precious metals. Gold is known to have been discovered in Australia as early as 1839, by Count Strzelecki, who, in September of the following year, informed the Lieutenant-Governor of the colony of his discovery. In 1841, the Rev. Mr. Clark announced that he had discovered gold in Australia; and, from the year 1843 to 1847, Sir Roderick I. Murchison repeatedly urged the ex-

ploration of Australia for the precious metals. In February, 1851, a Mr. Hargrove, who had been in California, found gold in Australia, and in April following announced his discovery, which led to the finding of the vast gold-fields of that region, so rich and so profitably worked up to the present period, with prospects of inexhaustible supply.

#### GOLD IN CALIFORNIA.

The first mention of gold in California is found in a small volume of romance published in Spain in 1510—seventy years before the arrival of Sir Francis Drake in California. The book is entitled, "*The Sergas of Esplandian, the Son of Amadis of Gaul.*"

In this old romance the following passage occurs: "The island was the strongest in the world, from its steep rocks and great cliffs. Their arms [the natives] were all of gold, and so were the caparisons of the wild beasts they rode."

The next mention of gold in California is found in Hukluyt's account of Sir Francis Drake's voyage to California in the summer of 1579. In this account a paragraph reads: "There is no part of the earth here to be taken up wherein there is not a reasonable quantity of gold or silver." This statement of Hukluyt is a pure fiction, like the account of the Spanish novelist of 1510, and was only intended to lend a charm to the distant land of California. Most of Californians well know that there is not a shovelful of earth in the vicinity of Drake's bay, or any portion of the coast wherein the English buccaneer spent the six weeks in 1579, in which there is "a reasonable quantity of gold or silver," so far as known, nor has either of these metals been discovered in any quantity up to the present time within the radius of 100 miles of Drake's Bay, in Marin County.

#### EARLY PLACER DISCOVERIES.

Placer gold in small quantities had been discovered in California at various times between the years 1775 and 1828, near the Colorado in the southern part of California; in 1802, a vein of mineral supposed to contain gold was discovered at Olizal, in Monterey County; and, in 1828, small particles of placer gold were discovered at San Isidro, in San Diego County; but none of these indications of the precious metals were sufficient to attract public attention, or to warrant the belief that gold existed in paying quantities in the country.

Alexander Forbes, the British consul at Monterey, in writing a history of California in 1835, says: "No minerals of particular importance have yet been found in Upper California, nor any ores of minerals." In 1838, at San Francisquito, about forty-five miles northwest from Los Angeles, placer gold was discovered in small quan-

ties; these mines were worked steadily for many years with considerable profit.

James D. Dana, who accompanied the expedition of Commodore Wilkes as mineralogist to the coast of California in 1841, and who made a trip from the Columbia River, overland through Oregon and by the Sacramento Valley, to San Francisco, in his official report to the Congress of the United States, mentioned that gold had been found in the Sacramento Valley and in southern Oregon; but Dana did not seem to be much interested in the discovery, nor to consider it of any importance.

On the 4th of May, 1846, Thomas O. Larkin, United States consul at Monterey, in an official correspondence with James Buchanan, the Secretary of State, said: "There is no doubt but gold, silver, quicksilver, copper, lead, sulphur, and coal mines are to be found all over California; and it is equally doubtful whether under their present owners, they will ever be worked." On the 7th of July following—sixty-six days after the date of this communication—the stars and stripes floated over Monterey and California was a part of the American republic.

On the 9th of January, 1848, ten days before the signing of the treaty of Guadalupe-Hidalgo, James W. Marshall discovered gold at Coloma, on the American River, as has been described.

#### MINES AND MINING.

If local authorities are to be credited, Arizona, in the matter of bullion production, has more than held her own the past year. According to the returns of Mr. Valentine, of Wells, Fargo & Co., there has, however, been some falling off in the year's bullion output for this Territory, the decline, as compared with the preceding year, amounting to something over \$1,000,000. However this may be, there has, no doubt, much progress been made in the mining industry of the country, this shrinkage being due to a diminished production on the part of a few large companies, and not extending to the mines generally.

Besides the disadvantages of a hot and arid climate, a scarcity of timber, and a rather poor soil, Arizona has, first and last, suffered from a variety of extrinsic troubles, some of them of a serious kind. The hostility of the, murderous Apache has, from the first, done much to discourage immigration, and otherwise retard the progress of the Territory. Before these savages were well out of the way, the Texas Cowboys began to arrive in undesirable numbers. Following this disturbing element, an army of tramps was left in the country on the completion of the railroads, this last addition swelling the turbulent and lawless population to an inconvenient and even dangerous degree. But as the regular army, assisted by the citizen soldiery, has succeeded in subjugating the Apaches, so have the public authorities, aided by the people, shown

themselves able to cope with these unruly characters, the most of whom will be forced to betake themselves to honest labor or make an early exit from the Territory.

Some of the Arizona mines had already yielded enormous treasure before the facilities for railway transportation were available. There are mines of gold, silver, and copper which have been worked 200 years by the Spaniards and Indians in their own rude style. Placer mines are quite numerous, and pay handsomely for the working, in spite of the cost of supplies.

The mineral wealth of the Territory consists of gold, silver, copper, iron, lead, platinum, tin, and almost every other mineral known to commerce. Some of her gold mines have already produced millions of dollars for their owners. Silver ledges, from two to two hundred feet in



EARLY MODE OF WORKING PLACER CLAIMS.

width, are seen in many localities. In some of these veins, horn and ruby silver are found from one side to the other. The copper mines are absolutely without an equal in the world.

#### FIRST ARASTRAS.

The old arastras, the remains of which can now be seen at Fresnal, in the Barboquivra Range, were built, says Mr. N. B. Appel, in 1863 or thereabouts, and worked successfully by Don Francisco Padres till 1868, when they were abandoned. The ore was taken from the then Cababa, but now Picacho Mine, and transported across the valley in wagons. The ore, after being sufficiently pulped, was then subjected to what is known as the Patia process of amalgamation. In this labor Papagoes were alone employed, and they for their labor were paid at the rate of fifty cents per day per man. The Patia process consists of thoroughly mixing the pulp with quicksilver and salt,

by means of treading them together with their feet. The amalgam was then washed and put into flasks in which the quicksilver had been taken to the camp; an attachment was made to the flask by means of a small pipe; the flask was put in the fire and subjected to an intense heat, which caused the mercury to rise in fumes and pass through the pipe into a vessel of water, where it again liquified and was ready for further use. The flask was then cut in two and the bullion taken out. The bar, on coming from such a mould, looked, Mr. Appel says, like a white roll of butter. That purchased by Mr. Appel and sent to the San Francisco mint, brought him \$1.42 per ounce, so fine it was. The silver from the old Mowry Mine in Patagonias was worth \$1.28 per ounce, that from the Cerro Colorado \$1.35 per ounce, a fineness that is remarkable when taking into consideration the rude process by which it was so made.

#### ANCIENT MINES.

In an old Spanish work, entitled "Apostolic Labors of the Society of Jesus," published by one of the most illustrious members of that order, is given the following account of the discovery of silver and gold in the Santa Rita Range of Arizona: "In the year 1769 a region of virgin silver was discovered on the frontier of the Apaches, a tribe exceedingly valiant and warlike, at the place called Arizona, on a mountain ridge which hath been named by its discoverers Santa Rita. The discovery was unfolded by a Yaqui Indian, who revealed it to a trader of Durango, and the latter made it public; when news of such surprising wealth attracted a vast multitude to the spot. At a depth of a few *varas*, masses of pure silver were found of a globular form, and of one or two arrobas in weight. Several pieces were taken out weighing upward of twenty arrobas; and one found by an inferior person attached to the Government of Guadalajara, weighed 140 arrobas. Many persons amassed large sums, whilst others, though diligent and persevering, found little or nothing. For the security of this mass of treasure, the commander of the Presidio of Altar sent troops, who escorted the greater bulk of the silver to his headquarters, whereupon this officer seized the treasure as being the property of the Crown. In vain the finders protested against this treatment, and appealed to the audience chamber at Guadalajara; but for answer the authorities referred the matter to the Court at Madrid. At the end of seven years the king made the decision, which was that the silver pertained to his royal patrimony, and ordered that thenceforth the mines should be worked for his benefit. This decree, together with the incessant attacks of the hostile Indians, so discouraged the treasure hunters that the mines were abandoned, as needs must, be until these savages are exterminated."

## FAMOUS TUMACACORI MINES.

Nine miles from Tumacacori, the ruins of the Hacienda del Santa Rita are reached, burned by the Apaches in 1861, under Cochise, after a remarkable fight, conducted by Captain Smith, a half-dozen Mexican employes, and the wife of one of the latter, against a force of eighty Indians, directed by the Apache Napoleon in person. The hacienda was abandoned June 15th of that year.

Above the ruins is a hacienda of later construction, being the very first building constructed by Colonel Boyle, for the Tyndall or Tubac Company, into whose hands some of these old mines have passed. On the mountain-side above to the north and west, are a number of old shafts, sunk by the Indians under Jesuit direction. The most famous of these is the Salero (or salt-celler) Mine, which tradition says takes its name from the Padres at St. Joseph once fashioning a wonderful salt-celler out of a piece of ore, to deck the table of their bishop, who was visiting them, and being something of a *bon vivant*, had complained of the want of salt as a condiment to his dinner. The old shaft was, till recently, partially filled with water, from surface, not subterranean, drainage. The ores of this mine are known to be very rich. The dump at its mouth still establishes this. According to Mexican tradition, they yielded from \$51 to \$102 to each 300 pounds of ore. This is equivalent to \$340 and \$680 per ton. To the north and east are a number of other old shafts and drifts of greater or lesser depth and extent, which have been recently re-named after members of the English company—as the Hamilton, Abercorn, Macdonald, etc.

## THE LOST MINE.

It is the opinion of Colonel Boyle that the Hamilton will yet prove to be the lost and famous Tumacacori Mine of the Jesuits. The Mexican traditions, oral and written, insist that the location of this mine was to the west of St. Joseph's Mission, about fourteen miles in all probability. Many a gallant man has lost his life in vain attempts to find and re-locate it, but so far nothing has been seen to the west of the mission which in any way answers the tradition. Colonel Boyle has during the past four years made a number of efforts to find if there exists any lode or location other than the mines on the Santa Rita, which the Padres were known to have worked, that by any possibility could be made to answer the description and statements given; and he has failed entirely. According to the reports handed down, the Tumacacori Mine was distant, as the crow flies but a short morning's walk from the mission in the valley below. The Hamilton Mine lies exactly east and less than ten miles off. There is still an old trail plainly discernible, which strikes the present wagon road some distance below the old hacienda.

## EVIDENCE OF OLD MINES.

In the Valeria Mine, Arivaca District, Pima County, Arizona, a human skeleton, with tools of copper and stone, was found in an old shaft, from which a quantity of native silver has lately been taken. In the Pinal District, Pinal County, tons of litharge have been found, which in all human probability is the refuse of ancient furnaces, which have fallen into decay, and all traces of them been lost. The same substance has been found elsewhere in Arizona.

Another discovery of this nature has lately been made at a locality twenty-six miles northeast of Prescott, Yavapai County, Arizona, at the copper mines of Head & Richards. An old shaft was discovered, which had become obscured and nearly filled in by drifting sands. When cleared out it was found to be twenty feet deep, with a drift at the bottom fifteen feet long, in which lay hammers and gads of stone.

J. J. Vosburgh, agent of Wells, Fargo & Co., at Globe City, was prospecting, in 1876, in the White Mountains of Arizona. On the highest peak, about 12,000 feet above the level of the sea, he built his evening camp-fire. In doing so, he noticed some Indian arrow-heads on the ground. Stooping to pick them up, he saw, scattered among the loose earth, a quantity of stone beads, some of them in an unfinished condition, an examination of which is a key to the mode of their manufacture.

Ward's "Mexico," says: The mines of Arizona were celebrated for their riches. The specimens which I have seen of the ores extracted from them, almost induce one to adopt the theory that the proportion of silver contained in the ores increases as you advance toward the north—a theory very generally believed at present in Mexico, and certainly confirmed by the superiority of the northern ores to those of the richest districts in the south. The idea probably originated in the discovery of the famous *bolas de plata* (balls of silver) of Arizona, in the beginning of the last century, which was, and probably still is, believed in Europe to be one of those fables with which mining countries always abound.

But the attention of the present Government of Mexico having been drawn to the subject, a search was made in the vice-regal archives, by order of the President, for the correspondence which was known to have taken place respecting it in the year 1736.

This correspondence I have seen; and I have in my possession a certified copy of a decree of Philip the Fifth, dated Aranjuez, May 28, 1741, the object of which was to terminate a prosecution instituted by the royal fiscal against the discoverers of Arizona for having defrauded the treasury of the duties payable upon the masses of pure silver found there.

The decree states the weight of the balls, sheets, and other pieces of silver discovered (*bolas planchas y otras piezas de plata*) to have amounted to 165 arrobas, 8 lbs.—in all, 4,033 lbs.; and mentions particularly one mass of pure silver weighing 108 arrobas (2,700 lbs.) and another of eleven arrobas, upon which duties had been actually paid by a Don Domingo Asmendi, and which, as a great natural curiosity (*como cosa especial*), the king states ought to have been sent to Madrid.

The decree ends by declaring the district of Arizona to be royal property, as a "*criadero de plata*" (a place where, by some natural process, silver was created)—an idea to which the flexibility of the metal, when first ex-



STARTED FOR THE DIGGINGS.

tracted, seemed, in those times, to give some color of probability—and by directing it to be worked upon the royal account. This put a stop to the enterprises of individuals; the district was deserted; an attempt to send a colony there failed; and, in a few years, the very name of Arizona was forgotten.

#### LOST MINES.

In Pima County the mining districts are at once the oldest and the newest on the Pacific slope, north of Mexico. They are mainly in the Santa Cruz Valley, and a region to the west thereof once known as Papagueria, inhabited by the semi-civilized ancestors of the present Papagoes. Traces are not wanting of their having been worked even anterior to the Spanish conquest of Mexico, by a people superior to the Spaniards of that day in

nearly all the useful industries, and only excelled by them in the industry of slaying and marauding.

Although there are some indications that mining operations were more or less carried on here by the Jesuits and others, in the seventeenth century, it was not until 1748 that the records became definite. In that year the San Pedro Gold Mine, it is known, was worked by the Spaniards, by whom, from 1757 to 1820, mines were worked in the Baboquiveri region, some seventy miles southwest of Tucson, one of them to a depth of nearly 300 feet; as well as in the Santa Rita, Central Colorado, and Oro Blanco Mountains. But the continuous attacks of the Apaches, commencing with the year 1780, finally caused the abandonment of nearly all mining enterprises in what is now Pima County, except some placers, which have been worked at intervals by Mexicans and Indians up to the present time, and the mines of Fresnal and Cababi. And it was not until some years after the Gadsden Purchase, in 1853, when the military occupation of the country by the United States Government seemed to warrant expectations of security, that mining operations to a large extent, under the auspices of military men, were resumed. Many of these were largely successful, and in scarcely any were the failures traceable to deficiencies in natural richness. But the incursions of the Apaches continued to such an extent that, after a number of superintendents and other employes had been killed by them, the mines were mostly relinquished. Some few years elapsed, even after their final pacification, before the tide of enterprise again set in to the mines of southern Arizona, now known to have been always prolific, even under unskillful handling, in a degree far surpassing those of California and Nevada, which have created the money kings of the continent. And now, combining the advantages of age and youth, having a level country and generally good roads, with the single drawback of 200 to 300 miles of wagon transportation, soon to be replaced by more than one railroad to navigable water, there is no more promising field to the large or small mining capitalists than the mines, actual and prospective, in the southern and western portions of Pima County.

#### PLANCHAS DE PLATA.

In the last century, one of the most notable of lost mines of what is now Arizona was that called Planchas de Plata—the "planks of silver." Its exact position is unknown now, though the neighborhood in which it was found is plainly indicated by the old records and letters. Don Manuel Retes, in an essay on the mineral resources of northern Sonora, says: "This mineral deposit, situated  $31\frac{1}{2}$  degrees north and in longitude  $111\frac{1}{2}$  degrees west of Greenwich, is described by a Yaqui Indian towards the commencement of the last century: Distant from four to

five leagues from the mine of Arizona; about fifteen from the town of Tumacacori, the nearest settlement; about twenty-five from the presidio of Santa Cruz; nearly ninety from Ures, and about one hundred and thirty from Guaymas. The silver was discovered in sheets of different sizes, from which the name of "Planchas de Plata" originated. They were found almost on the surface, perfectly pure, and without adhering to any foreign substance, in a flexible state capable of receiving impressions, and only hardening on being exposed to the atmosphere. The region which produces them is an earth of the color of, and very much resembling, ashes, which extends in visible leads more or less wide, and in parts subdivided into veins, over all the hills and mountains adjoining the main deposit. Among the sheets extracted two are worth mentioning, especially one which, on account of its almost fabulous size (weighing 149 arrobas), it was found necessary to employ the heat of four forges at the same time to reduce to a smaller bulk. The other weighed twenty-one arrobas, though, according to other accounts, it was much larger. The amount of silver extracted within a very short period was 400 arrobas, or five tons."

Another mine of very rich silver was the Arizona, the position of which is also lost. It was in search of this mine that Count Rousset de Bourbon made his celebrated expedition into Sonora, whither he went at first in good faith and with peaceable intentions, though after he had been defrauded and attacked he turned filibuster. There are persons who are ready to assert that the exact position of the Arizona Mine is known, but the best informed say it is not.

#### GOLD AND SILVER PRODUCTIONS.

The Tucson *Star* gives the following estimate of gold and silver productions for 1883:—

The silver and gold bullion output for 1881 was a fraction over \$3,000,000; for 1882 the *Star's* estimates were \$7,257,009.08, which was collected with great care, and generally accepted as correct; and estimated the output not reported at \$1,500,000—making a total of \$8,957,000. The value of copper was placed at \$2,945,284.41, which, added to the gold and silver output, aggregated in all \$11,702,294.28. The output this year has fallen off in some districts but has increased in others. The greatest decline has been in the Tombstone District, which, however, was owing to the fact of water level being struck and a large portion of the year being consumed in putting up pumping machinery, which is now in place and doing well, and producing will go on as before. The prospects of the district are better than at any previous time. As the year's development has demonstrated that the area in which ore in quantities could be found is much greater

than generally believed, we give below a tabulated statement as far as heard from. There are many districts which are being worked in a small way that have not reported, such as Dos Cabezas, the placers of Apache and Yavapai Counties, as well as the Santa Ritas. There is also a great deal of gold and silver being extracted with arastras, and a considerable quantity of high grade ore has been shipped of which there is no account; the total amount of what is not reported, will probably reach \$1,500,000. The most satisfactory showing is that made by the Benson smelter, which has not been running a full year yet; as the returns show, it has done much more than was expected by the most sanguine. The estimate includes the value of silver, copper and lead; but for the sake of brevity the value of the output only is given.

Silver King, concentration.....	\$1,041,462
Benson smelter.....	723,122
Arizona Central, gold.....	265,000
United Verde.....	130,000
Pinal, consolidated.....	207,771
Tiptop.....	37,869
Silver district, silver.....	83,925
Silver district, gold.....	25,300
Howell smelter.....	173,852
Stonewall.....	42,000
Golden Rule, estimated.....	125,000
Pima County.....	281,175
Mohave County, estimated.....	150,000
Pinal County, estimated.....	175,000
Gila County, estimated.....	250,000
<b>Total.....</b>	<b>\$3,611,475</b>

#### TOMBSTONE.

Contention.....	\$987,955
Grand Central.....	854,522
T. M. & M. Co.....	702,333
Boston Custom.....	226,500
Luck Sure.....	859,777
Rattlesnake Mining Company.....	98,000
Boston and Arizona S. & R. Company.....	226,500
Woronoco G. & S. M. Company.....	11,875
Way Up.....	6,250
Ingersoll.....	28,500
Various other mines.....	54,600
<b>Total.....</b>	<b>\$4,066,812</b>

#### RECAPITULATION.

Tombstone.....	\$4,066,812
Outside districts.....	3,611,475
Estimated output not reported.....	1,500,000
Value of copper bullion.....	4,228,987
<b>Grand total.....</b>	<b>\$13,407,274</b>

This showing is encouraging, being over a half million more than 1882, and during a year of general depression especially in the mining industry of Arizona.

The prospect for silver bullion output for 1884 is certainly flattering. The Quijotoa bonanzas, and many other mines in the surrounding districts, all promise great results; the Santa Ritas and Sierretas, Oro Blanco and Globe, will double the production of the past year. Northern Arizona will add not less than from three to four millions over her present product, while the Benson smelter and other custom works will enable thousands of miners to work small veins of ore, which, in the aggregate, will amount to many thousands of treasure. Certainly the mining outlook of Arizona is interesting to contemplate.

#### FAMOUS MINES.

The Vulture Mine is situated in the northwestern portion of Maricopa County. This great lode has a reputa-



GRAND RUSH FOR THE ARIZONA MINES.

tion which has made it famous all over the Pacific Coast. No mine ever located in the Territory is, perhaps, so well known beyond its borders. The mine was discovered in 1863, by Henry Wickenburg, who in 1864 built the first *arastra* to work ores from the Vulture, and was worked continuously by an Eastern Company until 1873. The high rates of freight and the cost of hauling the ore—\$8.00 per ton—to the mill, sixteen miles distant, caused a suspension of work and an abandonment of the property. The mine was afterwards located by other parties, who erected a ten-stamp mill on the Hassayampa, twelve miles distant, and worked the ores successfully for several years. Three years ago the property passed into the hands of the Central Arizona Mining Company, and since that time the mine has entered on an era of prosperity it never knew before. The new company has brought water in pipes from the

Hassayampa, a distance of sixteen miles, and has erected an eighty-stamp mill at the mine. The property has had more work done upon it than any mine in the Territory. A deep excavation on the surface shows the ore body to be nearly one hundred feet in width. A depth of 390 feet has been reached, and several levels and cross-cuts run on the vein.

The ledge lies between a hanging wall of porphyry and a foot wall of talcose slate. It is situated in a low hill, and at a depth of about two hundred feet the vein is almost vertical. With the present arrangements for reduction, the ore is extracted and milled at a total cost of \$2.25 per ton. More stamps will soon be added, and the yield of bullion largely increased. The Vulture has produced more money than any mine in the Territory, the total yield being placed at \$3,000,000 in gold. With the immense ore bodies in sight, and the appliances for reducing them, we may look to see many millions more taken from this fine property.

#### THE ORO AND OTHER MINES.

Ellsworth District is about sixty-five miles from Sentinel Station on the Southern Pacific Railroad, in the northeast corner of Yuma County, and near the line of Yavapai County. The mines are situated in a rolling, hilly country covered with a sparse growth of grass. Mesquite, ironwood, and palo verde grow on the hills, and water is found in sufficient quantities for the milling of ores. The formation of the district is a granite and porphyry. The veins are large, with bold outcroppings. The ores of Ellsworth District are a gold quartz, carrying some silver. The camp has a good situation, and will undoubtedly become one of the leading gold camps of the Territory. The Oro claim has a shaft seventy feet besides open cuts and tunnels. It shows five feet of quartz that have worked \$20.00 per ton. The mine is owned by the Oro Milling and Mining Company. A five-stamp mill has been erected on the property, and \$10,000 has already been taken out.

The Nabob has a shaft seventy-five feet and a body of quartz four and one-half feet wide. Assays from this claim have gone as high as \$350 per ton. This is one of the most promising mines in the district, showing large croppings and well-defined walls.

The Argenta has a vein four and one-half feet wide, some of which assays as high as \$180 per ton. This claim carries a great deal of galena, rich in free gold. The Socorro has a tunnel fifty feet in length. It is a four-foot vein carrying ore that goes \$25.00 per ton. The Richards' and Ells' claim is opened by a tunnel 100 feet in length. It shows four feet of ore, worth \$20.00 per ton. The Last Chance has a twenty-foot shaft and shows an ore body four and one-half feet wide, that assays \$29.00 per ton. The General Grant is down twenty feet, and has ore that

goes \$240 per ton. The Hawkeye, O K, Peacock, Ellis, Oskoloosa, Oro Grande, Turtle, and many others, all show good ore and large veins. But little work has been done on any of them, but what has been done is sufficient to prove their value.

#### THE PECK GOLD MINE.

The Peck Gold and Silver Mine, situated about thirty miles from Prescott, is one of the leading mines in the Territory. Discovered in 1875, it was worked successfully till 1878, and as an evidence of what prospectors may do in this country, the original locators of this mine received \$13,000 for their first ten tons of ore. The mine produced \$1,200,000 between 1875 and 1878. Ore worth from \$5,000 to \$20,000 per ton, was frequently met with, and the average working test has been nearly \$200. In 1878 this valuable property became tied up by litigation, and, pending the settlement of lawsuits, has remained idle until this year; but now all difficulties are settled, and the present owners are pushing the operation of the property vigorously. New steam hoisting works have been supplied. A complete ten-stamp mill and roaster had been erected previously, and soon the entire works will be in full and profitable operation.

The Occident, which opens a vein running parallel to the Peck, and so near to it that it is considered by some to be a part of the latter mine, is producing some exceedingly rich ore, ten tons of which recently netted the owners \$19,000, after the heavy expense of transportation and treatment in San Francisco.

#### THE LEVIATHAN AND OTHERS.

The Leviathan is an immense gold-bearing quartz ledge, in some places 300 feet wide. Assorted rock from the mine has worked \$50.00 per ton, in arastras. It is opened by a tunnel, which cuts in 100 feet below the surface, and by several shafts and cuts. It is estimated that there are 2,000,000 tons of ore in sight in this enormous vein. The Marcus shows a vein three feet wide, of free-milling gold ore, to a depth of 68 feet, after which it changes to a sulphuret. The free-milling ore, worked in arastras, has yielded as high as \$200 per ton. The vein is opened by an incline 85 feet deep, and by a shaft 65 feet, connected by drifts. A new working shaft has been started, and is down 60 feet. There are scores of other promising properties in this district, among which may be mentioned the Metallic Candle, with a shaft 40 feet deep, and a vein of gold quartz 20 feet wide; the Emerald has a tunnel 125 feet long, and a shaft 20 feet deep; the Buckeye has a shaft 30 feet deep; the Cosmopolitan has a shaft 20 feet deep, and the Sexton one of 20 feet. Between twenty and fifty men are steadily at work in the placers of this district, all making good wages.

#### THE CHICAGO AND OTHER MINES.

The surface showing and the showing from the development thus far are such that this district will compare favorably with many others which are receiving more attention, and some of which have become producing and paying districts. There is a ten-stamp custom mill in the district, with concentrators, so that the free gold ore can be worked and the sulphurets concentrated. There is also a mill just erected at the Chicago Mine for the purpose of working the milling silver ore taken from this mine. This property is situated upon Groom Creek, and but a short time since was an indifferent prospect. It was purchased by Mr. Clark, formerly from Connecticut, who, although not a mining man, has, by the application of business principles, developed the property into a valuable and paying mine. The old Chase, Sterling and Senator Mines were worked in an early day, for the free gold they contained, and the last is said to have produced \$150,000. Work ceased when, or soon after the sulphuret ore was encountered and but little work has been done upon them since. The district is abundantly supplied with timber and water, is easy of access, and is but a short distance from Prescott. As illustrative of what may be done in this district, I will cite the case of two prospectors, who, after traveling through many districts, located here the first of this winter. Being satisfied that the locality was a good one in which to prospect, they commenced work in earnest, and soon made a location close by the trail leading to the Dosoris Mine. This location was named the Grapevine, and while opening it, the locators refused a *bona fide* offer of \$5,000 for the property. At a depth of ten feet they have a pay streak of nearly or quite two feet in width, of very rich galena, brittle and native silver ore. Notwithstanding the Dosoris trail has been traveled extensively, for some time, this valuable ground had been overlooked, and the same is the case in other portions of the district.

#### THE SILVER KING.

The Silver King Mine of Pinal County, has been operated by the present company for six and one-half years. In that time the total amount of dividends declared to stockholders has been \$1,300,000. During the year 1883, the total yield from this mine was \$592,504, and the expenditures, \$431,732. Dividends amounted to \$170,000, thus reducing the cash balance on hand during the twelve months, from \$39,386 to \$25,157. The statement submitted at the annual meeting of the company, held in San Francisco on the 8th inst., shows that the main vertical shaft has been sunk an additional 100 feet below the 714 foot level, and a station constructed. Most of the ore for the past year has come from that level. An artesian well has been sunk with success, and another is



*C. G. W. French*

now being sunk. The want of water, and poor lights and ventilation account for the suspension of dividends for five months during the past year. They have sunk more wells and introduced the electric light at the mill and in the mine during the present year. Various suits have been settled, adjoining property purchased, and title perfected, thus placing the affairs of the company in a better condition than they were a year ago.

#### FRANCO-AMERICAN MINE.

Oro Blanco is in the southwestern part of Arizona, and forms the boundary of Sonora, Mexico. The latest strike and the richest ore in this neighborhood was in the Franco-American, owned by Gen. G. W. Deitzler, of San Francisco. At fifty feet he drifted seven feet through solid ore and struck white quartz. He is now drifting in an opposite direction, and is still in good paying ore, averaging 33 per cent. copper, and \$200 per ton in silver—an apparently inexhaustible mine. The Warsaw Mill shut down a few days ago, for want of water. The last run was a very profitable one, particularly in ore from the Cross Lode and the Montana Mine. Esperanza Mill, Mr. Blaisdell superintendent, would have started up before this, it is supposed, had they not lost their drill-bit in the well while boring for artesian water. He is now putting up a steam power and laying pipe to the Calaveras mining shaft, where he expects to find an abundant supply of water. Messrs. Clark and Dixon have a fine body of ore in their mine at the Sierra Colorado; it carries from \$600 to \$900 per ton, gold and silver.

#### RICH SILVER MINES.

Secretary Van Arman says that the property of the United Verde Copper Company is developing wonderfully. This company owns several claims in a district known as the Black Hills, distant about thirty miles northeast from Prescott, the capital of the Territory. The company has only been at work developing the property about eight months. A 30-ton smelter is in operation, and is used to smelt the copper ore from the mines, the principal ones being the Wade Hampton and the Eureka. Tests of the bullion run from the smelter were made from time to time, and one day, not many weeks since, they began to show silver—first, 60 ounces to the ton, then 100 ounces, then 400 ounces, and up to 1,000 ounces per ton, while more recently copper ore has been taken out which is completely covered with horn silver; and some of the ore will go as high as \$10,000 per ton. Forty-seven days' run of the smelter produced nearly \$200,000. The ledge in the Wade Hampton is forty feet wide, and in this mine alone there is over one million dollars' worth of ore in sight, easily attainable, and yet operations can be said to have scarcely been commenced on these marvelously rich mines. In June last, the Pine Spring Mine was discovered by

Messrs. Gavin and Morgan. It produced tons of "horn silver." A shaft, 102 feet, was sunk on the vein, which proves to be a true fissure vein, carrying horn and native silver in the pay streak, which is over twenty-four inches wide; also chlorides all the way down. Three pipes or strata of horn silver have been encountered and cut through in this shaft, and over \$100,000 worth of silver ore has been taken out so far, without stopping, and but little drifting.

The "Pine Spring" Mine is situated in Turkey Creek Mining District, about twenty-two miles south of Prescott. In all directions from the Pine Spring Mine, there are rich prospects within a radius of ten miles. No mines are worked if the ore does not assay \$100 per ton, and there are no means of working the ore nearer than Pueblo Colorado. Northern Arizona may be considered, in view of these facts, as a wonderfully rich country, and has undoubtedly fair prospects of becoming very famous.

It needs capital to develop these mines, and no better field of operation is open to investigation than that around Prescott.

#### PINE SPRING MINE.

The Turkey Creek District is about twenty miles southeast of Prescott. The ledges are principally silver, bearing in a granite and porphyry formation. The camp has plenty of wood and water, and a climate unsurpassed in that Territory. In this district is located one of the richest finds ever discovered in Arizona, named the Pine Spring Mine, of which previous mention has been made in this paper. The following truthfully describes its present status: "On Thursday evening, June 27th, Gavin & Co. sunk fifteen feet on their great bonanza, and at that depth the ledge showed better than on the surface—some thirty inches of ore showing itself near the hanging wall. Of this, ten inches is fully \$15,000 ore, while the remaining twenty inches is of \$1,500 value. At the present writing \$50,000 has been taken from the mine with every indication of permanency. The walls are now solid and smooth, dipping at an angle of forty-five degrees. Many people thought the owners were a little off because of having refused \$150,000 for this property, when there was a hole of but five feet sunk. It now transpires, however, that they were wise in refusing the offer, for let the mine turn as it may, they have out \$50,000 and \$100,000 in sight, hence they cannot lose, but have a fair prospect of getting millions. Since the settlement of Arizona commenced, no such find or strike has been made as that of Gavin & Co. The ore is marvelously rich and the vein unusually large for such high grade vein matter. The extensions are being worked, showing the same decomposed material as is found in the original discovery, and the probabilities are that good ores will soon come in."

## MCCRACKEN MINE.

The McCracken was discovered by Jackson McCracken August 17, 1874. It is six miles north of Bill Williams' Creek (a little to the south of which is the Planet Copper Mine, Yuma County), twelve miles from Greenwood on the Big Sandy, and thirty-five miles from the Colorado. The lode runs nearly due north and south near the top of a hill, the elevation of which is about two thousand feet above the adjacent valleys. For about two miles it is continuously traceable, and occasionally, by out-crops southwardly for fully ten miles. Its out-crop on the summit of the hill is visible for considerable distance. The formation of the mine is a spar gangue, in a formation of granite, and, as an exception to a supposed uniform rule in regard to the matrix of gold and silver, it is worthy of attention from both a practical and scientific standpoint. The spar forming the out-croppings on the hill has a dark, burned appearance, resembling, at a distance, a black volcanic dyke, and having been so regarded by prospectors was passed by unnoticed. The McCracken Company owns two mining claims of 1,500 feet in length, named the Senator and the Alta. A great amount of work has been done on the mine, one of several shafts having reached a depth of nearly four hundred feet; over a thousand feet of the tunnels are in vein matter all the way. The best of the milling ore assays \$96.00 per ton; the bullion produced is 985 fine. The second class assays \$65.00. There are small strata of carbonate ore containing \$237 per ton silver and twenty per cent. lead. The vein at the surface is, in places, over eighty feet in width. Adjacent to the discovery mines above mentioned are the Signal (originally the San Francisco), and the Palmetto. The product of all these mines is enormous, and may, at present, be roughly estimated at about \$150,000 or \$200,000 a month, though apparently limited only by their milling facilities. The ores of the McCracken have been crushed by a ten-stamp mill at Greenwood, but a twenty-stamp mill has just been completed at Virginia City, five miles below, and about nine miles from the mine, and in the same locality another mill is working on ores from the Signal.

## COPPER PRODUCT OF ARIZONA.

The Arizona *Star* says, "While there has been a slight decline in the output of silver bullion for the year, the copper product has been one-third more than that of 1882, which was 16,751,581 pounds, last year's product being 5,479,734 pounds." The following figures are official except where they have been marked "estimated," in which instances the figures given are very nearly correct; if in any way wrong, they are too low:—

	POUNDS
Arizona Copper Co., Clifton.....	4,106,575
Detroit Copper Co., Clifton.....	4,035,525
Copper Queen, Bisbee.....	7,950,000
Old Dominion, Globe.....	4,590,000
United Verde, Yavapai County.....	1,763,153
Omega, Pima County.....	350,000
Columbia, Pima County.....	273,000
Long Island, Globe, estimated.....	475,000
Tacoma, Globe, estimated.....	400,000
Buffalo, Globe, estimated.....	250,000
Cochise Copper Co.....	1,277,481
	25,170,734

There has been a large amount of copper ore shipped out of the Territory of which we give no estimates, also scattering shipments of copper bullion. All told, it will probably reach two million pounds, making the total aggregate nearly 29,000,000 pounds. And yet not a single one of these copper companies has been running during the entire year; some of them only half the time, and the majority not to exceed nine months; others only two or three months. The outlook this year is highly gratifying. Northeastern Arizona is now fairly in the field as a producer. Globe will treble her amount; the Ray Company will rival any now in operation, and a large number in western Pima will be in operation before many weeks, among which are the Ajo, Burro Burro, the Copperosity, and numbers in the Quijotoa District and Silver Bell. In fact, in all the mountains of Arizona, copper is being discovered in large bodies; and, as yet, Arizona is only in her infancy as a producer. The *Star* estimates the product of 1884 at not less than 50,000,000 pounds; and while this may seem to some an exaggeration, we do not fear the prediction.

## THE OMEGA AND OTHER MINES.

The Omega Mine, situated in the Santa Rita Mining District, twenty-five miles southeast of Tucson, has developed into a first-class copper property, and its owners are now putting a large plant upon it, and by the last of January they expect to be making bullion. Their development shows ore enough on the dump and exposed to actual sight, to run the works to their fullest capacity for two years to come. The ore of this mine is remarkably high grade, and the yield will be heavy.

The Evening Star Group, of Silver Bell District, owned by B. F. Bivens & Co., will soon have smelting works on them, and from the splendid ore reserves recently exposed in this valuable group of mines, the copper product here will certainly be large the ensuing year. Operations will, without doubt, be resumed at the plant of Old Boot and Blue Coat furnace, in the same district, and a good output of bullion may be expected there. The Scott Group, recently negotiated in New York, has developed

into fine properties, and the company contemplates having smelting works put up by the first of the year. The large bodies of high grade copper ore opened up, gives the most flattering assurances that the Silver Bell District will be no small factor in swelling the copper product of our section the coming year.

The Young America Mines, adjoining the above group, comprise several valuable claims. From the Detroit and Aztec several lots of high grade ore have been recently shipped to New York, giving the most satisfactory results, and work is now being pushed on this group, with the view of putting up smelting works at an early day.

#### THE BURRO COPPER MINES.

The Burro Burro Copper Mines of Gunsight District have been opened up, showing large bodies of fine ore, which also justify the erection of reduction works, which will soon be erected and a good bullion yield may be expected from this property.

The Ajo group of copper mines in the same district embraces a large scope of copper lands, which have been recently explored with the best of results. The ore bodies here are simply immense, and the promoters of this enterprise are now satisfied to place a large copper plant on the mines, and the run of copper bullion from here may well be expected to equal the most favored in the above list.

The Emperor Copper Mining Company, operating in the Sierrita Mining District, twenty miles south of Tucson, have also pushed developments on their copper property there to such an extent that the fine ore bodies exposed justify reduction works, which will soon be put in operation, and this camp be added as another copper producer.

The O'Brian Copper Mines, near the mouth of the San Pedro, have recently changed hands to the San Catarina Copper Company, of New York, who are now moving a fine copper plant to the property, and expect within the next sixty days to be making copper bullion in large quantities.

The Bell Isle Mine, in same mountain, 600 feet above the famed Copper Queen, has recently developed a large body of same class of ore as the Queen. The works of the Queen tend to settle its permanent downward tendency, and this valuable property will doubtless be a producer also during the coming year.

The Silver Bear, near the above mine, has developed large bodies of high grade copper ore, and has yielded a handsome profit to its owners the past year by shipping the ore East. The owners have resolved on putting a plant upon that property, which by June next will be producing copper bullion.

There are many other copper mines on the great belt that, with a little systematic development, are destined to soon enter the list as copper producers.

From the above facts and figures it will be seen that Tucson occupies a most enviable position in one of the richest copper belts in the world. The copper industry, just in its infancy, and under the adverse conditions that new mining camps have to contend with, has given to the copper markets the past year 16,751,580 pounds of copper, valued at \$2,945,284.40. The coming year this product will be at least trebled or quadrupled, as plants will be enlarged at some of the now producing mines, and from the new mines that are now coming into operation, under the flattering prospects of this year's development. Northern and central Arizona lay claim to equally flattering prospects, and with just cause. With such a favorable array of facts and figures before us, do not the immense copper interests of southern Arizona assure her prosperity in that important mineral industry alone for years to come? And in due deference to the other valuable minerals, with the superior economic conditions that this particular section affords, capital, with judicious investment, and under practical and systematic operation, can find no safer field for legitimate investment.

#### THE COPPER QUEEN AND OTHER MINES.

Besides its veins of silver and gold, Cochise County has also some of the largest and most valuable copper mines to be found in the Territory. At Bisbee, some twenty miles south of Tombstone, are found some of the richest copper mines in the United States. The veins are large, the grade high, and the appliances at hand for reduction cannot be excelled. The mines are about sixty miles from the railroad at Benson, and about twenty miles from the Sonora line. The Copper Queen, the leading mine of the camp, is an immense mountain of ore. It has been explored 160 feet in length by 150 in depth, and 120 feet in width, and as far as the explorations have extended, rich ore has been encountered everywhere. The claim is 1,500 feet long, and 600 feet wide. Two thirty-ton smelters are kept running steadily, and the daily output is about thirteen tons of pure copper. The ore is a carbonate and a black and red oxide, and averages about twenty-two per cent. The claim has been opened by 700 feet of shafts, drifts, and cross-cuts, and has already yielded over \$600,000 worth of copper. The property is owned by an incorporated company, with headquarters in New York.

The Neptune Company owns nine mine claims, the most prominent of which is the Neptune, which shows ore going twenty-four per cent. This company is making preparations to erect a smelter on the San Pedro River fifteen miles distant. The Twilight shows a six-foot vein of red oxides, carrying twenty-five per cent. pure copper, and is opened by a seventy-foot shaft. The Holbrook has a ten-foot vein of red oxides, but has little work done on

it. The Copperopolis shows a five-foot vein and a forty-foot shaft. The Atlanta carries twenty-five per cent. ore, and is opened by a forty-five foot shaft. The Copper King is the western extension of the Copper Queen. It is a large vein, showing good ore. The Golden Gate, Ohio, Copper Prince, Cave, New York, Galena, Garfield, Bounty, Black Jack, and Dreadnaught are all fine prospects, although but little work has been done upon any of them. Bisbee, besides its immense copper veins, has silver and gold also. It is one of the most eligibly situated camps in southern Arizona, and has a bright future before it.

#### THE OLD DOMINION AND OTHERS.

Gila County contains some of the finest copper properties in the Territory. The Globe Copper Mine is about one mile from the town to which it has given its name. It was the first mine located in what is now Gila County. It is a large vein, and has been taken up for several miles. The ore is a high grade, carrying \$25.00 in silver. The True Blue is one of the most promising copper properties in the district. It is opened by several shafts and tunnels, and shows three feet of ore that gives an average of thirty per cent. A smelter of thirty tons capacity is nearly completed on this property, which is situated about three miles from Globe. The O'Doherty is another large vein, carrying high-grade ore, and opened by a shaft fifty feet deep. About eight miles from Globe, at what is known as the Bloody Tanks, is another group of copper ledges, on which a smelter of thirty tons capacity is now being erected by a New York company. The Chicago, New York, Old Dominion, and Buffalo, are owned by this company. The veins are large, and the ore is said to be of a high grade.

#### KEYSTONE MINES.

In the Penal District there are a number of very promising copper mines being worked, among which the Keystone and the Burnside take the lead. The former, however, is conceded by some to be the better of the two. The ledge of it is claimed to be 300 feet, while the pay-streak, which can be worked and yields very profitably, is certainly fully 100 feet wide. The average yield will be fully 30 per cent. copper, which, taking into consideration the extraordinary width of the ledge, and the ease with which it can be worked, at once stamps this as a mine of extraordinary value. But it is in the hands of parties who have not the capital, as yet, to fully take advantage of what Dame Fortune has cast in their way. The Burnside has done considerably more work, the company having capital, and is shipping the ore regularly to San Francisco and deriving a handsome profit.

On Mineral Creek, a tributary of the Gila, northeast from Florence, in the foot-hills of the Pinal Mountains, are situated some rich copper mines. The camp is about five

miles from the Gila River, and abundance of wood is found in the neighborhood. No better situation for a mining camp can be found in the Territory. A smelter with a capacity of 30 tons in twenty-four hours, has been erected at the river, and is running successfully. The Keystone is a large ledge, carrying great quantities of native copper. The average of the ore is said to be about twenty-five per cent. The mine is opened by several shafts, drifts, etc. The Ida Ingalls is a 14-foot vein of copper glance, a large portion giving assays of thirty per cent. There is a shaft 100 feet, and a drift 60 feet on the property. The Monitor shows 7 feet of good ore. It has several openings.

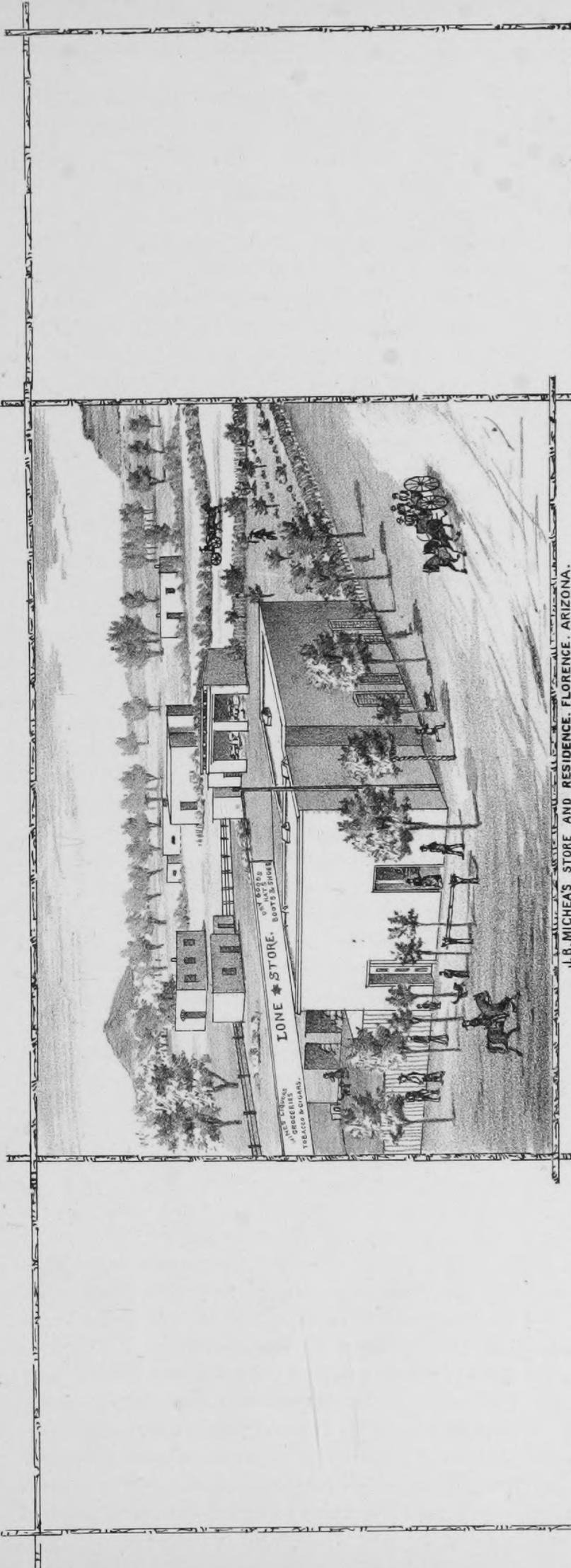
#### THE EUREKA AND WADE HAMPTON.

Yavapai is rich in copper ores; they are found in every part of the county, some of them of a very high grade. Very large deposits are found east of the Agua Fria and in the southern end of the Juniper Range; copper is also found in the Walnut Grove District, in the country west of Date Creek, and in Castle Creek, south of the Bradshaw Mountains. So far as developed, these deposits show ore of a high percentage, and of a character easily reduced. The only copper mines which have been thoroughly opened are situated in the Black Hills, about twenty miles northeast from Prescott. The Eureka, the leading mine of the group, has been explored by several tunnels, which have tapped the vein nearly 200 feet below the surface. The ledge is from 8 to 16 feet in width, and over 1,600 tons are on the dump. The property has recently been purchased by Eastern parties, who intend to erect reduction works.

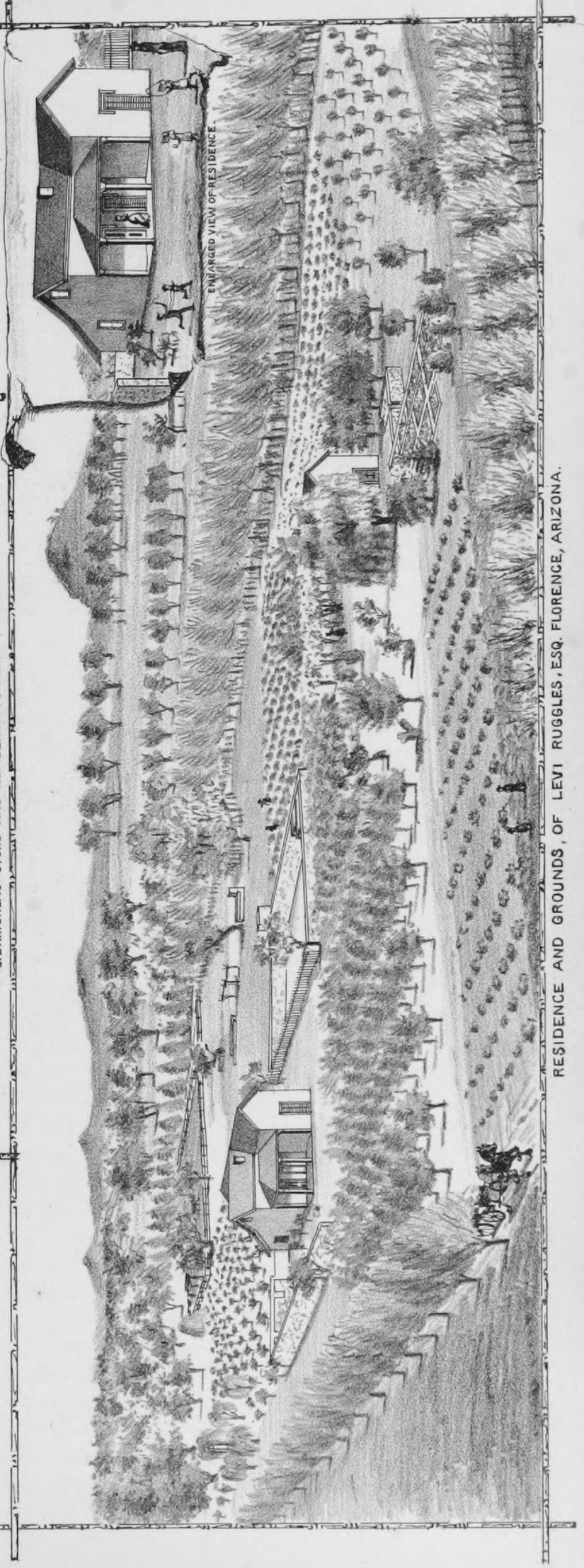
The Wade Hampton is on the same ledge as the Eureka, and carries a large ore body similar in character. There are many other promising claims in this district, which possess the advantages of wood and water, and will be only forty miles from the Atlantic and Pacific Railroad.

#### UNITED VERDE COPPER MINES.

These mines are situated in the Black Hills about twenty-eight miles northeast of Prescott, near the Verde River, and are so wonderful in extent and value that it is almost impossible to estimate their worth. The owners are rapidly progressing in the development of their property, and there is now 50,000 tons of high-grade copper ore in sight, with possibilities so great in prospect that there is no question but that these mines will soon be ranked among the greatest mining properties of the country. It is doubtful, even with their present development, if the famous Copper Queen property, of the southern portion of the Territory, can favorably compare with them. The machinery for extensive works will soon be in place, and the mines are easily accessible over one of the finest



J.B. MICHEAS STORE AND RESIDENCE. FLORENCE, ARIZONA.



RESIDENCE AND GROUNDS, OF LEVI RUGGLES, ESQ. FLORENCE, ARIZONA.

mountain roads in the country, the natural scenery along the route being of remarkable beauty and grandeur. This property is well worth a visit by parties from a distance.

#### ARIZONA COPPER COMPANY'S MINES.

The famous Longfellow Copper Mines are in Graham County. They are situated on the San Francisco River, a few miles above its junction with the Gila. This region was known to be rich in copper, but it was not until 1874 that mining was carried on to any extent. Before the building of the Southern Pacific Railroad, the copper matte was shipped a distance of 700 miles by wagons to the nearest railroad, and from there forwarded to Baltimore. Notwithstanding the enormous cost of this mode of transportation, the ore paid its owners a profit. The deposit appears to be a regular mountain of ore, drifts and tunnels having, so far, failed to find anything like a wall; and in whatever direction the workmen penetrated, they have encountered the ore body. As a consequence, the mine resembles in some respects a quarry, showing metal in every direction.

The property is owned by an incorporated company, which appears to be a very close corporation, not disposed to let outsiders know too much about the "good thing" they possess. The ore is copper glance, red oxide, and a carbonate. Extensive reduction works have been erected on the San Francisco River. The yield is about 14,000 pounds daily, which will soon be largely increased by additional reduction facilities. What the total yield from these mines has been has not been ascertained, though it is known to reach up into thousands of tons. The company gives employment to a large number of men, and a flourishing camp, known as Clifton, has sprung up near the mines. The Detroit Mining Company, operating three miles from the Longfellow, has opened up a splendid property. They have put up reduction works, and intend to connect their mines by a branch road to the Southern Pacific. The ore is equally as rich as that of the Longfellow, and quite as extensive, and will no doubt prove as productive. There are many other copper properties in this region, which give every promise of becoming valuable.

#### FIRST PLACER MINING ON THE GILA.

"At a point on the Gila River," says Lieutenant Mowry, "about twenty miles from its junction with the Colorado, and in a succession of sand-hills, gold was discovered in September, 1858. The emigrants who were still on their way, stopped, and, the news reaching California, others came in. I visited the gold mines early in November, and found about one hundred men and several families. A town called Gila City had already been laid out, and temporary houses of brush and adobe were in the course of erection. I examined carefully for myself, and found that

several men could afford to pay laborers \$3.00 per day and their board to work for them. I saw more than \$20.00 washed out of eight shovelfuls of dirt, and this in the rudest manner, and by an unpracticed hand. I saw several men whom I knew well would not have been there had they not been doing well, who told me they had made from \$30.00 to \$125 per day each. I purchased about \$300 in gold-dust out of a lot of more than \$2,000. A portion of this dust is here, if any one is curious enough to wish to see it. Several hundred men have come into the mines since I left Arizona. My letters gave me no reason to suppose the mines had given out or shown any signs of failure."

#### FIRST PLACERS OF YAVAPAI.

About the first placer mining that was done in Yavapai County was at Weaver, about forty miles west of Prescott. The diggings were discovered in 1862. Indians knew of them and told the whites. These were the richest ever found in Arizona. The yellow stuff was there picked up by the tin cupfuls. These mines have yielded a great deal of gold and are far from being worked out. The gold was and is coarse. A great many Mexicans and some Americans are still working around Rich Hill, where the big pieces were first picked up. The gravel in gulches and on *mesas*, or table-lands, on the west side of Antelope Mountain, contains plenty of gold, but water to wash it is generally scarce. By and by, water will be procured and the yield of the king metal will be very great.

The bed and bars of Hassayampa, Lynx, Big Bug, Turkey, and other creeks running out of the Prescott Mountains will pay well when properly worked. Lynx Creek was mined in spots in the early days. Scores of miners are yet engaged in washing gravel there. Some time ago a miner found a piece of gold of the value of \$15.00. Early miners prospected for the richest places. It was impossible for them to work poor ground when Indians were bad and flour was \$40.00 a hundred. Ground sluicing and hydraulic process can now be used. These modes are in use, and Lynx and Hassayampa Creeks will, this winter and spring, contribute much gold.

Granite Creek was never very rich, and yet some miners have made money by their labors in creek and bars.

Turkey, Black Cañon, and Agua Fria Creeks offer inducements to placer miners. Black Cañon gravel contains a great many boulders; the fall is not sufficient for ground sluicing or piping, so that it is a little difficult to rob it of its gold.

Besides these creeks there are, in this vicinity, a great many gulches which hold gold in abundance.

The present mild winter, with its abundant supply of water, enables miners to work old diggings and prospect for new.

## THE PLACERS NEAR THE QUIJOTOAS.

But there is evidence of still earlier discoveries and extensive workings in this now new mining district. To the north of the Quijotoa Mountains about six miles, there is an area of about three miles square, more or less, of placer ground, which has been extensively worked (from the most reliable authority) as early as 1774, by Padre Lopez, a Castilian priest, and up to 1849, when the gold excitement of California caused many to leave for the North, the remainder returning to Lower California, whence they had come. The workings of the placers are remarkable. The most of the ground is a perfect honey-comb of working shafts from five to twenty feet deep, covering the gold field—so close together that it is almost impossible to ride over the ground without danger. These shafts or pits are connected by under-ground workings, from which the gold was evidently taken. The deepest shafts are those furthest removed from the base of the mountain. Some of the dumps of the deep workings are very large, and have been found to be rich enough to work with profit, as the methods used by ancient gold miners of that region were so rude and primitive that none but the coarse gold was taken. Several parties now working on the dumps are making from \$3.00 to \$5.00 per day.

There is evidence of the working of several old silver mines in the vicinity of the placers. The query, Where did this gold come from? is rationally answered—From a mammoth iron ledge which trends the district from north to south, a distance of twelve miles, to Mount Ben Nevis, which is found to be quite rich in free gold. Thus it is evident that the new district which is now causing so much stir as the new Bonanza Camp is perhaps the oldest mining district on the Pacific slope, and there is good cause to believe that the workings of the placers are the finger-board to the most extensive gold diggings which now remain for the gold hunters to try their fortunes.

## THE BONANZA MINES.

The famous "Bonanza Camp," in Arizona, is probably now attracting more attention among mining men and the public generally on the Pacific Coast, and, indeed, throughout the United States and Europe, than any mineral discovery made since the finding of gold in the mill-race, at Sutter's Mill, in 1849.

It is about sixty-five miles from Tucson to the Ben Nevis Mountain, the giant sentinel of the famous Bonanza Mines in the Quijotoa District, which is now attracting the attention of the mining men of the entire country. By the most practicable route by wagon or railroad the distance will not exceed seventy miles, over which the daily stage lines make the trip in ten hours from here to the camp.

The country is a vast pasture-field on both sides of the road for miles, capable of grazing hundreds of thousands of stock during the entire year. Water in abundance for stock purposes can be obtained by sinking from one hundred to two hundred feet, which fact suggests that at no distant day the stock industry of the western Pima will vie with the mines in giving to the world untold wealth.

Since the discovery of the Bonanza Mines, and many others in the surrounding mountains, the oft-recurring question is, Why were these mines not discovered before this? Why were so many rich prospects as have been and are now being found daily, allowed to escape the keen eye of the indefatigable prospector? The principal causes were the Apaches and the scarcity of flowing water, both of which reasons made it extremely hazardous for the most courageous treasure hunter to venture into the seemingly unknown region; but with the tide of emigration the Apache has been forced back into one nook of the Territory, and during the past few years the rain-fall has been much more frequent, so that both causes have, in a great measure, been removed.

Yet, however, there is evidence in existence that the rich mineral mountains west of us were known. Many years ago the Mexicans worked the mines in the Comobaby and the Cababi Mountains, which are located midway between the Quijotoas and Tucson.

## EVIDENCE OF OLD MINES.

Many old arastras and smelters are still found in the locality of the mines of these mountains which were used to work the ores of which fabulous stories are to this day related by old Mexicans. It is well known that when water became scarce or the Apaches raided the country, the ore was carried from these mines to Fresnal, in Sonora, where can be seen to-day the remains of more than forty-five arastras, but finally the forays of the Apaches became too frequent, and the mines were deserted. This period was in the early part of the present century. Some of these old mines are being re-opened with good results. The workings of others are filled with water and *débris*, which still remain as they have been for more than a half century, while many new discoveries are being made in both of these mountain ranges and in the foot-hills, the most recent of which are the new finds reported in the Artias Range, about fifteen miles southeast of the Quijotoas.

## THE POINTER.

The iron ledge above referred to was the key which led to the discovery on Mount Ben Nevis, and which makes the name of the discoverer a part of the history of Arizona. This great ledge first attracted Alex. McKay's attention

in the fall of 1878, during his first visit into that region. He followed it down to the foot of Mount Ben Nevis, where it shows very prominently. McKay did not think much of the ledge and passed it by. On his return from the district he mentioned the fact of the iron ledge to his partner, Albert Weldon, who went and examined it, but did not think it worth locating. In 1882 he made a visit to northern Arizona, taking in the United States Verde Copper Mines, and observed that the formation and surroundings were very similar to the iron croppings at the base of Mount Ben Nevis. He immediately returned and told McKay that there was a copper bonanza under the iron and he was going to locate it. McKay said: "All right, but don't you put my name on the location. I don't want any of it." Weldon and J. A. Roark determined to go and locate the ledge and prospect the surrounding country. They arrived on the grounds in August, 1882, and camped at the base of Mount Ben Nevis. They made the location and named it the Emerald, which, on development, promises to be one of the great copper mines of the Territory, carrying a large per cent. of silver.

#### FIRST LOCATIONS.

They also located the Wadsworth, Josh Billings, and the Palo Verde, the two former being now included in the Bonanza group. In this they did not forget their old prospecting partner, Alex. McKay, and his name went down on all the claims but the Emerald.

It was not until last year that any work was done on the claims, the locators having left the district and returned during the month of May for the purpose of developing their claims. It was during this time that McKay felt there was something worth trying for on the summit of the mountain which reared its crest 1,400 feet into the azure sky.

After several futile attempts, on account of the almost perpendicular ascent, he at last determined to make his last effort, and on the morning of May 6th he shouldered his pick and commenced climbing the cliffs and precipices, and after four hours of climbing, creeping, panting, and scrambling, he stood on the summit of Mount Ben Nevis, where the foot of human being had never trod. He at once set about to explore the mountain he had mastered by endurance, pluck, and perseverance. Commencing near the south end of the location of the Peerless Claim, he knocked off the croppings, and to his surprise found what appeared to be rich ore. Every step he made forward showed the same character of rock. The vast ledge rose up before him on all sides; he traversed the mountain to the northern slope, and found that the ledge stood out in grand relief along its entire crest. When he reached the northern end of the mountain, he crept down as far as he could with safety, and plainly heard Roark working below.

He fired off his pistol, which caused Roark to run out into plain view far below him.

After passing salutations, he retraced his steps, loaded with samples of ore, but found the descent much more difficult than the ascent. It required almost the entire afternoon to reach the camp, although the distance did not exceed one and a half miles. "What luck?" asked his partners. He answered by throwing his specimens at their feet. It did not require long for them to take in the situation. "I tell you," said McKay, "there is a bigger thing up there than the Comstock; we have got it at last, you can bet on it. No more prospecting for this crowd. You are all in on the find," etc., and they all sat down to a first-class camp supper.

Early next morning he and J. A. Roark went up the mountain and made a careful survey of the croppings, and returned at sundown with a lot of samples, which they tested and became fully satisfied that the mountain was a bonanza of silver.

On the 11th, McKay, accompanied by Albert Weldon and Geo. Teitworth, provided themselves with provisions and tools and went up. The first cropping they struck off showed horn silver in large quantities, and the quartz vein showed so large that they set about and located the Peer and Peerless Mines. They sampled the ground well, and at once came to Tucson to have assays made. To their great surprise they found that one sample gave over \$1,500, and the other over \$4,400 in silver per ton. They immediately returned and located the side ground, which will probably prove of as great value as the Peer and Peerless. In the meantime they took into their claims W. C. Davis, a well-trying friend, who accompanied them to the camp.

Active development, sampling and shipping of ores, commenced at once, returning most satisfactory results. In September the attention of W. S. Lyle, one of the best-known mining men of the Pacific Coast, was called to the bonanza through the *Star*.

Having sunk \$20,000 some months previous in a property north of the Quijotoa District, he at once left San Francisco and pushed right through to the district, never halting until he found the owners on the claims taking out ore. Lyle had always maintained from his first visit to that section of Arizona two years ago, that somewhere in that range of mountains would be found another Comstock. The formation and all external indications pointed out this conclusion to his mind, hence his anxiety to see whether or no his predictions were fulfilled. He looked over the ground, sampled the ore, and determined that he had not been mistaken, and secured an option on the Peer and Peerless, with side locations for fourteen days at \$350,000. He came to Tucson and telegraphed the result of his visit to the bonanza men. Mr. Mackey thought the price too

high for a prospect, but Lyle stuck to it that the property was a genuine bonanza and the price was small. J. B. Low, of the Comstock, was sent down to make an examination; he reported still more favorably than Lyle, but in the meantime the fourteen days' option had elapsed.

At the request of the San Francisco capitalists, W. C. Davis and Alex. McKay went to San Francisco to hold a conference with them. After a short interview, J. C. Flood telegraphed their old time superintendent, Hank Smith, of the Comstock, at Virginia City, to go up to San Francisco. Shortly after he also wired W. H. Patton, another of their tried Comstockers. He sent both of these gentlemen down, accompanied by Messrs. Davis and McKay, to make a final examination, the result of which was the purchase, which was closed by telegraph immediately after the examination, which showed that Mr. Lyle was right, and we feel assured the future will establish that all of these four gentlemen who examined the property have added new testimony to their sound and safe knowledge of mines and mining.

### COAL FIELDS OF ARIZONA.

Mr. Charles P. Stanton, vouched for as a competent geologist, in a communication relating to the coal fields of Yavapai County, claims that nearly or quite 38,000 square miles of coal formation are to be traced; so that nearly one-half of the whole coal measures of the United States are embraced in this Territory. The eastern edge of this great tertiary basin commences at Tierra Ausarilla, and runs south to Santa Ana, New Mexico. The beds vary in size from two inches to twenty feet. Close to Fort Defiance, in Yavapai County, a vein exists nine feet thick.

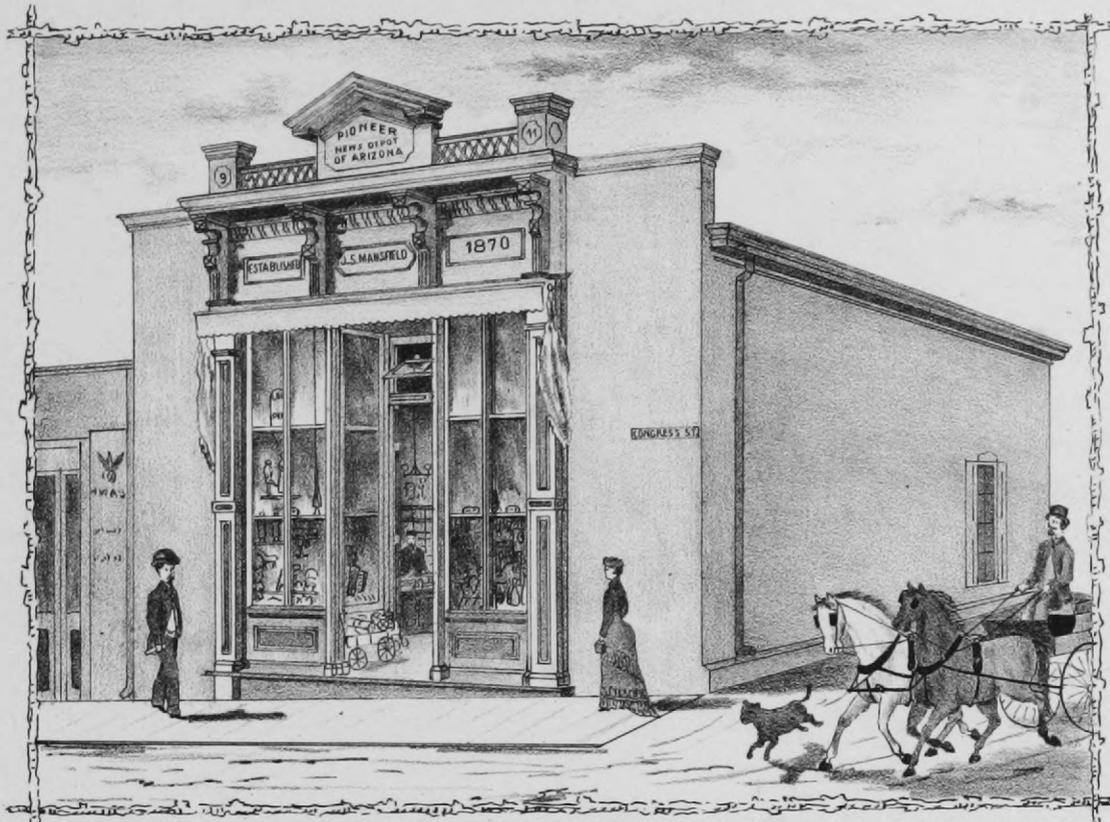
I conveyed to the blacksmith shop at that agency in 1873, one hundred pounds of this coal, for the purpose of experimenting on its qualities for welding iron, which it readily did. I spent two days at this blacksmith shop burning this fuel, and it seems to me to possess all the qualities of excellent bituminous coal, and to rank next to anthracite for domestic purposes. It is as neat as anthracite, leaving no stain on the fingers. It produces no offensive gas or odor, and is thus superior in a sanitary point of view; and, when brought into general use, it will be a great favorite for culinary purposes. It contains no destructive elements, leaves very little ash, no clinkers, and produces no more erosive effects on stoves, grates, or steam-boilers than dry wood. I see no reason why it should not be pre-eminently useful for generating steam and for smelting ores. This description will apply to all the coal in this great Arizona coal basin, with but few exceptions. It is in the paleozoic lower tertiary, and lower silurian

sandstone, and calciferous sand-rock, with arenaceous clay, and in some places dark cretaceous clays, with red hematite and spathic iron ores. Close to the western base of the dizzy peak, or butte, on which the Moqui Indians have erected their village, is another immense bed of coal. It rests on a bed of carbonaceous clay, and in the clay are nodules of iron ore, full of impressions of deciduous leaves, with an abundance of small bivalves and other shells.

The next great bed of coal encountered is situated about twenty miles northwest from the Moqui villages, and close to the northern verge of the Painted Desert. It is twenty-three feet thick, and boldly crops out for a distance of three miles. This coal is close, compact, and close-burning, melts and swells in the fire, and runs together, forming a very hot fire and leaves little residuum. It resembles, in external appearance, the Pennsylvania bituminous coal. It is, however, very hard to ignite. The trend of the coal beds is north and south, and overlying this great deposit is drab clay, passing up into arenaceous grits, composed of an aggregation of oyster shells, with numerous other fossils, which must have existed in this great brackish inland sea about the dawn of the tertiary period, probably in the eocene age.

#### THE SAN CARLOS COAL LAND.

In speaking of the San Carlos coal fields, the *Phoenix Gazette* says: "There is no measure that has been presented to Congress that can commend itself more strongly to the principles of reason and justice than that of segregating the coal fields from the San Carlos Reservation. They are the discovery of private individuals, hard-working miners and prospectors, who did not believe they were on the reservation when located. Under this impression they developed them, expending much time and considerable money. Subsequent surveys of the reservation were made so as to inclose the coal lands. The men who had discovered the vein, located in good faith, and developed it to a stage that would make it valuable, were thus deprived of the fruits of their labor. Immediately a disgusting wrangle ensued among the agency officials and other political pets as to who should reap the benefits of this steal. Fortunately Secretary Teller put a stop to these proceedings. As the matter now stands, it resolves itself into these three propositions: First, shall these coal fields, which cannot be of the slightest benefit to the Indians, be permitted to remain idle simply because they are on a reservation? Second, shall political wire workers be permitted to work them under the pretense of paying royalty to the Indians? Third, shall they be segregated from the reservation and go into the possession of the original discoverers and rightful owners? It is very im-



**"PIONEER NEWS DEPOT OF ARIZONA." PROPERTY OF J.S. MANSFIELD, TUCSON, ARIZONA.**  
CORNER CONGRESS ST. AND WARNER ALLEY.



**HOME PROPERTY OF L.C. HUGHES, COR. ALAMEDA AND COURT STS. TUCSON, ARIZONA.**

portant to this Territory that the coal mines be operated, for if they prove of sufficient extent, their value to the mining and other important interests of Arizona, cannot be overestimated. So far as our people are concerned, there can be no question in regard to their views in the matter, as it is unanimously in favor of the segregation of the coal fields from the reservation.

#### THE COAL FIELDS OF NORTHERN ARIZONA.

The quantity appears to be limitless. A few feet from the surface of the ground is one vein about five feet thick, and a few feet further another vein is found of about the same width, and still another vein of large size is found below the two former. These veins lie nearly horizontal. The coal is mined very cheaply, as the same is loaded from the opening into the mines directly into the cars, which are run in on a side track so as to come immediately under the chute from the mines.

The A. & P. Company and the stations along the line of the road are using this coal with great satisfaction. It is the very best kind of coal for railroad use. No clinkers are left after the burning of the same. It is of such fine quality as to burn all down to fine ashes.

Recently, fifty car loads of this coal were shipped to California for the use of the Southern Pacific Railroad Company. The officers of that company say it is even better coal for their use than the coal they are now using, which comes from Oregon and from England. The only question with the Southern Pacific Company as to which coal they will use is that of cost. It is not settled yet which can be had the cheapest.

In this great Arizona carboniferous basin, there is not a square mile in which the coal does not crop out on the surface, varying in size from two inches to twenty feet. This, no doubt, is owing to the tremendous drift erosion which has taken place here at a comparatively modern date—either miocene or pliocene age. The paleozoic, mesozoic, and cenozoic times, with their triassic, jurassic, cretaceous, tertiary, post-tertiary, upper and lower silurian, eocene, miocene, and pliocene periods, are in this great carboniferous basin, tumbled and crumbled together in indescribable confusion.

#### VALUE OF ARIZONA MINES.

Arizona to-day, with all intelligent men, eclipses Nevada. The glories of the old Silver State are those of memory and retrospection merely. Mines at a depth of from 2,000 to 3,000 feet are beyond the possibility of profit, especially with the extravagant management which has been bred in the bone of all Comstock mining magnets, or, more properly, stool pigeons. The sneer at Arizona has been principally because the mines of the Territory lacked depth. Just there is the strength of the Arizona mines. Tombstone is worth the played-out Comstock lode twenty

times over, because the Tombstone Mines are at trifling depths and yield dividends from the surface.

The Nevada mines are a mammoth devil-fish, squirming and delving not only into the depths of the earth, but into the depths of the poor stockholders' pockets. Fortunately for the fair fame of Arizona, assessments are an almost unheard-of thing. At the worst they are confined to the owners of the mineral properties, and that at a time anterior to their becoming stock propositions. None of the attractive properties which are now paying heavy dividends in Arizona have levied assessments. The Silver King, which has paid many dividends, and which bids fair to pay more, has never levied an assessment on stockholders. The same may be said of the leading Tombstone Mines. Undoubtedly, Arizona will, in the near future, play a leading part in stock speculation. Unless all signs fall, before the coming trans-continental railway systems below the snow belt shall have been completed, the attention of Eastern capitalists will be focused upon Arizona, a region which has practically developed itself in an extraordinary degree.

The San Francisco *Alta* adds the following:—

“Arizona mines are now the popular mines, but hardly for speculation in the stock boards—we mean for investment by capitalists; and here we wish to say that a few of ours have awakened at last to the fact that Arizona has very promising mines. Wherever the mines of Arizona have been developed to any considerable depth, they have, with but very few exceptions, proven richer in minerals with increasing depth, and foreshadow a permanency completely at variance with all theories of scientists and experts. Even small prospects on the surface generally develop into good ledges at less than 200 feet in depth. This is true not only in those districts where the mining excitement exists, but in all locations where minerals have been found. Tombstone has shown that her mines are practically inexhaustible; the Meyers District is showing astonishing richness; the Silver Bell and Silver Hill belt are adding to the wonders of the Territory; Patagonia is proving the truth of her predicted greatness; the California District is full of bonanzas; Dos Cabezas, Oro Blanco, and Arivaca are fast growing in favor; and the rich leads of the Santa Ritas are beginning to show that they are not a whit behind the rest.

#### ARIZONA MINES BOOMING.

Governor Tritle, in his message, says: “In mining, the Territory stands especially prominent in the yield of precious metals. Improvements of the most costly and desirable character for mining and reduction of ores have been and are being erected, and before another year it will be impossible for the miners whose claims will not justify the erection of works, to find a home market for the sale

of their products. In no other State or Territory does such a general mineralization of the earth occur as in Arizona, and almost every mineral commercially valuable can be found within its boundaries."

"The mining interests of Arizona," says the *Benson Herald*, "are booming all over the Territory. These booms are not confined to one portion, but are general. The greatest excitement at present is the Quijotoas, which is destined in a few months to be a large and prosperous camp; then comes the new and rich finds in the Galuri Mountains, about twenty-five miles below Benson, which are just now attracting a good deal of attention from capitalists. Next in order to the Quijotoas comes the Casa Grande Mines, which have just been sold for \$150,000, with more prospects at hand just as rich. Then we have the Gunsight Mines, which have just been sold to Eastern capitalists, who will begin work on them at once, and they will soon be among the bullion producers of the Territory."

"There are the Riverside, Clifton, Bisbee, Golden Rule, Johnson, and the famous Tombstone Districts, that are turning out their regular bars of bullion daily. Mines that have lain heretofore undeveloped are now being worked by their owners or others who have leased them. This has been brought about by the custom smelters in different parts of the Territory, and more particularly by the Benson Smelting and Reduction Works. The bullion product of the Territory for the past year has been placed at \$20,000,000, and we predict that with the impetus that mining has got at present the yield for 1884 will be over \$50,000,000."

RANK OF THE STATES AND TERRITORIES IN THE PRODUCTION OF GOLD AND SILVER IN THE CENSUS YEAR 1880.

GOLD.	SILVER.	TOTAL.
1. California.	1. Colorado.	1. Colorado.
2. Nevada.	2. Nevada.	2. California.
3. Dakota.	3. Utah.	3. Nevada.
4. Colorado.	4. Montana.	4. Utah.
5. Montana.	5. Arizona.	5. Montana.
6. Idaho.	6. California.	6. Dakota.
7. Oregon.	7. Idaho.	7. Arizona.
8. Utah.	8. New Mexico.	8. Idaho.
9. Arizona.	9. Dakota.	9. Oregon.
10. Washington.	10. Michigan.	10. New Mexico.
11. N. Carolina.	11. Oregon.	11. Washington.
12. Georgia.	12. N. Hampshire.	12. N. Carolina.
13. New Mexico.	13. Maine.	13. Georgia.
14. Wyoming.		14. N. Hampshire.
15. S. Carolina.		15. Michigan.
16. N. Hampshire.		16. Wyoming.
17. Virginia.		17. S. Carolina.
18. Alaska.		18. Maine.
19. Maine.		19. Virginia.
20. Tennessee.		20. Alaska.
21. Alabama.		21. Tennessee.
		22. Alabama.

## PRODUCTION OF GOLD & SILVER.

RANK OF THE STATES AND TERRITORIES IN PRODUCTION OF GOLD AND SILVER, PER CAPITA, IN THE YEAR 1880.

GOLD.	SILVER.	TOTAL.
1. Nevada.	1. Nevada.	1. Nevada.
2. Montana.	2. Colorado.	2. Montana.
3. Idaho.	3. Montana.	3. Colorado.
4. Dakota.	4. Arizona.	4. Arizona.
5. California.	5. Utah.	5. Idaho.
6. Colorado.	6. Idaho.	6. Utah.
7. Oregon.	7. New Mexico.	7. Dakota.
8. Arizona.	8. California.	8. California.
9. Utah.	9. Dakota.	9. Oregon.
10. Washington.	10. Oregon.	10. New Mexico.
11. Wyoming.	11. N. Hampshire.	11. Washington.
12. New Mexico.	12. Michigan.	12. Wyoming.
13. Alaska.	13. Maine.	13. Alaska.
14. N. Carolina.		14. N. Carolina.
15. Georgia.		15. N. Hampshire.
16. N. Hampshire.		16. Georgia.
17. S. Carolina.		17. Michigan.
18. Virginia.		18. Maine.
19. Maine.		19. S. Carolina.
20. Tennessee.		20. Tennessee.
21. Alabama.		21. Virginia.
		22. Alabama.

## METALS DEPOSITED AT MINTS.

GOLD AND SILVER OF DOMESTIC PRODUCTION DEPOSITED AT THE MINTS AND ASSAY OFFICES FROM THEIR ORGANIZATION TO THE CLOSE OF THE FISCAL YEAR ENDED JUNE 30, 1882.

LOCALITY.	GOLD.	SILVER.	TOTAL.
Alabama .....	\$ 221,886 05		\$ 221,886 05
Alaska .....	46,254 51	\$ 167 30	46,421 81
Arizona .....	2,963,537 38	10,272,443 50	13,235,980 88
California .....	716,354,816 23	2,563,593 32	718,918,409 55
Colorado .....	39,393,894 91	21,928,710 88	61,322,605 79
Dakota .....	14,050,169 82	50,869 52	14,101,039 34
Georgia .....	7,922,794 17	874 46	7,923,668 63
Idaho .....	25,288,037 98	897,151 36	26,185,189 34
Indiana .....	40 13		40 13
Maine .....	5,516 86	21 38	5,538 24
Maryland .....	1,087 91		1,087 91
Massachusetts .....		917 56	917 56
Michigan (Lake Superior) .....	126 15	3,500,830 93	3,500,957 08
Montana .....	51,481,833 94	6,580,549 99	58,062,383 93
Nevada .....	16,516,639 98	81,226,931 53	97,743,571 51
New Hampshire .....	11,020 55		11,020 55
New Mexico .....	1,687,369 93	2,979,750 51	4,667,120 44
North Carolina .....	10,739,759 24	46,556 85	10,786,316 09
Oregon .....	16,816,275 39	40,307 01	16,856,582 40
South Carolina .....	1,435,390 36	175 30	1,435,565 66
Tennessee .....	86,616 20	4 66	86,620 86
Utah .....	531,152 72	13,056,896 40	13,588,049 12
Vermont .....	10,981 27	43 50	11,024 77
Virginia .....	1,694,509 35	82 86	1,694,592 21
Washington Ter... ..	259,027 88	326 82	259,354 70
Wyoming .....	727,992 24	11,818 18	739,810 42
Refined bullion .....	231,261,345 34	73,522,397 63	304,783,742 97
Parted from silver .....	16,699,768 48		16,699,768 48
Contained in silver .....	9,322,268 97		9,322,268 97
Parted from gold .....		7,073,251 68	7,073,251 68
Contained in gold .....		526,284 79	526,284 79
Other sources .....	10,503,840 51	32,574,302 44	43,078,142 95
Total .....	\$1,176,033,954 45	\$256,855,260 36	\$1,432,889,214 81

For other interesting information on gold production, see diagrams in front part of this work.

## THE PIONEER SETTLERS.

Old Pioneers; Explorations; Gold in 1838;  
The Walker Party; Pioneer Reminiscences;  
Exciting Times, etc.

### THE ARIZONA PIONEERS.

**D**URING the years 1837 and 1838, Joe Walker and Jack Ralston, old trappers and hunters, with one or two companions, were hunting and trapping on the Colorado River, within the limits of what is now Arizona. While traveling across the country from the Grand Cañon of the Colorado to reach the Little Colorado River, they failed to find water, and coming to the Little Colorado River below the falls, at a deep cañon, they endeavored to reach the water, and finding a dry ravine that extended back from the river, Walker and the others made their way down this ravine to endeavor to reach the stream. Ralston remained near the head of the ravine with the horses. Having nothing to do, he sat down on the rocks, and taking out his sheath knife, began digging in the crevices of the rocks. He discovered something that attracted his attention, and dug or pried out several pieces of yellow-looking, hard substance, which he put in his pocket. Water having been found and a camp made, Ralston showed his "find," and told where he found it. It was examined by all, thought to be curious, but none knew what it was, and was used as pocket pieces until lost or thrown away.

After the discovery of gold in California, and southern Oregon, about the year 1856, Ralston, who had been on a hunting and trapping expedition in the British Possessions, came into southern Oregon, and, on seeing gold there, immediately recognized it as being identical with what he had dug out so many years before. He told his story, which created some stir, but the great distance to travel, and the knowledge of the hostility of the Indians, prevented any movement being made at that time.

Among those who heard this story, was Mr. Geo. D. Lount. He wanted to organize a company for the purpose of testing the truth of the story he had heard. Nothing, however, was done till 1861. In the meantime, Ralston had died. Mr. Lount, hearing that Joe Walker, Ralston's partner at the time, was living in San Francisco, went there, and after having a long talk with Walker, they agreed to organize a small party, and visit the locality, and satisfy themselves of the truth of the story. A company was finally organized consisting of seven members: Joe Walker, George Lount, John Dickason, Arthur Clothier, Joseph R. Walker, Robert Forsyth and Oliver Hallett.

They left San Francisco in the spring of 1861, with horses and pack animals, taking the old Spanish trail and through Walker's Pass. At this pass, they fell in with a party of prospectors, known as the Miller party. They were twelve in number, among whom were S. C. Miller, and his brother, J. L. Miller. They were invited to join the Walker party, which they did, making the number nineteen. They crossed the Colorado River near what was called Mount Virginus, and reached their destination without anything of special interest occurring. They found the locality, but alas! the gold was not there. A diligent search failed to reveal anything that looked like gold, or even indications. In fact, the formation was such that if it was gold that Ralston found, it was evidently carried there, it not being a gold-bearing region.

A council of war was held, and it was decided to go to Albuquerque, New Mexico, and from there to Denver. The company wintered in Denver and vicinity. In the spring they reorganized as a prospecting party, and returned to Albuquerque, New Mexico, followed down the Rio Grande River, and from there struck across the country to the head of the San Francisco and Gila Rivers, where they found gold, but not in paying quantities. Here this party fell in with Jack Swilling, who had heard of rich diggings on the Colorado River at La Paz. They went to Tucson, and there fitted out and started for La Paz, but after getting under way, Swilling induced them to go to Hassayampa Creek, near where Wickenburgh now is. In the spring of 1863, the party went north to where Prescott now is. Here Jack Swilling left the Walker party, and soon afterwards discovered the placers on Antelope Hill and Creek. The Walker party also about this time discovered the placers on Lynx Creek. Before the discovery of these mines, however, George Lount went to San Francisco, and returned with a party of twelve men. The Walker party were then at Prescott, and built the first cabin, now in ruins. Of this party, we give portraits of those that could be obtained. There are living in and near Prescott, S. C. Miller, J. L. Miller, Jos. R. Walker, Geo. D. Lount and John Dickason.

### CHARLES D. POSTON'S REMINISCENCES.

Hon. C. D. Poston is one of a very few of the early settlers of Arizona, now remaining in Arizona. He says in writing to the Tucson *Citizen* of April 15, 1884:—

It will be thirty years in June (1854) since I camped on the Sonoita, with about twenty-five men.

We had endured a long journey from Nanachista in Sinaloa, along the Mexican coast, visiting Fuerte, Alamos, Guaymas, Hermosillo, Ures and the principal towns of Sonora.

When we arrived at Sonoita, by the Altar road, we had been down in the sand dunes of the Gulf of Califor-

nia, looking for a port from Lobos to Adairs Bay, and tried to make the journey to the mouth of the Colorado River by land, but the sand-hills and brackish water were too much for human exertion, and even mule power failed in the effort, so we turned inland and stopped at Sonoita Creek a week, to recruit our exhausted animals, and to prepare for a journey across the desert. Old Don Jesus Estrella was camped at the Sonoita with his cattle and peons, as he was in some quarrel with the officers of his government about "derechos;" and the old proprietor of Norra Vede treated us with royal hospitality.

He advised us not to essay to cross the desert from Sonoita to Yuma, 132 miles without water, but to take a "rumbo" through the Papago country, and strike for Gila Bend. At parting, he gave me a bota of mescal, with which to celebrate the 4th of July.

I can scarcely remember the Quijotoas, but may recall it when I visit there. I remember nooning in a cave where there were a great many Papago paintings in chalk, charcoal and a red substance, perhaps cinnabar.

We had to carry our scanty remnant of provisions on pack mules, and our water in leathern botas. It was not a very favorable occasion for prospecting the Quijotoas.

We passed the 4th of July, 1854, at the Sausaida Village, a Papago settlement, and feasted on the fruit of the sahuaro, and milk—not forgetting the bottle of mescal. The journey from there to Gila Bend was a hard one, and some of the mules gave out.

I dismounted, and walked the last fifteen miles to let a poor devil who was perishing with thirst (and had drank his own urine), ride my mule. When we reached Gila Bend, we appreciated the blessings of water, and almost slept in the river.

The journey down the Gila was monotonous—we killed some buck deer—made seines out of our blankets, and caught some fish, and fed mostly on mesquite beans.

When we arrived at Yuma, the sight of the American flag was like the stars of heaven to a midnight wanderer.

Major (afterwards General) Heintzelman ordered rations for the party, and after resting on the banks of the Colorado a week or two, we crossed the Colorado Desert on mule-back to San Diego, and thence by steamer to San Francisco.

It makes my head whirl to think about the suffering of that journey. Ehrenberg, my chief engineer, was killed at Dos Palms, on the Mohave Desert. Manuel Escalante, of Hermosillo, and Charley Woobrichy, of Mazatlan, are the only members of the party that I can remember, who are now living. The rest have gone on the *jornada de la muerte*.

At San Francisco we called upon General Sumner, who had just succeeded Albert Sydney Johnston, in command of the Department of the Pacific, but received no encouragement for the protection of Arizona.

Professor Pumpelly, with Professor Blake, sailed for Japan under the employment of the Japanese Government, and I sailed for New York *via* Panama, and thence to home in Kentucky.

Having pulled my family out of the fire in Kentucky, I took up my residence in New York City.

After a rest in New York, I went down to Washington, and found General Heintzelman (formerly of Yuma), in command of the department.

As he had spent a year with me in Arizona, and supposed he had interests here, he was disposed to be friendly to the Territory.

I accompanied the General across the Potomac, but found the Virginia day in winter-time more disagreeable than the Arizona sand in summer-time. The rebel shells were worse than Apache arrows, and my military career was brief and inglorious.

I returned to New York and bought gold on the stock market to gain money for board, clothes, and doctor's bill. Living in New York City at that time, with gold from 130 to 280 in greenbacks, was like going up in a balloon—plenty of gas, and but little ballast.

#### POSTONS' EFFORTS AT ORGANIZATION.

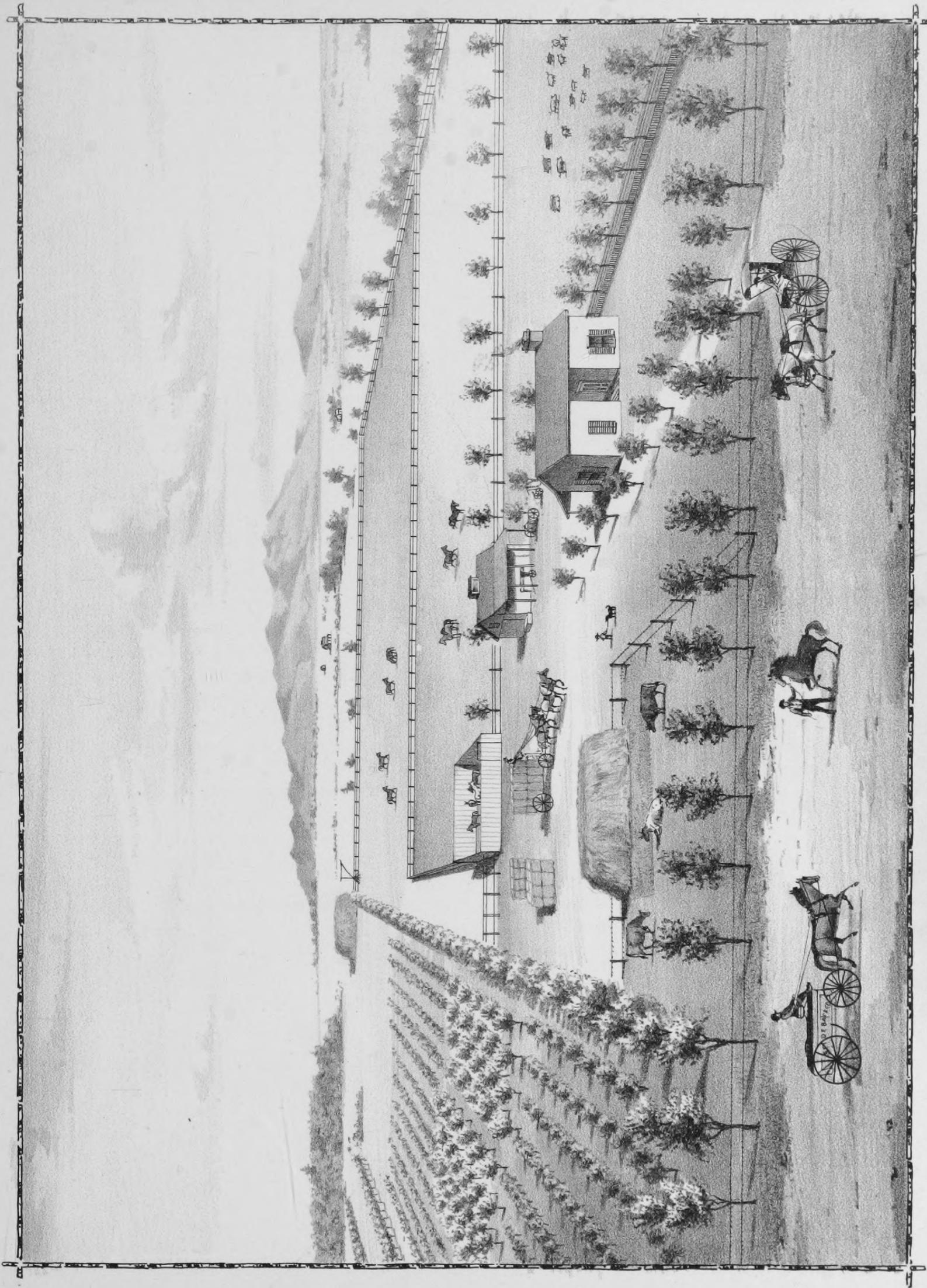
At the meeting of Congress in December, 1862, I returned to Washington, made friends with Lincoln, and proposed the organization of the Territory of Arizona.

Oury was in Richmond, cooling his heels in the ante-chambers of the Confederate Congress, without gaining admission as a delegate from Arizona.

Mowry was a prisoner in Yuma, cooling his head from the political fever which had afflicted it, and meditating on the decline and fall of a West Point graduate.

There was no other person in Washington (save General Heintzelman), who took any interest in Arizona affairs. They had something else to occupy their attention, and did not even know where Arizona was.

Old Ben Wade, the chairman of the Senate Committee on Territories, took a lively and bold interest in the organization of the Territory, and Ashley, the chairman of the committee in the House, told me how to accomplish the object. In the month of June, Fort Buchanan was burned and abandoned by the United States troops, under Lieutenant Chapin, by an order from General Lynde, commanding the Department of New Mexico, with orders to "burn everything that would feed an enemy, between the Colorado and the Rio Grande, and not to allow any citizen within three miles of their lines."



RANCH AND RESIDENCE OF S. F. WEBB ESQ. THREE MILES NORTH OF PHOENIX, A. T.

## ARIZONA ORIGINALLY DONA ANA COUNTY.

I had been appointed on my overland journey, in 1856, deputy county recorder for the county of Dona Ana, Territory of New Mexico; used a seal for the attestation of documents, celebrated the rites of marriage, and kept a book of records, which is now in the office of the county recorder of Pima County, at Tucson, in a very dilapidated condition.

A deputy sheriff had also been appointed, at my request, by the sheriff at Mesilla, to reside at Tucson; but the "rawhidiers" refused to pay taxes, licenses, or to recognize New Mexican authority; so the new purchase of Gadsden began its career in chaos and lawlessness.

This state of affairs continued from 1854 till the organization of the territorial form of government in 1864 (a period of ten years), and for many years subsequently; and in many districts yet prevails.

I had commenced the exploration of Arizona in 1854, and by the close of 1860, the "company" under my charge and its offshoots, had occupied the mines then known in the Santa Rita Mountains, the Cerro Colorado District, the Cababi District, the Arivaca District, and we laid our finger tips on the Tombstone Mines, when Bronckowe and his companions were assassinated there in October, 1859.

The only member of the old company remaining alive, is Charles Schuchard, of Nueva Leon, and he was not a member of the original company, but came out with Col. A. B. Gray, surveyor of the Texas Pacific Road, as a draughtsman.

The company brought valuable property, merchandise, machinery, and the elements of civilization, into a nest of thieves, where there was neither law nor order, and, of course, was despoiled of its property, and its members were all killed, or died from exposure.

After the robbery of Santa Rita, Tubac, and Arivaca by the Apaches, and the plunder of all south of Tucson by the Mexicans, with the loss of many lives, I went with Raphael Pumpelly, on mule-back, with some attendants, to Yuma, and thence to Los Angeles and San Francisco.

## SCRAPS OF HISTORY BY POSTON.

The civil history of Arizona may properly commence with the organization of a territorial government by Congress, by an act approved February 24, 1863. Previous to that time there had been, virtually, neither civil nor military government in the Territory, as acquired from Mexico. True, it was attached to New Mexico by an act of Congress, but the capital at Santa Fé was so remote that little or no action was taken by the New Mexican Legislature for its government. All the country acquired by the "Gadsden Purchase" was annexed to the county of Doña

Ana, on the Rio Grande, with the county seat at Mealla. But a feeble jurisdiction was exercised west of there.

The Butterfield overland stage line from St. Louis and Memphis to San Francisco, passing through Arizona daily, was giving an impetus to the settlement of the country and some mining enterprises had been organized in what is now Pima County, principally by Charles D. Poston and his associates east.

The establishment of Fort Buchanan (now Crittenden), had been secured on the Sonoita, for the protection of the inhabitants, and farms were being opened on the Santa Cruz and Sonoita in 1856-59.

The effects of the Civil War began to be felt in Arizona early in 1861. The Butterfield overland mail was broken up, and the stages and stock withdrawn, leaving the few people in the Territory cut off from any communication with the States, and comparatively helpless.

He said there were a number of members of the expiring Congress, who had been defeated in their own districts for the next term, who wanted to go West and offer their political services to the "galoots," and if they could be grouped, and a satisfactory slate made, they would have influence enough to carry the bill through Congress. Consequently an "oyster supper" was organized to which the "lame ducks" were invited, and then and there the slate was made and the Territory was virtually organized.

Gourley, of Ohio (Lincoln man), was to be Governor; Goodwin, of Maine (Blaine man), was to be Chief Justice; Allyn, of Connecticut (Secretary Wells' man), was to be Associate Justice; Turner, of Iowa (Senator Grimes' man), was to be Associate Justice; McCormick, of New York (Senator Morgan's man), was to be Secretary of the Territory and prospective Premier; Bashford (Wisconsin man), was to be Surveyor-General; Duffield (Senator Pomeroy's man), was to be United States Marshal, to represent the African element. So the slate was made, and the bargain concluded, but towards the last, it occurred to my obfuscated brain, that my name did not appear on the slate, and in the language of Daniel Webster I exclaimed, "Gentlemen, what is to become of me?"

Gourley politely replied, "Oh, we will make you Indian agent!"

So the bill passed, and Lincoln signed all the commissions, and the oyster supper was paid for, and we were all happy, and Arizona was launched upon the political sea.

The bill was drawn and introduced into the House by the Hon. John S. Watts, then delegate from New Mexico, (including Arizona), dividing the Territory of New Mexico, as it then existed, into two equal parts, giving the new Territory of Arizona all west of 109 degrees longitude about 120,000 square miles. (A corner of this was subse-

quently given to Nevada.) The bill contained only three sections, and passed the House with very little opposition. Some of the "old guard" made speeches against it, but "progress" was the rule in Congress about that time, and opposition was the idle wind.

The first Legislature under the organic act creating the Territory of Arizona, was convened at Prescott on the 4th of October, 1864.

John N. Goodwin, of Maine, was appointed Governor after Gourley's death, which occurred in Ohio, in May, 1863.

I "took a pass" from Ben Holladay, the Prince of the Plains, from Kansas City to Placerville, and thence to San Francisco, the home of my youth. There I met Ross Browne, just returned from Germany (dead broke as usual), and said: "My boy, come go with me. I will show you the wonders of the wierd land, and you can write them up for Harpers, and they will give you \$15.00 a page; besides, I have millions, and whatever is mine is yours." So Browne came along, and damned the whole country by his caricatures and sarcasm for a decade at least.

#### POSTON AS INDIAN AGENT.

After I had distributed the little dab of Indian goods allowed by the Indian Bureau, away up the Colorado, at Yuma, at the Pima and San Xavier del Bac, it occurred to me that "Othello's occupation was gone," the Indians would not give me a pumpkin for less than a dollar, and my Government transportation ordered by Secretary Stanton had been withdrawn by Sergeant Toole, so "the last resort of a scoundrel," according to Dr. Johnson, was to become a patriot and run for Congress. Accordingly, I issued my "manifesto," and by great exertions of my friends was elected the first delegate.

The "rawhidlers" were cross, because the Territory had been organized under Abe. Lincoln, instead of Jeff. Davis. They wanted Federal money, but they did not want Federal Government. In fact, they were a set of chronic grumblers and nothing on earth or in Heaven would please them.

In addition to chronic grievances, the capital of the Territory had been located (by influence of General Carleton) in a remote place in the northern part of the Territory, very much to my surprise, and against my advice.

The Territorial papers in Washington had all been printed with Tucson as the capital.

In addition to the grievances of the "rawhidlers," I made an official visit (as it was my duty in courtesy to do), to the Governor and officers of the Territory, at Prescott, and as soon as my back was north of the Gila River, "traitor! renegade! scoundrel," and all the vile epithets that frontier language can originate, have been showered upon me, but in the serene atmosphere in which I "live and

move and have my being," these filthy aspersions fall like water from a duck's back. I have endured them for more than a quarter of a century, during which time I have been continually threatened with assassination.

The capital question was a vexed one; but Alexander the Great solved the gordian knot by stroke of the sword, so McCormick, then Governor of Arizona, solved the capital question by saying: "Gentlemen, if you will agree to elect me delegate to Congress, I will remove the the capital to Tucson.

It was done, and McCormick was the favorite delegate from Arizona for many years, and a more diligent, intelligent, and influential delegate we never had. After his term of usefulness expired, Hiram Stevens, who had been a soldier of the United States, came up, and sat four years as a delegate from Arizona.

Without having acquired the usages of parliamentary customs, or the manners of his peers, the recent effort to become Mayor of Tucson, without success, has relegated this ex-delegate to merited obscurity. Oury is esteemed by many old pioneers, and in many respects is a fit delegate from the Territory, as he belongs to the Bourbon Democracy, "who never learn anything, and never forget anything." "The world moves" notwithstanding that the Ourys live in it; and the donkey which backed up against a ferry-boat on which he was crossing, and thought he was impeding its progress, is a specimen of the "Rawhider."

As Arizona has been a tarrying post for every passing political tramp for many years, it is quite time that more solid orders should be administered to its soil.

And the Governors of Arizona! "Vere not dose Governors now?"

Not one remains to air his rubicund visage in the Arizona breeze. They are not much to blame; Arizona has been a poor goose to pluck.

The term for which I was elected to Congress as delegate, was only the remainder of the 38th Congress (the short term), lasting only three months, and about sixty working days, during which time, by the aid of the President, the Secretaries, and the Chairmen of Congressional committees, the post routes were established; the Indian business was organized and a hundred thousand dollars appropriation obtained for the Indian service, the military force greatly increased in the North, and all the machinery of a liberal Government put in motion.

[Among pioneers who came previous to 1860 and are now living in Arizona, are S. C. Miller, J. L. Miller, Jos. R. Walker, Geo. D. Lount, John Dickason, Chas. D. Poston, who came first in 1854; H. S. Stevens, in 1856; Samuel Hughes, 1858; Peter Kitchen, 1854; Michael McKenna, 1856; William S. Onry, 1856; and N. B. Appel, 1858.]

## DESCRIPTION OF COUNTIES.

Counties Organized; Boundaries; Productions; Mines; Towns Described; Chief Attractions; Prominent Citizens; Financial Condition; Officers, etc.

## APACHE COUNTY.

**A**PACHE is in the northeastern part of Arizona. It is on the Colorado Plateau, and its elevation above the sea level is from 5,000 to 7,000 feet, while some of its commanding peaks attain a height of over 10,000 feet. That portion of the county north of the Colorado-Chiquito and the Rio Puerco, is composed of elevated table-lands,



NATURAL WELLS IN THE LAVA BEDS OF ARIZONA.

isolated mountains, and deep and narrow cañons. In the northern end of the county is the remarkable plateau called the Mesa la Vaca, elevated about 1,000 feet above the surrounding formation.

The Mogollon *mesa*, 10 to 15 miles in width and 7,000 feet altitude, was a source of many former rivers, as shown by such cañons as that of Big Dry Lake, 70 miles in length by 200 to 400 feet in depth, heading in a small creek that sinks in the sand. Chevelon's Forks and Cedar and Cariso Creeks head in this *mesa*, and the Tonto Basin borders on the south.

The elevated region is covered by a growth of fine grass, crowned with stunted pines and cedars. Water is not plentiful. The extreme northeastern corner of the county, through which flow the Rio de Chelly and its

tributaries, is partly included in the Navajo Indian Reservation. That part of Apache south of the thirty-fifth parallel is one of the best timbered and watered portions of Arizona. The snow-fall in this part of the Territory is very heavy, giving rise to many beautiful, clear, mountain streams, which flow out through lovely valleys all the year round.

The valley of the Colorado-Chiquito contains fine farming land, and considerable water for irrigation. It is dry every summer thirty miles below Sunset Crossing, but Chevelon's Fork, which falls into it a few miles above, has never run dry within the memory of the whites. The Colorado-Chiquito is here two to four feet deep and about eighteen feet wide. The Mormon settlements on both sides of the Colorado-Chiquito were five in number, aggregating about 400 people. These settlements have been abandoned, or nearly so, during the last few years, on account of alkali in the soil.

The great difficulty throughout the whole northern portion of Apache County is the great scarcity of water. There is no living stream north of the Little Colorado; even that stream is dry most of the time.

## APACHE COUNTY FOR STOCK.

Apache is chiefly good for stock-raising, and the feed on the elevated table-lands and mountain valleys is sweet, nutritious, and noted for its fattening qualities. The winter snow-falls and the summer rains, which are very general in this county, bring forth a vigorous growth of green grass. Sheep also do well in this county. The number of cattle is constantly increasing. Many large herds have been driven in from New Mexico,

and the ranges are rapidly filling up. But there are yet many locations unoccupied. Apache County for stockmen offers many advantages not possessed by other localities.

The principal ranges are along the Little Colorado and its numerous tributaries. On the White, Blue, and Black Rivers, on Silver, Nutrioso, and numerous other smaller creeks, there is prime feed and clear, cold water. In the elevated valleys and on the low hills of the Sierra Blanca and the Mogollon Mountains, there is room for thousands of cattle. During a few weeks in the winter months, when the snow-fall happens to be heavy, cattle are driven down to the lower foot-hills and plains.

The elevated valleys and glens throughout this mountain region make some of the most desirable ranges to be

found anywhere within the Territory. The grass is green and fresh nearly all the year, and abundance of shade and pure water are most favorable to the production of fine beef.

The country south and east from Fort Apache has grand stretches of grass-covered lands capable of sustaining large droves. That portion of the county included within the San Carlos Reservation is nearly all good grazing land, capable of fattening many thousands of cattle if the Indians were removed from it.

The north part of Apache is occupied by the Navajo and Moqui Indian Reservations. These Indians have immense flocks of sheep and goats and herds of horses. Up the Cañon de Chelly is remarkable scenery. The cañon is populated with Indians, having large corn-fields and peach orchards, and flocks of sheep and goats, and herds of horses. In fact, everywhere the Indians seem to be industrious and thrifty. The Puerco was also quite populous with these thrifty Indians. The Moquis are also well-to-do, with fine-looking crops of corn and herds of sheep. Removed to a more favorable country, with their present industry and economy, they would soon become rich, but, under present circumstances, they have a hard struggle for existence. In the southern part of the county is the White Mountain Reservation.

The Atlantic and Pacific Railroad passes through the center of the county, thus giving an outlet to the productions and stimulating industry.

#### MOQUIS INDIAN VILLAGES.

The Moqui Indians are said to be the purest type of the Aztec living, and the only tribe who can decipher the inscriptions on the ancient pottery and the hieroglyphics on the cliffs. They make curious pottery and unique and beautiful baskets. Their blankets are highly valued; they manufacture not only woolen blankets, such as are made by the Navajoes and Zunas, but also curious and really exquisite wraps or rugs of feathers and of strips of rabbit skins, weaving them ingeniously into a warp of the yucca plant.

North from the Moquis is the wonderful Cañon de Challey, where the most wonderful cliff dwellings of America are found. This cañon is not very easy of access, save *via* Fort Defiance and Navajo Indian Agency.

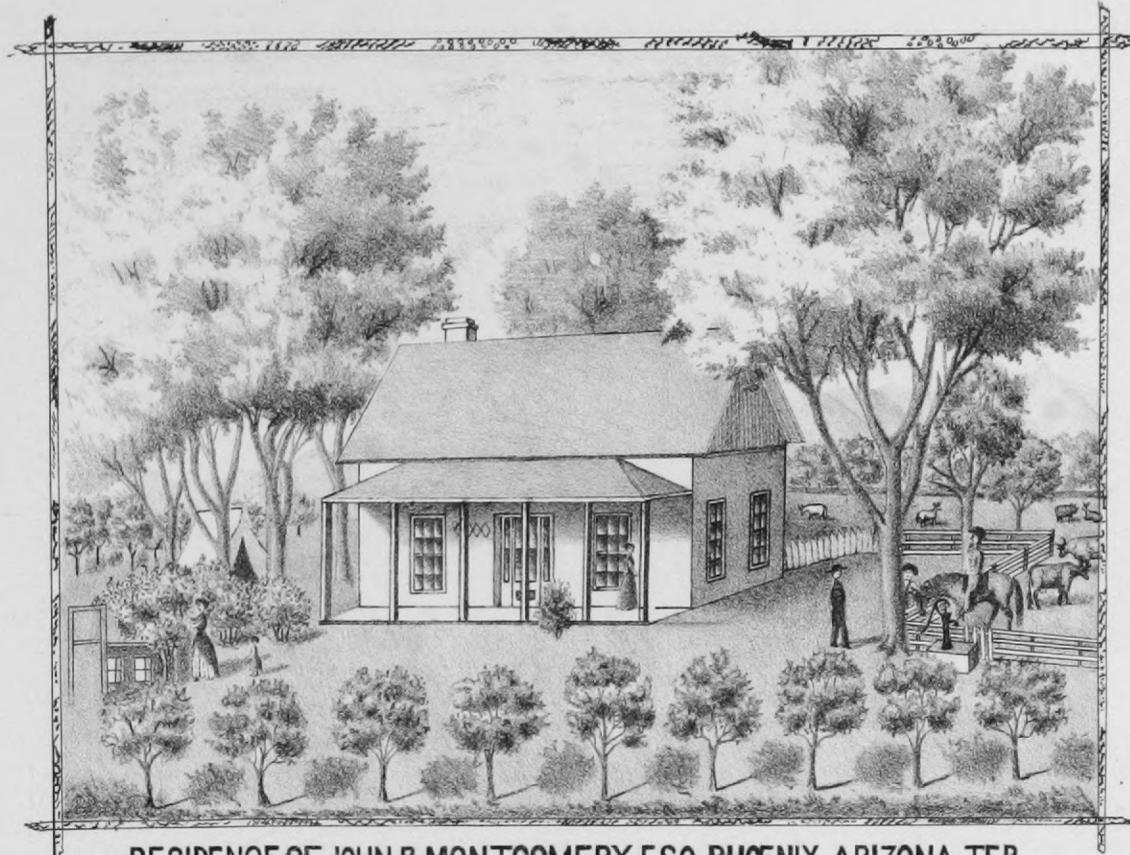
Lieutenant Ives gives an account of his visit to the Moquis which we reproduce in part, as it gives a good account of the country and the difficulties he had in passing over it.

"The face of the bluff, upon the summit of which the Moquis town was perched, was cut up and irregular. We were led through a passage that wound among some low hillocks of sand and rock that extended half-way to the top. Large flocks of sheep were passed; all but one or two

were jet black, presenting, when together, a singular appearance. It did not seem possible, while ascending through the sand-hills, that a spring could be found in such a dry-looking place; but presently a crowd was seen collected upon a mound before a small plateau, in the center of which was a circular reservoir, fifty feet in diameter, lined with masonry, and filled with pure, cold water. The basin was fed from a pipe connecting with some source of supply upon the summit of the *mesa*. The Moquis looked amiably on while the mules were quenching their thirst, and then my guide informed me that he would conduct us to a grazing camp. Continuing to ascend, we came to another reservoir, smaller, but of more elaborate construction and finish. From this, the guide said, they got their drinking water, the other reservoir being intended for animals. Between the two the face of the bluff had been ingeniously converted into terraces. These were faced with neat masonry, and contained gardens, each surrounded with a raised edge so as to retain water upon the surface. Pipes from the reservoirs permitted them at any time to be irrigated.

"Peach trees were growing upon the terraces and in the hollows below. A long flight of stone steps, with sharp turns that could easily be defended, was built into the face of the precipice, and led from the upper reservoir to the foot of the town. The scene, rendered animated by the throngs of Indians in their gaily colored dresses, was one of the most remarkable I had ever witnessed. My state of admiration was interrupted by the guide, who told me, to my astonishment, that we had reached the camp-ground. Besides the danger of the mules trampling upon and ruining the gardens, it was no place to stop, inasmuch as there was not a blade of grass. I called the attention of the Indian to the latter fact, which he did not appear to have considered. While he was reflecting upon the matter, we were joined by a pleasant-looking, middle-aged man, with a handsome shell suspended to his neck, and a kind of baton in his hand, whom I supposed to be a chief. Like the rest, he shook hands all around, and held a consultation with the guide and with the crowd generally about the grass. They finally concluded there was plenty a little further ahead, and we proceeded around the ascent by a side trail that led away from the pueblo. In ten minutes a spot was reached which all agreed was the best grazing camp the country afforded. I no longer wondered that their one horse looked so thin. A single animal could scarcely have existed for three days upon all the grass in the neighborhood.

"Arrangements seemed satisfactory, and the chief, accompanied by several friends, led the way to their houses with an inconvenient alacrity, considering the steepness of the ascent. The stone steps being surmounted, we came



RESIDENCE OF JOHN B. MONTGOMERY, ESQ. PHOENIX, ARIZONA, TER.



RESIDENCE OF A. C. BAKER ESQ. PHOENIX, ARIZONA.

upon a level summit, and had the walls of the pueblo upon one side, and an extensive and beautiful view upon the other. Without giving us time to admire the scene, the Indians led us to a ladder planted against the center of the front face of the pueblo. The town is nearly square, and surrounded by a stone wall fifteen feet high, the top of which forms a landing extending around the whole. Flights of stone-steps led from the first to a second landing, upon which the doors of the houses open. Mounting the stairway opposite to the ladder, the chief crossed to the nearest door and ushered us into a low apartment from which two or three others opened towards the interior of the dwelling.

#### MOQUIS INDIAN FOOD.

"Our host courteously asked us to be seated upon some skins spread along the floor against the wall, and presently his wife brought in a vase of water and a tray filled with a singular substance that looked more like sheets of thin blue wrapping paper rolled up into bundles than anything else I had ever seen. I learned afterwards that it was made from corn meal, ground very fine, made into a gruel, and poured over a heated stone to be baked. When dry, it has a surface slightly polished, like paper. The sheets are folded and rolled together, and form the staple article of food with the Moquis Indians.

"As the dish was intended for our entertainment, and looked clean, we all partook of it. It had a delicate fresh-bread flavor, and was not at all unpalatable, particularly when eaten with salt. The Moquis, when commencing to smoke, bow with solemnity toward each point of the compass.

#### MOQUIS DWELLINGS.

"While they were engaged with the pipe, we had a chance to examine the contents of the apartment. The room was fifteen feet by ten; the walls were made of adobes; the partitions of substantial beams; the floor laid with clay. In one corner was a fire-place and chimney. Everything was clean and tidy. Skins, bows and arrows, quivers, antlers, blankets, articles of clothing and ornaments, were hanging from the wall or arranged on shelves. Vases, flat dishes, and gourds filled with meal or water were standing along one side of the room. At the other end was a trough divided into compartments, in each of which was a sloping stone slab two or three feet square for grinding corn upon. In a recess of an inner room was piled a goodly store of corn in the ear. I noticed, among other things, a reed musical instrument with a bell-shaped end like a clarinet, and a pair of painted drum-sticks tipped with gaudy feathers. Another inner room appeared to be a sleeping apartment, but this being occupied by females, we did not enter, though the Indians seemed to be pleased rather than otherwise at the curiosity evinced during the close inspection of their dwelling and furniture.

"Spreading out a map of the country we had been exploring, I pointed out our route and the places with which I supposed they were familiar. They seemed to comprehend, and the chief designated upon the map the positions of the six Moquis pueblos. A bargain was made for some sheep, which they agreed to send to camp, receiving a blanket in exchange for each animal.

"Then we went out upon the landing, and by another flight of steps ascended to the roof, where we had a magnificent panorama.

#### SEVEN MOQUIS TOWNS.

"We learned that there were seven towns; that the name of that which we were visiting was Mooshahneh. A second smaller town was half a mile distant; two miles westward was a third, which had been seen from camp the evening before. Five or six miles to the northeast a bluff was pointed out as the location of three others; and we were informed that the last of the seven, Oraybe, was still further distant, on the trail towards the great river.

"From these heights, the ascent to which is so difficult and so easily defended, the Moquis can overlook the surrounding country, and descry, at a vast distance, the approach of strangers. The towns themselves would be almost impregnable to an Indian assault. Each pueblo is built around a rectangular court, in which we suppose are the springs that furnish the supply to the reservoirs. The exterior walls, which are of stone, have no openings, and would have to be scaled or battered down before access could be gained to the interior.

"The successive stories are set back, one behind the other. The lower rooms are reached through trap-doors from the first landing. The houses are three rooms deep, and open upon the interior court. The arrangement is as strong and compact as could well be devised, but as the court is common, and the landings are separated by no partitions, it involves a certain community of residence. The strength of the position, unfortunately, does not protect the animals upon the plains below, and our friends informed us, with rueful faces, that the Comanches and Navajoes had driven off a great deal of their stock during the previous year. The Moquis do not look warlike, and but for their natural and artificial defenses would doubtless long ago have been exterminated by their powerful and aggressive neighbors.

"Curious faces were peering at us from the openings and landings during these observations. Many of the women and girls made their appearance, all but one or two having previously kept out of sight. The hair of the young girls is gathered into large knots, or rather knobs, one at each corner of the forehead, which gives them an odd appearance, but their skins are rather fair and their faces pretty. They are quiet and retiring; were neat in

their appearance, and prepossessing in expression and manner. The whole tribe are of a much lighter hue than any Indians met upon our route.

#### MOQUIS STOCK AND MANUFACTURES.

"Having made a long visit, we descended to camp, inviting the chief and two of his friends to go with us, which they did, taking us down a more direct route than that by which we had ascended. The sheep were soon forthcoming, according to agreement, and several brought bags of corn and little packages of dried peaches to trade. Some beautiful and really valuable Navajo blankets were also offered, and readily exchanged for a woolen shirt, or some common article of apparel.

"The three who accompanied us down I invited into my tent and regaled with bread and molasses, which they ate greedily. They had scarcely commenced when as many as the tent could hold entered without invitation and joined in the repast.

"Like the Zuñi Indians, the Moquis have albinos among them. A woman with a fair, light complexion and hair has been in camp this evening. It seemed incredible that she could be of Indian parentage, but the cases are by no means rare in the pueblos of New Mexico.

"Satisfied with the conduct of the chief, I gave him a red sash, which excited great admiration. He then departed, promising to be in camp early in the morning, ready to accompany us as guide.

"We followed a sinuous and difficult road through the hills that form the slope from the bluff in the plain below. The trail led close to a second town, whose inhabitants were gathered on the walls and house-tops to gaze at us as we passed.

"Two more reservoirs were seen, and several gardens and peach orchards. A few miles of tedious traveling brought us to the edge of the valley. The chief here overtook us, and a mule was furnished to him upon which he mounted and led the way.

#### PRIMITIVE FARMING.

"The country now traversed was the most promising looking for agricultural purposes of any yet seen. It had nearly all been under cultivation. Immense fields were passed, and our guide stopped constantly to gossip with his neighbors, who were busy planting corn.

"Their method of doing this was very primitive. With a sharp stick a hole was punched in the ground a foot deep, and the corn dropped in and covered up. No women were engaged in the labor. Unlike other tribes of Indians, the men do the out-of-door work, leaving to the females the care of the households, the spinning, weaving, sewing, etc.

"At the end of a few miles, Oraybe came in sight; it

was larger than the other pueblos. Though we had made but a short march, several mules gave out and could not be driven, even without their packs. The scanty grass of the three preceding days had taken away the remnant of strength left to them. We had to camp, though the pasturage was neither good nor abundant.

"The Oraybe reservoirs are a mile or two distant, but we shall pass one to-morrow and be able to water the animals and fill the kegs as we go by. A large number of the citizens came to see us. I subsequently learned that one of them was a chief, but he did not accost any one nor seem desirous of making acquaintances. It was apparent that he was out of humor, and the chief that had guided us informed me that the other, who seemed to be the senior of all, had objected to any of the tribe accompanying the expedition north, on the ground that there was no water, that the country was bad, that we would have to travel several days before we would come to a river, and that if we did reach it the mules could not get to the bank. Arguments and promises were vain. The Oraybe continued to express disapproval, and his influence seemed to be all-powerful. His ill-temper increased as the discussion proceeded, and at last he left in a sulk and went home. I then had a talk with the other. He was friendly in his manner, but said that he could not go while his superior objected, and intimated, if I understood him aright, that the Oraybe captain had some reason for not being well disposed towards Americans. He said there was a water hole a long day's journey off where we could get a small supply; that to this point he would guide us, and that there was a trail beyond which we could follow as well without guidance as with it. He persisted that there would be a march of three or four days without water before reaching the river. As nearly as I have been able to judge, they considered a day's march thirty miles.

"The Oraybe Indians are more quiet than their brethren of Mooshahneh. They collect in a circle to witness anything that may be going on, but are almost silent, and when they speak or laugh do so in a suppressed tone, like children under restraint. There is much uniformity of dress. All are wrapped in Navajo blankets, with broad white and dark stripes, and a crowd at a distance looks like the face of a stratified rock.

"The external and internal arrangements of the houses are like those of the other town, but there is generally less neatness and thrift in the appearance both of the place and its inhabitants.

#### ORAYBE GARDENS.

"Selecting a course amongst numerous intersecting trails, that would have puzzled a stranger considerably, the chief led the way to the east of the bluff on which Oraybe stands. Eight or nine miles brought the train to

an angle formed by two faces of the precipice. At the foot was a reservoir, and a broad road winding up the steep ascent. On either side the bluffs were cut into terraces, and laid out in gardens similar to those seen at Mooshahneh, and, like them, irrigated from an upper reservoir. The whole reflected great credit upon Moquis ingenuity and skill in the department of engineering. The walls of the terraces and reservoirs were of partially dressed stone, well and strongly built, and the irrigating pipes conveniently arranged. The little gardens were neatly laid out. Two or three men and as many women were working in them as we passed.

"Preferring to see for ourselves the condition of the country, we pursued the same general course as before, towards the northwest. The top of the *mesa* on which we had been encamped proved to be very narrow, and before we had traveled a mile we came to its northern edge, where there were the usual precipice and foot-hills forming the descent to a broad valley. Here, also, the bluffs had been formed into terraced gardens and reservoirs. The descent was steep and difficult. The valley furnished better grass than any seen since leaving Flax River, but the soil was soft and the traveling laborious. We crossed the lowland and ascended the opposite *mesa*. The trail was found and its course followed for ten or eleven miles, when most of the mules again gave out, and became unable to proceed. It was cloudy and cool. They had had rest, tolerable grazing, and water during the previous day and night, but it was evident that their strength was gone.

#### A DESERT REGION.

"There were no indications of water ahead. The country could be seen for a great distance, and, as far as the eye could reach, exhibited only line after line of arid *mesas*. In a ravine, not far from camp, appeared to be the watering place spoken of by the Moquis. Water had recently existed there, but there was none to be found now.

"To fully test the practicability of proceeding further, and at the same time to avoid what might be an unnecessary march of the whole train northwards, two experienced water hunters, mounted on the least broken-down mules, rode ahead to explore. If they found water, they were to send up a smoke as a signal for the train to advance. They traveled about twenty miles, finding a deserted Indian encampment, where water had been at some seasons, but which was then perfectly dry. From the point where they halted, on the summit of a lofty plateau, the country could be overlooked for fifty or sixty miles, and there was every indication that it was a waterless desert.

"There was no alternative but to return; and the next morning we retraced our way and encamped near the northern Oraybe gardens, at the edge of the large valley. We remained here for a day to let the mules rest and graze

before undertaking the trip to Fort Defiance. As it is, we half anticipate reaching that point on foot.

"The Oraybe chief, gratified at the fulfillment of his prediction in regard to the impracticability of the trip northward, has been to visit us, and comported himself with much amiability. He told me that he would send a guide to show us the best route to Fort Defiance, and I accordingly regaled him with the best the camp afforded. He ate till he could eat no more, and then stowed away what was left in the folds of his blanket.

"Several of the tribe have been working in the gardens and tending the sheep during the day. In the former labor the women as well as the men assist. The walls of the terraces and the gardens themselves are kept in good order and preservation. The stone and earth for construction and repairs they carry in baskets upon their shoulders from the valley below. The soil is of a poor character, and the amount which they extract from it speaks well for their perseverance and industry. Both turkeys and chickens have been seen in the pueblos. They have the material for excellent subsistence if they choose to avail themselves of it.

#### THREE MOQUIS TOWNS.

"Climbing the bluff south of camp and descending the opposite side of the *mesa*, we were joined by the promised Moquis guide, who came up, according to what appears an invariable custom, at the last moment and in a great hurry.

"When the place was reached where the trail turned west to go to Oraybe, I asked the guide if he could not take a short cut to Tegua (the most eastern pueblo), which the Moquis chief had said was on the trail to Fort Defiance. He said that he could, and struck off toward the east. In ascending a *mesa*, five or six miles beyond, an almost impassable precipice was encountered, but the mules, after sundry falls, succeeded in reaching the summit. Beyond was a valley nine or ten miles wide, and upon the opposite side a plateau with three Moquis towns standing in a line upon the top. We camped three miles from them, sending the mules to their reservoir for water. The valley was well covered with grass. Large flocks of sheep attested the wealth of the citizens of this department of the Moquis.

"Almost the entire population came to see us, evincing the greatest curiosity at everything they witnessed. In dress and general appearance they have a smarter look than the citizens of the other towns, and seem to be more well-to-do in the world. All the Moquis have small hands and feet, but ordinary figures. Their hair is fine and glossy. Many have an Italian physiognomy. The men wear loose cotton trousers, and frequently a kind of blouse for an upper garment, over which they throw a blanket. The

dress of the women is invariably a loose black woolen gown, with a gold-colored stripe around the waist and the bottom of the skirt. The stripe is of cotton, which they grow in small quantities. The material of the dress is of their own weaving.

"They seem to be a harmless, well-meaning people, industrious at times, though always ready for a lounge and gossip. They are honest, so far that they do not steal, but their promises are not to be relied upon. They want force of character and the courageous qualities which the Zuñans and some other pueblo Indians have the credit of possessing. Their chiefs exercise a good deal of authority, but by what tenure they hold their power, or how many there are, we could not learn.

#### MOQUIS LANGUAGE DISSIMILAR.

"A singular statement made by the Moquis is that they do not all speak the same language. At Oraybe some of the Indians actually professed to be unable to understand what was said by the Mooshahneh chief, and the latter told me that the language of the two towns was different. At Tegua they say that a third distinct tongue is spoken. These Indians are identical in race, manners, habits, and mode of living. They reside within a circuit of ten miles, and, save for the occasional visit of a member of some other tribe, have been for centuries isolated from the rest of the world, and it would seem almost incredible that the inhabitants of the different pueblos should not preserve a system of intercourse. If what they say is true, it would appear that this is not done. Tegua and the two adjacent towns are separated by a few miles from Mooshahneh and another pair. Oraybe is at a little greater distance from both. Each place, dependent upon its internal strength, is independent as regards defense. The people are indolent and apathetic, and have abandoned the habit of visiting each other till the languages, which, with all Indian tribes, are subject to great mutations, have gradually become dissimilar.

#### DELIGHTFUL LOCATION.

"The ravine is the prettiest spot seen for many a day, covered with rich turf, shaded by peach trees and surrounded by large gooseberry bushes. The water is clear and cold; the trail from Tegua has been plain and deeply cut, showing constant travel. After reaching camp two Navajoes rode in upon horses that we had seen hobbled near the Moquis pueblo. I supposed, at first, that they had stolen them, but a soldier told me that he had seen one of the men at Mooshahneh, and that the Moquis had told him that there were two or three Navajoes there on a visit. The two that came to see us were merry, impudent-looking knaves; they ate, and smoked, and laughed, and finally asked for a glass of liquor as independently as

though they were at a tavern. It was impossible to put them down; favors or rebuffs made the same or rather no impression; they received all with a grinning indifference that would have been good-natured, had it not been so impertinent. A third joined them after a while, also from the direction of Moquis, and the first two, after a rest, saddled their ponies and departed, informing me that the other would stay and accompany us. They perpetrated one act of civility, however, before leaving, presenting me with a cheese of dirty exterior, but almost white inside and very good. Two Moquis Indians came into camp at sunset and told us that they were going on with us.

#### WHITE ROCK SPRING.

"We had proceeded but a few miles this morning, when a shouting was heard behind, and looking back we saw the Moquis chief and eight of his followers running to overtake us. They had left Tegua before daylight; with the Navajo leading off upon his pony, the company of Indians formed a respectable-looking retinue, doubling the size of the party. I was glad to see that each had brought his own provisions tied up in the corner of a blanket, and swung over the shoulder. From their description we inferred that it was about fourteen miles to the next water; but that distance was accomplished, and the Indians being interrogated, said that it was still a little way ahead; mile after mile was passed, and still the water was a little way ahead, till we had at last made twenty-four miles, when they signified that it was the place to camp.

"We were in a level, grassy ravine, a mile deep, with low, rocky walls; an excellent spring was found at the lower end. The country crossed was a rolling *mesa* overgrown with cedars, which have contracted the view; occasional lines of bluffs break the smoothness of the surface. We are now in the Navajo region; a little way back of camp, in a broad valley, were herds of horses and flocks of sheep. A great many Indians have come into camp, both male and female, all mounted, the women riding a-straddle like the men, there being little to distinguish them apart excepting that the former wear a blanket and carry the luggage when there is anything to be transported. They are rather a fine-looking race, with bold features, but look like rascals, and undoubtedly are such. Fortunately, our camp and grazing ground are inclosed on three sides by the walls of the ravine; the camp is pitched near the mouth; the mules are inside, and cannot be taken out without passing by us, while Rock Spring is beneath a projecting rock of white sandstone that almost forms a cave. It is in a recess at the extreme end of the ravine, and the ravine itself is a mile from the trail, and surrounded by so many similar formations that we should have probably missed the place but for the Moquis guides. The Navajo left us on the opposite side of the valley, as soon



RANCH AND RESIDENCE OF SIMON NOVINGER, NEAR PHOENIX, ARIZONA.

ELIOTT. LITH. 40 MONT. ST. S.F.

as he came in sight of his own territory. The green plain is studded with isolated white rocks—remnants of the *mesa*—which stand in bright relief upon the dark surface, and form the most striking feature of the landscape.

#### PUEBLO CREEK.

“We found this a pretty creek running between steep earth banks ten or twelve feet high. The water is good, though warm. The country passed over has preserved generally the same features—a rolling *mesa* covered with a cedar forest—the bluffs, however, being less seldom encountered than on previous days. The crest of a plateau a few miles from the creek overlooked an extensive and lovely valley, a brilliant sheet of verdure dotted with clumps of cedars, and extending far to the north and south.

“Countless herds of horses and flocks of sheep were grazing upon the plain. The Moquis said that we were entering one of the most thickly populated sections of the Navajo territory.

“Hundreds have come into camp, and, considering their natural impudence and the weakness of our party, have astonished me by the correctness of their behavior.

“One old fellow was pointed out by a companion who spoke pretty good Spanish, as the chief. They were curious and a little concerned to know why we had come from the west. No party of whites had ever entered their country from that direction. The chief said that we must have just left the country of the Apaches, who had lately stolen the Moquis horses, of which act the Navajoes had been wrongfully accused; that the Apaches had plundered them also, and that, as our animals were safe, we must be friends to the Apaches, which proved that the Apaches, the Moquis, and the Americans were all leagued against “the poor little Navajoes,” to use his own expression. The reasoning was logical, but the throng of saucy vagabonds that were listening to the speech with grins that they took no pains to conceal was not calculated to enlist much sympathy, and we concluded that the pitiful harangue was intended for the benefit of the Moquis, to disarm them of their suspicions in regard to the perpetrators of the late theft. I perceived, however, that the Moquis were as unconvinced as ourselves by the plausible reasoning.

#### TRAIT OF NAVAJOES' CHARACTER.

“The Navajoes displayed one trait of character which I had never seen exhibited by Indians. A crowd of women surrounded the place where the Doctor and myself were sitting, and were amusing themselves by inspecting the remnant of the Indian goods and trinkets that had been brought along. Having no further occasion for the articles, as the expedition was now so nearly ended, and pleased with the unexpected civility we had experienced,

I distributed most of the things to those standing about. The women were highly delighted, and not long after some of the men, whom I supposed to be their husbands, brought into camp a quantity of cheese and joints of mutton—enough to have lasted our company a week. I offered to pay for what we required, but they insisted upon my accepting all as a gift.”

ST. JOHN is the county seat of Apache County. It is a small settlement, about twenty miles west of the New Mexico line. There are two newspapers printed here called the *Apache Chief*, and the *Orion Era*. The latter is a Mormon paper.

FORT DEFIANCE is situated in a picturesque valley of erosion not unlike, in its general aspects, those lying west of it, yet exhibiting some peculiarities, both in the elements composing its geology, and their arrangement. It has been excavated in a north and south direction on the slope of strata dipping rapidly eastward from the summit of the anticlinal axis a few miles west of it. These strata have been cut through nearly to the carboniferous limestone, while the cliffs bounding the valley on the east include about a thousand feet of cretaceous rocks. In the midst of the valley several large castellated buttes of basaltic trap rise abruptly from its alluvial surface, the unyielding material of which they are composed having resisted the action of the agent that has removed the sedimentary rocks for miles around them.

HOLBROOK is a station on the Atlantic and Pacific Railroad of considerable importance. It is on the banks of the Colorado, and possesses many features of interest both to the tourist and the man of business. To the sight-seer it is important as being the nearest point to the famous “petrified forests,” which lie twenty or twenty-five miles southeast of the town. They may be reached by a good road through an open country, bordered with bluffs of gray and red sandstone, covered at times with thrifty pinon and juniper trees, affording a most desirable trip to this El Dorado of wonders. The forests near here are found covering from one to two thousand acres, and in many places huge trees lie above the ground, varying in size from the smallest sapling to six feet in thickness, and all as solid as a rock. Sometimes they are found buried in the sand with only the top of the log visible. In ten or more districts they are found lying on top of the ground. They are of various kinds of wood, and in many instances the character of the bark is well preserved and the grain of the wood is nearly always distinguishable.

These petrified trees will weigh more per square foot than an ordinary stone, and, strange to say, when broken they most always break across the grain, and seldom ever split with the grain as with natural wood. When broken, they present a brilliant crystalline appearance, often of va-

riegated colors. Many pieces are found that are agatized and nearly all are susceptible of the highest polish, resembling the gems found in a geode after being treated by a lapidary. Some of the trees, when broken in two, have the appearance of being season-checked, and the heart is sometimes gone and the apertures of each are filled with purest crystals, varying from white to a rich amethyst in color. In many places these trees are found broken into logs of various lengths, and again into smaller fragments. At one place a log projects out of a solid sandstone bluff fifty feet below the upper surface, and in another place a mammoth petrified tree spans the cañon sixty-three feet broad, and lies forty feet above the bed of the cañon, the whole length of the tree being 103 feet, so far as traceable.

These petrified woods are truly marvels of beauty, and there are millions in it for somebody who will undertake their manufacture into articles of ornament or use.

Holbrook has a live, wide-awake population, who will yet make these glittering forests known throughout the land, for surely nothing half so wonderful of this sort has ever yet been discovered in the history of the world. But Holbrook possesses the elements for substantial growth far beyond its novel attraction. A branch of the Little Colorado River runs through the valley at this point, providing ample water for stock and irrigation for a very large acreage. A drive-well may be sunk at any point about Holbrook twelve or fifteen feet, and the best of water may be found, doubtless being the seepage from the river. This is one of the principal water stations of the Atlantic and Pacific Road.

The climate at Holbrook is truly delightful, the altitude being 5,600 feet above sea level. It is neither too hot or too cold at any season of the year, the thermometer never going below zero in winter, and scarcely ever above 100 degrees in summer. The country presents many of the beautiful physical features described in other portions of the valley, while along the banks of the Colorado you find thrifty cottonwood, growing sometimes to an immense size.

This is the distributing point of the mail for a dozen or more towns, by which it may be inferred that it is a general supply point for that country for 100 miles around on each side of the railroad. It supplies the Apache country; and Fort Apache, one of the largest garrisons in the mountains, consisting of six companies of cavalry and one of infantry, gets its supplies here. Grapes and fruits of all kinds may be grown here in abundance. The rainy season lasts during the months of July and August, and fair crops may be raised without irrigation. Holbrook has a population of about 200, has a jewelry store, one gunsmith shop, two stores of general merchandise, one grocery and drug store, two hotels, a blacksmith shop, one meat market, one livery stable, and three saloons.

Northwest from Holbrook, seventy or eighty miles, is a wonderful cañon known as "Cataract Cañon," on account of a waterfall 1,800 feet in height, and equaling if not surpassing the famed falls of the Yosemite Valley. In this remote cañon lives a tribe of Pueblos, and among the vegetables cultivated for food by them is the sun-flower, the blossom reaching the enormous size of four feet in diameter, and the stem being five inches in thickness. They also grow prodigious pumpkins and melons. They know but little of the whites, as they are rarely visited by them.

WINSLOW is thirty-three miles west of Holbrook, on the railroad. It is a new town, having two stores and a hotel. Clear Creek Cañon lies five miles south of Winslow, and the stream is well supplied with trout. A boat may be rowed here for four miles, surrounded by almost perpendicular walls, in some places 200 feet in height. A salt spring comes into this stream, and no fish are found below.

There is plenty of game along this creek, and it will yet become a favorite resort for hunting and fishing. There are good stock ranges about Winslow, and it is the nearest point to Tonto Basin, and about eighty miles to Globe City, both rich mining districts.

Winslow is the point from which to visit Clear Creek Cañon, six miles distant, and the Moqui Indian Reservation, some forty-five miles to the north. Clear Creek Cañon is very deep and has a stream of pure water running through it, abounding in fine fish. The walls of the cañon are engraved with many curious hieroglyphics. The cañon was evidently the resort of the ancient cliff and cave dwellers.

North of Winslow is the reservation of the Moqui Indians, who alone of all Americans possess the curious art of making robes and blankets of feathers, beautifully designed and ingeniously executed.

ST. JOSEPH, a Mormon town, lying east about twenty-two miles, gets its supplies from Winslow.

#### COUNTY OFFICIAL DIRECTORY.

BOARD OF SUPERVISORS—Luther Martin, Chairman ; H. Huning, R. Lopez, Chas. Kinnear, Clerk.

SHERIFF—Thomas Periz.

UNDER-SHERIFF—A. Gonzales.

PROBATE JUDGE—E. C. Bunch.

PUBLIC ADMINISTRATOR AND CORONER—E. F. Taylor.

TREASURER—Dionicio Baca.

DISTRICT ATTORNEY—W. M. Rudd.

RECORDER—Alfred Ruiz.

JUDGE OF THE DISTRICT COURT—C. G. W. French.

CLERK OF COURT—Alfred Ruiz.

## MOHAVE COUNTY.

**M**OHAVE COUNTY is formed out of the northwestern part of the Territory, and is bounded on the west by the Colorado River. It was organized in 1864. The portion lying east of the Colorado River is generally rolling and hilly, covered with nutritious grasses and an abundance of wood and timber. Stock thrives the year through without prepared food. There is a free pasturage in this county, yet unoccupied by stock-men. There are also many valleys of agricultural land.

Nine distinct mountain ranges, running north and south, mark the topography of Mohave County with distinctive features. The first back of the river extends from The Needles to the Great Bend between Black and Boulder Cañons, touching the river at each extremity. The northern part of this range is called by Lieutenant Mallory, of the Topographical Engineers, the Black Cañon Range, and the southern the Blue Ridge Mountains. To the east of this range Death Valley and Sacramento Valley extend, the latter about 150 miles north and south from near Greenwood to Mount Hualapais, with an average breadth of about fifteen miles, bounded on the east by the Cerbat Range in its northern part, and the Hualapias Range in continuation southward. These ranges are about twenty miles in breadth from foot-hills to foot-hills.

Mohave County possesses some of the finest and best cultivated ranches in the Territory of Arizona, which produce annually large quantities of barley, wheat, corn, hay, potatoes and garden stuff. The area of the land under cultivation is increasing every year. But the country off the Colorado River, is not regarded as available to any considerable degree for agricultural purposes. The Sacramento Valley, west of the Cerbat Range, and the Hualapais Valley, on the east of it, may prove to be good farming and pastoral regions, but are defective in running streams. There is also some good land on the eastern slope of the Peacock Mountains; and any farming products raised in or near those portions of Mohave County in which mining is carried on, command prices that in a farming country would seem extravagant. In the Hualapais Mining District grain was at one time brought from California, and cost eight to ten cents per pound, and hay, \$20.00 per ton. There is here a good grazing country, but not much stock; the game consists of mountain sheep, antelope, deer, quail and rabbit.

### COTTONWOOD VALLEY.

One of the many good valleys of Mohave County is that of Cottonwood, which is five or six miles in length and completely hemmed in by wild-looking mountains. The belt of bottom land is narrow, and dotted with grace-

ful clusters of stately cottonwood in full and brilliant leaf. The river flows sometimes through green meadows, bordered with purple and gold rushes, and then between high banks, where rich masses of foliage overhang the stream, and afford a cool and inviting shade. From the edges of this garden-like precinct sterile slopes extend to the bases of the surrounding mountain chains. A few isolated black hills break the monotony of the ascent. There is no vegetation; the barren surfaces reach to the very summits of the lofty ranges and impart to the grandeur of the scene an air of painful desolation.

At the head of the Cottonwood Valley is a cañon formed by the passage of the river through a spur that connects the Black and Dead Mountain Ranges. It is only two or three miles in extent, and the sides are of moderate height. The gorgeous contrast and intensity of color exhibited upon the rocks exceed in beauty anything witnessed of a similar character. Various and vivid tints of blue, brown, white, purple, and crimson, are blended with exquisite shading upon the gateways and inner walls, producing effects so novel and surprising as to make the cañon, in some respects, the most picturesque and striking of any of these wonderful mountain passes.

The country above and adjoining the river is tolerably open. There is no more alluvial land, but low gravel hills can be traced as far north as the base of the Black Mountains. Just above the Painted Cañon, and forming a part of the spur, is a symmetrical and prominent peak, Mount Davis, which presents the most conspicuous landmark north of the Dead Mountain. At the base of Mount Davis the river divides and forms a round island of considerable extent.

Cottonwood Valley is formed by the continuation of the Black Mountains on the east and north; by the Dead Mountain Range on the south and southwest; on the northwest by mountains extending into the desert, and which seem to connect the range which runs from Dead Mountain with that part of the Black Mountains lying west of the Colorado. The area inclosed by these mountain chains, though large, contains but little level or alluvial land; none, indeed, except that embraced within the limits of Cottonwood Valley; a narrow space is near its center, where the conglomerate bluffs recede for a few miles, permitting a growth of vegetation, conspicuous in which are many beautiful groups of cottonwoods. These trees, clothed in the vivid verdure of their spring dress, afforded a most agreeable contrast to the surrounding sterility, and suggested the name given to the valley.

The alluvial bottom lands are bordered on every side by a broad inclined plain, which extends to the bases of the surrounding mountains, and gives a peculiar aspect to the scenery. There is, however, nothing in the structure

of Cottonwood Valley radically different from that of the other subordinate basins of the Colorado.

#### SACRAMENTO OR LONG VALLEY.

Sacramento Valley lies east of the Black Range, and is traversed by the Sacramento River until it turns through the mountain range and empties into the Colorado just above The Needles. The valley is an interval of nearly level land some fifteen miles wide, lying between the Black Mountains and the next succeeding range on the east. It extends north nearly to the Colorado, and communicates with the Mohave Valley at its southern extremity. It is parallel to and somewhat resembles the Mohave Valley, but is much higher (2,000 feet), and is now traversed by no permanent stream, though there is every indication that a river of some size once flowed through it. It is quite possible that all or a part of the Colorado once found its way southward through this channel. This plain forms the first step in the ascent to the table-lands, and is probably in part underlaid by the tertiary sandstones and conglomerates which form the hills on its western margin.

The Sacramento Valley is of immense extent, and runs in a northwest and southeast direction, extending either way beyond the limit of vision. Toward the south, below the Black Mountains, it unites with the Mohave Valley, and from the base of the Cerbat Range the eye could follow the gentle slope for over forty miles till it terminated near the head of the Mohave Cañon.

The pass by which you cross the Cerbat Mountains is apparent as soon as you leave the Black Range. The pure atmosphere makes it seem close by, and it is disappointing to plod through the hot sand hour after hour, and find it appearing as far off as ever. When the base of the mountains is at last reached, it is found that the ascent is scarcely perceptible.

The earliest prospecting was done in the Sacramento Valley in the years 1857 and '58, but the first band of real prospectors entered the Hualapais (the Sacramento) district in 1863, when over 2,500 locations were made. Still the Indians were so bitterly hostile that the real settlement of that and adjoining districts did not commence until 1871. In 1872 a mill and furnace was started.

#### MOHAVE VALLEY.

The Mohave Valley is extensive, comprising the whole region between The Needles and the Black Cañon.

The Dead Mountain Range, the Pyramid and Painted Cañons, and Mount Davis are raised in bold relief upon the low country near the river. The beautiful valley is generally enveloped in the delicate blue haze that imparts to it a softened and charming glow. The windings of the Colorado can be traced through the bright fields and groves till the river disappears in the Mohave Cañon.

For some miles above Pyramid Cañon the river flows through an area which, though occupying the space between mountains on the east and west, scarcely deserves the name of valley. Granitic masses connected with the Dead Mountain form the immediate or remote bank on the west side, while on the east a succession of gravel terraces rises abruptly from the water's edge, and extends in table-topped hills to the base of the Black Mountains.

These hills have been eroded from the mass of the terraces by the water, which sometimes flows down through them from the summits of the mountains. The material which composes the gravel beds is usually considerably indurated, and cut, as they are, by water flowing from a distance, their erosion has assumed the form of a labyrinth of narrow ravines or cañons, of which the opposite perpendicular walls, though often 100 feet in height, approach each other so closely that they may be touched at the same time by the outstretched hands.

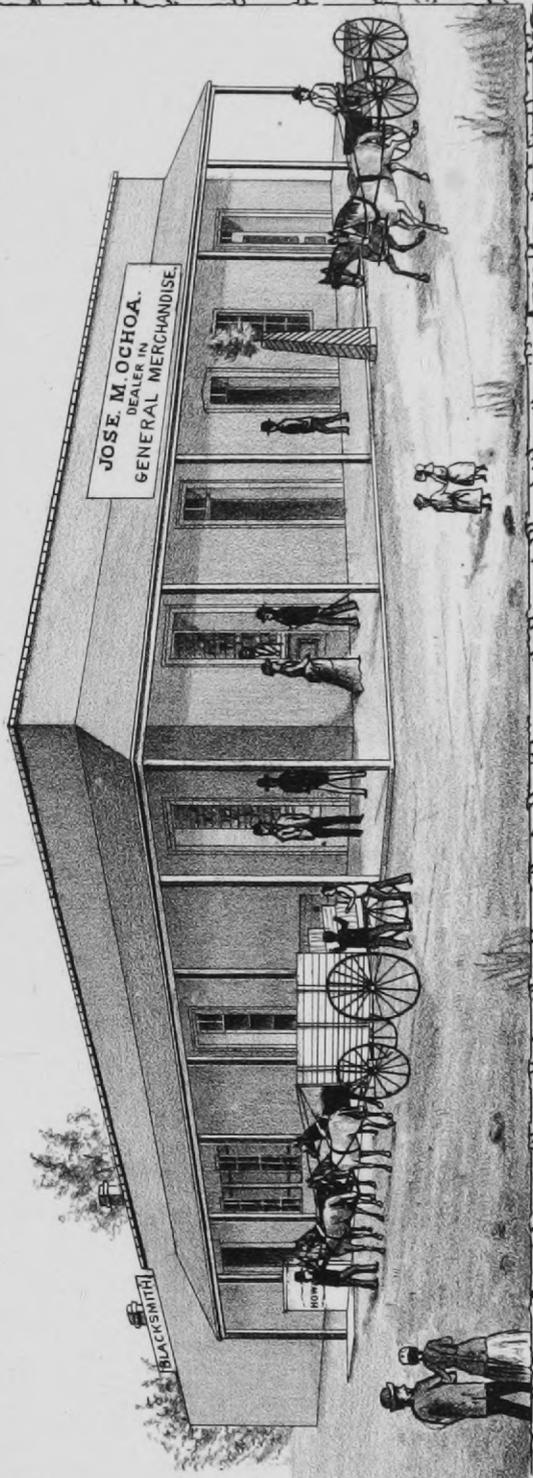
#### SITGREAVES' PASS.

This pass is east of Fort Mohave and is a gap in the Black Mountains, by which Captain Sitgreaves and Mr. Beale approached the Colorado River in 1851. This gap is the only pass that exists in the portion of the range south of the Black Cañon.

For nine or ten miles the road is good, and leads over a succession of gravel terraces and slopes to the base of the mountains. Soon after is reached a wide and beautiful valley which divides the Black Mountains from a high snow-capped chain, called by Lieutenant Whipple, who had seen it from the east, the Cerbat Range. A rapid descent leads through a ravine to the eastern base of the range. When nearly down the hill, the head of a creek is encountered, and half a mile from the valley the ravine spreads out for a few hundred yards, forming a snug meadow carpeted with good grass and fringed on one side by growth of willows.

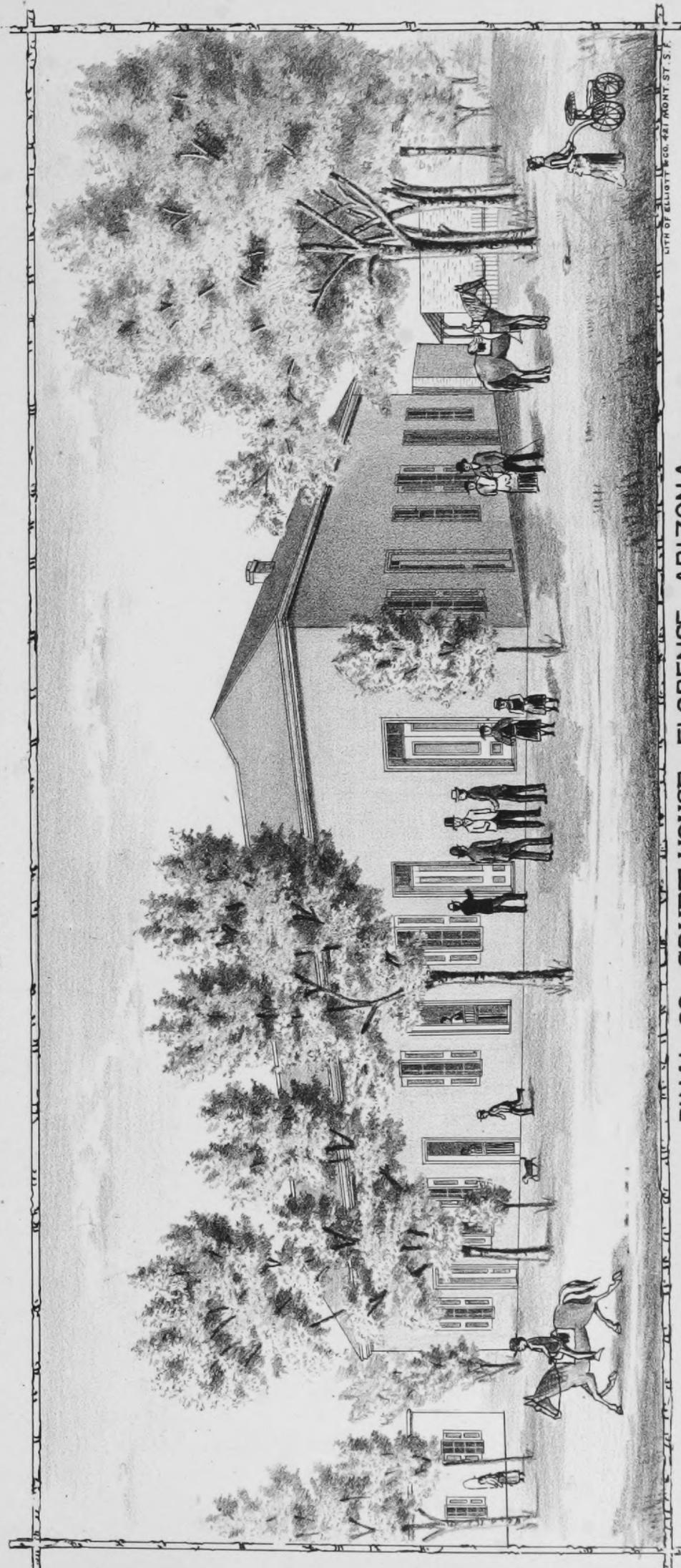
#### THE BLACK MOUNTAINS.

The view of the western slope of the Black Mountains from the summits bordering the cañon, is scarcely equaled, in its wild, savage grandeur, by any elsewhere. A thousand subordinate pinnacles spring from the mountain-side, all displaying the ragged outlines which the materials composing them are so prone to assume, while their colors are as striking and varied as their forms. Not a particle of vegetation is visible in the landscape. Here and there a spiny cactus clings to the rocks, but its color blends with theirs, as its thorny and repulsive nature harmonizes with the forbidding features of the surrounding scenery. As the eye of the traveler sweeps over this wilderness of sun-burnt summits, which stand so stark and still, glittering in the burning sunlight, and yet so desolate, he shrinks from



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the unearthly scene with a feeling of depression which must be felt to be imagined.

MINERAL PARK, the county seat, is twenty miles from Kingman Station, on the Atlantic and Pacific Railroad. The houses are mostly of adobe. There are two stores, a hotel, restaurant, five saloons, blacksmith-shop, etc. There is a commodious public school house and Court House. The town is the supplying point for numerous mining camps and cattle ranges. Its present population is about 400, which is being rapidly increased since the building of the railroad.

The mountains of the Mineral Park mining region, from which over two and a half millions of treasure of gold, silver, copper, and lead have been taken during the past ten years, are seen in the distance, and experimental sampling and testing works at Kingman, indicate active operations in this region.

STOCKTON CAMP is situated on the eastern slope of the Cerbat Range, about six miles southeast from Mineral Park. It has a delightful situation, fronting on the Huapapai Valley, and is only ten miles from the line of the Atlantic and Pacific Railroad. The formation is granite; wood and water are found in abundance. The camp has been self-sustaining, having received no aid from outside capital.

CHLORIDE is located three miles north of Mineral Park in the center of a very rich mining section, but as yet the mines have been but little developed, and the town has not assumed much importance.

HACKBERRY is a mineral region reached on the Atlantic and Pacific Railroad. The mining hamlet, nestled in the foot slopes of Peacock Mineral Range, is visible from the railroad, with its steam stamp mill clouding the mountain-side.

THE NEEDLES, so called from the pointed rocks near the Colorado River, is where the Atlantic and Pacific Railroad crosses the Colorado River. Here is now a substantial bridge lately constructed replacing one that was washed partially away in 1884.

There are very few white settlers in this fertile valley. South of The Needles are several other large valleys, well suited to sub-tropical farming, and reaching in places a width of ten to fifteen miles, subject to the drawbacks caused by the shifting of the river bed, which could probably be remedied by engineering skill at a cost that would be small in comparison.

The country is barren and of a broken character, and as the Colorado River is reached, The Needles' sharp, bare, rocky peaks rise to view like minerets guarding the entrance to the grand Mohave Cañon, through which the river rolls for many miles. Groups of Indians, in scant but picturesque costumes, may be seen at the stations on the western

slope, and the Mojaves are in force at the Colorado River, with tall, lithe, and graceful physique and painted faces.

MOHAVE CITY is noted mostly for the fort situated here. Below Fort Mohave the river bottom lands expand and the river branches out into lagoons, soaking the soil. The wide valley is here twenty-five miles in length, terminating below at The Needles, a portion of the Mohave Range through which the river has washed a cañon. It is inhabited by several hundred Mohave Indians, the fine corn-fields and groves of mesquite pleasingly contrasting with the surrounding dreary desert. Crops are here raised from the moisture caused by the overflow of the river.

FORT MOHAVE site was selected by Lieutenant Whipple, who is said to have been the first American to publish details of the customs and language of the Mohaves. The post was established in 1858, abandoned in May, 1861, and re-garrisoned in May, 1863, by two companies of the Fourth California Volunteers. The reservation area is 5,572 acres. The terrace on which the post is built consists of water-worn boulders washed down from the barren mountain ranges on each side of the river, testifying to the activity of the river in former ages, when it was much above the present level. Water is obtained from the river, filtered through gravel into a well, pumped into tanks and conducted by pipes to the quarters. Wood and hay are obtained from the Colorado Valley below the post. There is no post garden. The bottom land, six miles south of the post and on the reservation, is partly subject to overflow, fertile, and covered with coarse grass, cottonwood and mesquite trees, with a dense undergrowth of willows and arrowweed. On the elevated plains, broken by dry arroyos, is a spare growth of greasewood interspersed with cactus. The mountains are barren, timberless, and almost waterless.

The rain-fall varies from three to thirteen feet annually falling mostly in July or August, and probably not averaging over five or six inches. The principal winds are north and south, blowing five months each way with almost un-deviating regularity, sometimes bringing terrific sandstorms. The summers are intensely hot, even the nights bringing little or no relief; malarial diseases are prevalent in summer and fall, the effects of which are seriously felt by the troops kept at the post for several years, and are especially developed upon removal to a colder climate. Its supplies are received by the Colorado River, which is easily navigable from April to November, but at other times obstructed by drifting sand-bars. The annual rise takes place in June.

PEACOCK'S SPRINGS, near the Atlantic and Pacific Railroad, received its name from a member of Lieutenant Ives' expedition, G. H. Peacock, of California, as the expedition was proceeding, March 31, 1857, across the country.

The sun was very hot, and the mules, not having had a plentiful drink of water for four days, showed marks of distress. Ten or twelve miles from camp, Mr. Peacock, who was riding in advance, discovered a large spring of clear, sweet water in a ravine near the road. There were no signs of the place having been used as a camp, and even the Indian guide did not appear to have known previously of its existence. A Mexican subsequently found a running stream a mile or two further on, where the Indians passing this way had been in the habit of stopping. Deer and antelope are frequently seen, but they were shy and hard to approach.

AUBREY LANDING is the first town reached going up the Colorado River, 235 miles above Yuma, on the north bank of Bill Williams' River, which divides Yuma from Mohave County. Here freight is landed for the southern part of the county and more interior mines.

HARDYVILLE was at one time an important point, being the head of navigation on the Colorado River. It is 7 miles above Fort Mohave. It is 165 miles to Prescott. It is practically at the head of navigation, though steamers sometimes go as high up the River as El Dorado Cañon, and one several years ago went as high as Colville. It is the depot for supplies for the Wallapai and other mining districts in Mohave County. It was formerly the county seat, but the Legislature removed it to Mineral Park. The principal part of the town was burned some years ago, and but a small portion of it has since been rebuilt.

CERBAT is located thirty miles east of Hardyville, in the Wallapai Mining District, and is the county seat of Mohave County. It contains several mercantile houses, saloons, blacksmith shops, and one furnace for the smelting of gold and silver ore. It is the center of a rich mining district and is destined to be a town of considerable importance. A free school has been open in this place during six months of the year. Two physicians and two lawyers reside here.

#### COUNTY OFFICERS OF MOHAVE COUNTY.

SHERIFF, Robert Steen.

DISTRICT ATTORNEY, W. G. Blakely.

RECORDER, J. K. Mackenzie.

TREASURER, Wm. Krider.

COURT COMMISSIONER, J. J. Hyde.

COUNTY SURVEYOR, Otto F. Kuencer.

SUPERVISORS, W. H. Hardy, W. F. Grounds, M. W. Henkle.

CLERK OF THE BOARD, H. Bucksbaum.

#### MINES OF MOHAVE COUNTY.

A band of prospectors entered Mohave County in 1858, and explored the mountain ranges near the Sacramento Valley. It has been known since the organization

of the Territory, that nearly all the mountains in this county contained lodes of gold, silver, copper and lead, and, in 1863, an attempt was made to develop and work some of these lodes, some machinery was erected and considerable money expended; but, as has been the case in nearly all new mining countries, hostility of Indians, extravagance, want of experience, etc., caused the investments to prove disastrous, and the mining interest has been paralyzed.

In 1871-72 operations were again commenced and quite a mining settlement has sprung up at different points in the county. Several mills have been erected and others are in course of construction, and the prospects for a rich and extensive mining section are assured. These mines being located near the Colorado River, affords excellent facilities for shipping freights up and down the same to a connection with the Southern Pacific Railroad, at Yuma.

There are several other mines in the vicinity of Chloride which are capable of producing from one to five tons of galena per day to the man, but owing to lack of enterprise are not being worked at all, or else working on a very small scale. There are many other claims near this camp, which are producing high-grade ores—from \$80.00 to \$350 per ton. At present the shipment of ores from Chloride is larger than from any other camp in the district, and the outlook promises a steady increase in prosperity. The company work is being steadily pushed on the Cupel at Stockton, but with little success so far. Since writing the above an eight-inch streak of ruby silver ore has been struck in the Cupel, assaying \$300,000 per ton.

In doing the assessment on the Lone Star, near Mineral Park, in December, about three tons of \$350 ore were extracted on the 100-foot level. This mine had been shut down nearly two years, but has now started up again with prospects for a steady run.

The American Flag Mine, in Maynard District, is shipping some high-grade ore. The ore from this mine, together with all batches of ore less than a car load, from Walapai and Maynard Districts, is bought by the Arizona Sampling Works, at Kingman, and shipped to the Argo Smelting Works. Work is being steadily prosecuted in the cross-cut, which is paying well.

Since the advent of the Atlantic and Pacific Railroad at Kingman, the nearest station to the mining camps of Walapai District, mining has received an impetus which it never knew before. Formerly only ores of a very high grade could be worked or shipped with profit. Now, however, low-grade ores are almost as valuable as high-grade ores were formerly. Fifty ounces of ore are now worth as much as 100 ounces of ore were two years ago. Miners are steadily beginning to realize this fact, and now almost

every miner in Walapai District is taking out ore for shipment, either to San Francisco, Benson or Colorado.

The first car load of ore shipped by a miner after the railroad reached Kingman was taken out at Chloride and went to the smelting works at Albuquerque. The very satisfactory results obtained from the working of this car load induced others to ship to the same smelter. It was immediately followed by three car loads of ore from Stockton, one from Cerbat, two from Chloride, and one from Todd Basin, all of which, owing to the failure of the Albuquerque smelter, were forwarded to Pueblo Colorado.

The demand for lead ores in the San Francisco market stimulated the extraction and shipment to that market of lead ores, of which there is an unlimited reserve in Walapai and district. The New London Mine, at Cerbat, has shipped three cars of lead ore within the past three months, and is now producing twenty-four-ounce galena at the rate of three or four tons per day, the result of three men's labor. The Champion Mine, at Cerbat, has shipped six cars of galena ore, carrying from twenty-three to twenty-seven ounces silver, and from fifty to sixty-four per cent. lead, and is at present producing four tons daily, working seven men.

#### CHIEFS CAIROOK AND IRETEBA.

Both the above were found friendly at the time Lieutenant Ives went up the Colorado, and served as guides and instructors to the party. They were Mohaves. When Lieutenant Whipple passed through Colorado Valley, one of the five chiefs, whose name was Cairook, and a sub-chief, called Ireteba, joined him as a guide, and accompanied him through the country west of the Colorado as far as the Mormon road that leads to Los Angeles. They were noble specimens of their race, and rendered the party invaluable service.

Ives said: "Cairook is a noble-looking man. He is nearly six feet and a half high, and has a fine, open face. He seemed glad to see me, and laughed a great deal as he alluded to former adventures. The Mormons had converted many of the Mohaves, and, eager to make proselytes, had baptized a number of Indians; and Ireteba related, with a grin, that Cairook was among the number, and the big chief, who went first into the water, was greatly disgusted when they tried to duck his head into the river."

Ives continues: "Cairook came to bid us farewell. I was never before so struck with his noble appearance. When he shook hands, his head was almost on a level with mine, as he stood beside the mule on which I was sitting. He indicated his wishes that we might have a successful trip, and remained watching the train till it was out of sight, waving his hand and smiling his adieus. We all felt

regret at parting with him, for he had proved himself a staunch friend."

This excellent chief is no longer living. Not many months after the incident just related, a difficulty occurred between the Mohaves and a party of emigrants, in which some of the latter were killed. A detachment of troops, subsequently ordered to the valley, was fired upon by the Indians, and a large force was sent to obtain satisfaction. The Mohaves made peace by surrendering eight or nine of their principal men as security for the future good behavior of the rest. Cairook volunteered to go as a hostage, and was taken to Fort Yuma and confined, with his companions, in the guard-house. The restraint soon became irksome and galling to their wild natures, and to Cairook in particular it was almost intolerable. His faithful follower, Ireteba, visited him several times during his confinement, and one day made an eloquent appeal in his behalf to Lieutenant Tipton, who was again on duty at the Fort. He recounted in moving terms the services Cairook had rendered, both to Lieutenant Ives' and Whipple's party, and begged that he might be set free. Of course Lieutenant Tipton had no power to grant the request, but this Ireteba could not comprehend, and went away grievously disappointed.

When the chief learned the failure of the mission, he made a characteristic proposition to his brother captives for the termination of his own and their confinement. At certain hours they were all permitted to come out for fresh air upon the porch of the guard-house, and he agreed, being a very powerful man, to seize and hold the sentinel and allow the rest to escape. The heroic and generous project was executed. The following morning, as the Indians were taking an airing in front of the guard-house, they made a sudden rush down the hill towards the river, Cairook at the same instant pinioning the sentinel in his arms. He was bayoneted on the spot by the members of the guard. The fugitives were fired upon. Some were killed, and some escaped. None were retaken alive. The survivors carried to the tribe the story of their chief's self-sacrifice, and the only son of Cairook, a fine boy, was afterward regarded by the Mohaves almost with veneration.

Ireteba was far in advance of his tribe in intelligence. He was taken East, and his wonderful report on his return to his Indians, of what he saw, of the thousand things connected with the white men,—their great cities, their great canoes, and long lines of wagons drawn with the speed of the wind by the steam horses, and the many other things he told them of, were so incomprehensible to their simple minds, they could not credit the stories, and lost confidence in him, saying the white men had bewitched the great chief.

## GILA COUNTY.

THE first permanent settlement in the county of Gila, was in 1876, when the town of Globe was first laid out. Soon after, immigration began to be attracted towards Globe, and it rapidly became a thriving camp. There are now eight smelters and five mills within a few miles of Globe.

The county is the smallest in the Territory, and was made a county from portions of Pinal and Pima, by the Legislature of 1881. It is a mineral county, mainly. Its agricultural resources are limited to small sections of land on the Salt River, and Tonto Creek. It has, however, excellent stock ranges, which can, and will be utilized. Timber is abundant on the Pinal Mountains. Communication by railroad is, at present, 120 miles distant; but a railroad is now under way, which, it is expected, will open up the means of transportation, and enable the rich mines, now lying idle, to again resume operations.

## DISCOVERY OF SILVER.

In 1875, Mr. Munson found a solid boulder of chloride of silver in Globe District, weighing 300 pounds, and valued at \$3,400. This was the first discovery of what has since proved to be the richest mineral belt of Arizona. In 1878, the smelting works of Biebee and Kennedy, gave the following results of ore, worked at their mill: The McMorris Mine, first-class, \$1,307 to the ton; second-class, \$436.80; Rees and Stevenson, first-class, \$2,236.50; second-class, \$1,625; Silver Belt, first-class, \$3,461.90; second-class, \$1,066.60.

## A FAVORABLE OUTLOOK.

The Globe Mineral District, says the *Chronicle*, is now passing through the ordeal of transformation, and its future is more promising than the past. When first discovered, it was justly considered one of the most promising mineral districts on the continent, as its surface indications were unsurpassed in richness, and thousands of dollars were gathered in a short time, in various parts of the district, not confined to any one locality, but promiscuously scattered all over the district. These discoveries lead to wild and reckless excitement, and drew many prospectors and miners there. All came with the most enthusiastic feelings, and lead to extravagant notions and anticipations. Rich leads were discovered—mills were erected without hesitation—and thousands of dollars expended in costly machinery, and experts employed at enormous salaries. And what has been the result? Mills and machinery are idle, experts have gone to new fields of operation, and the capitalists who furnished the means are that much out of pocket.

The history of this camp is the history of thousands

of other camps on the Pacific slope, with this exception: Here we have a diversified field of operations, and the time is not far distant when it will be an established fact that Globe is one of the richest, and most productive mineral districts in the Arizona belt of minerals. Our copper mines are unequaled anywhere, and when other mines are developed, as is the Old Globe Mine, now running at a profit, with transportation almost double that of any other mine in the Territory, the richness of our copper mines will no longer be questioned. The Buffalo and Long Island Copper Works are now idle, but, when placed under proper and economical management, will be equally productive with the Globe.

Independent of copper and silver mills, there is dawning a better, brighter, and happier day for the Globe District, in the development of her silver mines. Heretofore our hopes have been placed on rich bonanza mines, with big companies—large mills and expensive machinery, and, as above stated, with self-important experts, in most cases mere charlatans. This class of citizens we see no more—they have gone to new fields and fresh pastures. The Globe District cannot depend for future prosperity on big mining enterprises managed by mere adventurers.

The future promises the development of a neglected branch of silver mining in this district—the smelters are now coming to the front. We have had a small smelter in Globe, that has heretofore not proved a success, owing in a great measure to the lack of competent men to handle the ores. Various attempts have been made by adventurers to run this smelter, and comparatively without success.

The great excuse has been that the camp was destitute of galena ores, and that the expense of providing this class of ores, would prevent the successful operation of the smelter. Recent discoveries have dispelled this idea, and we are now assured that an abundance of this class of ores is readily obtained, and that the abandoned smelter will soon be put in operation, under the skillful management of experienced men, and that results may be readily contemplated that will guarantee complete success.

Should the expectations of the men engaged in this enterprise be realized, and a remunerative market be made for ores that will not now bear transportation to distant markets, so that the owners of prospects will feel warranted in going to work and developing their property, being assured compensation, in part, at least, for their labor, we may reasonably expect a future for the town of Globe, and the district unparalleled in its past history. A good carbonate camp, such as we promise to have, is far preferable to relying on large enterprises that are controlled by corporations, and that expect to realize fabulous wealth in a short time. Individual enterprise and industry will be en-



*Antonio Loretto*



*Samuel Purdy*



*J. Mausfeld*



*R. E. Farrington*

couraged—men will rely on their own industry, and if successful, realize the benefits of their labors, and not depend on corporations for their daily sustenance.

#### COPPER MINES.

We notice an article, says the *Silver Belt*, speaking of the cost of Lake Copper, and giving the average percentage of the ore in four of the most notable Lake Superior Mines, outside of the famous Calumet & Hecla, namely, the Quincy, Franklin, Allouez and Atlantic Mines, as one and four-tenths of one per cent. of copper, or an average yield per ton of rock mined of twenty-eight and one-half pounds of metal.

Under these circumstances, the value of metal per ton of rock, taking metal at 15 cents per pound, is \$4.50, while the average cost of mining, stamping, transporting, and refining, appears to be  $12\frac{3}{4}$  cents per pound of metal, thus leaving a margin for profit of  $2\frac{1}{4}$  cents per pound of copper.

These Lake Superior Mines require an immense and costly plant, compared with which our Arizona copper mines dwindle into insignificance, and yet they manage to make it pay, notwithstanding the very small amount of metal in the ore. But the work there is done, not only on a grand scale, but systematically, and with fully and well-opened mines, some of which have expended millions of dollars before they became productive. It is well known that the Calumet & Hecla, which has to deal with five per cent. ores, is the richest mine in the world, and pays about two millions in dividends per annum, although hundreds of thousands of dollars are annually wasted on gigantic and sometimes useless machinery. We may well ask ourselves what enormous profit our Arizona Mines, with their rich and beautiful ores, should pay, were it not for the unsatisfactory, troublesome, and ridiculously expensive transportation.

There can be no doubt that the immense copper belt which passes through a great part of this Territory, when once developed, will furnish more copper than all the Lake Superior Mines, but this cannot and never will be done until our railroad facilities are increased, and until the railroad companies are prevented from making discriminating and speculative rates. This Territory, however, has not only an immensity of copper ores, but most valuable coal deposits, some of which could be easily connected with the mineral districts by railroads. With a genial climate and sufficient agricultural resources, why should Arizona not become a prosperous mining country?

#### GLOBE DISTRICT.

Globe Mining District is situated in Gila County, and bounded on the east by the west line of the San Carlos Reservation; on the north by Salt River; on the west

from the mouth of Tonto Creek to Bloody Tanks, thence to summit of Pinal Mountains; on the south by said summit and Gila River. Both Gila and Salt Rivers afford abundance of water, continuously, for all practical purposes, and power to reduce thousands of tons of ore annually. This district includes the Apache Mountains northerly, Gold Belt Hills westerly to Pinal Range, where are rich discoveries of gold and silver, and between are the foot-hills of a formation indicating rich mineral deposits of great permanency.

Pinal Creek runs from the Pinal Mountains some fifteen miles in a southerly direction, affording an abundance of water for mills and other purposes. Salt River flows through the northern portion of the county.

Divers springs are scattered over the district, and good water is usually obtainable for every necessary purpose by sinking a few feet, in most of the valleys. Abundance of timber for lumber and fuel for many years, exists on the Pinal Mountains, some eight miles from Globe, which cannot be purchased and controlled by capitalists, but must be kept for local use. Two saw-mills are now providing lumber for the community. Scattered all over the mining sections is a large amount of timber, answering for fuel for some time to come. But should all these sources of timber eventually fail, which must be a long time in the future, there are almost exhaustless supplies in the vast mountain regions, just north of Salt River, that can be cheaply transported here by a railroad under contemplation, and which will doubtless soon be built.

The gold belt extends through a low range of the Pinal Mountains. This rich deposit of gold promises, at no distant day, to add much luster to the rising fame of the district in which it is situated. It seems strange, though, to find, right in the heart (it might be said) of this great silver region, a part of it so distinct from the rest in character, and so different in its outlines and formations as is the locality in which are situated the Gold Hill and Lost Gulch Camps. The ore found there is in well-defined ledges, which improve in every instance as the depth is increased.

THE MACK MORRIS MINE.—This far-famed and undoubtedly rich property is located in a high range of the Apache Mountains, lying some twelve miles to the northeast of Globe. In its earlier history it attracted much attention, owing to the large amount and extraordinary value of the loose nuggets of nearly pure silver that were found on and near it, and shipped to San Francisco at enormous outlay, when the yield, in many instances, ran as high as \$10,000 per ton. This mine, however, was condemned (even when the malleable metal was being found in all its workings) by several experts from Virginia, who did not like the quartz-

ite formation found in such abundance in this section, and overlying the richest of the lodes.

The owners, however, after four years, disposed of it to Maj. M. A. Baldwin, a thorough, practical miner, who saw at a glance the great value of the property, although the manner in which the work had been done showed it had been poorly handled. He disposed of it to a company of Eastern capitalists, but continued superintendent and part owner of the mine. Under his management there has been a surprising amount of work done, not only in the mine, but also in making new roads, which were most necessary to haul the ore over easily and cheaply to the mill, about ten miles distant. Though the difference of level between the mill and mine is over 2,000 feet, the road is built with such a gentle slope that for miles the rise is almost imperceptible. There is, indeed, but one abrupt ascent, some 300 yards in all. It is interesting to behold a road so admirably graded, winding its way among the mountains, in tracks cut for it in their granite sides, and often apparently overhanging the ravines hundreds of feet below. With the one trifling exception just mentioned, the gentle, easy grade is maintained all the way to the mine, which lies at the foot of higher ranges of mountains rising above it in the north and east.

THE IRENE MINE is located on one of the lower ridges of the Apache Mountains about two miles, in a northerly direction from Globe. The lode first attracted attention in November, 1876, and was located by Dr. W. F. Vail. The croppings are bold and strong, showing to the very pinnacle of the outcrop, which stands towering away up over twenty-five feet, laid bare in the long course of ages, by the hand of nature washing and wearing away the earth with which it had been covered. Nature thus coming to the help of the prospector, directs his attention to the fine mineral ledge running clear and well-defined even to the highest peak; and holds up, as it were, to his very eyes, the evidence of what she has in store as the reward of man's energy and skill.

MCMILLEN CAMP lies between eighteen and twenty miles easterly from Globe, in the Apache Mountains, to which considerable notoriety is attached from the rich strikes and valuable finds that have been made at various times on or near the surface of the ground.

The high and rather extraordinary results that were yielded from ores obtained from the Stonewall Jackson, must be well remembered by most mining men; and the Robert E. Lee and Hannibal Mines were located in March, 1876, by Charles McMillen and T. H. Harris. The amount of work done in this section, like that in different parts of this Territory in early days, if well directed, would, doubtless, have developed many properties of genuine merit, which to-day are neglected or totally abandoned, the chief

cause being incompetence, mismanagement, and extravagance on the part of those who were in charge.

THE STONEWALL JACKSON has had a large amount of work done on it. The ore that is being hoisted shows it is very high-grade sulphurets and chlorides in pure white quartz, and occasionally considerable pure silver makes its appearance. Here the ledge is already sixteen feet wide in rich chloride and sulphuret ore imbedded in white quartz, much of which we were enabled to see, and it was very rich, such as should satisfy the heart of any ordinary stockholder. There is a fine five-stamp mill; a tunnel of 700 feet. Several assays have yielded \$20,000 per ton. The ore above the water-mark was in reddish porphyry; below it, however, the ore has come in pure white quartz and white porphyry and a wide vein of rich ore. With a splendid mine, good ore, and a fine mill, look out for good returns.

GLOBE MINE.—The old Dominion Copper Manufacturing Co., located at Globe, owns a large number of valuable mines in Globe District, among which the one known as the Globe Mine, is an immense copper deposit. This company was incorporated in 1881, with S. M. Hamilton, President; F. W. Brookes, Treasurer; A. P. Thomas, Superintendent. The ore is mostly red oxides of copper, and is smelted in water jacket furnaces. This mine has paid from the start, and over 7,500,000 pounds of copper have been shipped from it. The company own fifty-one mines in Globe, Clifton, and Mineral Districts.

Globe contains some of the richest copper and silver bearing lodes in the Territory, accounts of which will be found in other parts of this work.

#### GLOBE CITY.

GLOBE CITY, as a place of residence, has many things to recommend it. The climate is unexceptionably good and the town, which is nicely laid out, stands at an elevation of something over 4,000 feet above the level of the sea, at the foot of the Pinal Mountains, in a beautiful spot for a large, fine city. The summers are not excessively hot, nor are the winters extremely cold. Though ice frequently forms, the atmosphere is quite dry, clear, and bracing. Globe is a little over one hundred miles from Casa Grande, and somewhat more from Wilcox. In coming from Casa Grande, the tediousness of the stage travel can be greatly relieved by proceeding as far as the King Mine, *via* Pinal, and taking the Stonewall trail on mule-back, which is a most delightful change; besides, the traveler thus secures a good night's rest, and can proceed refreshed in the morning, taking the trip leisurely, and have an opportunity of beholding some of the grandest scenery nature has produced anywhere. The train consists of well-trained mules that know every step of the way, and are as safe and sure-footed and easy as if one were sitting in a rocking-chair,

enjoying a splendid, clean, asumptuous lunch at Pinal Rnch. The fare this way, by Colonel Saxe's train, is \$5.00 cheaper than by the stage; besides, by this route one escapes the night travel and the dusty roads.

For general health, this section is much superior to the average mining, and especially milling localities of most mining districts in this range of latitude. Doubtless no case of ague has originated in this district, unless from gross imprudence in the lowlands, where exists rank vegetation. While it has exhibited itself in a few cases when brought here in the system, it succumbs to a short visit on the higher lands. Good water and pure air are doubtless the reasons of so little ailment among the people.

Globe is 4,500 feet above sea level, and within about ten miles as much greater altitude is obtainable among pine trees, etc. A Northern man can work comfortably nine months of the year, very little snow in winter except on high mountains, and very little of anything to retard regular daily toil. June, July, and August sun is quite hot, and while many persons work right along without any inconvenience—no indication of sun-stroke here—yet it is usually more comfortable to have work shaded from its piercing rays. Ten miles up the mountains, or a little farther to the White Mountains, will afford a fine summer resort, with abundance of game, etc.

Globe contains two churches, one school, one bank, two drug stores, two hotels, several restaurants and lodging-houses, blacksmith's shop, saloons, and about ten mercantile houses. When the Mineral Belt Railroad is built, Globe will be one of the most prosperous towns in the Territory.

Globe has two weekly papers, the *Silver Belt* and the *Chronicle*. Judge Hackney is owner and editor of the former. This paper has a fine circulation, and has always held a front rank, both here and in the East, for reliability in all matters connected with the mineral resources of this section. The *Chronicle*, started in 1881 by Mr. W. H. Glover, but now published by Geo. H. Sterrett, is working hard to divide the field with the *Belt*; it presents a fine business appearance, is creditably gotten up, well printed, and has also a good circulation. Both papers are at present doing a fine business, and ere long the requirements of the community will demand daily papers.

ST. PAUL'S METHODIST EPISCOPAL CHURCH was dedicated at Globe, November 7, 1880. This organization, was first started under the pastorate of Rev. J. J. Wingar, who used to come on foot from Pinal, thirty miles over the mountain trail, preach on Sunday, and return on Monday or Tuesday. The services were held, for over a year, in Judge Hackney's rooms, which he gave free of rent, to which he personally attended. It was Judge Hackney and C. A. Fisk who first determined to build a church edifice in

Globe; and Mr. Fisk's mother, wife of Gen. Clinton B. Fisk, of Sebright, N. J., promised to raise \$500 in the East, provided the citizens of Globe would raise \$500. This was done, and ultimately the Eastern contribution was raised to \$960, besides donations of an organ, hymn books, and Bibles. A communion set was given by Joseph Stout, Esq., of New York, and the pulpit was the gift of a Roman Catholic lady, of New Jersey.

The remainder of the cost of the church, about \$2,500, was raised in Globe, when every one liberally contributed. The first pastor, J. J. Wingar, like St. Paul, worked with his own hands during the heat of summer, in helping lay the foundation and floors and painting the edifice, besides ministering to the spiritual needs of the community. To Mr. Wingar's self-denying labors, like to those of many another self-denying Methodist pioneer, the success of this religious movement is largely due.

The pastors succeeding Mr. Wingar were: Rev. C. A. Brooks, D. W. Calfer, and the present incumbent, Rev. Wm. George, who came here from Dexter, Mich., December 30, 1883.

The first trustees were: A. H. Hackney, Frank A. Sutherland, C. A. Fisk, Alonzo Bailey, H. W. Carey, Geo. H. Sisson. The church has had an active membership of twenty-one. A wide-awake and interesting Sunday-school is held every Sabbath under the charge of Mr. H. Jewell.

THE GLOBE BAPTIST CHURCH was organized May 25, 1883, with twelve members. Rev. R. A. Windes was ordained pastor, and is still in charge. Its trustees are: John Hise, R. A. Windes, Ephraim Fuller, John R. Porter, H. W. Haverly. The church edifice is a neat wooden structure 28x45 feet, with walls fifteen feet high, and is valued at \$2,500. It was built under the labors of Rev. R. A. Windes, missionary of the American Baptist Home Missionary Society, which society donated \$500 to aid the enterprise. They have a growing Sunday-school, and an active Ladies' Society for the advancement of the church interests. A mission Sunday-school is also held at Salt River, thirty miles north, as well as one six miles from Globe.

Mr. Windes was the first Baptist missionary in the Territory. He arrived in Prescott in 1879, and has since been actively engaged in missionary work for that society.

#### PUBLIC SCHOOL.

An excellent public school is maintained at Globe. The building, though not erected for a school building, is a roomy and convenient structure. Its trustees are wide-awake men, and have spared no pains to equip the school-room with the latest and most improved school furniture. In all its arrangements it is one of, if not the most com-

plete, of any school in the Territory. No pains have been spared to make the school a place where the children and youth can receive the advantages of a thorough education in all the English branches.

PASCOE'S RESTAURANT is one of the places where the traveler can find a cozy place to rest, and find refreshment. Mr. Pascoe and his admirable wife attend personally to the wants of their guests.

MR. J. H. PASCOE, the enterprising proprietor, was born in Grass Valley, California, of English parents. His early life was spent in farming, but in July, 1880, he came to Globe and opened a restaurant on Main Street, which is justly celebrated as being one of the best establishments of the kind in the Territory.

In 1880, Mr. Pascoe was joined in marriage to Miss Kitty Ross, a native of Lochiel, Glengarry County, Canada. This union has been blessed by the birth of one child, a daughter, Mary, now one year of age.

THE PASCOE HOTEL is the only hotel at Globe, and is, undoubtedly, one of the best houses in the Territory. It is a two-story frame structure, with twenty-five sleeping rooms. The dining-room is 25x75 feet. Although situated in a section where everything is necessarily high priced, the charges are the same as at hotels of greater pretensions situated on the railroad. The house is now owned and run by Jeremiah Hyndman and his excellent wife. A view of this fine building, together with the *Silver Belt* and Bank Building appears in this work.

CHAPEL'S BUSINESS HOUSE was established by him in 1880, and by strict attention to business, he has built up a lucrative trade. His stock consists of fruit, groceries, and provisions.

GEORGE A. CHAPEL was born at South Bolivar, Alleghany County, New York, February 28, 1849. He received his education at Alfred University and Genesee Lima Seminary. He entered upon the profession of teaching when nineteen, being tutor of a select school at Sharon, Potter Co., Pennsylvania. He followed this occupation for about two years, and then went to California, where he engaged in commercial pursuits until 1877, when he turned his attention to farming, in which he was engaged for about three years. During this time he resided about twelve miles south of Los Angeles. The year previous to his agricultural enterprise, he was married to Miss Nellie M. Trask. This estimable lady was born at Columbia, Tuolumne County, California, May 26, 1854, and is the eldest daughter of J. J. and L. S. Trask, now of Benson, Arizona. Finding agriculture a slow way to make a competence, Mr. Chapel determined to seek his fortune in a new field, and with this in view he left California for Arizona in 1880, traveling all the distance from there to Globe, Arizona, in his own conveyance.

CHAPEL'S PLACE.—To the tired traveler a place of rest is always welcome; but when with the resting-place, you find a pleasant greeting, and cheerful companionship, combined with nice, pleasant, and comfortably fitted rooms, it then imparts a degree of comfort that is truly home-like. Such a place is found at Mr. G. A. Chapel's residence, a view of which will be found in this work. Mr. Chapel takes delight in making people happy, and spares no pains in providing for the comfort of their guests.

T. S. HENDRIX, one of the leading dentists of Arizona, was born in Louisiana, in 1836. Mr. Hendrix has been quite a traveler, residing at different times in Louisiana, Arkansas, Nevada, Idaho, Colorado, California, and at present in Arizona.

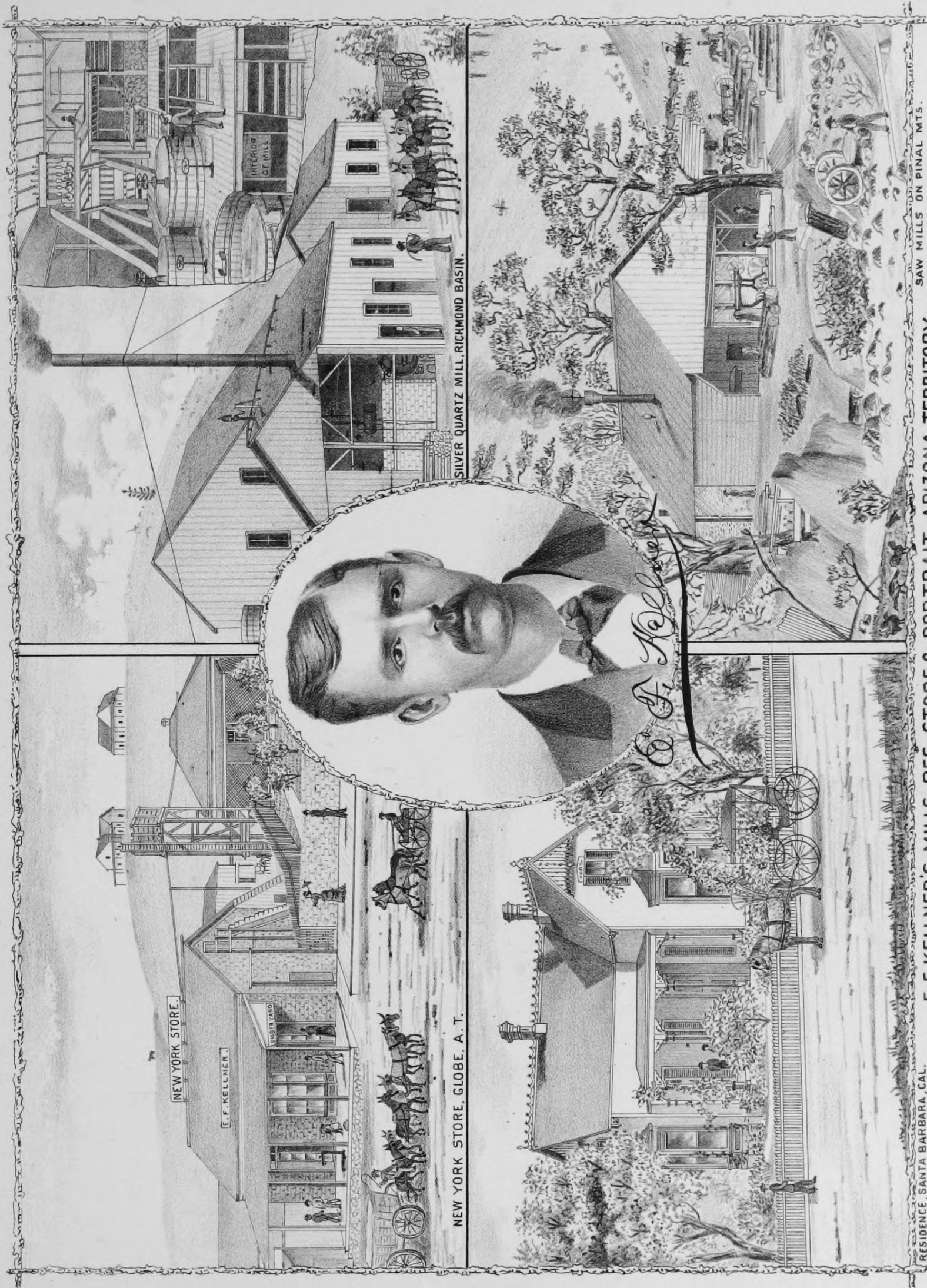
He started from Rico, Colorado, and traveled by private conveyance through New Mexico, practicing his profession at Clifton, Arizona, about six months, and then went to Globe, Gila County, his present home, August, 9, 1883. He is located at the county seat ninety miles from the railroad; he practices dentistry in all its branches.

In 1884, he married Mrs. Louise Graham, a native of Montreal, Canada.

GLOBE HOSPITAL is an institution founded by the ladies of Globe, who founded a society to care for the sick and afflicted, and raised funds by social meetings, and by direct subscriptions, that enabled them subsequently to buy and beautifully furnish a large, four-roomed house, with five or six beds. The hospital is under the care of a salaried attendant, Mr. Montgomery. The original arrangement was that the men employed at the smelter and mines should subscribe \$1.00 a month toward the funds, which entitled them to free medicine, attendance, nursing, and board. It has been instrumental in relieving the necessities, and caring for a number of parties who had the misfortune to be injured, or were taken sick without means to care for themselves. It was truly a noble undertaking, and reflects great credit on the noble and kind-hearted ladies of Globe.

WHITE MOUNTAIN LODGE, No. 3, F. and A. M., was organized August 2, 1880, in Globe. Its first officers were: A. H. Morehead, W. M.; Alonzo Bailey, S. W.; J. Abraham, J. W. Its regular meetings are held in the Masonic Hall, on first Thursday evening on or succeeding full moon each month. It has a membership of forty-six, and is in a good financial condition. Its present officers are: G. W. Bird, W. M.; W. W. Lowther, S. W.; Charles A. Fisk, J. W.

GLOBE LODGE, No. 6, I. O. O. F., was organized at Globe, August, 10, 1882. Its first officers were: W. L. Whelpley, N. G.; J. Reed, V. G.; C. E. Taylor, Sec.; Alonzo Bailey, Per. Sec.; Jos. Thompson, Treas. Its regular meetings are held every Monday night at Masonic Hall.



NEW YORK STORE

E. F. KELLNER

WOOD YARD

NEW YORK STORE, GLOBE, A. T.

SILVER QUARTZ MILL - RICHMOND BASIN.

RESIDENCE, SANTA BARBARA, CAL.

E. F. KELLNER'S MILLS, RES, STORE & PORTRAIT, ARIZONA TERRITORY.

SAW MILLS ON PINAL MTS.

They have a membership of twenty-nine, and are in a prosperous condition financially. The present officers are: W. H. Cook, N. G.; Jos. Thompson, V. G.; W. T. McNelly, Sec.; A. Bailey, Per. Sec.; C. E. Taylor, Treas.

J. D. McCABE, the efficient District Attorney, is one of the leading lawyers of Globe, and enjoys a lucrative practice.

ALECK GRAYDON has the largest and most complete blacksmith and wagon shop in Globe. He keeps everything on hand needed in his line, and warrants all his work.

B. F. PASCOE is the wide-awake Sheriff of Gila County, and has proved himself an efficient officer. His portrait will be found in this work.

CHARLES BANKER, a view of whose place is found among our illustrations, has, by industry and perseverance, built up a business, as a brewer, that bids fair to become one of the permanent institutions of Globe. His place is fast becoming a favorite place of resort for the thirsty ones of Globe.

W. E. SPENCE is the popular Postmaster at Globe. His portrait will be found among others in this work.

THE CHAMPION BILLIARD HALL of W. T. McNelly, corner of Push and Main Streets, an illustration of which is given elsewhere, is one of the first buildings erected in Globe. Its gentlemanly proprietor has won hosts of friends by his uniform courteous treatment. Mr. McNelly is a native of Maryland, having been born in Aveland, April 3, 1850. He came to Globe in 1875, where he has since resided. In 1880, he was married to Miss Ida E. Fox, a native of Iowa.

#### COUNTY OFFICIALS.

The first officers appointed by the Governor were:—

SHERIFF—Wm. Murphy.

RECORDER—Chas. T. Martin.

PROBATE JUDGE—J. R. Porter.

TREASURER—A. F. Sutherland.

DISTRICT ATTORNEY—S. H. Wildy.

SUPERVISORS—J. K. Smith, Geo. Danforth, J. Chamberlin.

Its present officers are:—

JUDGE OF PROBATE—R. L. Long.

SHERIFF—Benjamin F. Pascoe.

UNDER-SHERIFF.—Thomas A. Pascoe.

CORONERS—Dr. E. C. Thatcher, F. Howell.

DISTRICT ATTORNEY—J. D. McCabe.

RECORDER—P. B. Miller.

SUPERVISORS—F. W. Westmeyer, C. A. Fisk, P. C. Robertson.

CLERK OF BOARD OF SUPERVISORS—George W. Sterritt.

COUNTY TREASURER—D. B. Lacéy.

PUBLIC ADMINISTRATOR.—Homer W. Fiske.

CLERK OF DISTRICT COURT—H. M. Snapp.

COURT COMMISSIONER—H. M. Snapp

## GRAHAM COUNTY.

GRAHAM COUNTY was organized in 1881, from portions of Pima and Apache. The county has an area of 6,485 square miles, and a population of 4,200. It is bounded on the east by New Mexico, on the south by Cochise, on the west by Pinal and Gila, and on the north by Apache. The Gila River flows through it from east to west, and forms a fine valley suitable for agriculture, and is being rapidly taken up by Mormons from Utah and Idaho. It has also extensive copper deposits on the San Francisco River and its tributaries. The mountain ranges are generally well wooded.

The valley of the Gila, says Rothrock, near Camp Thomas, where the trail crosses the river, is 2,517 feet above the sea; hence, in coming from Camp Apache, the traveler descends 2,408 feet. Camp Grant, about thirty miles south, in a direct line, is 2,336 feet higher than the river, so there is a marked sloping of the country from north to south towards this stream, which fact must not be lost sight of in considering its peculiar climatic conditions. Its sandy soil, its rapid evaporation, the dryness of the ridges parallel to the river, together with its greatly lower altitude, impress, of necessity, upon the flora the peculiarities which contrast so strongly with that of the surrounding region. Yet this valley in many places produces fair crops of barley and corn. There is enough of water for irrigation of the adjacent lowlands. At the very point of crossing there is evidence in some ruins that a large population subsisted on the productions of this region in the past.

The Francisco River heads on the south side of the same mountain peak in the White Mountains, near where the Little Colorado leads to the north. The former river then flows in a southerly direction, and is west of the line all the way. The line then crosses the Gila River about five miles west of the bridge, and about one mile east of Little Ranch. It then passes directly over Steen's Peak and into the San Simeon Valley, between the Chiricahua and Peloncello Mountains.

The San Simeon Valley runs parallel to the Sulphur Spring, and is separated from it by the Chiricahua Range. In the center of the valley, a short distance below, the Rio del Sur flows on its way to the Gila. This stream forms several springs in its course, and an abundant supply of water can be had by sinking from three to ten feet. Farms have been taken up, and the yield of cereals and vegetables is something phenomenal. Running into this valley from the eastern slope of the Chiricahuas, are several mountain streams, with small but exceedingly rich stretches of land.

There is quite an area of land under cultivation lying next to the Gila River, which yields good crops of barley and wheat. But little attention has been paid to fruit, and but few fruit trees can be found.

At the Longfellow Mine, situate some ten miles west of the town of Clifton, is a curiosity in its way, and unlike anything thus far found in copper formations. The ore cropped out along the slope of a mountain and followed the turn of the mountain. The miners have labored hard to find the direction of their vein proper, if it be a vein, but without success. Wherever they sunk or tunneled on the slope of the hill, sixty, eighty, one hundred feet or more, below the outcrop, and without any dead work, they broke out ore; penetrating seventy feet into the mountain, at a short distance below the outcrop, nothing but ore was found, and the place has thus necessarily been turned into an open quarry. The thing resembles a large iron-ore bank, and, indeed, iron and clay occur with the copper ore.

The copper matte produced was shipped to Baltimore, some 200,000 pounds, and, being refined, proved soft and good in quality, as did also that from the New Mexico mines. This is due to the fact that neither antimony, arsenic, nickel, nor tin occurs with the ores of the region.

While this mountain of ore should prepare us for surprises in that locality, it is totally eclipsed by the Coronado Mines, some three miles west of the Longfellow, and discovered by the party working the latter. The discovery had been kept secret until the land had been cut off from the Indian reservation by the President of the United States, and restored to the public domain. This fact being advised by telegraph and swift expresses, a re-location was made by the discoverer, thus securing a virgin title that can never be disturbed.

Here we have a true vein, in a limestone and granite formation, cutting mountains and gorges 9,000 feet long, and probably much longer, as a mountain of green carbonates, some miles beyond, seems to lie in the same direction. Gay-colored croppings of carbonate plainly define and picture out the course of the vein.

These mines, together with others in this copper belt, have been purchased and are now owned and occupied by a syndicate of Scotch capitalists. They have already expended nearly \$4,000,000 in purchasing mines, erecting machinery, and more recently purchasing and operating a railroad from Lordsburg, New Mexico, to Clifton, Arizona. These mines have yielded, since their discovery, over 20,000,000 pounds of copper.

Besides these mines, there is a group near the Longfellow, owned and worked by a Detroit company, which has yielded nearly 7,000,000 pounds in the past two years.

The Clifton Copper Company, a New York incorporation, owns a group of mines northeast of the Longfellow, which promises well.

The Copper King Company owns a group of mines about five miles above Clifton, on the San Francisco River.

The Great Western Company owns some mines just west of the Copper King Company's mines.

There is a district known as the Lone Star District, north of the Gila, and opposite the town of Safford, that has some rich veins of copper ore. Prospecting is being actively carried on, and indications seem to show a permanent body of paying ore.

A goodly share of Graham County is included in the White Mountain Indian Reservation, and although known to be rich in minerals, cannot be prospected. The Deer Creek Coal Fields are in this county.

SOLOMONVILLE was made the county seat of Graham County by an act of the Legislature, and bonds were issued by the county, and a neat and substantial Court House was erected during 1883-84. The town is built of adobe, and is unattractive in its appearance. There are but few American residents, the majority being Mexican. It is situated on the Gila River, in the midst of what will, at no distant day, be a thriving agricultural region. The valley of the Gila is wide at this point, while the river affords an inexhaustible supply of water, which can be used for irrigating the whole valley. A large Mormon emigration is now fast taking up all the available land. Solomonville contains but one store and hotel and post-office combined, with the usual number of saloons that are found in every new town. A public school is also maintained.

SAFFORD, six miles from Solomonville, was for a number of years the county seat. There are, near here, some farms under a good state of cultivation, and some attempts have been made at fruit culture.

On the farm of Mr. Henry Tuttle there is a variety of thrifty apple, peach, pear, apricot, and cherry, besides grapes of several kinds, which bid fair to prove a success.

Messrs. Glasby and Ijams have a large and commodious store at Safford, and do quite an extensive business with the farmers of the valley. Beside their usual trade in general merchandise, they deal largely in grain, thus enabling the farmers to dispose of their products at their own doors. The post-office is also kept at their store, Mr. Ijams, Postmaster. A good school is maintained at Safford, with a daily attendance of sixty scholars. There is also a hotel and a small flouring-mill.

SMITHVILLE is seven miles west of Safford. It is a thriving Mormon settlement, containing two stores for general merchandise, blacksmith shop, post-office and

hotel. The post-office is named Pima. Between Safford and Smithville a new town has been laid out by the Mormons, called Central, and is being built up.

Other Mormon settlements are springing up between Safford and Solomonville. Irrigating ditches have been constructed, and farms are being rapidly opened up. The Mormons are the only sect that have a church in Graham County.

JOSEPH CLUFF, who is the bishop of the settlement at Central, is a native of Ohio, and became a Mormon several years ago, becoming convinced that their religion was the true one. He is an energetic man, respected by his neighbors, and has been instrumental in laying out and building up the new town of Central.

THOMAS, first called Camp Thomas, after the military post of that name, which adjoins the town, is a small settlement containing ten stores, two hotels, two blacksmith shops, several saloons, feed-yards, etc. It is kept up mainly by the post, where there are generally two or three companies of cavalry stationed. But little farming is done in the vicinity.

CLIFTON is the largest and liveliest town in the county. It is built in a narrow gorge in the San Francisco Mountains, so narrow that there is scarce room for a single street. It is built on both sides of the river, and is really divided into three sections by the river. The scenery is grand—towering cliffs of trachite and conglomerate rock rear their heads on either side. The place has a thrifty business look; there are eight mercantile establishments, one hotel, lodging-houses, and restaurants, with saloons in plenty. The houses are built of wood and *adobe*, while there are many business houses in tents. Preparations, however, are being made for the erection of a number of business houses. The place is growing rapidly. The reduction works of the Arizona Copper Company are located here, and employ a large number of men. The works have recently been rebuilt and enlarged. The narrow-gauge railroad, Arizona and New Mexico, which connects with the Southern Pacific at Lordsburg, New Mexico, has its terminus here. It is a young, prosperous, and active mining town, and bids fair to be one of the most prosperous in the Territory.

The Clifton *Clarion* is published here by D. L. Sayre & Co., and is one of the best local papers in the Territory. It is also full of news, and has much to do in the advancement of the mineral industries of this section. An excellent public school is maintained at Clifton, and is under the charge of Mr. Stowell, of Martinez, California.

Among the mercantile firms of Clifton, Mr. L. Fraissinet takes the lead. He has the finest store in Clifton, and carries the largest and most complete stock of goods.

MR. G. W. BONNELL deals in general merchandise, and makes a specialty of all kinds of produce, which he receives fresh every day. He is one of the enterprising, wide-awake, business men of Clifton.

THE CLIFTON HOUSE is a first-class hotel, kept by Mrs. J. Abraham. It is the best hotel in eastern Arizona.

#### THE SIERRA BONITA RANCH.

“Sierra Bonita,” meaning beautiful mountain, was the name given by the old Spaniards to a very high and picturesque range of thickly-wooded mountains which border one side of this magnificent property. The scenery from the base to the highest summit of these mountains is very fine, and the vegetation changes very gradually. Low down we have gentle slopes carpeted with rich, succulent grasses; and then, as we ascend, the ground becomes somewhat rugged and broken, and is clad with trees, which at first are mostly oak and juniper—looking like immense garden spots, dotted with orchard trees, carefully raised and cultivated by the hand of man, rather than put there by chance or of natural growth. Then by degrees the fir and the pine intermingle with the oak, etc., as our elevation increases, and become more and more abundant, until at last they form a dense forest which extends to the highest peaks. In journeying along the vale beneath, which lies between the Galiura and the Graham Mountains, the traveler during the winter season is enchanted with the splendid scene that is here presented to his delighted gaze. The sun, peeping over the tops of the opposite hills, pours his rays in all their glory and effulgence on the higher snow-capped peaks, and makes the contrast of the fleecy white on the dark emerald-green of the foliage so beautiful as to place it beyond the power of my pen, at least, to depict or describe, so charming does it seem.

#### A BEAUTIFUL SCENE.

During the summer the scene is not the less enchanting, from the entire change in the garb which then adorns the hills, and the many-colored carpet so thickly spread by Nature on the valleys below. The sunsets, too, are here sublimely grand and gorgeous; the contrasts are so great, so rich, and so decided; while the colors are so brilliant, and blend into each other with perfect harmony as they fade softly away. On coming through the pass between these mountains, and on reaching a slightly elevated eminence, a scene of rare beauty is laid before the beholder, such as is, perhaps, but seldom met with in any country. On one side the Sierra Bonita Mountains looming away up thousands of feet in stately grandeur, with the immense ranch and valley of the same name spread away out, thirty miles to the south; while some fifteen miles to the north runs the smaller, and only less beautiful, Aravaipa Valley, extending from twenty to twenty-five miles in width, and running into the rolling foothills of the Galiura Range.

These two mountain ranges border the two sides of the colossal ranch which belongs to H. C. Hooker, Esq., the great cattle king of Arizona, who first arrived in this Territory in 1866, and early made up his mind that as soon as he could come to settle in this section with safety he would do so.

#### A DESIRABLE LOCATION.

At first it was used for herding beef cattle for the supply of the military posts. At times there were 10,000 head on the range at once. Mr. Hooker, who had been engaged in various enterprises in the Territory for five years previous, and traveling over it extensively, with rare good judgment selected this site for a ranch, as affording the best range, water, and facilities of access. He at once secured the water on what is called his home ranch, Sierra Bonita. Gradually he has acquired, by purchase, the water at six other ranches.

A person starting from the central farm-house, and riding at the rate of forty-five miles per day, would require about four days to make the entire circuit of this ranch.

#### HOOKER'S HOME RANCH.

The "Sierra Bonita Ranch" proper, embraces a tract of land of proportions far greater than the eye can scan in the valleys themselves, there being hundreds of cosy little vales hidden between the hill-sides and behind the elevated points, at every turn in the mountains on each side, where splendid hay may be cut, or feed be found for the horses or cattle. It has taken many long years of toil, anxiety, and care to get this splendid property into the condition it now presents. It took a long time to secure a valid title to the lands and to the water privileges, and to carry out the many various arrangements and improvements which have made this one of the few great and valuable ranches in this Territory—and such it is, as at present managed, and in its present shape, but if cut up and subdivided into what many would think moderate-sized ranches, each of these subdivisions, taken separately, would be of comparatively little value for cattle ranches.

The atmosphere here is clear and dry; the elevation, which is about 4,300 feet above the level of the sea, rendering the summers exceedingly pleasant during the day, with nights so cool as to make blankets acceptable, while the winter months are of the most bracing and healthful kind, the weather during that season being quite delightful, and with only slight frosts. This is, perhaps, one of the most perfect sanitariums on the globe. Invalids cannot but find health here, and the healthy become even more vigorous.

This valuable ranch is considered to contain 500 square miles in all, embracing wide, rich valleys, and the splendid pasture and timber grounds of the foot-hills; of the former there are some 400 square miles, and about 100 or

more of the latter. The home farm-house is located in a very central position, near the ruins of what must at one time have been the *casa grande* of an old *hacienda*, of some race long since passed away, but of whose former existence here abundant evidence is furnished by the ruins that still mark the place of their abode, though of the people themselves it may be said:—

"Their memory and their name is gone,  
Alike unknowing and unknown."

#### CULTIVATED FIELDS.

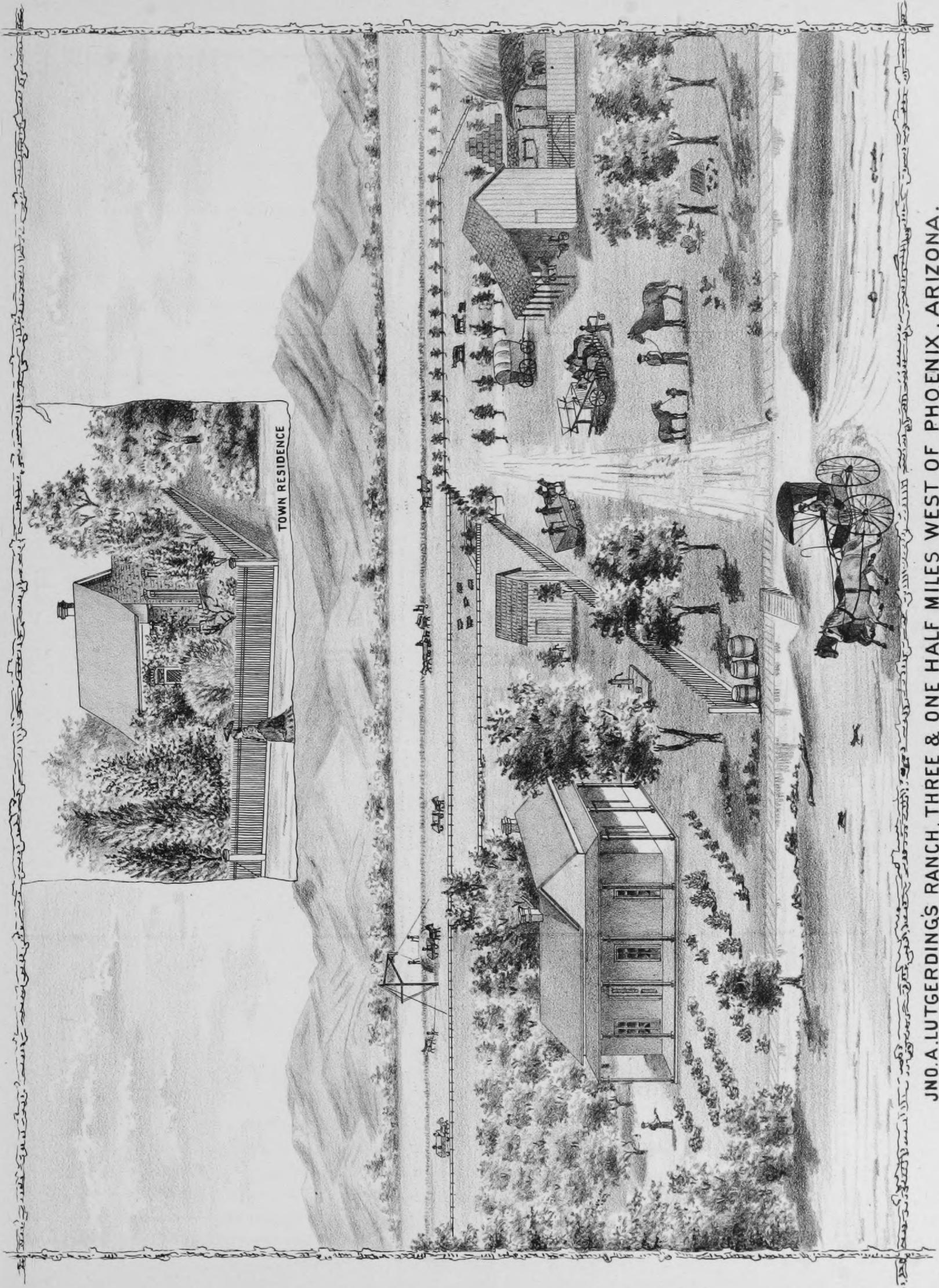
Mr. Hooker has inclosed by board fence 1,000 acres, which he uses for pasturage, and raising corn and barley; 200 acres are seeded to alfalfa, red-top, clover, and timothy. A short distance from the dwelling-house is another well, with windmill attachment, that fills a 20,000-gallon tank. From this, water is conducted by iron pipes to the yards and stables back of the dwelling, and also furnishes water for the irrigation of garden and lawns. In two large ponds which he has constructed, and which are kept well supplied with an abundance of water, he has placed German carp, which are doing well.

#### A COMFORTABLE MANSION.

The house, built on the Mexican *hacienda* plan, is 80 feet square, with a court in the center 40x60 feet. The house is an *adobe*, conveniently planned, and divided as follows: Parlor, 16x35 feet; with three bedrooms, 16x20 feet, and a store-room 16x20 feet, on the same side; on the other side, family dining-room, 14x20 feet; family kitchen, 14x14 feet; employes kitchen and dining-room, each 14x14 feet; and store-room 14x20 feet. The roof was built with a view to Indian disturbances, the wall going up fully three feet above it. The walls are twenty inches thick and sixteen feet high—the ceiling twelve feet. In the court a veranda six feet wide, and nicely floored, goes all around and forms a delightful shade in summer.

#### LARGE CORRALS.

In the corral, adjoining the house, there are seven box stalls for stallions, 12x18 feet, each separate and by itself, besides stable room for seventeen head of horses, a carriage shed and a harness room. The corral adjoining that is 80x100 feet, the one next is 80x50 feet, and the next again 80x60 feet. Then comes a circular corral, thirty feet in diameter, and next to it is a large main corral 300 feet square. These are all for general stock purposes. Next to the stables there is a large corral 150x300 feet, for hay, where is annually stowed some 250 tons of as fine hay as Arizona can produce. There are three large paddocks for pasturing; a fine mill and a half-mile race track for training purposes; and a large blacksmith's shop, 25x25 feet in the clear. There is also ample accommodation for the employes. The poultry yard is extensive, and contains all the most choice breeds.



JNO. A. LUTGERDING'S RANCH, THREE & ONE HALF MILES WEST OF PHOENIX, ARIZONA.

The market for this ranch is California on the west, and on the other side, Chicago, St. Louis, and New Orleans, while for the home trade it has a large slaughterhouse and market, which also supplies the military posts near by.

#### WATER SUPPLY.

Five living springs, two wells, and several *cieneegas*, besides a large ditch, which brings the water across the valley, ten miles from the foot of Graham Peak, constitute the water supply of this tract. The *cieneega* land extends for nearly ten miles along the valley, and is often overflowed for months at a time.

Besides the Bonita Ranch, Mr. Hooker has become possessed of the following valuable property, which we describe in the following paragraphs:—

#### SONORA RANCH.

The Sonora Ranch lies between Fort Grant and the home ranch, about six miles from the latter. This ranch is used chiefly for agricultural purposes, being readily irrigated from the stream flowing through Camp Grant. Its name was derived from its tenants, who were Mexicans.

#### CIENEGA RANCH.

This property is about four miles north of the homestead. Being very abundantly watered, it makes a very favorable stock ranch, but is not confined to this industry, there being at this writing (1884) about 160 acres fenced and under the plow, the crop being wheat and barley, which is grown for hay. A portion is also now used as a vegetable garden.

#### MUD SPRINGS RANCH

Is situated about seven miles southwest of the home ranch, Galiuro Range, and is in many respects similar to the Box Spring Ranch, but is about 400 feet higher. It is estimated that the water supply of this property is sufficient for the supply of 5,000 head of stock. This section was formerly, like Box Spring Ranch, the favorite haunt of the savage Apache.

#### THE RILEY RANCH

Is about eight miles southwest of the home ranch, but, unlike the Mud Springs Ranch, is on the open prairie. It was formerly used as a stage station on the old emigrant road. It was selected for this purpose, on account of its distance from the timber and foot-hills, making it comparatively secure from the lurking Apache.

#### HIGH CREEK RANCH.

This ranch, sometimes styled "Buena Vista," is situated at the foot of the Galiuros, commanding a fine view of the valley. This ranch is devoted mainly to breeding purposes. It is well timbered with oak, cedar, and pine.

#### BOX SPRING RANCH.

The Box Spring Ranch is six miles due west from

the home station, and situated at the foot of the rolling hills of the Galiuros, nestling under the wide-spreading branches of the ash, the sycamore, and the oak, forming at once a beautiful landscape, as well as a delightful shade for the stock and the wild game which ramble over these gently sloping hill-sides.

#### A FAVORITE SPOT.

This little nook has much that causes it to be a favorite spot with all who have visited it. The continuously bright verdure which is always found here, and the rippling brook meandering down the hill-side in a cool, purling stream, and emptying into a magnificent fish pond 100x50 feet, makes this a favorite place of resort, where the tourist can enjoy one of nature's best and most refreshing beverages. This portion of the ranch is six miles square in the rear, besides what is fronting on the main valley.

#### THOROUGHBRED HORSES.

Although Mr. Hooker has a penchant for fine cattle, his special pride is in his thoroughbred horses. He has, at the time of this writing, the following thoroughbred stallions: Union, King William (Gold Dust, Jr.), Garfield, and Baird. Union was sired by Gray Messenger Stockbridge Chief; his dam was San Jose Damsel; she was sired by H. D. Easton's Blackhawk horse, David Hill; her dam is a thoroughbred mare, and is the dam of Dashaway, Richmond, Beauregard, and other well-known race horses; her dam is by Red Bill; he by Medock, and he by Gray Eagle. Stockbridge Chief was sired by St. Louis Champion Stockbridge Chief; his dam, the celebrated Gray Messenger mare, Fanny Dawson, was well known as a remarkable trotter on the Eastern turf. St. Louis Champion Stockbridge Chief was sired by the world-renowned Blackhawk, of Bridgeport, Addison County, Vermont; his dam was sired by Sir Charles; Sir Charles by old Durock, the sire of old American Eclipse. Sir Charles' dam was by Plato, out of old Messenger; his grand-dam by old Brutus. Sir Charles was raised by James Cox, Esq., of Long Island.

Baird is a beautiful Percheron Norman, purchased by Mr. Hooker of M. W. Dunham, Oaklawn Farm, Dupage County, Illinois. He is of a deep bay color, slightly dappled, and weighs 1,800 pounds. He is a noble specimen of draught-horse stock.

Belmont and Peacock, two stallions of famous pedigree, were formerly owned by Mr. Hooker, and died at the Bonita Ranch. Much of Mr. Hooker's stock descended from these sires. Their pedigree was as follows:—

Peacock was sired by L. Sawyer's Gray Messenger horse Union, of San Mateo County, California; his dam was young Dinah; her sire was Montreal, a horse of French descent, and had a record of 2:38; his grand-dam

was old Dinah, imported from Kentucky in 1858 by S. M. Stone, Esq., and is the dam of many fine trotters.

Mambrino Belmont, sired by Belmont 1st; dam Lady Christman, by Idol; dam by Pilot, Jr.; third dam by Whip; Belmont by Alexander's Abdallah (sire of Goldsmith Maid); first dam Bell, by Mambrino Chief; g. d., by Bellfounder; Alexander's Abdallah by Rysdyke's Hambletonian; first dam, Katy Darling, by Bay Roman; g. d., by Mambrino, son of imported Messenger; Rysdyke's Hambletonian, by Abdallah; first dam, Charles Kent's mare, by imported Bellfounder; g. d., One-Eye, by Hambletonian; g. g., dam, Silvertail, by imported Messenger; Abdallah, by Mambrino; dam, Amagonia; Mambrino, by imported Messenger; dam, imported Sourcrot; Hambletonian, by imported Messenger; dam, Pheasant, by imported Shark; Mambrino Chief, by Mambrino Paymaster, out of Goliah's dam; Mambrino Paymaster, by Mambrino, son of imported Messenger; Brown's Bellfounder, by imported Bellfounder; first dam, Lady Allport, by Mambrino, son of imported Messenger; g. d., by Tippo Saib, son of imported Messenger; g. g. d., by imported Messenger; Idol, by Mambrino Chief (sire of Lady Thorne, record 2:18 $\frac{3}{4}$ , and many others); Pilot, Jr., by old trotting and pacing Pilot, the king of the pacers; first dam, Nancy Pope, by Havoc, son of Sir Charles; son of Sir Archy; son of imported Diamond; g. d., Nancy Taylor, by Alfred, son of imported Medley.

Gold Dust, Jr., or King William, foaled by a thoroughbred mare; his sire was old Gold Dust.

Old Gold Dust was foaled in 1855; his sire was Vermont Morgan, or Wiley Colt; his dam was an imported Arabian, Zilcandi; her dam, imported Barefoot.

Garfield, a three-year-old, was sired by Belmont; dam, Abdallah.

Mr. Hooker owns a band of seventy-five mares, all of excellent pedigree, which he keeps entirely for breeding purposes. This is only a part of his entire horse property, as he owns other large herds. His horses need no comment—their pedigree is a sufficient guarantee of their excellence.

#### CHOICE CATTLE.

Mr. Hooker's cattle have also been carefully picked. Only good stock cows are used, the bulls being imported Durhams and Herefords, brought here at immense cost; consequently the beef cattle on this ranch are also of a superior kind, and are ready for market any time after one year old. The general yield on the farm is something rather unusual, being, both in cattle and stock, up to as high as ninety per cent., attributable, perhaps, as much to careful handling, as to the excellence of the grasses and waters on the ranges. This district has long been famed for the variety of its pasture, and its rich, fattening quali-

ties; and this has also been noticed in the military reports on the resources of the Territory. Of the various kinds of grasses found here, the gramma, in its four varieties, is at once the most succulent, abundant and productive. There is also a red clover, which seems to be indigenous to this section, but, being found only in one place on the whole range, it is supposed to have been planted by the former inhabitants, who at one time lived in the now ruinous *hacienda* mentioned above. There are also large meadows of sacatone, which is a beneficial and much-liked article of food for stock at certain seasons. No drives are made from a winter to a summer range. Cattle very seldom stray off the range; they soon learn the watering-places, and are easily kept track of.

As to the amount of stock kept in this grand, natural park, there are some 6,000 well-graded cattle, and upwards of 500 horses—fine animals, bred from superior stock, some of them making splendid carriage horses, and others first-class roadsters.

In former times much trouble was experienced from the depredations of Indians. Many men have lost their lives in this valley, and thousands of cattle have been stolen. Mr. Hooker has been a heavy loser, but a claim made by him to the United States Government, now pending, seems liable to receive the attention it deserves. But danger from Indian raids is practically over in this valley. Fort Grant, only ten miles from the Sierra Bonita Ranch, offers its protection to the settlers in its vicinity. This fort lies east of the home ranch, at the base of Mount Graham, which raises its snow-capped head about 6,500 feet above the plain, and 10,576 feet above the sea. A view of the Sierra Bonita Ranch, with the fort and mountain in the distance, is illustrated on a large double-page view in this work.

As can be seen in this view, which is by no means overdrawn, the corrals, stables, and other buildings are of a very extensive, substantial, and convenient character.

At this place the traveler is never turned away. The hospitable doors are ever open, and the weary sojourner will find here not only food and rest for the body, but evidences of culture and refinement to refresh the mind and gladden the eye. The writer will long remember with gratitude the kind courtesy and hospitable manner in which he was entertained by his worthy host and hostess, during his stay at this place, and not only he, but scores of others have testified of the comforts and cheer so freely provided them during their stay at Sierra Bonita.

#### THE ARIVAIPA VALLEY.

The Galiuro Mountains to the west, the Graham Mountain Range with Camp Grant to the north, the Chiricahua Mountains to the east, and the Mexican boundary to the south, inclose an extensive plain of at least 800

square miles. Standing near Camp Grant, on the base of Mount Graham, one can overlook the whole region.

#### BEAUTIFUL MIRAGE.

A splendid *mirage* appears on the southern horizon every clear morning, in the form of a transmuting mountain chain. Adjoining this plain to the northwest is Arivaipa Valley (where coal has recently been discovered), and to the northeast a level stretch of country, bordered by the Peloncello Mountains on the north. This vast area is without either running streams or timber, but covered to a great extent with fine grass. The soap-weed, the cactus, the sage-brush, and the grease-wood are but little found here. There are several springs of good water on the plain—Eureka Springs in the northwest and Croton and Sulphur Springs on its southern portion.

The valley in which Eureka is situated, without having a constant flowing stream, appears to have enough of water to meet all the demands of a large herd. The ground is at several places quite boggy, indicating a ready means of obtaining more water than appears on the surface. In fact, it is a sort of drainage basin for the neighboring hills. A strip of fertile soil exists above the ranch. Timber of good quality can be had in abundance within a few miles. Without having anything to make this an especially attractive home, there is no doubt that it will yet be an important point in the stock-raising interests of the country.

The Arivaipa Valley, in Graham County, supports large bands of horses and cattle; the grasses in this region are not excelled in the Territory, and the quality of beef produced has no equal in the western country.

#### THE ARIVAIPA CAÑON.

The Arivaipa Cañon has its head about thirty miles northwest of Camp Grant, and twenty-five miles south of San Carlos, and is about thirty miles in length to its junction with the San Pedro River and Valley. The lower twenty miles is a deep, wild gorge, with steep and abrupt cliffs on both sides of from 400 to 1,000 feet in height, reaching back to a height of 2,000 feet. The cañon has been cut out by running water in the long ages which have passed away, since the deposition of a drift that is plainly to be seen is mostly a conglomerate. The whole upper part of the cañon is a cemented conglomerate, and the lower part a sandstone conglomerate. The face of the cliffs, the angles, the side cañons, the jutting and overhanging cliffs, are worn into all sorts of fantastic forms, such as forts, towers, churches, houses, thrones, pulpits, etc., which meet the eye at every turn for miles. At many points in this valley are the stone foundation walls of old ruins, surrounded by the same mystery attending similar remains so

freely scattered throughout the Territory. The future of this region seems to be now assured.

#### EUREKA SPRINGS RANCH.

There is, presumably, no better locality in Graham County for a stock ranch than that which the subject of this sketch, Charles P. Leitch, has selected for his use. This ranch is situated about thirty-five miles from Wilcox, and about fifteen miles northwest of Fort Grant. The water supply is very abundant, consisting of numerous springs. On this account the place has been suggestively named the "Eureka Springs Ranch."

Mr. Leitch was reared in Ohio, but when twenty-two years of age he started out to seek his fortunes in the West. He was variously engaged for a number of years prior to his removal to Arizona, first in Iowa, where he remained one year, then from there he went to Kansas, where he resided two years, when he removed to Colorado. He resided there until 1875, when he came to Arizona. For a number of years after reaching this Territory, he was a Government contractor, furnishing beef, wood, hay, etc., for the use of the army and Indians. In 1878 he purchased the Eureka Springs Ranch and commenced the cattle business. He was subsequently joined by his brother, C. P. Leitch, who entered into partnership with him in the business, which partnership still exists.

#### A PRETTY HOUSE.

The dwelling-house erected upon this ranch is one of the best in the valley. A view of this building with surrounding property and scenery is represented in a large view in another part of this work. It contains at least ten very commodious rooms, which are excellently furnished. The front is beautifully shaded by large cottonwood trees, while on the opposite side of the road stands a lovely grove of the same timber, sustained by some of the never-failing springs. This grove stands in an inclosure, which also contains a large reservoir walled with nature's rock, which is allowed to fill during a dry season, and is then drawn off for the supply of the immense herds of stock which quench their thirst at numerous troughs situated below the springs.

#### A WELCOME RESTING-PLACE.

To the weary traveler on a summer day, traveling over the hot, dusty roads which stretch for many a weary mile on all sides, before water can be procured, or the luxury of shade enjoyed, this place, with its bright green foliage, standing in such marked contrast to the arid wastes around, presents a refreshing picture, and gives new life and impulse to the flagging energies. And, reaching it, none will be disappointed with the place or owner, for he will find not only food and drink for his beast but a hospitable welcome.

## THE CIENEGA AND DAVIS RANCHES.

Besides the Eureka Ranch, the brothers have two other places, the Cienega and Davis Ranches, which are favorably situated. The Cienega is four miles, and the Davis Ranch eight miles further down the valley to the northwest. Part of the Davis Ranch is used for garden purposes, and an abundance of excellent vegetables are raised.

By the purchase and consolidation of these two additional ranches, Mr. Leitch now controls all of the available water in the main Arivaipa Valley. The range is twenty miles square. The valley and hills are covered with nutritious grasses. Though the valley is comparatively narrow, yet the foot-hills afford an unlimited supply of gramma and other grasses.

## FINE STOCK.

On this range there are 2,500 head of cattle, of choice breeds, crossed with Durhams, which Mr. Leitch thinks are better adapted for this market than any other. He has recently purchased a car load of Durham bulls in California to turn in with his herd. At the Davis Ranch there is quite an acreage under cultivation, as well as considerable fruit. Mr. Leitch has recently set out quite a number of fruit trees of various kinds. They seem to do well here.

Mr. Leitch was member of the Territorial Legislature in 1879, filling that office with entire satisfaction to his constituents. He has since devoted his entire attention to his stock interests.

## CAMP GRANT.

Camp Grant, now called Fort Grant, was located on its present site January 24, 1873, by Capt. E. H. Leiv, of the Fifth Cavalry.

Camp Grant was originally located at the confluence of the Nevaissa and San Pedro Rivers, in 1856, being then designated Fort Breckenridge. The situation being extremely malarious and unhealthy, it was abandoned, and the new post established in January, 1873, on a plain fifteen miles in width and over one hundred miles in length. The post is about two miles from the summit of Mount Graham, which is 10,375 feet above the sea, Camp Grant being 3,985 feet, on a sort of *mesa*, sloping southwestwardly towards the plain—a region unattractive in appearance, but abounding in good wood, grass, and water.

Major Royall, of the Fifth Cavalry, took command of the post the second day of April, 1873. It consists of five companies of cavalry, one of infantry, and regimental band. The Government reservation is 42,842 acres.

Lieut.-Col. Charles G. Bartlett, of the First Regiment, assumed command of the fort in April, 1883, and has devoted his energies to repairing, rebuilding, and beautify-

ing the entire premises. The soldiers had been compelled for years to sleep on the ground, in tents, and also in buildings without floors.

There have been sufficient new adobe buildings erected, with shed roofs, and good floors, to accommodate all the soldiers. Officers' quarters have been built; also a new and neat hospital building, while the old one is now used as an administration building, having all the offices of the post under one roof. The parade ground has been surrounded with a row of ornamental trees, as well as the fronts of the officers' quarters.

Colonel Bartlett deserves great credit for the manner in which he has pushed the improvements to completion, as well as in breaking up a gang of gamblers, thieves, and prostitutes, who had succeeded in planting themselves close to the reservation. The present season the soldiers will have under cultivation forty acres of vegetables, although they were told that nothing could be raised there. Last year about ten acres were planted and proved a success.

## FIRST OFFICERS OF GRAHAM COUNTY.

The following were the first officers of the county:—

SHERIFF—C. B. Rose.

PROBATE JUDGE—George H. Lake.

TREASURER—I. E. Solomon.

RECORDER—W. E. Clark.

CLERK OF COURT—Edward D. Tuttle.

BOARD OF SUPERVISORS—Jonathan Fish, A. M. Franklin, Adolph Solomon.

PUBLIC ADMINISTRATOR—Daniel Ming.

## OFFICERS FOR 1884.

PROBATE JUDGE—G. H. Hyatt, of Solomonville.

CLERK OF PROBATE COURT—G. H. Hyatt (*ex-officio*), of Solomonville.

SHERIFF—G. H. Stevens, of Solomonville.

DEPUTY SHERIFF—A. G. Hill, of Clifton.

RECORDER—Pablo Salcido, of Clifton; Deputy, P. J. Bolan, of Solomonville.

TREASURER—I. E. Solomon, of Solomonville; Deputy, W. S. Martin, of Solomonville.

DISTRICT ATTORNEY—A. M. Patterson, Clifton and Solomonville.

PUBLIC ADMINISTRATOR AND CORONER—Daniel Ming, of Fort Grant.

COUNTY SURVEYOR—J. D. Holiday, of Pima.

BOARD OF SUPERVISORS—S. W. Pomeroy, of Clifton; I. N. Stevens, of Clifton; A. M. Franklin, of Camp Thomas.

CLERK OF THE BOARD—J. T. Fitzgerald, of Solomonville.



PUBLIC SCHOOL . MESA CITY. MARICOPA CO. ARIZONA .



PUBLIC SCHOOL. LEHI. MARICOPA CO. ARIZONA.

## COCHISE COUNTY.

**T**HIS county has the honor of being named from the great Apache warrior, Cochise, whose career is mentioned elsewhere.

The county embraces a territory 69 by 84 miles in extent, covering an area of 5,925 square miles, which is larger than the State of Connecticut, and nearly the size of Rhode Island and that State combined.

Cochise County was organized in 1881, from a portion of Pima. It occupies the extreme southeastern corner of the Territory, bounded on the south by Mexico, on the east by New Mexico, on the north by Graham, and on the west by Pima County. Its area is 5,925 square miles, and its topography is made up of lofty mountains, wide valleys, and grassy plains.

The San Pedro Valley extends entirely across the county, and is well adapted to stock-raising, besides containing some very good agricultural land. The valley of the San Simon and the Sulphur Spring Valley embrace hundreds of square miles of magnificent grazing lands, and the recent discovery of artesian water in the latter valley has determined that it will not be long before thousands of cattle will be upon it.

Though just beginning in stock-raising, there are now 52,000 head of cattle within the county, 4,000 head of horses, and 2,200 head of mules.

The assessed valuation of the county is over \$4,000,000. It contains 137 miles of railway, with over a dozen stations. This county has three important mountain ranges well timbered. The Chiricahua Range crosses the eastern part of the county, while the Huachuca, the Whetstone, the Mule, and the Dragoon Ranges run through it on the west.

## HUACHUCA MOUNTAINS.

The Huachuca Mountains are very symmetrical in outline, about three times longer than wide, and rising in the middle, with two peaks a little over ten thousand feet in altitude. Deep cañons furrow it on all sides, those on the northeast being clothed to their origins with a fair growth of trees, several of the species attaining sufficient size for mechanical uses. A lumber factory has been established in four of these cañons, the owners cutting off its trees as long as it would pay five hundred per cent. upon the outlay, then removing their machinery and requisite logging teams to another cañon. One of the mills is at this time high up in Ramsey's Cañon, its proprietors cutting down a body of pine and fir timber as rich as any on this coast outside of the Sierra.

Five of the cañons on the northeast side are so long as to nearly sever the mountains into divisions, being ten

to fifteen miles long. These are, respectively, Fort Cañon at the north end, Tanner's and Ramsey's near the middle, Maple and Ash near the south end. Out from each flows a small stream of clear, sweet water, though strongly impregnated with lime. Each forms a delta of alluvium at its mouth, clothed the greater part of the year with excellent grass and other forage plants, affording the establishment of one or more valuable ranches. Their owners, by commanding the sources of perpetual water, hold the contiguous portion of the outstretched plain tributary. Over this, thousands of horses and cattle roam, menaced, meanwhile, by the lawless cowboys of Arizona, or by the Mexican cattle-thieves marauding along the border anywhere they may find an unguarded victim.

The rock formation of the Huachuca is both magnificent and picturesque. Strata of granite, gneiss, porphyry, sandstone, slate, trachyte, quartz, and limestone are the principal rocks, exposed in regular terraced peaks or tumbled about in the wildest confusion. The limestone and quartz ledges, being often uplifted and set on edge, appear as black-and-white tapering columns in *bas-relief*, supporting the highest peaks, and distinctly seen from the plain fifty miles away.

Few regions, says the *Tombstone Epitaph*, can show so many natural resources as can Cochise County; for while its mountain ranges hold, deep buried in their rocky bosoms, large and precious mineral deposits, their deep gorges and long, sloping ridges furnish an abundance of timber for fuel, mining, and building purposes. Its valleys spread their broad acreage of fertile soil at the foot of these mountain ranges, inviting the grain and fruit-grower and dairyman to occupy them, only awaiting the plow, the harrow, and the seed to show their remarkable productiveness, while its rolling *mesa* lands offer an abundant pasturage to the stock-grower. All these, with a climate not to be excelled in the world, where the sun shines brightly 365 days in the year, make Cochise County a place eagerly sought by the miner, the stock-grower, and the honest tiller of the soil.

The one and only great drawback has been the scarcity of water, which has, in a great measure already, been overcome. The favorable territorial legislation on the question of artesian wells has done much towards overcoming this obstacle. The rapid settling up of the San Simon and Sulphur Spring Valleys demonstrates beyond peradventure that water may be obtained at almost any depth from two to forty-five feet. In many places the water comes to the surface in sufficient quantities to supply thousands of cattle and horses.

To those seeking homes, and desirous of tilling the soil, we would say, Come and look at the broad and beautiful valleys of Cochise County, and we have no doubt you

will remain. Out of its 5,925 square miles it is safe to say there are at least 5,000 square miles of agricultural lands. At the present time there is cultivated in the county but 4,000 acres. The greater portion of this is along the San Pedro River. On this ground two crops may be grown each year. Wheat and barley are sown in January, and harvested in June. Corn and beans are then planted on the same ground, and ripen in October. The market is good, wheat and barley rarely bringing less than \$2.00 per 100 pounds; corn, the same; beans bring five and six cents per pound; onions, from four to six cents, and potatoes, from three to five cents. Any of the above may be produced on any of the valley land with proper care and attention.

To stock-growers the county affords as fine range, pure water, and suitable climate as can be found in the West. Along the foot of the mountain ranges springs are found that will, in most cases, furnish an abundance of water. A few figures will illustrate what has already been done. Five years ago there was no attention whatever given to stock-growing in the section that is now Cochise County; to-day there are feeding on its ranges and in its valleys, 52,000 cattle, 5,000 sheep, 4,000 horses, 3,000 mules, and 1,000 hogs. Estimating cattle at \$25.00 a head, horses at \$80.00, mules at \$100, sheep at \$3.00, and hogs at \$10.00, we have the valuation of live stock now in the county—\$2,180,000, which is not at all discouraging for so young a county.

Though Cochise County has seen many dark days, and has had perhaps more than its share of obstacles to contend with, still it has progressed rapidly, and has now entered on an era of prosperity which promises to continue.

It occupies a portion of the Territory hitherto almost totally unknown, save to the murderous Apache, from whose fierce and treacherous war chief it takes its name. Since its organization, however, it has figured more conspicuously in the history of Arizona than any other county in the Territory, and has already gained that envious title of the banner county of Arizona.

The topography of the county is lofty, rugged mountains, wide and fertile valleys, and miles of grassy plains.

The mountains, for the most part, are covered with a heavy growth of valuable timber, even to their very summits. The valleys are broad and gently undulating; the plains, or *mesa* lands, are rolling uplands covered with an abundant growth of the most nutritious grasses.

#### MINES OF COCHISE COUNTY.

The discovery of mineral in this portion of the Territory dates from the latter part of 1877. The region was long known to contain deposits of the precious metals, and as early as 1858 some prospecting was done near the San

Pedro, and the Bronkow Mine discovered, but the presence of hostile savages prevented any extended development.

Ed. Schieffelin, in February, 1878, had his industry and energy rewarded by the discovery of the rich silver deposits that have since gained a world-wide reputation.

The report of these rich discoveries in southeastern Arizona spread like wild-fire to every camp east and west of the Rocky Mountains, and an army of adventurers flocked to the new Silverado. Thousands of locations were staked out and many valuable discoveries made. Tombstone sprung into existence as if by magic, reduction works were erected, and a steady stream of bullion began to find its way out of the camp. The first stamp was dropped in June, 1879, and since that time the flow of the precious metal has been steadily increasing.

#### PRODUCTION OF COCHISE MINES.

To the miner or capitalist seeking investment, we would state, says the *Epitaph*, that there is no place in the Union that offers the opportunities for safe investment, with an assurance of speedy returns, that Tombstone does at the present time. The following figures will show what our mines have done during the year 1883, their products being as follows:—

Contention . . . . .	\$987,955.59
Grand Central . . . . .	869,522.00
T. M. & M. Co. . . . .	702,333.00
Luck Sure . . . . .	35,977.29
Rattlesnake . . . . .	98,000.00
Boston & Arizona S. & R. Co. . . . .	226,500.00
Woronoco . . . . .	11,875.96
Way Up . . . . .	6,250.00
Ingersoll . . . . .	28,500.00
Various other mines . . . . .	54,000.00

Total . . . . . \$3,020,913.24

This product is from the mines in the immediate vicinity of Tombstone, while the Copper Queen, at Bisbee, produced during the present year \$1,136,366.27 in copper, declaring dividends during the year, amounting to \$500,000.

Cochise County occupies one of the wonderful mining regions of the world, endowed with mineral resources but in a very few places equaled, and never surpassed.

Comparing the capital invested in mines and mining machinery throughout this section with the amount of precious metals produced, we come to the conclusion that there never have been such opportunities for the investment of capital as have been and still are offered here.

Another very important addition towards reduction facilities has been the erection of the Benson Smelting Works, being the first works of this description located so as to be accessible for the ores. Until the erection of these works only very high grade smelting ores could be mined

with profit in this district, and many ledges which have since been proven to be bonanzas were doomed to lie idle.

The mines of this county have been reviewed on previous pages, to which the reader is referred.

#### TOMBSTONE.

Tombstone is the county seat of Cochise County. It is the greatest mining center in the west, and is a stirring and attractive little city. Its buildings are good, substantial adobes, which have taken the place of the poorer structures which were so completely destroyed during the two great conflagrations of 1881 and 1882. The streets are broad, smooth, and clean, and there is an air of general neatness about the city seldom found in a place so young.

THE COUNTY COURT HOUSE is a fine two-story brick structure, built on a solid stone foundation, neatly and substantially finished inside, containing the county jail and all the various county offices, with a handsome court room on the second floor. The building was erected at a cost of \$43,000.

THE CITY HALL is a handsome, two-story building, costing \$15,000, in which are all the city offices. The theater building, Schieffelin Hall, is large, commodious, and well arranged. Two large and well-furnished hotels, the Occidental and Le Van, make it pleasant for the traveler while sojourning in the city.

The public school building, recently erected at a cost of \$11,000, is a handsome and commodious two-story building.

THE HUACHUCA WATER WORKS, which, by the way, are the finest in the Territory, now supply the city with an inexhaustible supply of water, which is conveyed from the cañons of the Huachuca Mountains through a seven-inch iron pipe, across the valley of the San Pedro and over the foot-hills back of the city into a reservoir of 1,500,000 gallons capacity. This reservoir is 360 feet above the city, and 1,100 below the mountain reservoir. The pipes lead to all parts of the town, and for fire purposes it has a pressure of 160 pounds to the square inch, greater than that of the best fire engine.

The great fires of June, 1881, and May, 1882, in which was lost \$1,000,000 worth of property, would, with these water works, have been impossible. Since the advent of these water works, no fire has yet been able to completely consume even a pitch pine building, but is compelled, even in a heavy wind-storm, to leave the charred frame-work standing. The city also owns its own water works, and water rates are reasonable.

An efficient and well regulated fire department, with the water supply the city now possesses, makes a repetition of the large fires among the impossibilities.

Camp Huachuca was established as a temporary post on the mountain range of that name, near the Mexican line, about forty miles east and south of the Santa Rita Mountains, and designed to protect the important mining interests therein. It is situated in a delightful valley on the northern slope of the Huachuca Range. It is one of the largest posts in the Territory, and its site, near the Sonora border, makes it a point of much strategical importance.

#### HOW TOMBSTONE WAS NAMED.

At the beginning of 1878, there was not so much as a tent where is now this large village. The first house was built in 1879.

Ed. Schieffelin gives a thrilling account of the discovery of Tombstone Mines and the consequent naming of the locality. He says: "My mule found the Contention Mine for Dick Gurd and me. You see we, me and Dick, was out on the hills prospecting. We'd left Tucson, and the boys all said, 'You fellows won't find anything on them hills. We'll have to come out and put up a tombstone over yer bones.' Sure enough, we'd been out fifteen days, our grub was mighty short, tarnation hot, and mighty little water, but we didn't loose any grit.

"The sixteenth day out, about afternoon, we struck a little water-hole and camped. Dick and me are pretty tough, but we were a kind of getting down in the mouth. We'd just got through a smoke, when the mule began kicking and knocking with his fore feet. That was a habit he'd got into if he heard any one coming; talk about a watch dawg, he'd beat any dawg that ever lived. I looked up and Dick started to crawl atop a little hill to get a sight, when, all of a sudden, he sung out, 'Ed., come here here's a ledge.' And sure enough, there was a ledge, and a mighty good one, too—the rock as full of color as ever could be. Well, boys, we worked on that ledge two days; following up the hole the mule had made with his fore foot, and staking out the claim. I give Dick all the grub there were left, and rode Jack into Tucson within sixty hours, hadn't a bite to eat all that time, loaded up a wagon with tools and provisions, and started back to the mine. Then come the rush, and the boys gave me the job of naming the place; so I called it Tombstone. So now you see how the mule found the mine."

The mining claims run under the city itself. From the roof of the Grand Hotel you look down at the shafts, the hoist works, and heaps of extracted ore of the Vizina, the Gilded Age, the Mountain Maid, and other mines opening strangely in the very midst of the buildings. This circumstance has given rise to disputes of ownership, so that whoever would be safe purchases all the conflicting titles both above ground and below. On a commanding hill close by, to the southward, were the Tough Nut and

Contention, with above them many others discovered later. The larger mines have extensive buildings of wood, painted Indian red, with handsome draughting and assay rooms within, and regularly educated scientists, and ex-college professors.

About them all lie heaps of a blackish material, resembling inferior coal mixed with slate, which is the silver ore in its native condition. A laborer above ground earned \$3.50, and below ground, \$4.00, for a "shift" of eight hours' work; and the work went on night and day, Sundays and all. A burly miner could be seen stretched upon his cot in his windowless cabin barely large enough to contain it. There were small tents provided with wooden doors and adobe chimneys.

THE METHODIST CHURCH was the first organized. On the 7th of October, 1879, when but some hundreds of people were as yet in the camp, Rev. G. H. Adams, superintendent of missions of the M. E. Church, in Arizona, arrived to prospect the ground with view of establishing religious work. One of the first things he did was to select the lots on Seventh Street on which the church was subsequently built. He held religious services on the day above mentioned in a building which had just been completed as a place of business. At that service was the first sermon preached in Tombstone.

The crowded congregation was entirely made of men, with the exception of three ladies, who were present to assist in the singing. The place was lighted by one small flickering lamp and a solitary candle, and although but two hymn books could be found in the whole town for use at the service, the congregation is said to have raised the echoes on old Coronation and other tunes.

May 12, 1880, Rev. J. P. McIntyre was able to organize a society and also a board of trustees. Steps were immediately taken to build a church. Some time in August, Bishop Matthew Simpson visited Tombstone and preached to the people in Fonck's furniture store, on Fourth Street. On the 29th of May, 1881, or little over a year from the date of the organization of the society, the church was dedicated to the worship of God, the dedicatory service being conducted by Rev. G. H. Adams. Mr. McIntyre continued his very successful labors until July 24, 1882, when he resigned the pastorate. He was succeeded the following September by the present pastor, Rev. David McFawn. Since his coming, a parsonage has been built and paid for, and some debts on the church property cleared off.

THE PRESBYTERIAN CHURCH was begun early in August, 1880. At this time, Rev. James Woods, one of the first Presbyterian preachers who came to California in its early days, arrived in Tombstone, and under the auspices of the Presbyterian Board of Home Missions, commenced

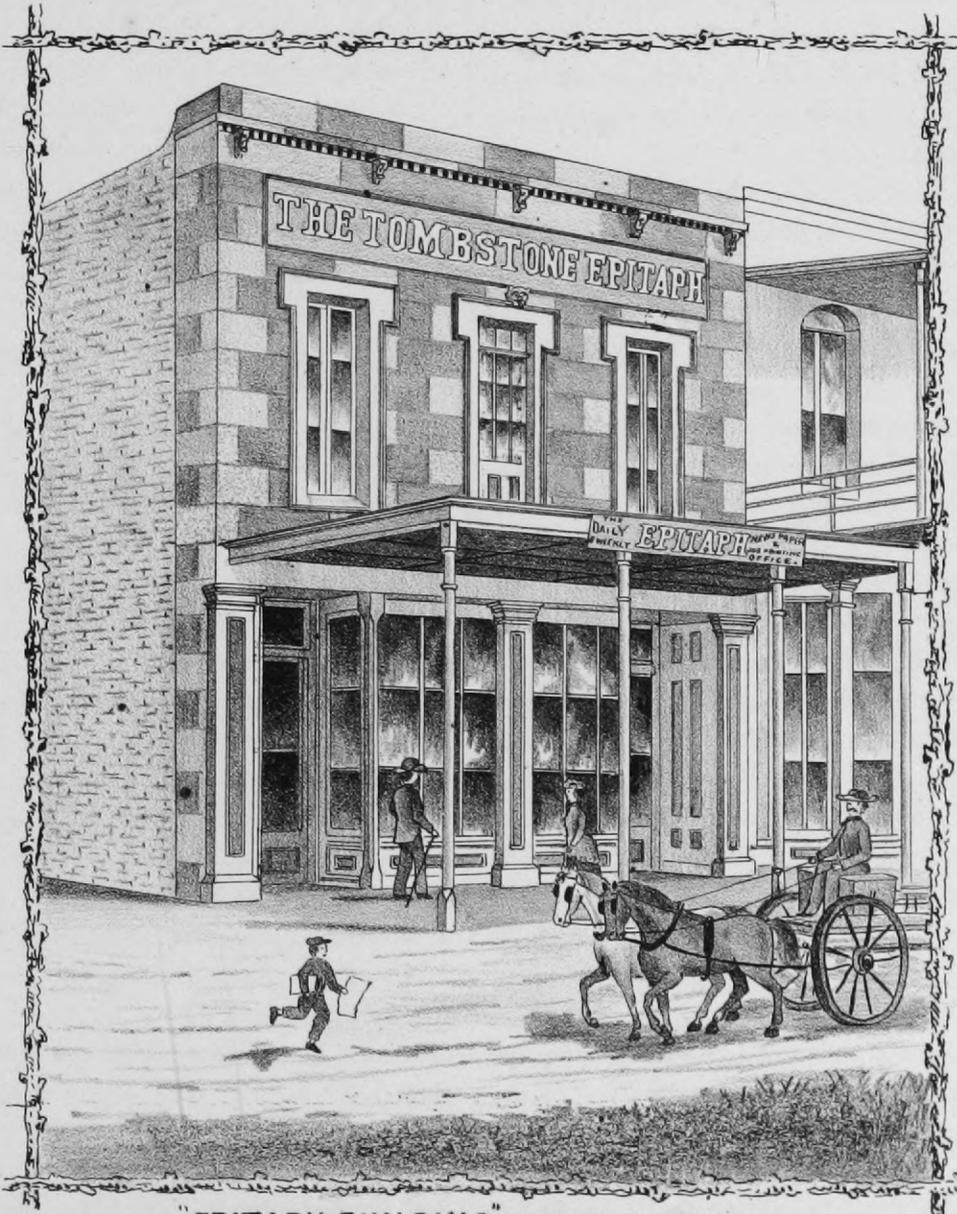
the work of founding a Presbyterian Church. He succeeded so well that in six weeks from the time of his arrival he was able to organize the first Presbyterian Church of this city, which event took place on the 8th of September, 1880. The efforts of the pastor and his co-laborers resulted in the erection of the present structure on Fourth Street, corner of Safford, which was so far completed as to permit holding service in it for the first time on the 25th of December, 1880, after which time it was used regularly for religious worship. Mr. Woods continued his eminently successful labors until the beginning of May, 1881, when he resigned. The church was then without a pastor nearly a year, until March, 1882, when Rev. H. M. Robertson, D. D., became pastor. Under his administration all the interests of the church flourished. The church building was handsomely finished, so that it is now as cozy and neat a church as can be found anywhere.

ROMAN CATHOLIC CHURCH.—The Right Reverend Bishop John B. Salpointe, of Tucson, some time in 1880, sent priests to hold religious services. The first of these was Rev. Father Antonia, assistant pastor of St. Augustine, Tucson, A. T. He said holy mass in several private houses and once in a public hall. With the growth of the camp, the number of communicants increased, and a church was resolved upon. Accordingly, operations were commenced and were so successful that before the close of the year 1880, the present neat and substantial frame house of worship, to which is added a house for the priest, was erected on Sixth Street, corner of Safford. On the 17th of January, 1881, the Rev. Emanuel Paul Schneider was intrusted with the charge of the church and congregation as the regular pastor. Rev. Father J. P. Gallagher assumed charge in May, 1882.

PROTESTANT EPISCOPAL CHURCH.—In the spring of 1881, Tombstone was visited by the Right Reverend Bishop Dunlop, of the Diocese of New Mexico and Arizona. The reverend gentleman held a business meeting in the Presbyterian Church, to which all communicants and adherents of the Protestant Episcopal Church were invited. This was the first step taken in the inauguration of the church. In the fall of the same year, Rev. Mr. Talbot was appointed the regular clergyman of the congregation, and labored for a period of three months, holding divine service in the old Court House. He was succeeded in the pastorate by the Rev. Endicott Peabody, in February of 1882. During his pastoral administration, the present church edifice, on Third Street, was partially erected. The present highly-esteemed and popular pastor, Rev. J. T. Bagnall, then assumed the pastoral office, in 1882, and under his administration the work of finishing and furnishing the church was carried on vigorously, so that by the 10th of September, 1882, it was completed.



OCCIDENTAL HOTEL, TOMBSTONE, ARIZONA. JOS. PASCHOLY, PROPRIETOR.



"EPITAPH BUILDING" DAILY & WEEKLY.  
 CHAS. D. REPPY, EDITOR & PROPRIETOR, TOMBSTONE, ARIZONA.

On the 10th of February, 1882, the consecration services were held, the Right Reverend Bishop Dunlop officiating.

#### SECRET SOCIETIES.

Tombstone is well represented by secret societies.

King Solomon Lodge, No. 5, F. and A. M., was organized June 10, 1881. Its first officers were: Wells Spicer, W. M.; Thos. R. Sorin, S. W.; C. D. Reppy, Secretary. It meets the third Saturday evening of each month. It is in a prosperous condition, financially, and has disbursed in charities and benefits \$2,000. Its present officers are: Thos. R. Sorin, W. M.; Carlisle Stewart Abbott, S. W.; Benj. Cook, J. W.; C. D. Reppy, Secretary. Its membership is eighty-three.

Cochise Chapter, No. 4, R. A. M., was organized February, 1883. It meets the third Wednesday of each month. Its financial condition is good. Its officers are: Thos. R. Sorin, M. E. H. P.; C. A. Arnold, K.; J. E. Durkee, S.; David McFawn, Secretary. It has a membership of twenty-five.

Grand Lodge of Knights of Pythias, was organized in Tombstone, March 27, 1884, with eighteen charter members. B. A. Fickas, Grand Chancellor; E. B. Wagy, G. K. of R. and S.

Burnside, No. 6, G. A. R., was organized February, 1882. It meets twice each month. Its officers are: A. L. Grow, Commander; C. B. Reppy, S. V. C. It has a membership of fifty-six. Its financial condition is good, and has disbursed in benefits \$1,200.

The *Epitaph* is the only paper now published in Tombstone. It is both daily and weekly. It is edited by Chas. D. Reppy, Esq. It has done a great work, in its able articles, to advance the interests of Cochise County, and these articles bear evidence of more than usual ability.

THE OCCIDENTAL HOTEL was opened on the seventh day of April, 1883. It is a fine, two-story adobe building, on the corner of Allen and Fourth Streets. The house is thoroughly ventilated for summer, and is well heated during the winter months. It is well fitted with all the modern improvements of any first-class hotel; it contains forty sleeping rooms, single or in suits, all of which are well and newly furnished with handsome furniture. The hotel is partly surrounded by a veranda, 160 feet in length, which affords a pleasant walk for the guests.

There is connected with the hotel a stage office, from which all stages start, going to Charleston, Contention, Fairbanks, Fort Huachuca, Bisbee, Benson, and all other points; and at which all stages stop on their arrival at Tombstone, from any of the above-named places. This hotel is the headquarters for mining experts, capitalists, and mining men generally. The hotel is conducted on strictly European principles. A first-class restaurant is attached to the house for the convenience of its guests.

Joseph Pascholy, the manager, has had an experience of fourteen years, and understands his business thoroughly, and no pains are spared to make guests comfortable and at home.

THE PUBLIC SCHOOL HOUSE is a two-story building 76x30 feet, extending parallel with Fremont Street, with a wing 40x28 feet fronting on the same street. It has six large, commodious rooms, capable of seating 400 pupils. These class-rooms are well ventilated, conveniently arranged for school work, and of easy access from the ample hallways. On the second floor are two class-rooms 36x29 feet, that can be thrown into one, affording a large assembly room. The third room in the upper story is the same in size as the smallest of the first-floor rooms. It will be used for a recitation, library, and music room. Water is at both ends of the main halls on each floor, and gas in all the rooms of the building.

The School Board, composed of Messrs. Hartman, Hudson, and Clark, are deserving of much praise for the careful study they have given to what is needed in a school building.

The following brief historical sketch of the school, since its organization, may be of interest:—

"Scarcely had the first excitement and rush to Tombstone, occasioned by the discovery of her rich mines, subsided, and it became a settled fact that a town had, in reality, been established, when the necessity of a school became apparent. It was in February of 1880 that, with Messrs. Fickas, Fay, and Pomroy as trustees, Miss. Lucas opened the first school in Tombstone, in a little room with a dirt floor and a mud roof. Nine were the number of pupils in attendance the first day. The school grew with the growing town. The trustees began the erection of a school building, 50x30 feet, which was completed, ready for occupancy, in the latter part of January, 1881. The number of pupils then reached 128 with an average daily attendance of 83.

#### BENSON STATION.

Benson is where the Atlantic and Pacific Railroad branches off for Guaymas, from the Southern Pacific. It is 1,024 miles from San Francisco.

"The wonderful growth of Benson is attributable, in a measure, to the marvelous country surrounding it. Within a radius of forty miles are some 30,000 head of cattle and horses, and about ten thousand acres of land under cultivation. One ceases to be astonished after traveling thirty or forty miles down the San Pedro, for there before him, spread out in all its native splendor, are thousands of acres of land, the capabilities of which are unsurpassed.

THOMAS DUNBAR has a ranch near Benson, which, we think, for beauty and worth, has no superior in Arizona. He also has the best and most commodious house to be

found in this section, with all the necessary out-buildings, corrals, stables, etc., for the successful operation of the place.

He was born in Bangor, Maine, in 1842; during his early life he worked at the lumber business in Maine. In 1869, he married Miss. Angess Burget, a native of Ohio; they have four sons, Edward, John, Thomas, and Arthur Dunbar.

He left Maine for Colorado in 1870, and in 1874 came to his present home, Tres Alamos, Cochise County, Arizona, where he kept a hotel for some time.

He now has a fine farm of 300 acres, situated thirty-five miles from the county seat, and eight miles from the church and railroad, but near to the post-office and school house. His farm produces a good yield of barley; his orchard contains fifty trees of different kinds. He is also in the stock-raising business, and has 800 cattle and ten horses.

Large tracts of land have been taken up, lying along the San Pedro, for the purpose of securing water for stock. With large numbers of cattle coming, and the recent accessions from other quarters, he considers Benson will soon—and justly—have a right to one of the foremost cattle districts in Arizona, or even the southwest.

Benson is a thriving town, which was called at first into existence by the necessity of a shipping point, at the railroad, for Tombstone. Benson has nearly recovered from the effects of the late fire. The business part of town which was destroyed, is rebuilt in a substantial manner.

It is expected that the Atchison, Topeka, and Santa Fé Company will commence their branch road from this place to Socorro, New Mexico, in May.

The Benson *Herald*, published by W. A. Nash, is doing a good work in writing up the resources of the country, and is ably supported by the live people of the town.

The Benson smelters are situated at the base of a small hill, just east of the town, on the north side of the railroad. The building is not very large, about the size of an ordinary flour-mill. From March, 1883, to January, 1884, they turned out \$725,000 in bullion. At the present rate of work they will turn out \$1,250,000 for 1884. The bullion averages \$400 per ton. About one-half of their supplies are drawn from Arizona, one-quarter from Sonora, and one-quarter from New Mexico. The smelter is at present owned by the Benson Smelting and Mining Company of San Francisco, with M. Salisbury as general manager. Capital stock, \$3,000,000, and no stock for sale.

TRES ALAMOS signifies three cottonwood trees. The village contains some 300 souls, principally Mexicans, but at the present writing, is rapidly filling up with Americans, anxious to avail themselves of the chances now to be had. Here in this olden town, which, in years gone by, resounded to the songs of the murderous Apaches, and

now bears evidence of their cruelty, the lowing of herds of the prosperous ranchers and the waving fields of corn and barley, bear silent evidence to the fact that the days of the Apaches are fast fading away, and over the graves of their numerous victims and the ashes of the long-deserted wigwams, are growing and thriving a prosperous community.

CHARLESTON is situated on the San Pedro River, about nine miles west of Tombstone. At this point are located the reduction works of the Tombstone Milling and Mining Company. The town has four stores, two hotels, besides blacksmith shops, saloons, etc. It is on the main road to Sonora, and does a large trade with that State. The population of the town is about 300.

CONTENTION, where the mill of the Contention Mining Company is located, is ten miles from Tombstone, on the Guaymas Division of the Atchison and Topeka Railroad.

DOS CABEZAS or "Two Heads" District is situated in the Chiricahua Range, in the northeastern portion of Cochise County. Its ores are gold-bearing, carrying some silver, and its ledges are large. It is favorably situated near the line of the Southern Pacific Railroad, and has plenty of wood and water.

BISBEE is near the southern edge of the county, where is located the Copper Queen Mine. It is twenty-five miles from Tombstone. This mine yield amounted to 8,045,320 pounds of copper, valued at \$1,096,160.08.

GALEVILLE is a lively mining town, situated on Turkey Creek, on the eastern slope of the Chiricahua Mountains. It is twenty miles south of the Southern Pacific Railroad, and thirteen miles west of the New Mexican line. It has a beautiful situation, surrounded by groves of oak. The town was laid out in November, 1880, and has a population of about 400. There were at that time six stores, four restaurants, two blacksmith shops, two feed and livery stables, three butcher shops, thirteen saloons, barber, boot, and shoe shop, etc.

WILCOX is charmingly situated in the midst of one of the finest stock-grazing portions of Arizona, and is the point from which all the freight for Globe, San Carlos, and other points in the central part of the Territory is shipped. It was named after General Wilcox, department commander, then stationed at Fort Whipple, Arizona. The first child born here was a son of Anthony Powers; and General Wilcox, in honor of the event, presented the youth with a silver cup on which was engraved the general's initials, in consideration that the boy should be named Wilcox Powers.

The town of Wilcox has an inexhaustible supply of water. It is found only six feet beneath the surface, and is clear and pure. It is evident that this is an under-ground

passage for the waters of Sulphur Spring Valley, which take their rise about thirty miles to the north, near the Sierra Bonita Ranch, and then sink out of sight. It has many advantages for settlement. The ease with which water can be obtained, and the vast tracts of land in the immediate vicinity, will make this an important center. Experiments are being made with fruit trees, ornamental trees having already been planted, which are flourishing.

M. W. STEWART took up the present sight of Wilcox, and laid out the town in 1874. Seeing the advantages of the town as a commercial point, Mr. Stewart bent his energies to build it up, and to-day it is a wide-awake and important town.

The firm of Norton & Stewart owns a large warehouse, *corral*, and feed yard, beside a large and commodious store, which is well stocked with a well-selected class of goods, including agricultural implements, and machinery. They also own a very fine store and hotel at Fort Grant, and do the heaviest business of any firm outside of Tucson or Tombstone. Mr. Stewart has a neat and tasty residence, which adds much to the looks of the town.

D. H. SMITH & Co. are one of the heaviest firms of this section. They claim to carry at all times the most complete and well-selected stock of goods in the Territory, and at prices to please all who will favor them with a call.

JOHN C. FALL is general manager for the above firm. He at one time conducted one of the largest mercantile houses in northern California, at Marysville. Has recently built a large and commodious store and is fast building up a lucrative business. The old gentleman is seventy-six years of age, but his step is as light as a man of thirty, and his wits as keen for business as they were thirty years ago. There are numerous other business houses in town which we have not space to mention.

#### COUNTY OFFICERS FOR 1884.

JOINT COUNCILMAN (Territorial)—P. J. Bolan, Cochise and Graham.

COUNCILMAN (Cochise)—E. H. Wiley, Cochise.

ASSEMBLYMEN—D. K. Wardwell, J. L. Duncan W. H. Savage.

SHERIFF—J. L. Ward.

UNDER-SHERIFF—A. O. Wallace.

DEPUTY SHERIFF—R. S. Hatch.

RECORDER—H. L. Jones.

TREASURER—Ben. Goodrich.

DISTRICT ATTORNEY—M. A. Smith.

PROBATE JUDGE—B. L. Peel.

CORONER—Pat. Holland.

PUBLIC ADMINISTRATOR—Alexis Freeman.

COUNTY SURVEYOR—J. H. Hoadley.

BOARD OF SUPERVISORS—L. W. Blinn, Theo. L. White, John Montgomery.

## YUMA COUNTY.

**T**HIS county is in the southwestern part of Arizona, bounded on the west by the Colorado River and on the south by Mexico. This is one of the four original counties into which Arizona was divided.

The Gila River flows through the county for nearly one hundred miles, forming, in its course, a rich and fertile valley. The Colorado washes its western boundary, and has large bodies of arable lands. Besides the railroad, it has the advantages of a navigable stream, which must ultimately develop and bring into prominence its great natural resources.

Yuma climate is warm, and our table printed elsewhere gives the actual recorded variations. The air is wonderfully pure, dry, and elastic, and has none of the depressing effects seen in moist, humid atmospheres. In winter, the climate is perfection itself, and no place on the Pacific is more favorable to the cure of pulmonary diseases than Yuma. Its qualities, in this respect, only require to be known to make it a most popular sanitarium.

#### COLORADO VALLEY.

All along the river are patches of valley land, making a continuous stretch of bottom-lands, varying from a quarter of a mile to eight miles in width, and containing 175,000 acres of rich land. The largest tract is opposite Ehrenberg. The Mexican authorities placed Blythe & Andrade, of San Francisco, in possession of 100 leagues of land along the Colorado bottom. They had on this side of the river and in San Diego County about 30,000 acres purchased from the State under the Reclamation Act. Canals had been made and everything was favorable towards successfully reclaiming this heretofore neglected but valuable section, at the time of the death of Blythe, in 1884. A system of irrigation and an improved method of agriculture would make the valley far more productive, but it is not certain that it could ever be a profitable place for white settlements. The shifting of the river bed, which, to the Indians, who have a certain community of property, is a matter of little importance, would occasion serious embarrassment to settlers who had established permanent locations and improvements. The rapidity and extent of the changes in the position of the Colorado can scarcely be imagined by one who has not witnessed them.

The annual overflow of the river enable Indians to raise, with little labor, an abundant supply of provisions for the year, which they improvidently consume, allowing the future to take care of itself. The failure of a crop is, therefore, an irremediable calamity. During one season, a few years since, the Colorado did not overflow its banks; there were, consequently, no crops, and great numbers of

the Mohaves perished from starvation. It is quite possible that such visitations are of periodical occurrence, and are among the means adopted by nature to prevent the population of the valley, as there is no outlet for it nor room for its expansion, from increasing beyond the capacity of the country to sustain it. There is no question but that, for several centuries, since the first visits of the early Spanish explorers, there has been little or no increase in the number of inhabitants. This number is apt to be overrated.

It is somewhat remarkable that these Indians should thrive so well upon the diet to which they were compelled to adhere. There is no game in the valley. The fish are scarce and of very inferior quality. They subsisted almost exclusively upon beans and corn, with occasional water-melons and pumpkins, and are probably as fine a race, physically, as there is in existence.

On either side of the Colorado River are broad, gravel, desert plains, that on the southeast occupying all the interval between the parallel ranges of the Chocolate and Monument Mountains. The surface of this plain is about one hundred feet above the level of the river, and the bluffs formed by the cut edges, limiting the bottom lands, are composed of gravel, sand, and clays, sometimes partially cemented by lime. In this, as in most of the subordinate basins traversed by the Colorado, its course is exceedingly tortuous; and as the water level is subject to great oscillations, the channel is constantly changing, and the sediment, with which its current is always loaded, undergoing deposition or removal.

#### YUMA INDIANS.

The principal chief of the Yuma band chooses his sub-chiefs, but is himself appointed by the military commandant. The last investiture with this distinction was made as long ago as 1852, by General (then Major) Heintzelman. He conferred it upon the now wrinkled and decrepit Pasqual, whose portrait is on page sixty-one, who was described at the time as a tall, fine-looking man, of an agreeable disposition.

Pasqual's people cultivate little patches of vegetables and hay in the river bottom after it has been fertilized by the annual overflow. Their principal sustenance, however, is a sweet bean resembling that of the locust, from a variety of the mesquite tree. This they pound in mortars into a kind of flour. Sometimes, on the move, they float their hay across the river on tule floats.

The female dress consists of a close-fitting gray or crimson under-shirt. They wear their thick, coal-black hair "banged" low over their foreheads, and long and bushy upon their necks. The effect at a little distance is curiously "asthetic."

The Indian school at Fort Yuma is now permanently established, with a membership of about thirty scholars. "The Indian children," says the *Sentinel*, "will be brought over to town, to show the people what is being done for them, and their manner of treatment. Colonel Clark is deserving of unbounded praise for his zeal in this work, and the success with which his efforts have been crowned."

#### MINES OF YUMA COUNTY.

Gold, silver, copper and lead are found in lodes near the Colorado River, the entire length of the county; also placer gold, in considerable sums, has been extracted. No effort has been made to conduct water to these mines; the gold has generally been obtained by what is called the dry-washing process. To pay by this process, the mines must necessarily be very rich; but if water could be obtained, they would, undoubtedly, pay well, even when once worked by the other process.

Many lodes of gold, silver, copper, and lead have been located, and quite a profitable business was engaged in, by shipping the ores *via* the Colorado River to San Francisco. The success of these enterprises would warrant the belief that, by the erection of machinery, and properly opening the mines, they could be made very profitable to the owners. Along the southern border of the county, extensive and rich mines of copper are found, but owing to the high rate of transportation, they have not yet been made to pay.

In Yuma County, American mining enterprise dates as far back as 1858, when Jacob Snively discovered placers at Gila City, twenty-four miles east of Yuma. Within three months of their discovery, over a thousand men were at work there; the diggings continued rich for four years, and have been continuously worked on a smaller scale up to the present time. Later, there was a revival of interest caused by new discoveries, and a company formed to take a ditch from the river, and work its bed by pumping, etc., as done on the American River and elsewhere in California.

In January, 1862, Captain Pauline Weaver discovered gold placers seven miles east of La. Paz, and before the year was out, 1,500 persons were on the ground, most of whom had left by the spring of 1864, but a few remained several years later. It is estimated that gold to the amount of a million of dollars in value, was taken out during the first year. Scarcity of water, however, necessitates recourse to dry-washing processes. The primitive rocks of the Riverside and Half-way Mountains, which border the Colorado River on the west, just above Ehrenberg, consist of granite and gneiss, the latter garnetiferous.



*R. H. Paul*



*J. A. Worford*

## YUMA CITY.

Yuma has always been a place of considerable importance, but the business formerly done at this point has now gone with the advent of the railroad. At first, however, it made slow progress. Only now and then did a steamer arrive.

The first steamer making the trip, arrived December 3, 1852. It was called the *Uncle Sam*, commanded by Captain Turnbull. In June, 1853, it ran ashore a few miles below, and was abandoned. For further account of navigation, see the article on "Steamboats."

At the time of the gold discoveries in 1861-62, Yuma was very prosperous, but the latter year it was washed away by the unprecedented flood of the Gila, the water standing nearly twenty feet deep on a ranch in the Gila bottom, just above the town. It was soon rebuilt, and in 1864 an extensive Quartermaster's depot was erected on the Arizona side, by Captain William B. Hooper, Yuma being then the distributing depot, for the military posts in Arizona.

The depot was burned in 1867, and at once rebuilt by Captain W. B. Hughes. Major Hooper, on his resignation from the service, entered into mercantile business in Yuma, in which he continued with success until he sold out. James M. Barney came to Yuma and engaged in freighting, and was afterwards Superintendent of the Quartermaster's depot, whose employes were then numbered by hundreds. At one period 900 mules were kept there, the Quartermaster's Department then doing the freighting, which for some years past has been done by contract. Mr. Barney subsequently became a partner of Hooper's, whom he afterwards bought out.

In 1870, the county seat was removed from La Paz to Yuma. In 1873 the first judicial hanging in the Territory took place in Yuma.

## FIRST FERRY AT YUMA.

Doctor Lincoln and John Glanton established a ferry in 1849, but not satisfied with the liberal profits thus accruing, they added to it the robbery and murder of emigrants, which they attributed to the Yuma Indians. Glanton killed a man employed by the Indians to run an opposition ferry, which caused an outbreak that resulted in the killing of all except three persons; among the slain were Glanton and Doctor Lincoln.

On July 11, 1850, Don D. Jaeger, Benjamin Harts-horne, and others arrived from California, and again started the ferry, over which sixty thousand people crossed in the fall and spring of 1850-51. On this occasion, the lumber for the boat was brought with great difficulty across the desert from San Diego. The ferry was established at Pilot Knob. In November, 1851, the ferryman was attacked, and driven off by the Yuma Indians.

In November, the whole party of soldiers and ferry-men retreated to San Diego, abandoning the Colorado River to its savage proprietors. In forcing their way out, Jaeger was shot through the arm with two arrows, and under the ear with another, which pierced his head through to under the opposite ear; but he made good his escape with \$600 in gold.

## YUMA IN 1852.

In the spring of 1852, General Heintzelman, afterwards famous in the Civil War, and General Stoneman, who subsequently commanded the Department of Arizona, and now Governor of California, marched across the Colorado Desert with six companies, and after a terrible time in crossing, from rain and snow in the mountains, reached the present post of Yuma. At that time Wilcox reached the mouth of the Colorado, in a sailing vessel with troops and supplies from San Francisco; the troops were commanded by Lieutenant Derby ("Phoenix"), better known as a wit than a soldier. The ferry-men came back, and again turned a tide of emigrants over this route. The Indians, however, maintained an active warfare until conquered in February, 1853, when, under the protection of the fort, the village of Colorado City arose. It was afterwards designated "Arizona City," and finally included in Yuma. But it was not until the Gadsden purchase, in 1854, that the present site of Yuma was included within the limits of the United States, previous to which purchase all of the Territory south of the Gila belonged to Mexico.

## YUMA CITY LAID OUT IN 1861.

Professor Pumpelly described Yuma in 1861, as follows: "This place, consisting of one house, had a curious origin, which was told to me by Col. C. D. Poston, who was also the founder. Soon after the purchase of Arizona, he had organized a party, and explored the new region. Wishing to raise capital in California to work a valuable mine, he was returning hither in 1855, with his party, when they reached Colorado River at this point. The ferry belonged to a German, whose fares for the party would have amounted to about \$25.00. Having no money, they encamped near the ferry to hold a council over this unexpected turn of affairs, when my friend, with the ready wit of an explorer, hit upon the expedient of paying the ferriage in city lots. Setting the engineer of the party, Herman Ehrenberg, and under him the whole force, at work with the instruments, amid a great display of signal-staffs, they soon had the city laid out in squares and streets, and represented in due form on an elaborate map, not forgetting water-lots and a steam ferry. Attracted by the unusual proceedings, the owner of the ferry crossed the river, and began to interrogate the busy surveyors, by whom he was referred to my friend. On learn-

ing from that gentleman that a city was being founded so near to his own land, the German became interested; and as the great future of the place was unfolded in glowing terms, and the necessity of a steam ferry for the increasing trade dwelt upon, he became enthusiastic and began negotiations for several lots. The result was the sale of a small part of the embryo city, and the transportation of the whole party over in part payment for one lot.

THE SOUTHERN PACIFIC RAILROAD has constructed a long wooden draw-bridge across the river at Yuma for their railroad. The company has placed here the first of its series of hotels of uniform pattern. It is both station and hotel. Such provision, on an equal scale of comfort, would hardly have been judicious as an investment yet for private persons. These structures, therefore, become not only a typical feature of the scenery, but an indication as well of the extent to which the railroad has had to, and has been able to, by reason of its ample resources, take this bare new country in hand. They are of the usual reddish brown, two stories in height, and surrounded by piazzas, which are indispensable here in warm weather.

In May, 1877, the Southern Pacific Railroad reached the California bank of the Colorado, and in the fall months of the same year their bridge was completed to the town. The draw-bridge is a Howe truss, 187 feet in length, can be pulled around by one man, and is provided with machinery by which it can be opened and closed in less than three minutes. It is composed of six spans, of eighty feet each, on piers of seventeen cedar piles, each driven to a depth of twenty-six to thirty-two feet. Every span is an independent truss in itself. The effect of the resistance presented by the piers is to deepen the river channel to eighteen feet, which, so far as it goes, is a benefit to the navigation of the river.

THE TERRITORIAL PRISON is located here. In 1877, on an appropriation made by the Legislature of territorial bonds to the amount of \$25,000, which realized \$21,265.62 currency, a penitentiary was commenced. Since then, on various appropriations, buildings have been enlarged, and when fully completed and finished according to the plans and specifications, will be a model of strength, utility, and architectural beauty. It is fully described on page 153.

Among the other important buildings are the county Court House, jail, public school house, Catholic school house, two hotels, printing-office, and a large number of fine stores, saloons, and private dwellings.

THE CITY OF YUMA, says a writer, no pen can portray; no photography can reproduce it; no painting can by coloring, represent the sandy desert of its wide streets' the irregular blocks and scattered houses, the lazy Mexicans lolling about the grog-shops, and gazing wistfully at their contents, the glare of the burning sun, the total ab-

sence of trees, shrubs, grass, or any green thing to vary the monotony of sand and dust. This is Yuma, the thriving city, with its wealthy merchants, its newspaper, its hotels, its Court House, and schools. This is Yuma with its thousand inhabitants, the frontier settlement on the west of Arizona, situated at the confluence of the Gila and the Colorado, 150 miles from the sea by the course of the latter river, and 100 miles in a direct line. By and by, when it increases in wealth and importance, as its opportunities indicate that it will, a more refined taste will change its present forbidding aspect. A few thousand dollars will pay for abundant irrigation, avenues of trees will supersede the shadeless streets, elegant houses rise upon the ruins of wretched adobes, and churches and schools will take the place of saloons and gambling dens. The poor Indians and the Mexican "greasers" will be drowned out by the coming wave of civilization, and in ten years from this time, whoever may read this description will say that it could not have been true of beautiful Yuma.

THE "SENTINEL," a wide-awake newspaper, is well established at Yuma, and thoroughly devoted to the interests of the county and Territory. It is now under the management of J. W. Dorrington, Esq., an independent and thorough journalist. For several years it was under the management and control of Judge Wm. M. Berry, who was an able editor and a most genial gentleman; and later, by George E. Tyng.

#### FORT YUMA.

Fort Yuma is built upon the west side of the river, and therefore in San Diego County, California. It is on the top of a gravelly spur that extends, with a steep bluff, to the edge of the stream. A corresponding precipice upon the opposite side forms, with the other, a gate through which the united waters of the Gila and the Colorado flow in a comparatively narrow bed. The mouth of the Gila is just above. The southern emigrant route to California crossed the river at this place. For ten or fifteen miles north and south, the valley is inhabited by the Yuma Indians, a few years ago the most powerful and warlike of the Colorado tribes.

Fort Yuma, 195 miles east of San Diego, is the extreme town of California. The fort was established in 1849, when "over the river" belonged to Mexico. The post is on the right bank of the Colorado, 180 miles from its mouth, and directly opposite that of the Gila. The fort, from its position, was an important one. It is now abandoned.

Fort Yuma, California, is in latitude 32°, 23' and 3"; longitude 37°, 33' and 9"; altitude, 267 feet above tide-water, and at the highest point of the rocky bluff on which it is built, 110 feet above the bank. On this bluff, in the midst of its two embracing rivers, rises Fort Yuma, white

and parched, above the broad sea of green at the river bottom, here seven miles wide, covered with a dense growth of cottonwood and mesquite. Chains of low, serrated hills limit the view, all bare and gray, except when sun-painted with delicate tints of blue and purple. This post is remarkable for its intense heat. The barracks at Yuma consist of a series of comfortable, large adobe houses, plastered and painted green, surrounding an oblong plaza. They have in front of them a peculiar screen-work of green blinds, which shuts out the glare from the yellow ground, and makes both a cool promenade and sleeping apartments for the summer.

Fort Yuma is built upon a granite hill, which projects slightly above the more recent strata surrounding it. Pilot Knob and the Black Mountain, lying west of the fort, are similar granitic masses of greater dimensions. The view eastward is limited by two ranges of mountains, marking lines of upheaval, which, running northwestward from Sonora, cross the Gila many miles above its mouth, and the Colorado at some distance above the fort.

GILA CITY is twenty-four miles up the Gila River, at the bend. It is situated on the south side and is encircled in the rear by volcanic hills and mountains, and pleasantly overlooking the bend of the river, with its sand flats, arrow-weeds, and cottonwoods in front. Gold was found in the adjacent hills a few years ago, and a grand furor for the "placers of the Gila" raged throughout the Territory. At one time over a thousand hardy adventurers were prospecting the gulches and cañons in this vicinity. The earth was turned inside out, says J. Ross Brown, in 1863. Rumors of extraordinary discoveries flew on the wings of the wind in every direction. Enterprising men hurried to the spot with barrels of whisky and billiard tables; Jews came with ready-made clothing and fancy wares; traders crowded in with wagon loads of pork and beans; and gamblers came with cards and monte tables. There was everything in Gila City within a few months but a church and a jail, which were accounted barbarisms by the mass of the population. When the city was built, bar-rooms and billiard-saloons opened, monte tables established, and all the accommodations necessary for civilized society placed upon a firm basis, the gold placers gave out. In other words, they had never given in anything of account. There was "pay-dirt" back in the hills, but it didn't pay to carry it down to the river and wash it out by any ordinary process. Gila City collapsed. In about the space of a week it existed only in the memory of disappointed speculators.

MISSION CAMP was an overland stage station, fourteen miles beyond. Here can be had a fine view of Coronacion Mountain. The old Spanish explorers named it the "Coronacion," from a fancied resemblance to a mitred crown. G. D. Bartlett, United States Boundary Commis-

sioner, speaks of this range as the "Pagoda," but the Spanish name seems to suit best the mountain summit, gilded as it is by the sun's glow, while the great, deep sides wear the imperial purple hues that clothe them as if, indeed, they formed a royal robe. It is ten miles from Adonde Station.

ANTELOPE PEAK is a singular mass of volcanic rock, whose northern side rises bold and almost sheer to its jagged top, while from there it descends in a series of broken bluffs. A good ranch on the river bottom, formerly supplied the station, and shows that with industry and water the seeming desert is amazingly fertile.

OATMAN'S FLAT is one of the historic places of Arizona. It is so called because of the terrible tragedy which occurred there in 1851, resulting in the death, at the hands of the Apaches, of Royse Oatman, of Texas, with his wife and four children. Two young girls were carried off. A boy, Lorenzo, was struck down and left for dead. He afterwards recovered; and Olive, one of his captured sisters, after four years of horrible captivity among the Apaches and Mohaves, was released and restored to her brother. Both were living in New York State a few years since, and are there now, in all probability. The lonely grave is in keeping with the scene of the tragedy.

Major Cremony and his party came upon the scene of the Oatman massacre. They found the coyotes had dug up the remains of the murdered party, and they were carefully and safely re-interred. The place of burial is at the point on the map below Gila bend, called Oatman's Flat.

Olive Oatman gave a very interesting narration of her adventures and life among the Apaches.

EHRENBERG is located on the Colorado River, 140 miles above Yuma. It was named in honor of Herman Ehrenberg, who was murdered by Indians in the Colorado Desert.

It was first designated Mineral City, and was founded by an association in March, 1863, of which Herman Ehrenberg was elected surveyor. The route to the placer mines, discovered in 1862-63, lay through La Paz, six miles above Ehrenberg. But at a later date a wagon road was opened, leaving La Paz to the north, starting from Mineral City, which in 1867 was again laid out and surveyed as the town of Ehrenberg. A ferry was established here as far back as 1862, but the new town amounted to very little until 1869 or 1870, when there was a movement to it from La Paz, the decay of which was partly caused by the working out of placer mines, and change of river channel. Before the advent of the railroad it was the shipping point for central Arizona. It was the crossing point of the California and Arizona Stage Line to Prescott, before the days of railroads. The annual sales of merchandise at this place were \$500,000 by some half-dozen firms. There is very little business there now. The Colorado bottom in

front of Ehrenberg is about thirty miles long, and in some places ten to sixteen miles wide, with much good soil, mesquite, willow, cottonwood, and undergrowth.

LA PAZ was formerly an important point on the river. It was at one time the county seat, and so remained until 1870. It is five miles above Ehrenberg, on the edge of the reservation. The superior advantages of the latter place soon caused the decline of La Paz, which is now nearly depopulated. It contained several large forwarding and commission houses, blacksmith and wagon shops, and in addition to the trade with central Arizona, large amounts of goods were formerly sold to supply the mines up the Colorado River.

CASTLE DOME is thirty miles above Yuma. Its name is derived from a large rock, resembling a castle. At one time it had several fine stores and private dwellings, and also a smelter. Large quantities of argentiferous galena, and copper ores, were shipped from Castle Dome Landing to San Francisco.

FRANK S. INGALLS, the present capable and efficient Superintendent of the Arizona Penitentiary, is a native of Maine. He was born in the town of Sullivan, January 9, 1851. When but seven years of age, his parents moved to Illinois. Here he lived until 1864, when he came to California. He was engaged in various pursuits in different sections of the State. He was surveyor of Monterey County from 1878 to 1882. In the latter year, he was appointed Assistant Secretary of Arizona, arriving at Prescott in May, 1882.

He was elected Captain of the Prescott Rifles, the first and only organized and uniformed militia in the Territory. He was also Private Secretary to Governor Tritle until January, 1883, when he was elected Assistant Chief Clerk for the Council of the Twelfth Legislature. On the 12th of June he was appointed Superintendent of the Penitentiary.

During his residence in California, in 1874, he was married to Miss Madera Spaulding, a native of California. Their family consists of two boys and one girl—Walter, Charles, and Theresa Ingalls.

#### COUNTY OFFICERS, 1884.

TREASURER—A. Lorette.

PROBATE JUDGE—Isaac Levy.

SHERIFF—A. Tyner.

UNDER-SHERIFF—W. H. Tonge.

DISTRICT ATTORNEY—Samuel Purdy.

SUPERVISORS—G. M. Thurlow, Chairman; Chas. Baker and G. H. Hutchins.

CLERK BOARD OF SUPERVISORS—F. Avila.

CORONER—J. H. Taggart.

JUSTICES OF THE PEACE—J. L. Smith, W. H. Simmons, J. S. Bancroft, Yuma; A. D. Crawford, Silent.

## YAVAPAI COUNTY.

YAVAPAI is the largest division of Arizona, and has an area of 37,000 square miles, or but little less than the great State of New York. It has long been known to be rich in minerals, though comparatively very little has been done in the way of development, and it may be safely stated that there is no mining locality in the United States and Territories so rich and varied in its mineral deposits, and possessing so many advantages to the prospector and miner, so little understood abroad, notwithstanding all that has been said in its favor.

#### RICH, BUT UNINHABITED COUNTRY.

To the north of Prescott, in Yavapai County, says the *Journal*, a stretch of country extends from 300 to 400 miles, to the Utah line, about which the general public knows comparatively little. Although Prescott is spoken of as being in northern Arizona, geographically speaking, it is almost in the center of the Territory. The entire Territory spoken of above contains a population of only from 200 to 400 souls, north of the railroad. To reach these settlements a circuitous route has to be taken to the northeast, to avoid the immense and impassable precipices of the Grand Cañon of the Colorado River, which, in places, rise perpendicularly for a distance of from 4,000 to 6,000 feet, making the distance from Prescott about 500 miles.

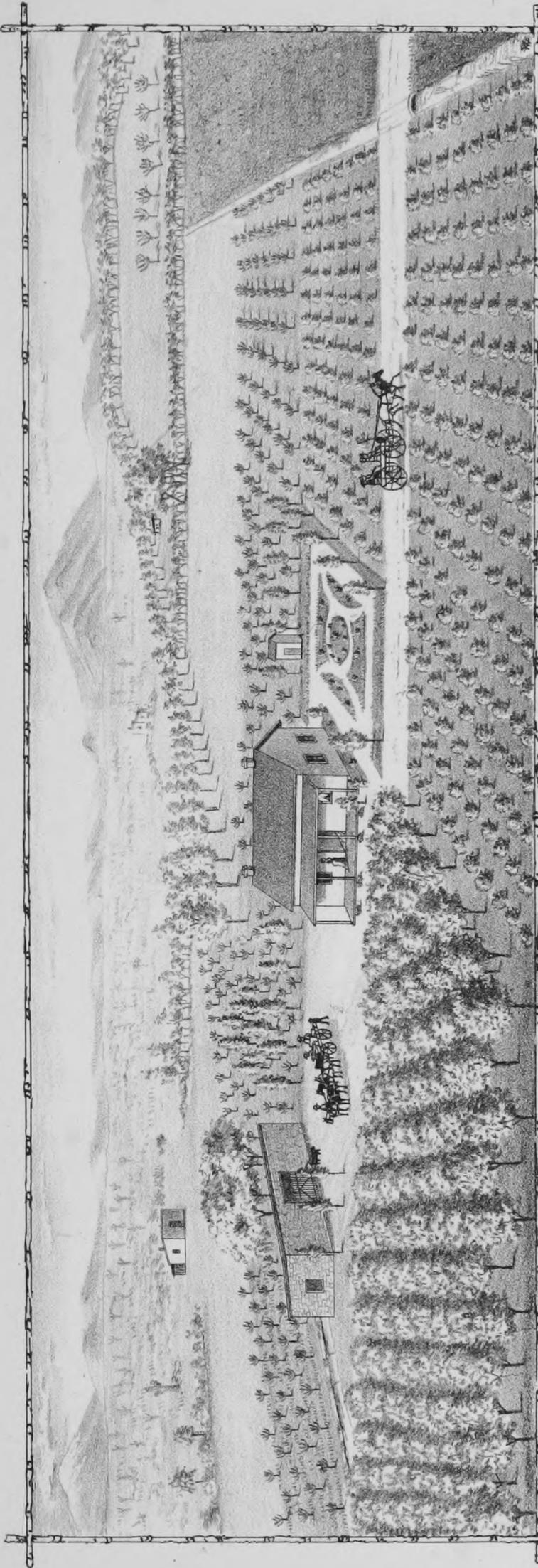
The few settlements that have been made are mostly by Mormons, whose families live in Utah, the nearest town being Knaab, about ten miles across the Utah line.

In 1853, that part of Arizona north of the Gila and Colorado Rivers was not occupied, to any extent, by American soldiers or civilians. December 23d of that year, Fort Whipple was located at Postal's Ranch, twenty-four miles northeast of Prescott; and on May 18, 1854, was removed to the left bank of Granite Creek, one mile northeast of that town, where it became the headquarters of the district, subsequently the Department of Arizona.

Camp Verde was located 47 miles east of Prescott, at an elevation of 3,500 feet above the sea, and eighty feet above the Rio Verde, distant about a mile from its western bank, and ninety miles, by a rough trail, north of Camp McDowell.

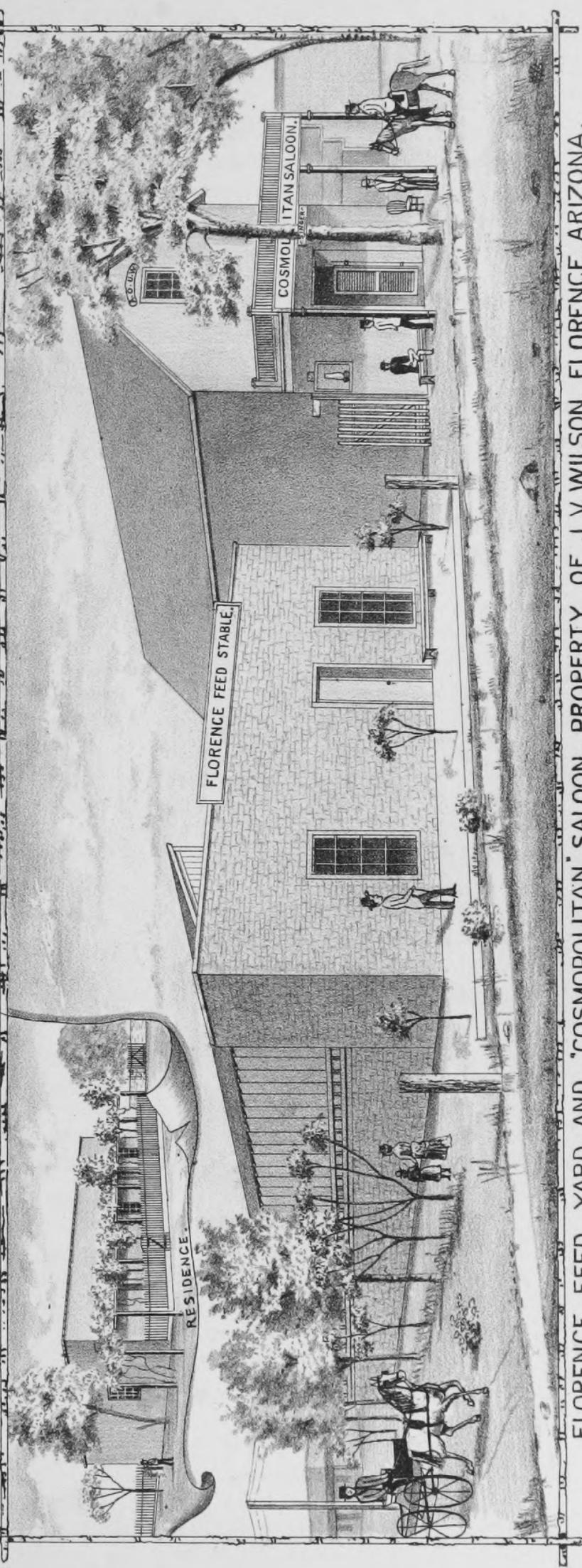
#### FINE GRAZING AND TIMBER.

Included in the above section of the county is some of the finest grazing and timber land in the Territory, which as yet does not contain a single settler, the great drawback being a lack of water. A portion lying between the Little Colorado River, Cataract Creek, and the Colorado River, designated on the maps of the Territory as the Coconino Forest, is said, by parties who have visited



RANCH AND RESIDENCE OF JOHN GIULIANI, ESQ. 3 MILES EAST OF FLORENCE, ARIZONA.

ELLIOTT & CO. LITH. 241 MOUNT ST. S. F.



FLORENCE FEED YARD AND "COSMOPOLITAN" SALOON. PROPERTY OF J. V. WILSON. FLORENCE, ARIZONA.

it, to resemble a great natural park. A portion of it is heavily timbered, without a single sprig of undergrowth, while in the center is an immense grassy plain 60 by 100 miles in extent, which, if watered, would afford grazing for thousands of head of stock. The time will come when the enterprise and ingenuity of man will, either by sinking artesian wells, or by diverting the waters of the Colorado rivers, make this, at present uninhabitable country, bloom with prosperity and teem with inhabitants. The settlers at present are confined to Soap Creek, Knaab Wash, and other valleys, whose only interest in either county or territorial affairs, is to annually select one of their number to carry the taxes of all the settlers to the county seat.

#### MINES OF YAVAPAI.

The principal mineral belt of the county lies between the thirty-fourth and thirty-fifth parallels of latitude, and extends from the boundaries of Apache County on the east to Mohave County on the west; and throughout this belt, from east to west, and over a hundred miles in width, the hills and mountains everywhere abound with rich deposits of gold and silver, copper and lead.

Silver Mountain, and the Mammoth Silver Lode, and other veins of silver, gold, and copper, in the neighborhood, were discovered in the winter of 1864-65, by W. C. Collier and a party of prospectors, and it was the first argentiferous district found in this range that attracted any attention.

Within three months from the date of the discoveries made by Collier & Co., everything like a quartz vein that showed itself on the surface of the ground on Silver Mountain, and in its vicinity, was located in claims of 300 feet in length, and for two years there was quite a large number of men at work in the district.

From 1867 to 1873 the Apache war was in progress, and the insecurity of life and property caused many to leave the Territory, and prevented men of means from investing in Arizona mines, and the original locators of mining claims in Silver Mountain, and in many other districts, abandoned their claims, and for several years few persons visited that section of country. But in 1870 and 1871 the Tiger, War Eagle, Del Pasco, Grey Eagle, Oro Bonito, Congar, Lorena, California, Benton, and other gold and silver mines, were found in the Bradshaw Mountains, followed in 1875 by the discovery of the Peck, Silver Prince, Black Warrior, Evening Star, Alta, Tuscumbia, and many other veins, about five to ten miles north and northeast from Silver Mountain. Four quartz mills were put up to work the ore from these mines, known as the Tiger, Basin, Peck, and Tuscumbia Mills, and around them lively mining camps grew up.

The county built a road to the town of Alexandria at an expense of \$35,000, in 1877, and mail routes were es-

tablished, and a fresh impulse given to mining affairs. Under this condition of things the old mines in Humbug, Silver Mountain, and Castle Creek Mining Districts, were relocated under the United States laws, in claims of 1,500 feet in length by 600 feet in width, a claim containing nearly twenty-one acres of surface ground. Hardly one of the discoverers of these mines is now an owner in them. They have gone to other fields, and their places are filled by others, who are now endeavoring to work the mines on a scale which their magnitude warrants.

The present owners of the Mammoth have six claims, of 1,500 feet in length each, commencing at a point on the north side of Silver Creek, and extending across and down the south side of the mountain.

Where Silver Creek crosses, the vein water rises to the surface at the upper edge of the vein, and except in very dry seasons, runs across the ledge. Up on the mountain-side, south of the creek, water has been found in the vein by those making excavations for mineral.

On the southern side of the mountain are permanent springs near the vein, on the head-waters of Castle Creek, and one and a half miles west is a noted spring known both as Thompson's and Tussock Spring. Northwest of the mine, distant about five miles, is Taylor's Ranch, in Minnehaha Flat, where is a running stream, a fine body of farming land, a splendid body of pine timber, and a saw-mill, which supplies the adjacent country with lumber. Thus it is seen that surface water is as plenty at the Mammoth, and vicinity, as in most mining districts in Arizona.

The county of Yavapai has scores of promising mines, says the *Journal*, several of which are well known for their output of precious metals. A few of those now contributing bullion are: The United Verde Company's ledges, the Black Warrior, Peck, Pine Spring, Lane, Holmes, Dosoris, Chicago, One Hundred and Ten, Kitty, and Silver Belt. The mines of Yavapai exist in high timbered mountains and their foot-hills, in the center of the great mineral belt which crosses Arizona from east to west. These mines are counted by the hundred. They cannot, of course, all be rich; but beside those already mentioned, there are the Perry, the Dividend, the Galena, Eugenie, Grey Eagle, Prince, Alta, Bond & Hayden's Mine, E. S. Junior's, C. Y. Shelton's, C. B. Rush's, Dave Grubb's, and several others that have given proof of great wealth.

A great many mines are not being worked because owners thereof have not the means to purchase and put up proper machinery. With a railroad between sixty and seventy-five miles away, transportation is necessarily slow and uncertain. It is also costly. These are facts which, in a great measure, account for the apparent neglect of our people to work their rich mines. Press and people have appealed to the right kind of men to come here and start

reduction works in Prescott, which is convenient to all the mining districts, but our worst, our greatest need, is railroad connection with the Atlantic and Pacific, which will soon be accomplished by the Arizona Central, which is now a fixed fact.

The surface showing of the Hassayampa District and the showing from the development thus far is such that this district will compare favorably with many others which are receiving more attention, and some of which have become producing and paying districts.

The Old Chase, Sterling, and Senator Mines were worked in an early day for the free gold they contained, and the last is said to have produced \$150,000. Work ceased when or soon after the sulphuret ore was encountered and but little work has been done upon them since. The district is abundantly supplied with timber and water, is easy of access, and is but a short distance from Prescott.

#### PLACER MINES.

Yavapai has numerous and paying placers, some of them having been worked for many years at a profit. Among these are the Lynx Creek Placers. Speaking of these mines the *Journal* says: "Governor Tritle, Prof. F. F. Hunt, and Mr. L. H. Fink, formerly foreman of Governor Tritle's mills in Nevada, accompanied Mr. Frank M. Murphy to the Lynx Creek Placer Mines to witness the operation of a "clean up." The work was commenced while they were present, with prospects of a very handsome yield, and the party returned well pleased with the future prospects of this property, which has never yet failed to respond liberally to the demands made upon it by active operations. From other sources it is learned that the present owners of this property contemplate expending a considerable sum of money during the coming season in improvements in the way of building reservoirs, ditches, etc., by which the supply of water, which runs to waste in winter, can be stored and made available for working the placers a large portion of the year.

Mr. Moses Langley came in from Weaver District, bringing with him a nugget of gold which he took out of the top of Rich Hill, about six feet beneath the surface. It weighed twenty-two ounces, and was sold to the bank of Arizona for a little over \$400. The discovery of this nugget created great excitement in the district, and Rich Hill may again become the scene of as great activity as in former years, when it yielded up in a few months over one-half million dollars.

#### PRESCOTT, THE CAPITAL.

Prescott, says Hon. F. M. Murphy, the most beautiful town in Arizona, where all the great mining interests center, the capital of the Territory, and the county seat of Yavapai County, is situated in a beautiful mountain glade,

surrounded by the northern spurs of the Sierra Prieta. The city was laid out in 1864, and named "in honor of the eminent American writer, and standard authority upon Aztec and Spanish American history." The town has a beautiful situation, being surrounded by low hills crowned with lofty pines and covered with fine grasses. The streets are broad and laid out with the cardinal points of the compass. In the center of the town is a large plaza, in which stands the County Court House, one of the finest structures in the Territory. It is built of brick and stone, two stories in height, with a mansard roof, crowned by a handsome tower.

Prescott has the appearance of a home-like, Eastern town. Its buildings are of wood, brick, and stone. It contains the handsomest mercantile establishments in the Territory, many of which would be a credit to older and more pretentious communities. It is the center of an extensive mining, pastoral, and agricultural region, and has a large and prosperous trade. Besides its fine business establishments, Prescott can show many elegant private residences. It has a fine theater and a large public hall. Three saw-mills are in constant operation near the city.

Prescott has two banks, one a fine brick structure 72x29 feet and two stories in height, the other, an elegant brick building, one story in height.

One hotel, the Williams' House, is new and elegantly furnished and cannot be surpassed in the Territory; it has also fifteen mercantile establishments.

The permanent population of Prescott is about 2,000, and is rapidly increasing, for aside from its importance as a business point, Prescott has special home attractions.

#### LOCATING PRESCOTT.

On May 30, 1864, a meeting of citizens was held at Granite Creek, Yavapai County, and a town was established named Prescott. The streets all run with the cardinal points of the compass. A like excellence of judgment was shown by its founders in naming the streets after persons identified with the former or present history of the Territory, such as Montezuma, Cortez, Marina, Alarcon, Coronado, Whipple, Aubrey, Leroux, Walker, Laird, etc. Its broad streets reach out from a central plaza, giving ample space, and avoiding that density of structure and population which so jeopardize the sanitary condition of many of our large cities. The surveying was done by Robert W. Groom. The first map was by P. Waldemar. The Jackson House was the first hotel, then the Osborne, and next the Prescott.

Prescott has three newspapers. The *Arizona Journal* is published daily and weekly by the Arizona Publishing Co., and edited by J. C. Martin, an able and experienced newspaper man. The *Journal* is recognized as one of the leading papers of the Territory, and has been instrumental

in developing the resources of Yavapai County, and advancing the interests of Prescott.

The daily and weekly *Courier* is published by J. H. Marion, and is a wide-awake and newsy journal. Mr. Marion has long been identified with the fortunes of Prescott, and wields a ready pen. His paper has been ever foremost in advancing the mineral and agricultural resources of the country.

#### EARLY TIMES OF PRESCOTT.

"Captains Walker and Weaver hunted and trapped here as early as 1832. Of the Walker party, we have yet in our midst," says the Prescott *Courier*, "Joseph R. Walker, Sam and Jake Miller, George Lount, John H. Dickson, Alfred Shupp, and Charles Taylor.

The first number of the Arizona *Miner* (so named by Judge H. W. Fleury), made its appearance March 9, 1864, and was published for some time semi-monthly. It was owned and published by R. C. McCormick, afterwards Governor. The *Arizonian* was published in Tubac, at an earlier date.

Judge Fleury's residence is the oldest house in Prescott. It was built of pine logs, in 1864, and is still known as the Governor's mansion.

Rev. William H. Reid was the first minister of the gospel who attempted to enlighten the people of this section. Rev. G. H. Reeder built the first church.

The first Sabbath-school was organized by Rev. Reid, August 7, 1864. On June 14, 1866, Mrs. Turner, Mrs. Brooks, and Mrs. Bashford organized a Sabbath-school.

The first marriage of whites occurred at the Agua Fria, September 3, 1864. Rev. Reid tied the knot. The first marriage ceremony in Prescott was between John H. Dickson and Miss Mary J. Ehle, November 17, 1864, Governor Goodwin performing the ceremony. They are still honored residents of Prescott.

The first white child, Molly Simmons, was born here January 9, 1865.

The military telegraph was established in 1873.

The first term of District Court was opened in Prescott, September 27, 1864, by Judge Allyn. The late Hon. Coles Bashford, and Judge Howard, were the only lawyers until the Court made a new lot. The session was held in the log building now owned and occupied by Judge Howard.

Aztlán Lodge, No. 177, A. F. and A. M., commenced its career July 25, 1865. It was, for a long time, the only lodge of any kind in Arizona. The first Odd Fellows' lodge was organized here July 13, 1868.

The Wickenburg stage massacre occurred in September, 1871.

The first ball was held November 8, 1864. Ladies were very scarce.

The Indians commenced their career of crime in March, 1864, on the trail leading from the gold diggings of Weaver to Walnut Grove, where they surprised and killed three Americans and five Mexicans. It is estimated that not less than 1,000 men, women, and children, have since fallen by their hands.

The first, and only earthquake that made itself felt, came in March, 1871.

Potatoes and onions used to sell here at seventy-five cents and \$1.00 per pound. At one time, it took 100 greenback dollars to purchase 100 pounds of flour.

The first load of apples brought in from California, retailed at \$1.00 each.

Late California papers used to be four weeks old, while those from the Atlantic States would be six weeks old."

The Territory of Arizona constitutes a separate military department, with headquarters at Fort Whipple, near Prescott. Brigadier-General George Crook is the present commander.

Prescott is well represented in secret societies, having flourishing lodges of Masons, Odd Fellows, Good Templars, Knights of Pythias, Patriotic Order Sons of America, and the Foresters.

BARRETT POST, No. 62, of the Grand Army of the Republic, was mustered in, officers elected, and installed by Adjutant Robert Frazier, Negley Post, No. 35, Mustering Officer of the Department of California. To the martial music of fife and drum the veterans assembled at the Good Templar Hall. Roll called; showed a list of seventy-two comrades. Adjutant Frazier was introduced to the comrades, and immediately proceeded to muster in the post.

This is the largest post in Arizona, and, considering that a short time ago a charter was applied for, shows the enthusiasm and energy which is taken by the members, which are composed of some of Yavapai's oldest and best citizens.

The Prescott *Journal*, in noticing the formation of this post, says: "The action of the veterans in naming the new post of the Grand Army of the Republic at this place was a very handsome compliment to a faithful officer—the only one killed in this Territory by Confederate bullets. Lieutenant Barrett, after whom the post has been named, was a member of the First Cavalry, California Volunteers. He was killed in an engagement at Picacho, a few miles west of Tucson, with a detachment of Confederate troops under the command of Lieutenant Jack Swilling, who was afterward well known in this Territory, and who at the time was in command of a vidette post, Confederate army. General Carlton was, at the time, commanding officer of

the department, then known as the Gadsden purchase. Lieutenant Barrett was buried on the field of battle, but was afterward taken up, and his remains re-interred in Tucson by Capt. McCleave Griffith Taylor, at present a resident of Prescott, who was a lieutenant, also, of the California Volunteers, and was in command of a detachment in the rear of Lieutenant Barrett's, at the time of the engagement."

#### MILITARY COMPANIES.

THE MULLIGAN GUARDS completed an organization this year. The company numbers fifty-one active, and eighteen honorary members, the latter including Governor Tritle, Secretary Van Arman, M. Goldwater, Jacob Henkle, and others.

The company lately voted to change their organization from cavalry to infantry. As soon as the organization is effected, in accordance with the laws of the Territory, application will be made to Governor Tritle for arms.

The Prescott Rifles have an organization, and lately met to receive a flag, presented on the part of the ladies of Prescott, as well as to engage in the festivities of the occasion which followed. At a few minutes after 9 o'clock, the flag, which is an elegant silken banner, was brought into the hall, and Mrs. Gorham A. Bray, on behalf of the ladies of Prescott, in a very neatly-worded speech, presented it to the company.

Governor F. A. Tritle, on behalf of the company, in one of his happiest veins of oratory, received the colors, and, as commanding officer of the militia of Arizona, pledged the company to keep their gift unsullied, and thanked the ladies for their generosity in remembering them.

The Territorial Law Library contains nearly 3,000 volumes. Under Secretary Van Arman's judicious management, 350 volumes have been recently added, making it a valuable collection.

The miscellaneous library belonging to the Territory, contains 3,500 volumes, many of which are rare and valuable. The two libraries are valued at \$20,000. Recent additions have been made by the Secretary, which still further enhances its worth and value.

The public school building is located on Gurley Street. It is a two-story brick edifice, surmounted by a tower with bell. It is a neat, substantial, and commodious building. Its accommodations are ample for 300 scholars. Its rooms are seated with the modern, improved desks, and fitted with all the latest appliances for the aid of the scholars. A competent force of teachers is employed by the Board. Prescott has reason to be proud of her school.

#### CHURCHES OF PRESCOTT.

Prescott has five churches, in which service is held

every Sabbath. The Congregational Church building is on Gurley Street, and is a neat wooden structure. Rev. T. C. Hunt is pastor. A Sabbath-school is also held in connection with the services.

The Methodists have a neat wooden church on Marina Street, Rev. Nathan L. Guthrie in charge. A Sabbath-school is held in connection with every service.

The Methodists, South, have a small, neat church in West Prescott, where service is held every Sabbath evening. Sunday-school is held every afternoon. Rev. J. M. Langston is the pastor.

The Catholics have a small edifice on Gurley Street, where service is held every Sabbath.

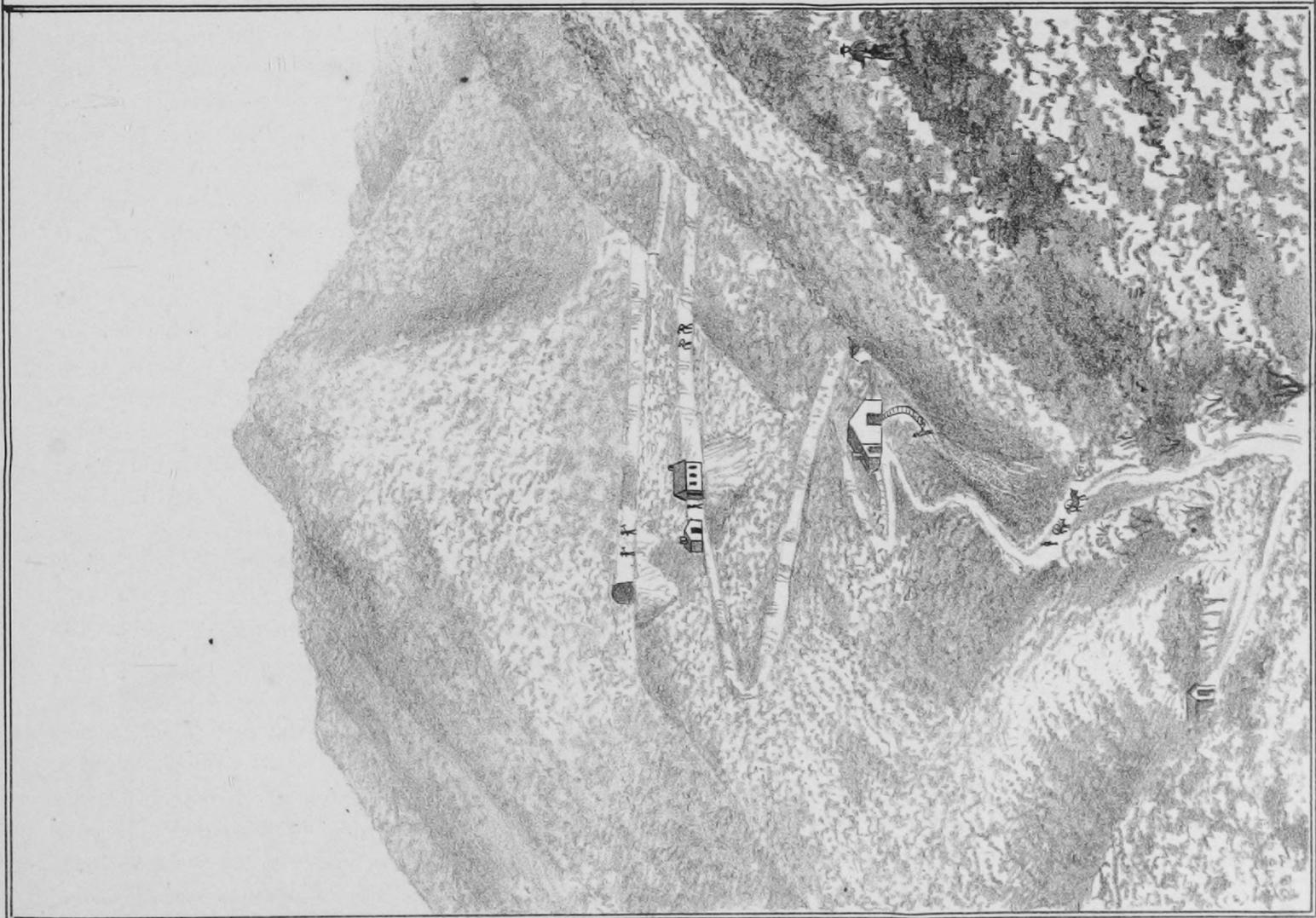
The Baptists have a small building in West Prescott, where occasional services are held. There is, at present, no regular pastor.

#### CLIMATE OF PRESCOTT.

The fine mountain scenery, and clear, bracing air, make Prescott a charming retreat in summer. The city is situated about 5,500 feet above sea level, and possesses one of the most delightful climates on the continent; and with its pine-covered hills, green valleys, and beautiful gardens, is one of the most attractive cities on the Pacific slope.

Prescott is in an elevated region, and has considerable cold weather. Snow falls during the winter, but disappears very rapidly. Sleighing is almost impossible. Perhaps, for one or two days in the middle of winter, the snow lies long enough for a short ride, but not very often. During July and August, the middle of the day is warm, but in the shade there is always a breeze blowing, and it is cool.

An old settler is reported as saying, in regard to the weather of 1884, that "having hung out here since early in 1864, we have, of course, some recollection of wet spells in former winters, and think we risk nothing in asserting that the rain of 1884 is the heaviest and best winter rain-storm that Providence has given the Territory during the Hassayampa era. While the winters of 1865 and 1866 were very wet, it was snow, not rain, which made the earth spongy, and caused a tobacco famine throughout Yavapai County. We had, on Christmas, 1865, one foot and a half of snow in Prescott. A little later, snow here was three feet deep. Higher up, in the mountains, it was measured by the yard. It was a very cold winter, and 1867 was a winter similar to this. We recollect that the waters of Black Cañon Creek raised twenty feet in one night, a Sunday night at that. We might go on with the record, but have given sufficient to satisfy most people of the fact that Arizona is not the dry country some people think it is. In less than a month, about eight inches of water have been given us, and the end is not yet."



DOSORIS MINE WITH WORKS AND TUNNEL;  
FROM THE SOUTH.

Eighteen years ago this winter, Prescott had a food and tobacco famine. It took a train of wagons three months to come from Hardyville, on the Colorado River, to Prescott. This was on account of wet roads. People suffered for the necessaries of life, and men thought more of a square inch of tobacco than they did of so much gold. Freight, then, was brought in at from twelve to thirty cents a pound.

#### RAILROAD TO PRESCOTT.

The building of a railroad to connect Prescott with the outside world has taken tangible shape, says the *Journal*. We have begun now in the right manner. We have taken up the matter ourselves; have come to the wise conclusion to wait no longer for other people to drag us out of the mire, but to pull ourselves out. Have concluded that if we do not help ourselves, others—outsiders—will not give us a helping hand.

So the organization of the Central Arizona Railroad Company is a move in the right direction, and unless some unforeseen obstacle is thrown in the way, the whistle of the locomotive will reverberate among the surrounding hills of Prescott before the death of the current year.

With the water works and railroad the life and prosperity of Prescott is assured, and the horoscope of the future gives ample cause for rejoicing among her people. These things accomplished, others of a substantial character will inevitably follow. The rate of insurance will be reduced; the price of living will be lessened; the merchant will sell more goods, while, at the same time, he will make more profit, because of his increased sales. If wages are reduced, the wage-man will still be better able to purchase than now, because of the reduced price of all commodities which he consumes.

FLAGSTAFF is beautifully located in the midst of a pine forest at the foot of the San Francisco Mountains. Aside from the scenic attractions, which are many, there is in the lumber business, and the prospective cattle and sheep business, enough to warrant us in saying that Flagstaff is destined to be one of the commercial centers of the Territory. The climate is equable, the elevation being about 6,500 feet above sea level. Oats and potatoes are grown in abundance without irrigation, and the grass is of the finest quality. There are thousands of acres where it could be cut profitably for hay.

Some of the largest saw-mills in the country are located here. Deer, turkey, and antelope abound in the vicinity of Flagstaff, deer frequenting the mountain peaks in summer, and the cañons south of the station in winter.

Eighteen miles from Flagstaff, in Oak Creek Cañon, brook trout are found in great numbers. Nine miles northeast are the cave dwellings, well worth a visit. The drive is over a splendid natural road, with magnificent

scenery. It is said there is a passable trail from Flagstaff to the Grand Cañon of the Colorado, passing over the mountain between Agassiz' and Humphrey's Peaks, and then bearing to the eastward to the Little Colorado, and following the course of this stream, not in the bed of the cañon, down which it is impossible to journey, but keeping on the *mesa* or cliffs on the west side of the river until you approach the Colorado, then following one of the numerous dry-washes to the river. This would bring the tourist to the foot of Powell's Marble Cañon, and directly in front of the great Kaibab Plateau, with perpendicular walls of vermilion between 5,000 and 6,000 feet in height. A magnificent trip for an enthusiastic tourist! But no one should attempt the journey without a competent guide.

The good people of Flagstaff have gone to work in laying the foundations for the future growth of the town, as though they fully comprehend the advantages of that location. There has a row of business houses been built there within the last three or four months, that would be a credit to any town.

P. B. Brannen & Co. have erected a massive stone building upon the main street, and have a fine walled cellar beneath the entire structure. Passing through their store, we were surprised that in a new country such an extensive stock should be carried.

You find an excellent assortment of dry goods, clothing, boots and shoes, hats and caps, furnishing goods, etc., and one side of the store is devoted exclusively to groceries. Below are the wines, and liquors, and heavy goods, such as glass and goods in cases. They are always crowded with customers, and the place looks like a grand market. The members of this firm are also largely interested in cattle and sheep, and are among the earliest settlers in Arizona.

A neat and commodious frame building has been erected for school purposes, which is also used by the Methodists and Congregationalists, alternately, for divine services.

PEACH SPRINGS is the nearest station to the great Colorado Cañon. This fact has given the place considerable importance, that it would not otherwise have. The Atlantic and Pacific Road here get a good supply of water from their fine springs north of town. The water is forced up through pipes and stored in tanks.

#### OFFICERS OF YAVAPAI COUNTY.

RECORDER—Harley H. Cartter.

SHERIFF—Jacob Henkle.

TREASURER—E. J. Cooke.

DISTRICT ATTORNEY—C. B. Rush.

PROBATE JUDGE—A. O. Noyes.

CORONER AND PUBLIC ADMINISTRATOR—R. J. Rutherford.

SUPERVISORS—W. A. Cline, W. H. Hutchinson, J. M. Myers.

## PIMA COUNTY.

**T**HIS county was originally very large, and was bounded on the north by the Gila River, on the east by New Mexico, on the south by Sonora, and on the west by Yuma County. Its limits have been reduced by the formation of other counties.

The valley of the Santa Cruz is the principal agricultural settlement of this county. This stream, which rises in the Huachuca Mountains, sinks in the thirsty sands for more than two-thirds of its course. In several places the stream comes to the surface, and the land in the vicinity is brought under cultivation, producing crops of cereals, vegetables, and fruits. The valley of the Santa Cruz, opposite Tucson, has been cultivated for hundreds of years, and shows no diminution in its productiveness.

There are excellent grazing lands along the Santa Cruz, the Arivaca, the Cienega, and in the rolling, grassy country southeast and southwest from Tucson. Large bands of cattle have been pastured on these plains and table-lands for years.

### MINES OF PIMA COUNTY.

In Pima County the mining districts are at once the oldest and the newest on the Pacific slope, north of Mexico. They are mainly in the Santa Cruz Valley, and a region to the west thereof, once known as Papageria, inhabited by the semi-civilized ancestors of the present Papagoes. Traces are not wanting of their having been worked even anterior to the Spanish conquest of Mexico, by a people superior to the Spaniards of that day in nearly all the useful industries, and only excelled by them in the industry of slaying and marauding.

Until the last few years all the mines were overrun by Apaches, and abandoned or worked with great difficulty. Owing to the disturbed state of the country, it was customary to transport most of the bullion of the Picacho Mine, and rich ore, under cover of night. The dreaded and deadly Apaches were the most formidable enemies of the whites, and the great hindrance to mining operations. For a time, the friendly Papagoes, under the leadership of their gallant chief, the brave old Conquin, kept vigilant ward over this district, and generally succeeded in keeping the ruthless marauders at bay. The loyal Conquin took a great interest in the safe transportation of the bright bars of silver to their place of destination. This fine old veteran is now over eighty years of age, yet his eye has a fiery twinkle whenever the Picacho Mine is named in his hearing, and with a kind of grunt, he mutters, "Plancha, plata."

In the earlier history of the mine, the ore had to be transported on the backs of animals some twenty miles to

a place called Fresnal, where there are several springs. This mode of conveyance had, of course, the effect of adding to the slowness of the already very slow system in vogue. There were, as the ruins of the reduction works still show, thirty-six arrastras and several furnaces kept constantly employed. The conveyance of the ore required for all these, would employ a large number of burros and mules, with their drivers, and the number of employes at the works must have been very considerable. After the water level was reached in the tunnels, some thirteen arrastras and a few smelters were erected close to the mine, although part of the Fresnal works were still continued in operation. Much of the high-grade ore taken from the lower levels was shipped and sold in Sonora, and rumor points to several good-sized villages and hamlets which owed their origin to the working of the great Picacho Mine. All around the foot of the mountain can be seen the monuments of a former settlement.

For fuller description of mines, the reader is referred to the article on that subject.

### CITY OF TUCSON.

Tucson is one of the most important places in Arizona. It is on the Santa Cruz River, which is here a small, inconsiderable stream, coursing its way northward to traverse thirty miles of subterranean passages to the Gila River.

Tucson is by no means a young town. It was at one time the capital. In the days of the Apache wars, it was, as now, the largest town. Originally a Mexican town, it was laid out with many angles, acute and obtuse. The following items are from the *Tucson Star*:—

"Tucson has 12,000 inhabitants, about two-fifths of which are Mexicans. It has a municipal form of government, under a special charter granted by the Legislature. It is the seat of Pima County, and as such has magnificent county buildings, constructed at a cost of nearly one hundred thousand dollars, also city hall, library, and engine house, erected in 1883.

"It is the most important point on the Southern Pacific Railroad between Los Angeles and New Orleans, and is headquarters of the Arizona Division. Railroad shops, round house, and car shops of the company are erected here, employing many mechanics and other workmen. Tucson is the natural railroad center of southern Arizona.

"Daily stages run from here to all of the principal mining camps and settlements. Good roads traverse the country. Tucson has excellent accommodations for travelers. There are five good hotels and a number of lodging houses. The city has water works, gas works, electric light, and herdic coaches, four churches, public and parochial schools, a new public school building, costing

\$50,000. There are five teachers employed in the public school, and as many more in the parochial school and St. Joseph's Academy. In fact, educational facilities are as good as can be found anywhere. The growth of Tucson has been steady and gradual. The same may be said of the appreciation of real estate. Buildings now being erected are of the most substantial. Brick is coming into general use.

"The climate of this entire section is unexceptionable during ten months of the year. The winters are as mild as Florida's; the summer, though warm, is not oppressive, owing to the dryness of the atmosphere. Hence, many come here for pulmonary and similar ailments, and in almost all cases find relief or permanent cure. Consequently, the health record of Tucson will compare with any health resort in the United States.

"The geographical location of Tucson is most favorable to a large radius of mining camps, Empire, Santa Ritas, Oro Blanco, Quijotoa, Sierritas, Silver Bell, Santa Catalinas, and many others, all of which are within a distance of sixty miles, some only twenty, but all draw supplies from this point."

Tucson has five hotels. The Palace, Cosmopolitan, Porter's Russ, and Occidental. The arrivals during the year 1882, were 19,749, as follows: Palace, 6,689; Cosmopolitan, 3,247; Porter's, 3,114; Russ, 4,779; Occidental, 1,940. There is a large number of lodging houses which have accommodated at least half as many more. Four alone enters 3,357 arrivals. We give this as an index of the travel to this point.

Three lines of railroad have been projected, all having Tucson as the terminal point, to wit: Tucson and Calabasas; Tucson and Port Lobos, on the Gulf; the Tucson Narrow Gauge, running to the north, through the coal fields and bullion-producing districts of northeastern Arizona.

#### ANCIENT TUCSON.

The origin of Tucson is rather obscure. Coronado's reports of his expeditions to the "Seven Cities of Cibola" (New Mexico), in 1540-43, though very minute in details, do not mention the Valley of Santa Cruz, through which he passed, as being inhabited. A claim is made for it by Colonel Hodge, in "Arizona as It Is" (on what data it is not stated), that this valley was settled about the year 1560, which would make it the oldest city in the United States, but one, it being stated that Santa Fé was settled in 1555, and St. Augustine, Florida, in 1565. Three miles below Tucson, and a mile due east from the Casa de Dominic Padre (or the Mission of San Augustine), is what appears to be an old town in ruins, but no clue can be obtained as to its origin, history, or the date and circumstances of its destruction. It is again believed that Tucson was com-

menced as a Spanish military station to protect the Mission of San Xavier del Bac, nine miles south, in 1694, or very soon afterwards. One of the oldest inhabitants, who was born in Tucson, in 1819, was Francisco Leon. As far back as he recollected, it was a military post, at which were stationed eighty or ninety soldiers. There were about 140 hovels, without doors or panels, and the windows, when there were any, had no frames; these buildings had a prison-like and angular appearance, inside and out. There were about three hundred citizens.

#### TUCSON IN 1857.

Tucson, the most northern presidio in Mexico, once contained three thousand inhabitants. In 1851 it had dwindled down to less than five hundred. The valley here is wide and rich. The large and picturesque haciendas, and the wide-spread system of irrigation which everywhere marks the plane, sufficiently attest its susceptibility for cultivation. Between Tucson and the Gila is an arid desert ninety miles across, about midway on which is a well-known *picacho*, at the base of which water is often found in pools, and where, by sinking wells, it might be had at all times

December 15, 1859, is the date of Number 42, Volume 1, of the *Arizonian*, published here, a Democratic paper and the first in Arizona, from which it appears that on or before October 27th, of that year, a flour-mill was carried on at Tucson, and on December 1st, a stage line had been established from Tucson to Fort Buchanan, *via* San Xavier Tubac, and Calabasas, the fare to which last-named place was \$8.00, and to Fort Buchanan, \$12.00. In the issue of March 9, 1861, appears the editor's valedictory, and an attack on President Lincoln. At this time Arizona was a county of New Mexico. It was then, as now, the center of trade with the State of Sonora, and on the high road from the Rio Grande to Fort Yuma. Two companies of California volunteers were then stationed in Tucson, but were quite inadequate to keep down the Apaches in the vicinity.

In 1866, several mercantile firms, in succession, brought large stocks of goods to Tucson; building became lively, and substantial and convenient houses replaced the old hovels.

#### CHARACTER OF THE BUILDINGS.

Up to a short time ago the houses of Tucson were one-story adobes. The great heat during the day would render a wooden house less inhabitable, and besides, adobe is cheaper than wood. Now, many of the houses are of brick, and of more pretentious height. There are, also, many brick business blocks. The streets are generally wide. There is a magnificent Court House, and a good opera house.

"On one side of the plaza, the red Indian sells his beads, trinkets, and pinyon, and across the way the American

boys play base-ball. In one quarter of the city, olive-skinned, pig-tailed Chinamen, laundry, scour, scrub, and market garden, and in another place the white boys and girls disport themselves around the skating rink. In the Mexican quarter the women, veiling, in Oriental manner, their faces with bright shawls, and carrying their earthen pitchers of water on their shoulders, or bundles of hay on their backs, do duty as beasts of burden, while their brave lords of creation ride behind them on their ponies, and then swiftly by them trails the Columbia bicycle, as, on the smooth hard plain, Young America holds its Christmas tournament, while, with shriek and whistle, glides past the monster steam-engine, and is heard the whiz of the telegraph line, linking together, by bands of iron and wire, the Occident and the Orient. Tucson, the metropolis of our most modern, and yet most ancient, Territory, is a study, and is well worth coming West to see.

At Tucson to-day, two or three distinct civilizations meet and flourish side by side. There are the old Mexican adobe houses, and there is the electric light streaming from the Court House top and from street corner. The narrow main street of the city seems like an ancient Cairo with its bazaars, and in Congress Hall are American gamblers playing modern keno, faro, and poker. The old Roman Church, with its tawdry furniture, and the image of the Christ Child in the manger, stands on one side of the plaza, and across the street the Methodist bell rings for prayer and simple worship. There are relics of ancient Aztec, Toltec, and Spanish civilization, and four are modern printing presses, issuing two daily and three weekly newspapers, with telegraphic summaries of the world's daily doings. In the one adobe, dirty house, two or three Mexican families huddle together in mire and muck; and across the square is a finely finished frame and adobe mansion, where Thomas Fitch, the California orator, has imported every modern luxury."

#### STREET SCENE IN TUCSON.

A street scene at midday constitutes the most interesting feature of the town to the new-comer. A more complete admixture of races and nationalities could not well be gotten together anywhere else—Jews, Swedes, Irish, English, Germans, French, Yankees, Chinese, negroes, Spaniards, Indians, and all conceivable crosses among these. The Mexicans largely predominate in numbers.

These street scenes are a study, where almost every phase of life is presented. Kid-gloved men, fresh from Eastern cities, are here, full of the idea of plundering Arizona, and going back to enjoy the results. Brawny, broad-shouldered stock-men from California, inquiring quietly for large land-grants on the San Pedro and in Sonora; rough, hardy, open-faced miners and prospectors,

who talk of nothing but leads, lodes, claims, chlorides, sulphurets, free-milling ore, thousands, hundreds of thousands, and millions; swarthy Mexicans, with dark eyes and gleaming teeth; jolly, rollicking negroes, the same under all suns; almond-eyed Chinese, shuffling along; *burros*, dogs-innumerable, and Indians, with an occasional woman hooded to the eyes, with the glaring white sunlight over all, soft and warm, make up the street scenes of Tucson.

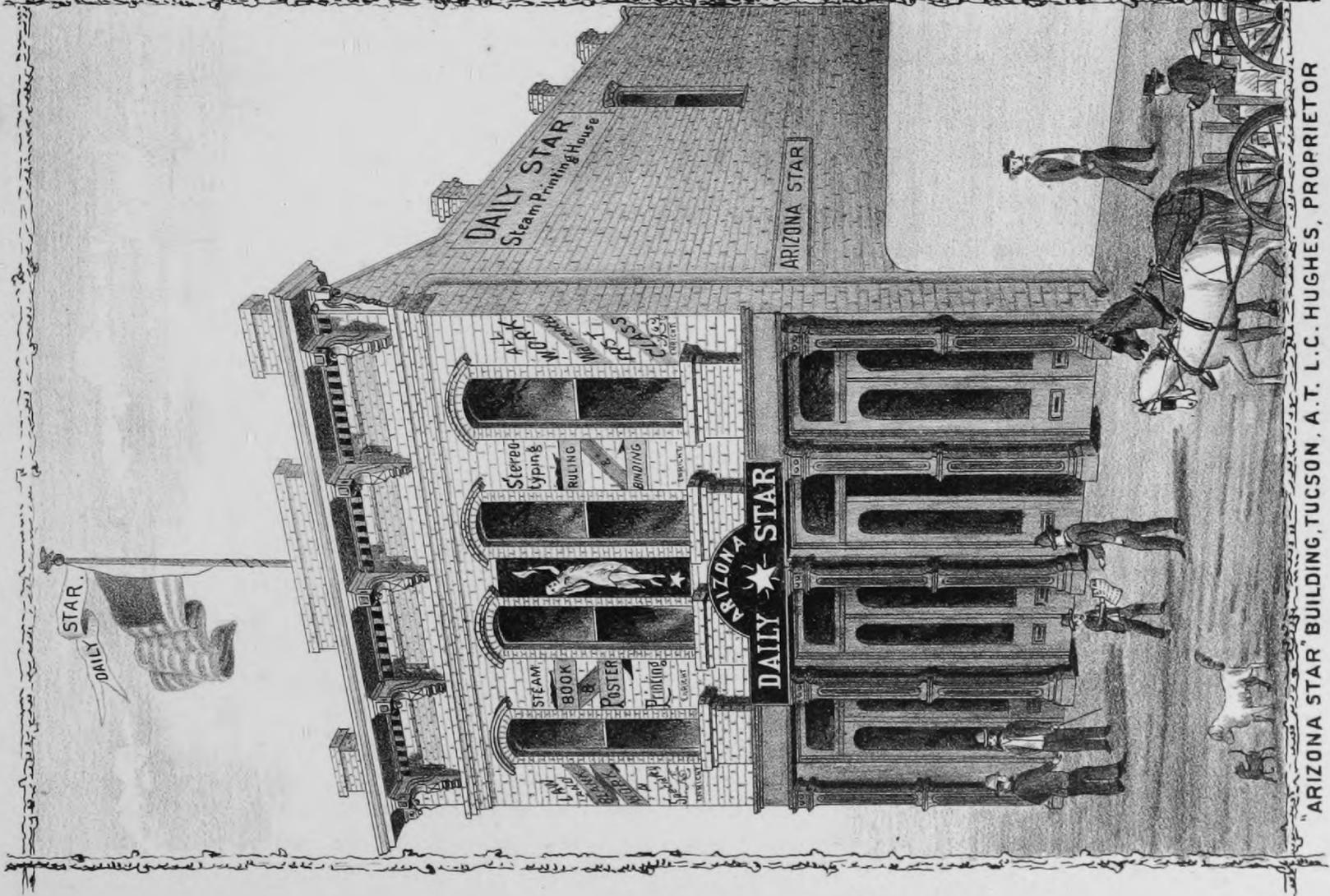
West of the town, the Santa Cruz River slowly steals its way northward; while two miles beyond, rise the Sierra del Tucson Mountains. Toward the north, the peak of Piacacho springs from the *mesa*, and at this distance reminds one of the cathedral of Strasburg; while to the eastward are the Santa Catalinas, trending away to the south east, to be succeeded, farther south, by the Santa Ritas.

#### SAN XAVIER DEL BAC.

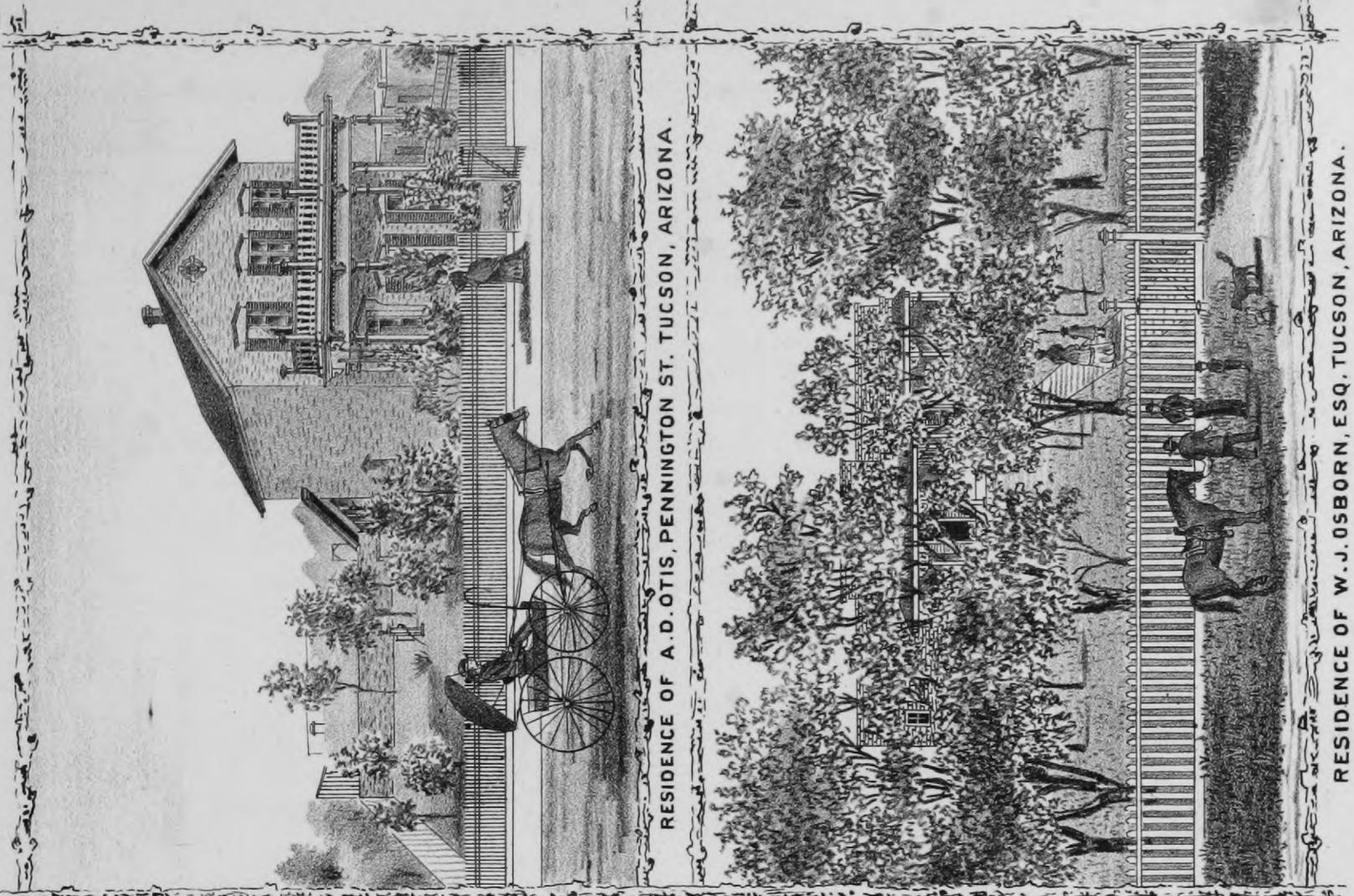
Near this reservation stand the ruins of the Mission San Xavier del Bac—the most noted of all the relics of the church's dominion in Arizona, though not so old by centuries as the Casa Grande and Cliff Castles, whose people have been lost, even in the tracery of tradition; though not so tumbled down as that of San Jose of Tumacacori, near the town of Tubac, still it is the greatest wonder of them all. Over one hundred years ago, a German *padre* began to build this mission by the contributive labor of the Papagoes, who had embraced the cross some years before. It is of the Byzantine style of architecture, and, on approaching it from a distance, has quite a mosque-like appearance.

The chapel was once paved with cement and stained in mosaics, in which thousands of devotional knees have worn furrows and holes. Opposite, and about forty feet away, is the altar, just back of the rotunda, under the dome, into which the chapel merges. Under the first arch, against the wall, are the broken fragments of the guardian cherubim of the sanctuary. One has only his head and shoulders remaining, and looks down upon us with straining eyes, and creates the impression that he has not yet recovered from the fright gotten at his breaking up, and that perhaps he was choked during the trouble. The other is not quite so badly crippled, but has a sympathetic look. Under the next arch is the covered wooden pulpit, placed high against the wall. Between these arches were once rude frescoes from the life of Christ; but the subject cannot well be distinguished, so dim and defaced are they by the hand of time.

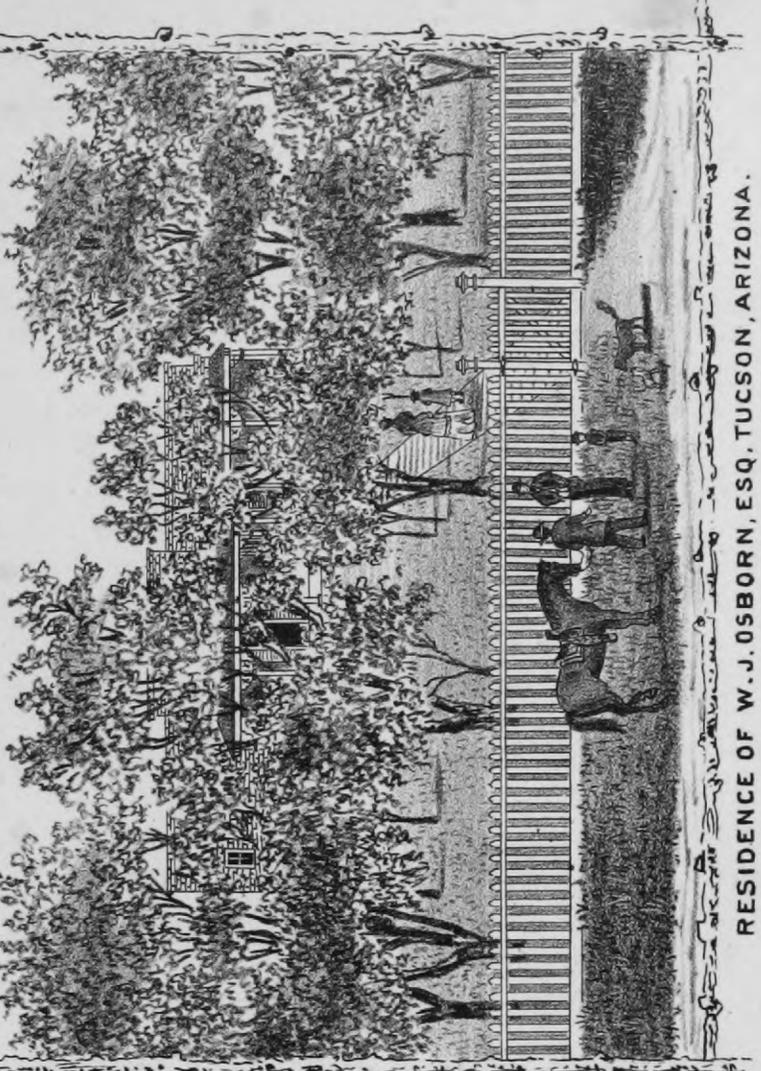
The rotunda rises thirty-five feet above the nave; while on either hand, as you face the altar, are shrines—the one on the left, to the twelve apostles, and the principal saints of the third order of Saint Francis; that on the



ARIZONA STAR BUILDING, TUCSON, A. T. L. C. HUGHES, PROPRIETOR



RESIDENCE OF A. D. OTIS, PENNINGTON ST. TUCSON, ARIZONA.



RESIDENCE OF W. J. OSBORN, ESQ. TUCSON, ARIZONA.

right, to Santa Maria, thus making the chapel in the form of a cross, with the lateral shrines constituting the arms and the altar the head. Back of the altar, in a niche, is an image of the patron saint of the mission—San Francisco—robed in priestly vestments. Statuettes and paintings, crude and expressionless, clamber up on all sides.

Guarding the approach to the altar are two wooden Mexican lions, holding candle sockets between the paws; and though one of these limbs was broken, it mattered not—they tied it on with a string. The Virgin Mother stands in a niche over her altar, dressed in the nun's white robe, a reddish-brocade dress, pea-green mantilla, and lace bordering, her hands tipped together in front in the regulation orthodox style that makes one tired to look at.

In the belfry, in one of the towers, hangs the chimes that have sent out their solemn peals all this hundred of years to the generations since the sunlight first kissed their brazen lips. Here a fine view in any direction can be had, the best, however, being out over the straggling Indian town and up the valley.

"Not a breath of air stirred; the sun came down white and dazzling, but with a pleasant temperature. Leaning against one of the columns, we were lost in the dream of by-gone ages, with the stories whose scenes cluster about these voiceless walls. Back drifted human fancy over years of blood, while savage and semi-civilized surged about these walls in a century grapple for supremacy, till we saw the stern-visaged but kind padre, who came first, standing here and looking out over the town and fields sleeping in the soft sunlight, and heard him in soliloquy murmur to himself the grand command: 'Go ye into every land and preach the gospel to every creature.' Then a long train of cowed and gloomy priests, with their tithes, their mummeries, their dark tyranny over ignorant, trusting, innocent men and women, came here to gloat over their dominion while the sun was shining in mockery, the winds whistling in the trees. Far off in the valley the dusky devotees toiled in the fields."

Tucson, seen from a distance in early morning or late afternoon, level, square-edged, and brown, with the mellow sunshine upon it and upon the castellated mountains behind it, and in the foreground some lazy ox-wains, a prospector with his pots and kettles, or a mounted Mexican towing a bull, which ducks its head in vain resistance, is thoroughly foreign, and of an attractive promise.

Tucson is the commercial center of the Southern mining district, and has an eligible position for future development. It has derived profit in the past from supplying the army, and from smuggling into Mexico, the goods being taken out by teams, then packed over the passes to Altar and Magdalena on donkeys. That part of Sonora traversed both by stage line and the new railroad to Guaymas is

cactus-covered and sterile. The traders at Tucson, as throughout the Southwest generally, are largely Jewish. A certain kind of "life" prevails here. Roulette, faro, and the other games of chance are played openly in a large way in the leading saloons, while the poor Mexicans gamble for small stakes at their own *fondas*.

#### BUSINESS HOUSES.

Tucson has many large and costly business houses, whose wholesale mercantile firms offer inducements to retail merchants not found elsewhere in the Territory. Hardware, groceries, dry goods, stoves and tinware, crockery, lumber, and liquor are represented by wholesale dealers. We represent, in our illustrations, some of these business blocks. Among them we may mention the following:—

L. ZECKENDORF & Co. have a mammoth store rarely exceeded anywhere in size and amount of business transacted. Their stock consists of general merchandise, which is handled in large quantities, both wholesale and retail.

A. D. OTIS & Co. have another extensive business house, dealing largely in mining supplies, lumber, hardware, crockery, iron, steel, paints, and oils, both wholesale and retail.

THE ARIZONA "STAR" building is a very substantial brick structure, with iron trimmings. It is one of the handsomest fronts in Tucson, and is an ornament to the plan. The *Star* has been of great value by its able articles in aiding in the building up of Tucson as well as of Arizona generally.

J. S. MANSFELD erected in 1881 a superb building, specially adapted to the trade of a large and regular book store, the only one in Arizona. Its interior dimensions are 46x35 feet, with a ceiling sixteen feet in height. A large sky-light illuminates the interior, aided by the large show windows in the front. The building is situated at the corner of Congress and Warner Streets, is substantially built, tin roofed, and has an ornamental front and broad sidewalk, both of which make the place attractive.

The shelvings and cases on the western side of the interior will be taken up with a large and well-selected stock of books; the show-cases and shelving on the east side contain such fancy goods as pertain to the trade; the rear is for a wholesale stationery jobbing department, and the center will be filled up with toys for the coming holiday trade. The northwest corner contains a suitably constructed and comfortable counting-room and private office.

In 1870 he opened the first book store ever established in this city. His primary stock consisted altogether of newspapers, and his store was the one-half of a space 8x10 feet, the other half being occupied by John B. Allen, the United States Sealer of Weights and Measures, and located where the present store now stands, on Congress Street.

At that time there were but few Americans in Tucson. Mr. Mansfeld knew all who were in the Territory. His principal customers were the three companies of soldiers stationed here at the military camp, and had it not been for them, he would have stood a poor chance in his early struggles.

In 1871 he purchased a stock of books, but finding no sale for them, he created out of them his circulating library, which has been an institution of the city ever since, and the first one in Arizona.

In 1875 he enlarged his store to one-fourth its present size, and began to feel prosperous. In 1878 he branched out again, increasing his store to one-half its present dimensions.

He has lately started a branch store in Quijotoa, being the first and only book store between Tucson and Mexico.

Mr. Mansfeld has seen much of life and its varying phases, both in Europe and America. He has held public positions of prominence both in California and Arizona, and is a valuable citizen by reason of his ripe experience and correct business habits.

J. G. GOODMAN & CO. are the leading jewelers of Tucson. They manufacture Mexican filigree in gold and silver and jewelry, watches, clocks, and silverware. J. G. Goodman was born in Tula, Prussia, which place he left when seven years of age to go to Germany to learn watchmaking. He afterwards worked at the trade in Geneva, and Leipsic, in Turkey, and in London and Austria. He came to Arizona in 1867, and first engaged in watchmaking in New York, and Marion, New Jersey, Waltham, Massachusetts, Chicago and Elgin, Illinois, Boston, Massachusetts. He came to Tucson in 1882, and engaged in watch repairing with — Howard, now in jewelry business firm of J. G. Goodman & Co. He married Miss Addie M. Coates, in 1870. They have three children, Chas. J., Essie R., and Irin R. Goodman.

THOMAS FITCH has a residence which is an elegant structure with mansard roof, bay windows, and all the modern appliances usual in a first-class residence, such as water, gas, and baths. An illustration of this elegant home will be found on an adjoining page. It is situated on Twelfth Street and Military Plaza.

This fine residence has lately been constructed, and is equal to those of much larger cities. It is an ornament to the place as well as showing great taste on the part of the owner in its construction and surroundings.

#### CHURCH ORGANIZATIONS.

By permission, we take the following articles on churches from the directory published by Cobbler & Co., Tucson.

THE PROTESTANT EPISCOPAL CHURCH became a

station under the Board of Domestic Missions, September 1, 1882. It is within the jurisdiction of the bishop of New Mexico and Arizona (the Right Rev. Geo. K. Dunlop, S. T. D., residing at Las Vegas, New Mexico), and under the immediate pastoral care of the Rev. J. C. Hendley, B. D., missionary rector, residing at Tucson. The rector reports fifty-seven confirmed members of the church against twenty-one when the work was begun, an increase of thirty-six in six months. The congregation purpose, very soon, building a church that will be a credit to themselves and an ornament to the city. At present, services are held in the Probate Court room, in the new Court House. In connection with the mission is a guild for religious and charitable purposes. The congregation is in a flourishing condition, and, undoubtedly, will develop with a strong and useful parish.

THE METHODIST EPISCOPAL CHURCH of Tucson was organized in October, 1879. Rev. W. G. Mills was the first pastor, and held services for some time in the old Court House. The eligible lots on the corner of Pennington Street and Stone Avenue, upon which the church building and parsonage now stand, were purchased in 1881, and soon after the erection of the edifice was commenced. Rev. G. H. Adams, superintendent of Methodist-missions in Arizona, personally supervised the work of construction, and the building was formally dedicated by him, November 14, 1881. The church is a brick, Gothic structure, and cost nearly \$5,000. The parsonage was erected in 1882, and cost \$1,800. Rev. B. F. Edwards was pastor from November 14, 1881, till April of the following year, when Rev. J. F. Berry assumed charge.

The society owns a valuable church property, has a congregation of about one hundred and fifty, a prosperous and growing Sunday-school, and all the interests of the church are in a flourishing condition.

THE FIRST BAPTIST CHURCH organization of southern Arizona was formed in Tucson, at the residence of E. S. Dodge, April 7, 1881, with six members and the pastor. On the 12th, the first meeting of the trustees convened at the residence of the pastor, to effect an organization. C. M. K. Paulson was chosen President of the Board and Benj. Goodrich, Clerk. On the 7th of May, a lot was purchased by the pastor, for the erection of a church and parsonage. On the 15th of May, recognition services were held in the Presbyterian Church at Tucson. Rev. J. W. Osborn, of Nebraska, preached before the council at 11 A. M., and Rev. Dr. O. C. Wheeler, Moderator, made the evening address. Three members were added to the church by letter. Immediately after the public recognition services, steps were taken by the trustees toward the erection of a house of worship, and a subscription book was opened for that object; but before much had been ac-

completed, the hot season arrived, and it was voted to suspend operations until September or later. The sickly season continued through September, and it was October before operations were commenced for building. A building committee was chosen to prosecute the work of erecting a church edifice on the corner of Stone Avenue and Eighth Street. The church edifice was completed on the twenty-first day of January, 1882.

THE FIRST CONGREGATIONAL CHURCH of Tucson was formally recognized November 20, 1881. The services of recognition, by the kind courtesy of the M. E. Church, were held in their house of worship, under the direction of the Revs. L. H. Cobb, D. D., of New York, and J. H. Warren, D. D., of San Francisco. There were nine original members. The present membership is twenty-four. The Rev. L. B. Tenney, of New Hampshire, came to minister to the church in May, 1882, and remained through the summer. In December of the same year, the Rev. C. B. Sumner, of Massachusetts, took up the work, and is at present the acting pastor. The arrangements have been perfected and the money pledged, through the liberality of our citizens and denomination, for the purchase of the house of worship on Meyer Street, Court Plaza, formerly owned by the Presbyterians, and now occupied by this church. It is the intention of the church, and the funds are already partly in hand, to proceed at once to the fitting up of this church edifice inside and outside, so that it shall be comfortable and attractive, and be an ornament to the plaza and an honor to the city.

ST. AUGUSTINE'S CHURCH was commenced in 1862 and completed in 1866. The adobe building first started has been greatly improved since; two brick steeples and an imposing stone front have been added to the edifice.

A new church building known as the Church of Immaculate Conception, is in course of erection on the south side of the Military Plaza. The church organization is under the jurisdiction of Right Rev. J. B. Salpointe, Bishop of Arizona, assisted by two clergymen, Revs. Francisco and Antonio Jouvenceau. All the Mexican, and a large number of the American, population belong to the Roman Catholic denomination.

ST. JOSEPH'S CONVENT ACADEMY dates from May, 1870, when seven Sisters arrived and established the Catholic school and academy, which was one of the first schools established in the Territory. At the present date there are 130 pupils attending the parochial free school department of the convent, while 120 are enrolled in the academy proper.

#### SCHOOLS OF TUCSON.

The first public school of Tucson was taught during the winter of 1869 by Mr. Augustus Brichta, who came to Tucson from Prescott. He was Assistant Clerk of the

Legislature, and in the absence of the Chief Clerk, convened the first assemblage of that body held in this place after the removal of the capital to Tucson. After the opening of the Legislature, he resigned his clerkship and took charge of the public school, which he taught for a period of four months. During the term he enrolled fifty-five pupils, all Spanish boys. The school was opened in an adobe building near Levin's Park. The school room was 25x40 feet, with dirt roof, a dirt floor, and entirely destitute of furniture aside from rudely constructed pine benches. He found it hard to obtain suitable books. There were no geographies in the school, and the pupils relied solely upon their teacher for a knowledge of the earth beyond their individual horizons.

The next session of the public school was opened by John Spring, in a building on Meyer Street, near the place where the Palace Hotel now stands. He taught fifteen months, and enrolled 138 boys, 95 per cent. of whom were Spanish.

During the summer of 1872, Mrs. L. C. Hughes opened a school for girls in a house in Levin's Park. This school was well attended and accomplished much good.

In 1873 Miss Harriet Bolton and Miss Maria Wakefield took charge of the school, and, during their connection with it, did excellent service.

In February, 1881, Geo. C. Hall and wife took charge of the school in connection with Prof. M. M. Sherman and Miss Nora Smith. There are now seven teachers employed. A view of the noble school building at Tucson is given in this work. It is a monument to the place, and especially to the officers under whose direction it was constructed.

The city of Tucson was duly organized in the year 1871. The following were the first officers of said city: Hon. S. R. De Long, Mayor; Samuel Hughes, W. W. Williams, C. O. Brown, and Wm. S. Oury, Councilmen; Hiram S. Stevens, Treasurer.

The officers for 1884 are: Mayor, Charles M. Strauss; Recorder, Charles H. Meyer; City Attorney, H. Farley; Treasurer, Ed. Hudson; Assessor, George F. Foster; Councilmen, B. C. Parker, Alex Levin, C. T. Etchells, P. R. Tully, H. S. Stevens; Chief of Police, A. G. Buttner.

There are numerous flourishing secret societies, such as Masons, Odd Fellows, Workmen, Legion of Honor, Locomotive Engineers, Typographical Union, etc.

Tucson has two daily journals, and six weeklies. Two of the latter are published in the Spanish language. Nothing is a better index of the prosperity of a growing city than her newspapers. In this Tucson rivals all other cities between Los Angeles and Galveston.

#### THE LOCATION OF QUIJOTOA.

Quijotoa, comprising the towns of Logan and New Virginia, now practically one, and their suburbs, is situated

in Pima County, sixty-five miles west of Tucson, and about the same distance south of Casa Grande, on the Southern Pacific Railroad. The town is built on a sloping bench of land which connects the *mesa* with the Bonanza Mountain on the east. The situation is very healthy, the ground being hard and the gradual fall allowing of a perfect drainage. In fact, a more healthy location can hardly be imagined. A mile of houses, many of them large, handsome buildings of lumber, extends along the main street—Logan Avenue—and through New Virginia, on the east. The ground on the north and south of the main street is a little broken and needs some grading. The town sites are covered with a growth of palo verde, cactus, and some mesquite bushes, which are being rapidly cleared off.

The mines of this locality are attracting more attention at the present time than any others in the Territory, and were fully mentioned under "Mines."

The *Quijotoa Prospector* is published here by Harry Brook, Esq., and gives especial attention to the mining interests of that locality.

#### ANCIENT TUBAC.

Tubac, at the present time, is a collection of adobe ruins, with a few such houses, rudely put into a semi-habitable condition. Mr. Bartlett found Tubac occupied by Mexican troops, when, in 1850-51, he was engaged in fixing the new boundary line between Mexico and the United States. At that time it was the principal place in the Pimeria Alta, as the territory south of the Gila River, below the thirty-third parallel from the line of New Mexico to the Colorado River, was then known.

The old town of Tubac was formerly occupied by a numerous and thrifty population, engaged in agriculture and mining. It was the very center of the mineral region of the Territory, and had probably 150 silver mines within 16 miles. Many of them were worked by the Spaniards and Mexicans in a primitive manner, but not open to any extent, because they had not sufficient machinery or mining tools. Under the Mexican rule a garrison was kept at Tubac for the protection of the inhabitants, but only of sufficient force to enable them to work their fields; the mines have not been worked.

Tubac has a history. Here was issued the first newspaper of Arizona, before it was organized as a Territory. It was called the *Arizonian*, and published in 1858-59.

The author of the "Marvelous Country," S. W. Cozens, who visited Tubac in 1858-59, describes it as being, with the company of the many intelligent men who had congregated there, a "very attractive place, with its peach orchards and its pomegranates." The population at the time, according to this writer, numbered 800, about one-sixth of whom were Americans. He adds that "the only business transacted was that done by the mining company,

if we except the trade in Mescal, which was very extensive." All this activity and enterprise, often interrupted between 1854 and 1861 by Apache raids and attacks, was brought to an end by the outbreak of civil war. The troops were withdrawn; the few officers then in the Territory mostly sympathized with and joined the South; the Apaches, no longer restrained by even a show of force, plundered and murdered almost at will.

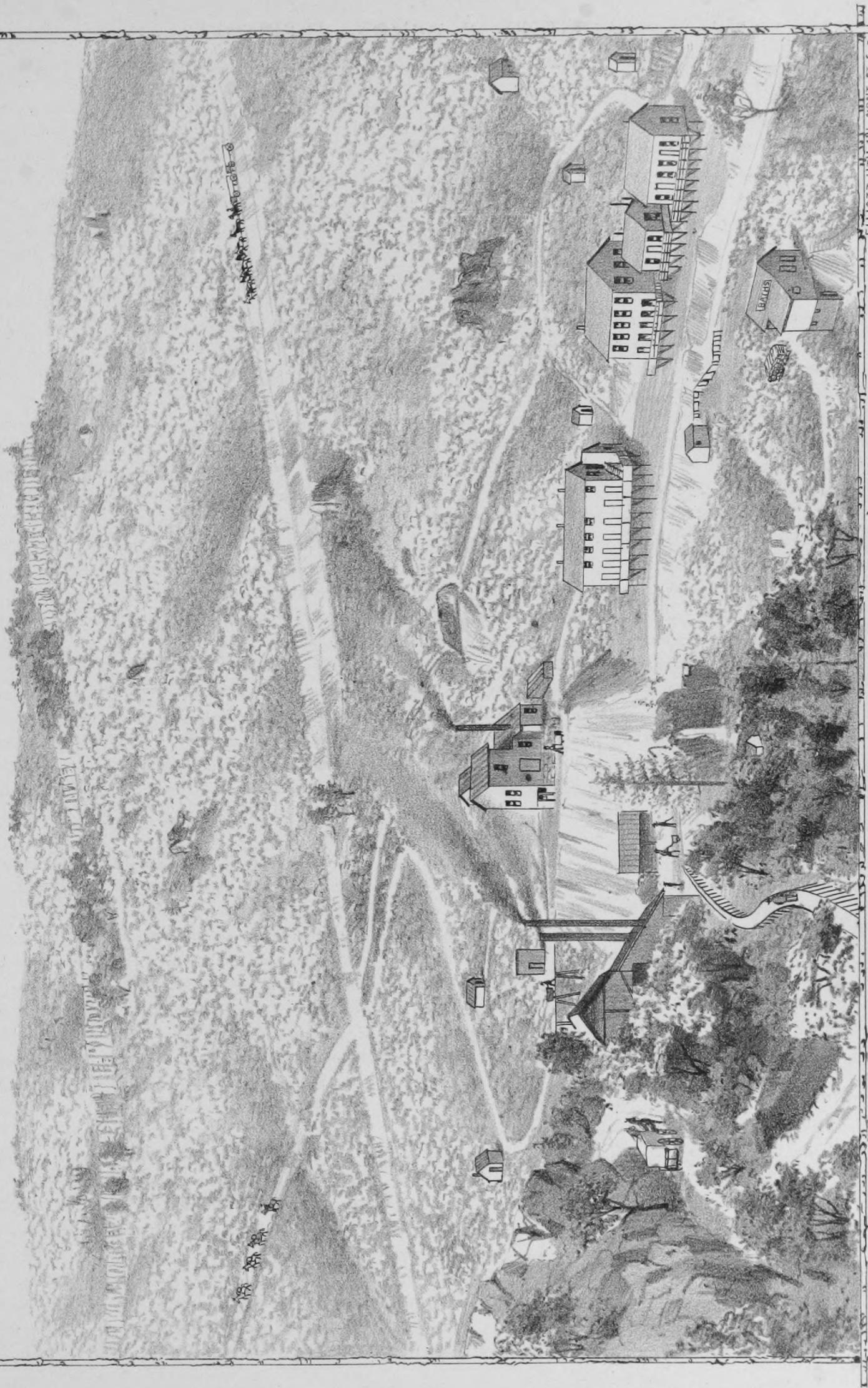
CAMP CRITTENDEN is only a fort in name, and though the walls of the houses are still fairly preserved, the roofs have long since fallen in. It is now a useless ruin, although the buildings and reservation are still in charge of Mr. S. Hughes, of Tucson. There have been no troops here since 1867. The last raid of the Apaches began April 15, 1877, and several men were killed. There is a military reservation still at this point. Old Camp Crittenden was laid out on a hill, from which one can look down on the ruins of old Fort Buchanan.

CALABASAS is in the Valley of Santa Cruz a short distance north of the boundary line. Somewhere back in the cob-webbed past, the King of Spain issued a grant of this tract, of seven leagues of land, to some old son of the conquest, who gave it the name of Calabasas (little squashes). From the grantee it has come down through all the tangled mazes known to the statutes of descent, distribution, and alienation, till it reached the hands of the company who now own it. Where the valley is surrounded by mountain peaks, they laid out the city of Calabasas, and put down the foundation of a hotel, beside the incipient hotel, one small brick building, and one adobe.

The scenery about Calabasas is very beautiful. The windings of the Santa Cruz can be traced by the thin fringing of cottonwoods; indeed, at this time, that was the best proof of where the river ran, as that concern had about gone out of business. It was navigable up to the Calabasas landing—by small fish and tadpoles; but even for them it was the head of navigation. Down the valley, hiding among the cottonwoods, stand the crumbling ruins of the old Mission of Tumacacori. From present indications, the city of Calabasas will have to wait half a dozen centuries for its greatness.

#### EARLY TOWNS AND SETTLEMENTS.

The towns and settlements in the Santa Cruz Valley are Santa Cruz and San Lorenzo (south of our line), Calabasas, Tumacacori, Tubac, Sopori, the mission of San Xavier, and Tucson. Santa Cruz, Tubac, and Tucson were presidios. With the exception of Santa Cruz and Tucson, this entire valley was abandoned to the savage Apaches at the time of Bartlett's first visit in 1851, and the population of these was greatly diminished; indeed, but for the military the Indians would have had entire possession of it. At Cala-



WADE HAMPTON MINE & HOISTING WORKS AND COMPANY'S BUILDINGS FROM N.E.  
UNITED VERDE COPPER CO. JEROME, YA'VA'PAI CO. ARIZONA.

ELLIOTT, LITH. ART. MONT. ST. S. F.

basas a small stream enters, upon which are fine bottom lands. At Sopori was another extensive hacienda, with a broad domain and fine bottom lands.

Between Tubac and San Xavier is the finest timbered district in the country; it extends from the river to the base of the mountains, and is apparently several miles in width. The timber is wholly mesquite, of a larger size than anywhere in the Territory, except in the valley of the Colorado. This timber must be of incalculable value both for railroad and mining purposes. For building purposes it is too hard and crooked. Besides, the cottonwood is found on the margin of all streams; it is of rapid growth, and well adapted for building.

#### COUNTY OFFICERS FOR 1884.

SHERIFF--R. H. Paul.

TREASURER--J. McC. Elliott.

PROBATE JUDGE--J. S. Woods.

CLERK DISTRICT COURT--L. S. Williams.

DISTRICT ATTORNEY--F. M. Smith.

RECORDER--Charles R. Drake.

SURVEYOR--George J. Roskruge.

SUPERVISORS--J. H. Toole, M. G. Samaniego, and A. D. Otis.

CLERK BOARD SUPERVISORS.--Wm. J. Osborn.

SUPERINTENDENT PUBLIC SCHOOLS--J. S. Woods.

PUBLIC ADMINISTRATOR--H. Buehman.

CORONER--E. J. Smith.

#### UNITED STATES OFFICERS.

U. S. DISTRICT ATTORNEY--J. A. Zabriskie.

U. S. MARSHALL--Z. L. Tidball.

DEPUTY U. S. MARSHALL--J. W. Evans.

#### LAND OFFICE.

RECEIVER--C. E. Daily.

REGISTRAR--B. M. Thomas.

#### CUSTOM OFFICERS.

SPECIAL AGENT--I. M. Schirmirhorn.

DEPUTY COLLECTORS--Alward White, Tucson; J. E. Clark, Charleston; --- Harris, La Noria; George Shepard, Nogales.

INSPECTORS--C. H. Robinson, Gunsight; --- Wilson, Nogales.

#### INTERNAL REVENUE OFFICERS.

COLLECTOR--S. W. Fisher, Tucson.

DEPUTY COLLECTOR--H. N. Alexander, Yuma.

The Recorder's office is a just indicator of the activity of real estate interests. During the year there were filed for record in Pinal County: Mining locations, 1,530; mining deeds, 1,051; real estate, 508; mortgages, 216; chattel mortgages, 11; leases, 94; notice of lis pendens, 7; bills of sale, 21; official and other brands, 59; land claims, 19; mill sites, 65; marriages, 33; marks and brands, 42; sole traders, 8; articles of incorporation, 42; powers of attorney, 60; liens, 9.

## PINAL COUNTY.

**P**INAL COUNTY is bounded on the north by Maricopa and Gila Counties, on the east it is bounded by Gila and Graham, on the south by Pima, and on the west by Maricopa, and contains about 5,210 square miles.

The Gila River runs through the county from east to west, and the San Pedro through the southeastern portion. It embraces within its limits a large tract of agricultural land.

The valuation of real estate in Pinal County for 1883 is: Real estate, \$849,760; tax, \$2.00; personal, \$1,048,382; tax, 2.00; total, \$1,898,142.

Pinal was organized in 1875 (instead of 1871 as in *Resources*), from portions of Pima and Maricopa Counties. The act creating the county was passed on February 22, 1875, and the first supervisors appointed were: S. B. Wise, Chairman; M. L. Stiles, and P. Holland. John D. Walker was appointed probate judge.

At a special election held March 1, 1875, Florence was chosen as the county seat, and the following were elected as officers of the county: Sheriff, M. Rogers; Treasurer, P. R. Brady; County Recorder, J. J. Devine; Public Administrator, F. M. Griffin; Coroner, Wm. Dumont; County Surveyor, P. R. Brady; School Trustees, P. R. Brady, F. M. Griffin, and J. W. Anderson.

The following are the officers for 1884: Sheriff, A. J. Doran; Under-Sheriff, Gid. J. Scanland; Treasurer, W. Dempsey; Probate Judge, John T. Bartleson; District Attorney, Jesse Hardesty; Clerk of District Court, W. R. Stone; Recorder, Hinson Thomas; Board of Supervisors, Jake Suter, Jerre Fryer, Pat. Holland; Superintendent of Public Schools, John T. Bartleson; Justice of the Peace, at Florence, H. Thomas; Justice of the Peace, at Pinal, W. H. Benson; Justice of the Peace, San Pedro, J. N. Dodson; Justice of the Peace, at Riverside, E. B. Green; Constable, at Pinal, F. Kuhne; Public Administrator, Henry Schoshusen.

The agricultural land in this county is confined to the valleys of the Gila and the San Pedro. For a distance of eighteen miles along the former stream there is a line of fine farms, and for thirty miles up the San Pedro, the valley has been brought under cultivation at different points. In the neighborhood of Florence, the county seat, the valley of the Gila is over a mile wide, and contains some of the richest land in the Territory. Here, as everywhere else, irrigation is required to produce a crop, and the area that can be cultivated depends entirely on the water supply. Corn, wheat, barley, alfalfa, vegetables, and fruits are

raised in Pinal County. The soil is a rich loam of durable fertility, and well adapted to the usual agricultural products and semi-tropical fruits. There is evidence in the ruins of the Casa Grande that this portion of Arizona supported a dense population at one time; and the remains of the large irrigating canals, go to show that those ancient tillers of the soil had a much more comprehensive idea of the irrigating problem than their modern successors. The number of acres under cultivation in Pinal County is estimated at 7,000, not including the land occupied by the Pimas, which is nearly all within the limits of this county.

Peaches, grapes, apricots, pears, figs, quinces, and pomegranates, all do well in Pinal, and many farmers are going into the business extensively. The climate and soil are specially adapted to fruit. The district north of and immediately contiguous to the Gila is, *par excellence*, the finest agricultural district in the Territory, lying in the same latitude, between eastern Texas and the Pacific, for the great extent and richness of the soil, the abundance and excellence of the water, the cottonwood timber for building purposes, the fine quarries of stone in the adjacent hills, and for the facility with which it may be approached from every quarter.

The district in question lies along the Gila River. It is but a little above the bed of the river, and might be, in consequence, easily irrigated. The arable bottom land is from two to four miles in width, and is overgrown with mesquite, while on the river's margin grow large cottonwoods. The river is from 80 to 120 feet wide, from 2 to 4 feet deep, and is sluggish and muddy.

#### SILVER KING MINE.

In 1873, General Stoneman constructed a road up the fall of the Pinal Mountain. One of the soldiers, named Sullivan, employed in cutting the trail, when returning from his work one evening, sat down to rest on a projecting rock, near the camp, and began picking up loose fragments of rock about him, amongst which there were some small but heavy, black, metallic-looking lumps. These, instead of breaking up when pounded on the stones, became flattened out, and were evidently metallic, somewhat resembling lead. This attracted his attention, but he did not fully realize the importance of his find. He, however, gathered a few of the lumps and went on to camp without saying anything about his discovery to his comrades. His term of service expired soon afterwards; he was discharged from the service and made his way to the rancho of Chas. G. Mason, on Salt River, near to the place where the town of Phoenix was afterwards located.

Mr. Mason was one of the very few frontiersmen who braved the terrors of the Apaches and staked out a farm on the fertile bottom lands of the river. Sullivan remained at the place some time and frequently showed the black

ore (since familiarly known amongst the miners and prospectors of the region as "nugget silver") to Mr. Mason, but without telling him exactly where he had found it. Mr. Mason supposed that he would go back to the place, and he no doubt expected to go with him and participate in the benefits of the discovery, but one day Sullivan suddenly disappeared and was not heard of for years after. He was supposed to have been killed by the Apaches, or to have perished on the desert, in the attempt, perhaps, to return to the place where he had found the rich silver ore.

The next year, 1875, Mr. Mason and one of his neighbors, Benjamin W. Regan, formed a party of five, consisting of themselves, William H. Long, Isaac Copeland, and ———, to go again to the Globe Mine, taking a train of animals to fetch out some of the ore. On their way back, March 21, 1875, they were attacked by Apaches and one of their party was killed. His body was taken to Camp Supply, at the summit of the Stoneman Grade, and was buried by his comrades in one of the old stone baking ovens used for baking bread by Stoneman's soldiers. When the survivors reached the foot of the grade, near to the water and camp-ground, Copeland was sent to break off some of the croppings from projecting rocks at one side of the trail, and fetch them into camp two miles below. He went to the place indicated, and soon after came hurrying into camp shouting, "I have struck it." The excited and hopeful prospectors gathered around him. But they were in no condition to remain at that time to explore the locality or to make their prize more certain and secure. Travel-worn, weary, and saddened by the loss of their comrade, and without provisions, they hastened on to the settlement on the Gila, at Florence, crossing the dreaded desert at night. The next day, jealously guarding their secret, they gathered supplies together and hastened back to the discovery point. There, sure enough, they found the little black nuggets strewn the surface, and mineral stains, of many colors, including green and blue, in the substance of the rock.

The long-sought treasure was found at last. Sullivan's discovery was no longer his alone.

The ownership of the location of the Silver King claim was then equally divided between the four survivors of the party of five, each holding one-fourth. The mine has been worked continuously, since the incorporation to the present time, and it promises to be prominent as the leading silver mine of the country for years to come.

One day, in 1882, an aged man came slowly into the thriving settlement at Picket Post, and with great interest wandered about the Silver King Mill, where twenty stamps were, day and night, merrily pounding out silver from the rock. The man was evidently in need of help, and soon went to the office of the company and announced himself

as Sullivan, the old soldier, the original discoverer of the vein, and humbly asked for work. Although long before he had been given up as dead, and very few of his old acquaintances survived, he was identified beyond a doubt, and was immediately taken into the company's service by the day. His story was briefly told, as follows: On leaving Mason's rancho, he crossed the wide deserts to the westward as far as the Great Colorado River, and beyond it into California. Being penniless, he had sustained himself by working as a farm-hand in California. Always hoping to obtain sufficient means to return to Arizona and secure the benefits of his discovery, he had labored on year after year, looking vaguely forward, and keeping the secret of the locality to himself, until one day he heard of the discovery of the rich deposit of silver by Mason and others. He was convinced that the place had been found, and that he had lost his chance of making the location for himself.

FIRST CHANCE MINE was located one mile north of Silver King Mine, in 1879, by H. E. Beach and D. H. Taft, who still own it. It is a formation of granite with gray porphyry and red spar. They have a tunnel on the ledge 150 feet, and are patiently and perseveringly developing what promises to prove a paying mine. The ore on the surface is fine galena, black sulphurets, with some chlorides. Farther in the tunnel it changes to white quartz, carrying copper, silver glance, horn blende, antimony, and pyrites of copper and iron. The assays run from a few dollars to \$800 per ton.

#### INDIAN TROUBLES.

The neighborhood of Florence was, for a long time, the scene of Apache troubles, till a decisive issue was made, a few years ago, in which their power was forever broken in that region. General Stoneman was stationed, with several companies of United States soldiers, at Picket Post, the present site of the celebrated Silver King Mills, thirty miles north of Florence, in the Superstition Mountains.

The post was in a valley, on Queen's Creek, easily overlooked from a high ledge of the mountains known as Tordillo Peak, and all of Stoneman's movements were noted in the inception. On top of this mountain was a *rancheria* of Pinal Apaches. These occasionally poured down some unknown pathway upon the settlers along the Gila Valley, stealing, burning, and killing, and when pressed by the troops, would vanish in the cañons. The location of the village was suspected, from a solitary Indian now and then seen perched upon these peaks, watching proceedings at the post, from which his station was inaccessible.

All attempts by Stoneman to get at them were fruitless. At length, emboldened by their successes, they raided a ranch near Florence, and drove away a band of

cattle. The Florentines armed and followed, till, after several days of patient pursuit, they found the trail that led to the *rancheria*. The Indians, doubtless feeling secure in this fastness, neglected to post videttes, and thus the Florentines were enabled to steal upon them by night, and at daybreak attacked the *rancheria*, which was situated only a few yards back from the brow of the bluff overlooking Pickett Post. Seeing they were surrounded, they fired a few shots, then threw down their guns, and went to meet the approaching Florentines, with hands raised, in token of surrender; but the latter, seeing the advantage, and remembering that mercy to them was cruelty to the defenseless families on the Gila, determined to make the most of the situation, and continued firing upon them. When about two-thirds had fallen, seeing no chance for quarter, the remainder ran to the bluff, where their videttes had been so long stationed to watch Stoneman, and threw themselves over, striking the rocks two hundred feet below. The Florentines could see their mangled remains from the place where they sprang over. Not a single warrior escaped, but the women and children were turned over to General Stoneman. About fifty bucks went over the bluff.

#### PRIMROSE HILL.

Near the town of Florence is Primrose Hill, a solitary cone-like peak, that rises from the *mesa* to the height of many hundred feet. That queer genius, Chas. D. Poston, who, some years ago, was a delegate in Congress from this Territory, for some reason best known to himself, conceived the idea of building upon its apex a temple to the sun, and establishing the religion of the Gheber or Parsee, and went so far as to spend several thousand dollars constructing a road to the top, upon which he planted a flag, bearing a huge sun-disk upon its ample folds. At this point, funds gave out, and the project ended. Though the flag is gone, the road may be seen to-day, winding around, a trailing niche in the precipitous sides of the hill, making a complete circuit before the top is reached. He was, for a time, in correspondence with the Parsees of India on the subject. It is known as Poston's Folly.

Primrose Hill stands on a *mesa* more than usually sandy and bleak. Coupled with this scheme of the sun temple was another, not less startling and original. It was to establish here, upon the *choya*-cursed, sand-made *mesa*, an ostrich farm. What the birds were to eat, besides pebbles, tarantulas, and *choya* burs, is a problem Mr. Poston never divulged to the public. Two as wild whims never entered human brain, and the regret is he was not able to carry them out, so that the world could have seen the logical end. With their completion, his professions would have been sufficiently varied, embracing delegate in Congress, ostrich farmer, and Parsee priest.

## VILLAGE OF FLORENCE.

Florence is a pretty little town, with its shady cottonwoods and verdant alfalfa fields, and is destined one day to be the center of a busy agricultural settlement. It is surrounded by thousands of acres of fertile land, that will grow anything from a cabbage to a cocoanut, but the present inhabitants seem to think they do enough in growing old. There is ample water in the Gila to irrigate hundreds of square miles. The various small ditches are, at present, in private hands. What Florence needs is a ditch to be taken out above the river by a well capitalized stock company, and carried along the ancient canal before mentioned, towards Casa Grande. This would bring a vast amount of splendid lands into cultivation. Land around Florence is very cheap. Improved farms, with water and buildings, can be purchased for \$20.00 an acre. The number of acres of improved land is 13,420; number of horses, 1,385; mules, 557; sheep, 614; cattle, 14,281; hogs, 850.

The town of Florence contains about 1,000 inhabitants, about evenly distributed between Americans, Mexicans and Spaniards, and yet retaining all the evidences of its Mexican origin. The streets are laid out, wide and straight, shaded on each side by a row of fine cottonwood trees, and at their roots along each side-walk, a babbling stream of running water, thus reminding us of Salt Lake City in its general appearance. The streets present a lively and thriving appearance. It is the county seat of Pinal County, and has good accommodations for the officials and courts. Its county clerk boasts the finest and most complete records of any county in Arizona. A good and well-arranged post-office, kept by W. E. Guild, is conveniently located on the main street, which is also used for the stage office, and the express office of Wells, Fargo & Co., who have established agencies at every important point in the Territory. The buildings are all built of adobe as lumber is very high. Like other southern frontier villages, the buildings are generally one-story high, having a wide porch or veranda surrounding them.

With the near proximity of the rich silver mines of the Pioneer, Pine Grove, and Globe Districts, the well cultivated agricultural lands that surround it, its flour-mills its water privileges, and good climate and central location, the future prospects of Florence are indeed promising.

CHARLES G. MASON, the first settler in Florence, built the first adobe house in the summer of 1866. In March, 1869, Joseph Collingwood opened the first store in Mason's building. Hon. Levi Ruggles located in Florence in October, 1868. In the winter of 1867-68, a store was opened at a place called Adamsville, three miles down the river from Florence; it is now deserted.

Florence was named by Hon. Richard C. McCormick,

and laid out as a town in 1869. The first post-office and mail facilities were obtained through the efforts of Hon. R. C. McCormick, and Hon. Levi Ruggles. Mr. Thomas Ewing was appointed Postmaster.

He, however, deputized Joseph Collingwood to act as Postmaster, he having a little store on the present town site of Florence. The first mail was brought in September, 1869, on horseback from Blue Mountain Station, twenty-five miles distant, on the overland stage road.

Another writer says: "The town has a home-like promise in its out-of-doors aspect. It lies in the Gila Valley, encircled by a wide stretch of delicious green and ripening fields of grain and alfalfa. To the northwest is a high, extensive plain. To the south, and trending east, are the usual ranges of low, volcanic, and granitic mountains, while across to the south, the eye can discern the far outline of the Picacho Peak. To the north, and trending west, can be seen a range of bold outline, marked on the map as Superstition Mountains. There is a wide expanse of undulating plain to the east, and southwesterly the stage road to this place skirts near the foot of the volcanic hills already noticed. A considerable quantity of land in the valley is under irrigation.

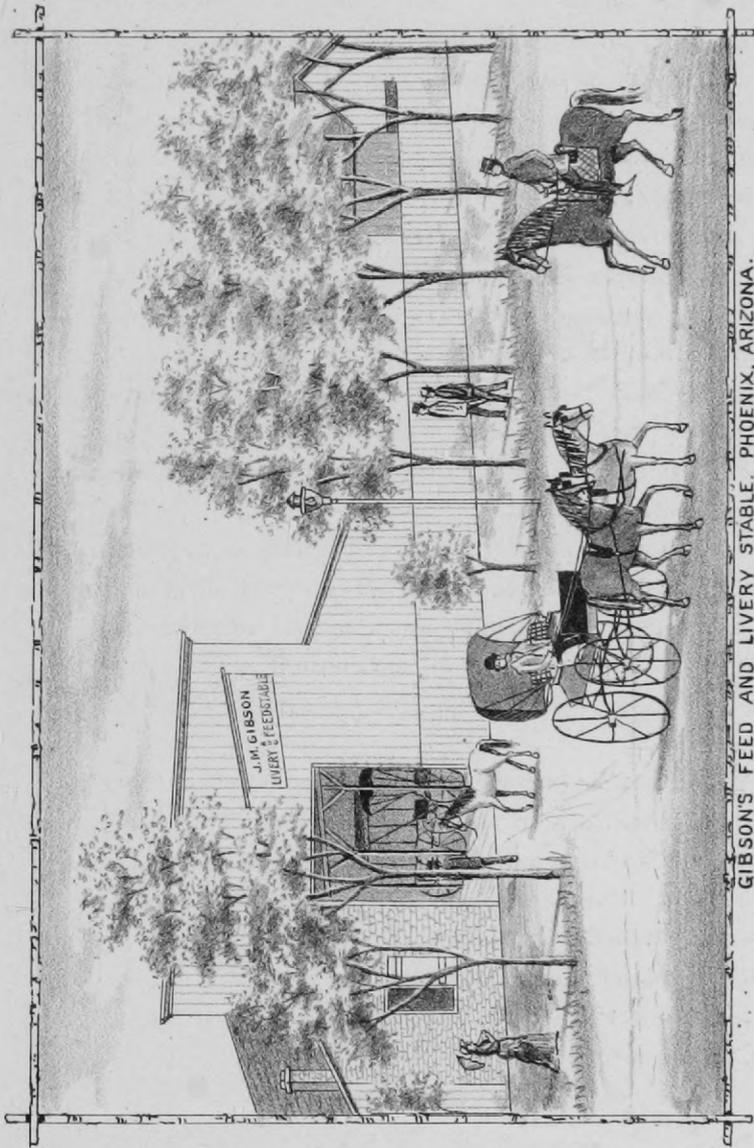
The Florence *Enterprise* is published here, by Thos. F. Weed, editor and proprietor. It is a spicy sheet, and well supported. It has done much to call attention to, and develop the mineral and agricultural resources of Pinal County. A view of the building will be found in another place.

The town is built about half a mile from the Gila River, and principally of adobe of one-story. The Silver King Hotel is a commodious building, and is run by G. A. Stone & Co. There are several stores, some of which are owned by Mexicans. A flouring-mill owned by P. R. Brady, is situated half a mile down the river.

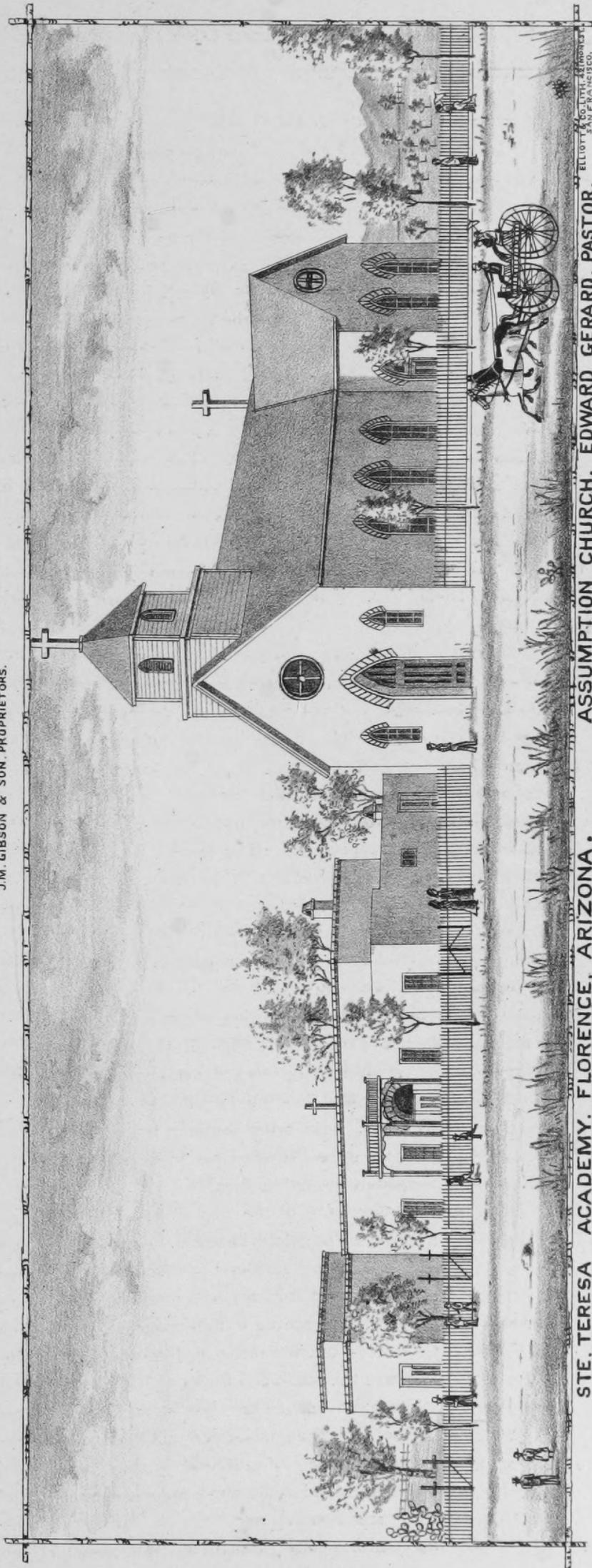
Ivanhoe Lodge, No. 2, and Florence Lodge, No. 4, A. O. U. W., meet in Wilson's Hall.

## A BEAUTIFUL HOME IN FLORENCE.

It is a real pleasure to visit the beautiful home of Col. Levi Ruggles, the patriarch of Florence. It is a perfect little paradise, and shows what can be done in this "desert" land with water, labor, and taste. He has a very fine variety of grafted trees, which show a vigorous and healthy growth. His peach, apricot, almond, plum, quince, pear, olive, fig, and pomegranate trees are remarkably strong and healthy, and the amount of young fruit they now show is simply marvelous. The trees will not be able to stand up under the load, and it will be necessary to shake some of the fruit off. We do not believe it possible to find fruit to surpass, either in size or quality, that grown in this orchard. The yield is regular and certain. It is the same each year. The same is true of every other orchard



GIBSON'S FEED AND LIVERY STABLE, PHOENIX, ARIZONA.  
J.M. GIBSON & SON, PROPRIETORS.



STE. TERESA ACADEMY, FLORENCE, ARIZONA.

ASSUMPTION CHURCH. EDWARD GERARD, PASTOR.

ELLIOTT & FISHER, SAN FRANCISCO.

in the valley. There are no failures in the fruit crop, and it does not take long to make a good orchard here. Many kinds of trees will bear the second year, after setting out. It is pre-eminently a fruit country.

Colonel Ruggles also has some very choice varieties of the grape, which, like the fruit trees, are remarkable in their growth and yield here. On his Muscatel vines are clusters of grapes a foot in length now, and when these clusters shall have attained their full growth, they will be at least sixteen inches long, and weigh four or five pounds.

In addition to his fruit trees and vines, Colonel Ruggles has in his orchard sixty varieties of the rose family, all of which grow luxurantly, and blossom freely.

ST. TERESA ACADEMY was located at this place in September, 1883. The building was formerly used as a church. Mother Hyacinthe is Lady Superior, and is assisted by a corps of competent teachers. They have eighty students in attendance.

THE CHURCH OF THE ASSUMPTION, adjoining the academy, as well as the academy, are among our illustrations. It is a fine-looking building, made of adobe, and was built in 1870. They have a membership of 600. Services are conducted every Sunday in Spanish. Father Edward Gerard is in charge.

The Court House is built of adobe, and although plain, is commodious. It stands on the corner of a square surrounded with cottonwoods. A view of this building will be found in this work.

The School Board have purchased the needed grounds, and have laid the foundations of a school building of sufficient dimensions to accommodate all the children of the district. They have very good schools, but are hindered by the lack of proper rooms. The report of the superintendent of schools for this county, will be found in another place.

JOHN T. BARTLESON has a very nice farm adjoining the town site. It is pleasantly located, and is seeded mostly to alfalfa, from which large crops are cut every year. He has a pleasant home, a view of which may be seen among our illustrations. Mr. Bartleson is probate judge, and is one of the leading citizens of Pinal County.

A. J. DORAN is the sheriff of Pinal County, and is one of her most respected citizens.

PAT. HOLLAND, one of the Board of Supervisors, has a large tract of land east of Florence, a good share of which is under cultivation. He employs quite a number of hands, and farms quite extensively. A sketch of two of his ranches is given. He has been identified with the development of Pinal County since its organization, and is one of the prominent citizens of Florence. He deals quite largely in hogs in addition to his farming, supplying some of the neighboring mining camps with pork.

THE BREWERY, of which we give an illustration, is one of the attractions of Florence, especially to the thirsty traveler. It is owned by Mr. Peter Will.

J. V. WILSON owns the corral and building given in our illustrations. The building is used as a saloon below, while the second story is occupied by the A. O. U. W. His yards are conveniently located, and nicely fitted up for the accommodation of travelers and campers.

Mr. Wilson was born in La Fourche, Louisiana, in 1839. In 1860, he enlisted in the Confederate Army, joining the famous Louisiana Tigers. He was in many a sanguinary battle, but escaped with two wounds, one having been received in a leg at the battle of Shiloh, and the other in his side when fighting on the right of Atlanta. Mr. Wilson says that he knows of only seven survivors of that brave company, who struggled so bravely, but in vain. After the war Mr. Wilson left Louisiana for the West. He lived in many different places, being generally interested in mining schemes, in which he was at times very successful. At one time he purchased the dumps of the famous Silver King Mine, of Arizona, from which he realized a handsome profit. In 1878 he located in Florence, Arizona, where he has since resided. He is now engaged in the saloon and corral business. In 1878, he married Miss Rosa Arvizu, who is a native of Mexico. They have no children of their own, but have adopted two daughters of a brother, Mary and Anasztazia Wilson.

THE LEADING MERCANTILE HOUSE of Florence is that of J. M. Ochoa, who, by his energy and ability, combined with courteous treatment, has built up a lucrative trade. Among our illustrations will be found a view of his pleasant and tasty home. The grounds are neatly laid off in walks, bordered by flowers, while many different kinds of fruit trees are to be found on his grounds.

JOSE M. OCHOA was born in the State of Chihuahua, Mexico, in 1848. His parents moved into New Mexico when he was only a year or two old, and he lived in that Territory, with the exception of three or four years spent at school in Pennsylvania, until he was eighteen years old, when he moved to Arizona, where he has followed freighting and mercantile pursuits. In 1878, he married Miss Sarah Jane Moss, a native of Pennsylvania. They have one daughter, Caturah Ochoa.

THE EXTENSIVE FURNITURE STORE and lumber yards seen among our illustrations, are owned by Chas. W. Tillman. He has a fine line of furniture, suited to the trade, and deals largely in lumber. The building is of adobe, a portion of which is occupied as an office by the Florence *Enterprise*.

CHARLES W. TILLMAN, who now resides in Florence, Pinal County, Arizona, was born in New Bremen, Lewis County, New York, in 1842, and came to California in

1858. His occupation was mining; he removed to Gold Hill, Nevada, in 1859, where he worked at carpenter work and mining. He returned to California in 1865, residing at Oakland, where he worked at carpentering; as well as at San Francisco, Benicia, Vallejo, and also in Portland, Oregon.

He arrived at Casa Grande, Arizona, February 19, 1880, where he engaged in carpentering and building. In 1882, he married Miss Flora Nesbitt, a native of Michigan. They have one son, Carl Nesbitt Tillman.

THE LONE STAR STORE is a well-known business institution of Florence, owned and conducted by J. B. Michea. In March, 1878, he commenced business with a capital of only \$300, but, by strict attention, and fair dealing, he has built up a prosperous trade, and has now a large and seasonable stock of general merchandise. He has worked his own way, and owes his present standing and success to his own efforts.

J. B. MICHEA was born in France, September 20, 1842, was raised as a farmer, left his home in 1859, traveled in France, was a soldier in the French Army, crossed the Atlantic Ocean three times, and for twenty years was a rover, never staying a year consecutively in one place. During this time, he followed the professions of baker, clerk, peddler and cook. When not able to obtain large wages, he accepted small ones, at any honest calling, instead of lying idle. He came to Arizona from Mexico, where he had been for some time, stopping for a while at Phoenix, as clerk for Peralta & Co. He married Miss Carmel Robles, February 6, 1878, who was a native of Sonora, Mexico. They have four children, three boys and one girl; Nathalia, John Baptiste, Claude, and Louis Michea.

WILLIAM E. GUILD, the efficient and gentlemanly Postmaster of Florence, was born in Colbrook, Ohio, in 1846. He moved from Ohio to Paw Paw, Michigan in 1864, and engaged in the lumber trade at Bear Lake, and Muskegan during the years 1869-71. In the year 1872 he engaged in the telegraph business, and in 1874 he started from Washington, District of Columbia, and arrived at Stanwix, November 9, 1874, after eighteen days travel, *via* San Francisco and San Diego. During his stay at Stanwix, he was prospecting the country south of the Gila River, into Sonora, Mexico, having three fights with the Indians, but escaping without injury.

He was a telegraph operator, and was a manager of Stanwix and Yuma offices. He came to Florence in 1877 to adjust the accounts of said offices, and remained at that place until 1882, when he left the service, and obtained the appointment of Postmaster, and organized the Silver King and Florence Telegraph Companies, and built the line from Casa Grande to Silver King, the same year. He now lives in Florence. A view of his residence is also

given. He has an orchard of forty trees of apricots, peaches, figs, nectarines, cherries, and plums.

He married Miss Josie A. Simmons in 1877, a native of Lawton, Michigan. They have two sons, Nott E. and Ray Guild.

J. B. REMY owns one of the finest fruit farms of the Gila Valley. The vineyard covers about six acres, and is very thrifty. The fruit raised on the place besides grapes, consists of the usual varieties grown in the climate of southern Arizona. No prettier sight can one find than a view of this ranch when all is in full leaf. A sketch is given in this work. Mr. Remy has given but five years to the cultivation of this ranch, and has accomplished much, showing what industry can do on the desert wastes of Arizona.

Mr. Remy is a native of Lorraine, France, where he lived until coming to this country. After the Franco-Prussian War, he emigrated with his family to America. They went to Chicago, where they remained a short time when they removed to Kansas, locating in Cloud County. Here they built a comfortable home, and engaged with success in farming, but the "locust plague" discouraged them during several years, and Mr. Remy decided to emigrate to a country where grasshoppers were unknown.

With this object in view, he sent his son Lucien to Arizona, to find a favorable locality. Lucien reported favorably, and in 1876 Mr. Remy set out for that country, with the remainder of his family, consisting of his wife and daughter, Mrs. Camille Lanoue, and also her husband, Edward Lanoue, and her little daughter Noemie. They were three months crossing the plains, but met with no serious adventures, although the Indians were hostile.

They located at Florence, where the son had already become established in the butcher business. Mr. Remy joined his son in this business, but two years later retired from it, and purchased a quarter-section, one mile east of Florence, where they have since resided. They located a stock range about twenty-two miles east of Florence, in 1879.

Mr. Lanoue is in partnership with Mr. Remy & Son, both in farming and stock-raising. Mr. Remy was married in 1850, to Miss Annie Becker, also a native of Lorraine, France.

JOHN GUILANI has a fine farm of 320 acres, three miles from the county seat, twenty-eight miles from the railroad, and three miles from school, church and post-office. About one-half of the farm is first-class soil, and the rest sandy loam. The chief products of the farm are vegetables of every kind, principally Irish and sweet potatoes, the sweet potatoes averaging over two tons per acre. The wheat and barley yield about 2,000 pounds per acre. His orchard contains 600 peach trees, 36 apri-

cot, 24 apple, 7 pear, 10 plum, 6 nectarine, 40 fig, 800 grape, and 150 pomegranate.

John Giuliani was born in Italy, January 26, 1830. While he was living in Italy he was clerk of the Board of Supervisors, and teacher of the Latin language. He started from Italy, and arrived in San Francisco, California, March 8, 1860. He was engaged as storekeeper and bookkeeper in San Francisco, and came from there in 1876, to Florence, where he now lives, and engaged in gardening. In 1874, he married Mrs. Josefa Molina, a widow, with one son, Samuel Torres.

C. W. FULLER, ESQ., is one of the prominent farmers of the Gila Valley; he was born in Newark, Ohio, June 5, 1836. While a resident of Ohio, he was employed at clerking and farming. Arriving at the age of twenty, he traveled by the Nicaragua route to San Francisco, Cal. From this place, he went to the mines on Rabbit Creek, now Laport, Sierra County, and engaged in the packing business. Eighteen months later, he joined as partner with his brothers James and John, who had also come to California, at St. Louis, in the same county, under the firm name of Fuller Bros., dealers in hardware and general merchandise. This business proved prosperous until 1858, when they were burned out, suffering a total loss. But with the pluck of frontiersmen, they were undaunted, and again started in business at Pine Grove, in the same county.

In 1860, Mr. Fuller sold out, and went to Virginia City, Nevada, where he engaged in the mercantile and butcher business, but in 1861 he sold out to his brother, and located at Reno, on the Truckee River, being the first settler at that place, which was then named Fuller's Crossing.

He was the first person in the Territory to obtain a charter from the Territorial Legislature, for building a toll-bridge and road; and he built the first bridge across the Truckee River. He also kept a hotel at this place. But in the spring of 1862, he suffered severely from a flood, losing his bridge and part of his hotel. He then sold out, and went to Lassen County, California, where he turned his attention to stock-raising and farming.

In 1875, he sold out, and went to Arizona. For a time he joined a brother at Tucson in the butcher and stock business, and then sold out, and removed to Florence in 1877, and purchased the Harris Claim, about three and one-half miles east of the valley, where he has since remained. This property is on the Gila River, and is readily irrigated from that stream. He has built a substantial house, corral and barn; and has many thrifty fruit trees coming into bearing. The soil of this place is very productive, yielding 2,000 pounds of wheat and barley to the acre, and other crops in proportion.

#### PINAL SETTLEMENT.

This mining town is situated on Queen Creek, about thirty-five miles northeast of Florence. One mile west of the town is the lofty Tordilla Peak, an immense pile of basaltic rock. It is more generally known as the Picket Post, there having been for a number of years a company of soldiers stationed here for protection to the settlers. The town is built of wood and stone, and presents a pleasing appearance. It contains several stores of general merchandise, one tin and hardware store, one bank, two hotels, a public school, post-office, express office, saloon, restaurants, etc. There is a neat wooden church built by the Methodists, which is now under the charge of Rev. David Calfee. A flourishing Sunday-school is held in connection with the services. The Odd Fellows and Masons have organizations here. There are three mills for the reduction of ores, located at this place, of which but one is working.

It was first named Picket Post, being used as that during the time General Stoneman had his headquarters at Pinal Ranch. The post-office was called by that name till a few years ago, when the citizens had it changed to Pinal. This camp is surrounded by rich sections and mineral belts, which, though slowly, are surely being developed. Within a radius of fifteen miles can be named very many valuable properties, which, for merit and intrinsic value, are here considered equal to some in other districts that are now causing considerable stir and excitement in mining circles. Here, as in some of the earlier settled portions of the Territory, lack of capital, and mismanagement, have kept mining back; but the real wealth that is here, will ere long tell its own story, and the tide will begin to flow in this direction, and Pinal will become a populous city, and the hill-sides teem with the industrious classes. Mr. L. Arnett took up the first cattle ranch near where the Silver King Reduction Works now stand, and put up the first house. In 1877, he sold to the Silver King Company the site for their mill.

Pinal has a number of retail merchandising stores, which do a large business.

GEO. L. MILLER & CO. are one of the oldest firms, and have built up a good trade by honest and fair dealing.

A. A. WALLSWORTH has a neat store, and is one of Pinal's wide-awake business men.

J. CHAMPION carries on the business of a lumber dealer, and supplies the towns of Pinal and Casa Grande with first-class lumber, as well as shipping to surrounding points.

J. DE NOON REYMERT, a prominent lawyer of Pinal, is one of the leading lawyers of Arizona. He came to that place in 1876, and has been an active mover in all public enterprises. He published for several years the

Pinal *Drill*, devoted to the mining interests of Arizona. Mr. Reymert is a native of Norway, was a student at Christiania, and subsequently at Edinburg, Scotland. He came to America in 1842, and took up his residence in Wisconsin, where he practiced law. He also became interested in mining, was editor of a prominent journal, and a member of the constitutional convention of that State. He has also traveled in South America, been a resident of Pennsylvania and New York, and while in the latter city spent some time in the practice of law. He has been engaged in many mining enterprises, in connection with his extensive law practice, and is now the owner of several fine mining properties in the Pioneer District.

SILVER KING, so named from the celebrated mine, is built in the Pinal Mountains, close to the Silver King Mine. It is a town of some note, and is situated about five miles from Pinal. It contains three business houses, two hotels, blacksmith, and shoe shops, and the usual number of saloons. A good school is maintained here, while occasional religious services are held by the Rev. David Calfee, of Pinal. Perry Wildman is the leading merchant.

The William's Hotel, conducted by Robert Williams, of Silver King, Pinal County, is one of the best houses in that county, being the favorite stopping-place of the general traveling public. Mr. Williams' birth occurred under rather unusual surroundings, transpiring on board the ship *Sebastopol*, commanded by his father, while near the coast of Newfoundland on the thirtieth day of March, 1839. When five years of age, William removed with his parents to California, where his father died in 1849. William started out to shift for himself at the early age of twelve, being employed at that time in the mines of Sierra County, California, and at the age of fifteen he went to Fort Vancouver, Washington Territory, where he was employed by the Government. Two years later he was employed by the Hudson's Bay Company, trading on the coast. In 1858 he went to Frazer River, where he commenced mining with good success. After eighteen months he opened a saloon, called the California Saloon, at Victoria, California, where he remained about a year. About this time Mr. Williams lost heavily in various speculations, after which he joined with C. C. Chapman in printing in 1863, but was immediately arrested and imprisoned. During the same year he rode a horse to Lower California, where he was interested as trader for some time. While here he met Captain Gorman at La Paz, and went with him to the mouth of the Colorado in the fall of 1864. He was from that time variously engaged in Arizona, Idaho, and Nevada up to 1877, when he located at Silver King, where he opened an eating and lodging house for travelers, and has since built up a fine business here.

PERRY WILDMAN was born in Albany, New York,

May 9, 1848, and graduated from the high school at Troy, New York, in 1862. He then worked in a saw-mill, was a clerk in a grocery store, and bookkeeper and proof-reader in a printing office until 1867. In 1869 he was united in marriage to Miss Mary J. Allen, a native of Argyle, New York. They have one daughter, Eliza Armitage Wildman. Mr. Wildman went into the wholesale grocery house of J. J. Gillespy & Son, of Troy, New York, as receiving clerk, and remained there until 1875, at which time he started for California. He kept hotel at Wilmington, California, for two years. July 4, 1880, he came to Florence, Arizona, and went into the employ of Buckalew & Ochoa, and in January, 1882, he went into business for himself at Silver King, Arizona, where he now lives. He is a dealer in general merchandise, does a storage and commission business, forwarding merchandise and freight to Globe by pack trains, employing 100 mules and burros.

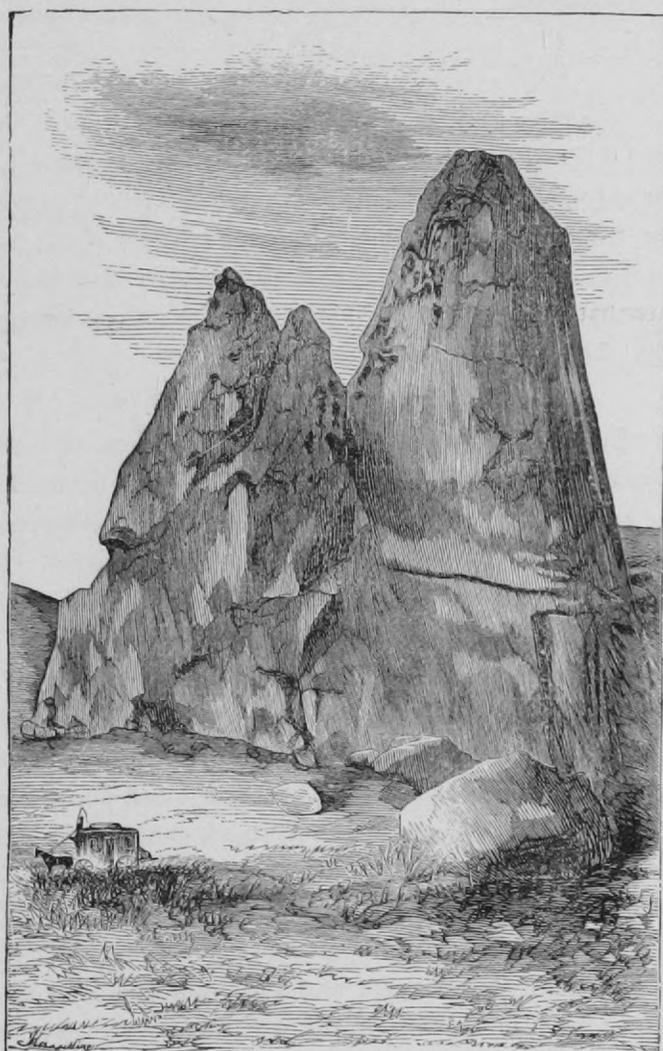
CASA GRANDE presents a cheerful, business-like appearance. The town consists chiefly of one long street, built along the north side of the railroad track. Its geographical location gives it some advantage in regard to trade, a share of which it is endeavoring to secure with an industry and perseverance that deserves success. Casa Grande does a large forwarding business to Florence, Globe, Pinal, and Silver King, stages running to all these places, and also to the Quijotoas.

The stage lines from here north are owned by the Texas and California Stage Company. Their horses are handsome and well fed, as is the president of the line. Six miles north of Casa Grande, the road passes through an ancient reservoir—how old no one knows—half a mile in diameter, with banks still twelve feet high and twenty thick. Not a blade of grass grows on the bed of this dry lake, which is as smooth as a billiard table and glistens in the sun like a mirror. A canal can be traced from the Gila, above Florence, leading into the reservoir, a distance of twenty miles. The race that did this work, and did it, in all probability, without iron implements, must have been far superior to the present degenerate inhabitants.

Picacho Peak forms the most prominent object on this portion of the road. It lies forty-five miles from the Gila, and is about the same distance from Tucson. It presents a prominent and picturesque landmark from both points, and is seen at a great distance. The name is Spanish, and signifies "point," or "peak." Some travelers have discovered in this curious formation of rocks some resemblance to an ax-head. There are many Picachos in Arizona. Generally they consist of two sharp-pointed rocks, one of a triangular shape and the other of a rectangular shape, growing out of the top of some isolated mountain, and serve to indicate the routes across the *mesa*, which otherwise it might be difficult to find.

## MARICOPA COUNTY.

**T**HIS county lies in the southwestern portion of the Territory, and is bounded on the west by Yuma, north by Yavapai, east by Gila and Pinal, and on the south by Pinal and Pima Counties. The Salt and Gila Rivers flow through the county in their westward course, the former emptying into the Gila some fifteen miles west of Phoenix, the county seat. The northern portion is, in addition, watered by the Rio Verde, Agua Fria, and Has-sayampa Creeks. In an agricultural point of view, the county is regarded as ranking first in the Territory.



PICACHO PEAK ON THE ROAD TO PRESCOTT.

It is also rich in its mineral resources, as almost every mountain is known to be seamed with lodes of gold and silver-bearing quartz. The county has not been, as yet, thoroughly prospected, and all the development in its mining districts, except in a few instances, has been of recent date.

## FIRST OFFICERS OF MARICOPA.

On the seventeenth day of February, 1871, when the county of Maricopa was set apart from Yavapai, J. T. Alsap was appointed Probate Judge by Governor Safford; W. A. Hancock was appointed temporary Sheriff, and C. H.

Gray, M. P. Griffin and F. A. Shaw, temporary Supervisors, while the 1st of May of the same year was named as the day for the first county election. Accordingly, a special election was held on that date at Hancock's store, and resulted as follows:—

Phoenix was chosen as the county seat. Thos. Barnum was elected Sheriff; Geo. E. Mowry, Treasurer; J. S. Mercer, Recorder; W. A. Hancock, Surveyor; R. Stinson, District Attorney; J. M. Henderson, Public Administrator; J. McElliot, Coroner; and the Supervisors chosen were F. A. Shaw, M. L. Stiles, and John A. Young. The Justices of the Peace were Chas. Carter and John A. Young.

## COUNTY OFFICERS FOR 1884.

SHERIFF—L. H. Orme.

TREASURER—G. F. Kemper.

COUNTY RECORDER—Levi Osborne.

PROBATE JUDGE—L. G. Greenhaw.

BOARD OF SUPERVISORS—M. Wormser, A. J. Halbert, and N. Herrick.

The rapid progress of this county is shown by comparison of the assessment rolls of 1882 and 1883. In the year 1882, the grand total footed up \$1,484,969, and in 1883, \$1,939,231. This shows an increase of \$454,262, being an increase of 23.4 per cent. during the past twelve months, which all must admit is a good showing. The realty for 1883 foots up \$1,080,020, and the personal property, \$859,211.

## SALT RIVER VALLEY.

Salt River, says the *Gazette*, rises away to the east in the Pinal Mountains, possibly beyond, and cuts across a more or less rugged country, until it *debouches* from out the cañon, and enters what is known as the Salt River Valley, and renders possible the reclamation of what would be, without its life-giving flood, a most inhospitable desert. The entire length of this valley, from the mouth of the cañon to the junction of Salt River with the Gila, is not far from forty miles. Not all of this length, however, has been reclaimed, nor is it susceptible of cultivation. From the remotest extremes of cultivation up and down the river, the distance is not far from thirty miles, and the greatest width seven miles, along the line of the Maricopa and Black Cañon roads, from outer ditch to outer ditch, and from that point twelve miles westward almost as wide.

Through the heart of this belt is a stretch of country lying immediately along the river, that is absolutely worthless, being the river beds that have been cut from year to year. This shingly, sandy, worthless stretch of country varies from three-quarters of a mile to one mile and a half wide. The irrigable land lies six to ten feet above the river bed, therefore ditches invariably have their head

several miles higher up than the land intended to be irrigated by the waters brought down therein.

The irrigable land has a slight fall, just sufficient to give the water a good flow across the land when turned on for flooding. Outside this irrigable belt, stretching away in every direction, is the brush-covered desert, with here and there a large mesquite, *palo verde*, and iron-wood, with the columnar stalks of the *cereus giganteus* towering up over them all, resembling trunks of a forest that have been denuded of their branches by tempest or tornado. All is yellow and bare, except where the hand of man has made itself felt, and has caused streams of life-giving water to flow, encouraging the growth of trees, in addition to the cereals and summer crops.

PRODUCTS OF THE VALLEY.

The *Gazette* has done a work that, by law in California, devolves upon County Assessors, and that ought to be made obligatory upon the Assessors of Arizona to do. At great expense it has caused to be visited almost every ranch within Salt River Valley, and has obtained a statement of the number of acres of alfalfa, wheat, barley, oats, rye, summer crops, fruit trees, and grape-vines under cultivation. The number of acres seeded in alfalfa, in the Phoenix portion of the valley, is 2,639; wheat, 7,447; and barley, 7,335, making a total of about 20,000 acres in these three crops. Of rye there was 50 acres, and oats, 10.

The product of wheat enumerated is 10,882,555 pounds. This gives an average of 1,461 pounds, or  $24\frac{2}{3}$  bushels, per acre. That of barley is 10,950,550 pounds, which is at the rate of 1,493 pounds, or  $26\frac{1}{2}$  bushels, per acre. It will be seen that the yield of barley is only 32 pounds more per acre than that of wheat. Of wheat and barley there was harvested 22,924,754 pounds. To this must be added that of Tempe, which gives us 32,778,871 pounds, as the total for the entire white settlements of the valley. This is divided as follows: Wheat, 13,686,780 pounds, and barley, 18,792,091 pounds. If we add the probable amount of Indian wheat raised within the county, say 2,000,000 pounds, we have as the total product of wheat and barley for the year 1883, 34,778,886 pounds.

ALFALFA FIELDS.

There is within the Salt River Valley, as enumerated, a total of  $3,973\frac{1}{2}$  acres of alfalfa, divided as follows:—

	ACRES.
Phoenix .....	2,639
Tempe .....	541
Mesa City .....	570
Jonesville .....	$223\frac{1}{2}$
Total .....	$3,973\frac{1}{2}$

GRAPE-VINES.

The total of grape-vines under cultivation in this county, as enumerated, is 213,420, divided as follows:—

	VINES.
Phoenix .....	104,170
Mesa City .....	68,925
Jonesville .....	24,275
Tempe .....	16,050
Total .....	213,420

FRUIT TREES.

Of the various kinds of fruit trees, there are 30,260 under cultivation in Maricopa County, as enumerated, divided as follows:—

	TREES.
Phoenix .....	17,151
Mesa City .....	8,214
Tempe .....	3,460
Jonesville .....	1,435
Total .....	30,260

The trees and vines growing within the limits of the city of Phoenix are not enumerated. This would swell the aggregate of vines to 215,420, and fruit trees to 32,260. For a country where fruit culture only began about six years ago, and that too, where it was thought at that late date that neither fruit nor vines could be grown successfully, the above showing is remarkably good.

SALT RIVER VALLEY GRAIN FIELDS.

By the kindness of Capt. W. A. Hancock, says the *Herald*, we were favored yesterday with a drive behind his fine team to the grain-producing section of the valley west of town.

For sixteen miles the road is as straight as the surveyor's instruments could make it, and on both sides is bordered with promising homes and the most luxuriant growth of grain, almost as far as the eye can follow the surface to the north and to the south. Whole sections of barley and wheat follow each other in quick succession, while long lines of cottonwood or thick clumps here and there mark out the roads and canals over the surface of the land, or the site of the home of some rancher rejoicing in the great cereal wealth upon which he feasts his eyes at every glance. Often grain and wild oats approach close to the wheels of the vehicle, and are as high as the horses' backs.

Aside from the grain there is considerable acreage of alfalfa, wild oats, and wheat or barley that will be cut for hay. Many of the farmers are also turning their attention to stock, and large quantities of hogs, horses, and cattle here and there dotted the rich green surface of the alfalfa fields. Some extensive orchards and several fine, flourishing vineyards form noticeable features of this portion of the valley, which, it should be remembered, was mostly a vast expanse of greasewood brush two years ago, till within a very few miles of town. Now homes dot the plain in all directions; the rapidly growing cottonwood has quickly

spread its grateful shades about them till already they nestle in the elysian fields of quiet beauty, peace, and a wonderful prosperity.

In passing through such scenes one cannot resist comparing the life-time it takes in many of the older States to work a home up to a point of beauty and thrifty productiveness with the mere bagatelle of two years of time which most of these homes have been in existence. With the one exception of buildings, all else is to-day ahead of the older homes of the East.

Very few of the citizens of the Territory, and, indeed many of our own valley, have but little comprehension of the wonderful capabilities of the Salt River Valley. Down through the center of the valley for sixteen straight miles, then explorations hither and thither in all directions, and finally away northward beyond the Grand Canal, then homeward along the general line of that water course for another sixteen miles, altogether a drive of certainly not less than forty miles, and all the time grain, grain, grain that would make a Californian grow green with envy, grain that would astonish an Illinoisan to death, grain by the millions of pounds upon millions more, and all in the desert of Arizona, where nothing but rattlesnakes, Indians, and cactii grow, as outsiders picture us. Outsiders will learn better some day, but it will be when not a foot of land can be had in our fertile valley for less than \$100 per acre, and on up to \$500 and \$1,000 per acre, for in the fruit cultivation that is rapidly and surely coming on, land will readily reach the latter figure, large as it may appear.

#### COTTON CROP.

The Salt River Valley has just received a premium of \$500 for the best cotton raised in the Territory. The gentleman who produced the cotton regards our valley and climate as all that can be desired for the business, and as a proof, points to the quantity of cotton raised per acre and its extra quality. From five acres Mr. Hardwicke gathered 3,390 pounds, or an average of 678 pounds to the acre. The staple is long and fine, and the cotton will recommend itself at a glance as being superior in fiber. The labor required to produce this crop is no more than is required to produce a corn crop, and it can doubtless be put upon the market at about the cost of shelled corn.

#### FRUIT IN SALT RIVER VALLEY.

The soil of our valley, says the *Herald*, is too precious to be much longer wasted, even on bountiful harvests of grain, as shown unmistakably by the phenomenal advance in the price of land in the fruit-growing sections of southern California. Wonderful, because desirable locations for orchards that could have been bought, five years ago, for \$500 can hardly be purchased now for \$5,000.

Salt River Valley has a climate superior, for health, to

that of southern California, being entirely free from fog and damp winds, and is capable of producing as valuable fruits. The heat of summer here is favorable for the maturing of fruit.

For the production of raisins, this valley is faultless, vines yielding immensely, and the fruit being free from disease or pest. Nothing more is needed or desired for grape culture.

The guava will bear luxuriantly here, and has few equals for jelly, on account of its indescribably delicious flavor. There is no money, however, in guavas, which one will naturally class with pomegranates.

Enthusiasts, by using figures and facts, prove that an olive orchard is most desirable property, and a certain source of wealth. The evidence is certainly good as shown by Santa Barbara orchards.

The pecan will doubtless prove as productive here as in western Texas, which furnishes large quantities of the best nuts in the market.

The *Herald* having always the interests of the people in view, has repeatedly urged all who can do so, to acquire a piece of land while it is yet plentiful and cheap, and to improve the same for a home. Within a few years the individual who owns forty acres of improved land in this valley with water, will be wealthy. Around Riverside, California, improved land is now worth from \$500 to \$1,000 per acre. Water in southern California is piped all over the country, up-hill and down, without waste, and he who has land and water can sell for a small fortune. In some localities, water is worth \$1,000 per inch, and some orchardists have replaced windmills with steam pumps.

The present generation will see this a rich and fruitful valley, and may possibly see the Colorado River spread over a vast, valuable, peerless country, from Yuma to the sea.

#### THE ARIZONA CANAL.

Among the numerous agricultural enterprises of the Gila and Salt River Valleys, the most important is the construction of the Arizona Canal; indeed, just at the present time, it is one of the most extensive and important enterprises in the Territory. This canal heads on the Salt River, just below the mouth of the Verde, at a point where the River cuts through a low point of mountains, and where the ledge of rocks forces the whole body of water from both rivers to the surface, and therefore the body of water in the channel is here the greatest.

From this point the canal takes a course slightly north of west, then turns to the south around the point of mountains, running out into the plain some eight miles above Phoenix; then again takes a general northwestern course, hugging the foot of the mountains as closely as possible to the Agua Fria, the entire distance, in a direct line, being

thirty-five miles. The canal is being constructed six feet deep, and thirty-six feet wide on the bottom, and will carry a body of water more than ample for irrigating all the vast body of land that will come under its influence, which is now, without carrying the canal beyond the Agua Fria, some 145 square miles in extent.

#### EARLY TIMES ON SALT RIVER.

We are indebted to the Phoenix *Herald* for the following pages of valuable matter relative to the early settlement of Maricopa County.

No attempt was made to form a settlement on Salt River until water was brought upon the ground by the Swilling Irrigating Canal Company, which was organized at Wickenburg, in the fall of 1867. The events which led to its formation were as follows:—

Wickenburg, situated on the west bank of the Hassayampa Creek, sixty miles northwest from the present site of Phoenix, was at that time in the fourth year of its existence, and at the height of its prosperity, supporting a population of some 1,200 inhabitants.

The Vulture Mine was discovered in 1863, by Henry Wickenburg, and was overflowing with rich gold ore, and furnished work for countless arastras, which lined the banks of the Hassayampa, and also kept a ten-stamp mill running night and day. These industries, with the continual disbursement which they necessitated, soon brought together a wide-awake population, with the hotels, eating-houses, saloons, and dance-halls, usually attendant upon a frontier mining camp. Money was free, but provisions and grain were scarce.

California was then distant nearly two months' journey for freight teams, and all supplies had to be hauled from Prescott. For flour and grain the new settlement depended upon the Pima villages, on the Gila River, some seventy-five miles to the southeast. Here the Pima Indians raised a superior quality of wheat. A Mr. White was running a small flour mill at the Pima village, and Henry Morgan, afterwards one of the first merchants in Phoenix, had a small trading post in the same vicinity, buying wheat from the Indians and furnishing them with other necessities of life.

At Maricopa Wells, a stage station near by, Grinell & Co. had a small store. Flour brought \$12.00 per hundred, and wheat was eight cents per pound.

As there was a rapidly-growing demand for these staples at Wickenburg, it is not strange that some of the more enterprising citizens commenced looking about them for a chance to turn an honest penny by furnishing the required articles.

Salt River Valley was, in those days, almost unknown. The road from Wickenburg to Maricopa Wells came down

the Hassayampa to the White Tank Mountains, and from that point struck straight to the Gila at its confluence with Salt River.

#### FIRST WHITE SETTLER.

The only road through the valley was made by J. Y. T. Smith, who had the government hay contract at Fort McDowell, on the Verde River, and had established, in the spring of 1867 a hay camp on Salt River, four miles above the present city of Phoenix. Here he had some Mexicans at work cutting the *galleta* hay, which grew in profusion along the river banks. Here he also had a small band of cattle roaming over the unclaimed wastes; and his only neighbors were the antelope, the coyote, and the rabbit. The rattlesnake hissed at the passing traveler, and the loathsome turkey buzzard circled in silent curves overhead. There was no shade except from a few straggling cottonwoods along the river channel, and on either side stretched a desert covered with mesquite, *palo verde*, and sage-brush, sloping gradually towards the foot-hills of the barren mountain ranges, which inclose the valley to the north and south.

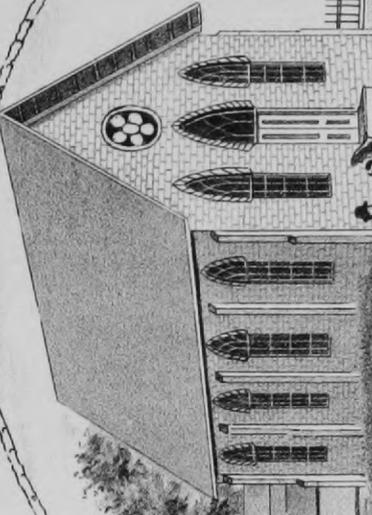
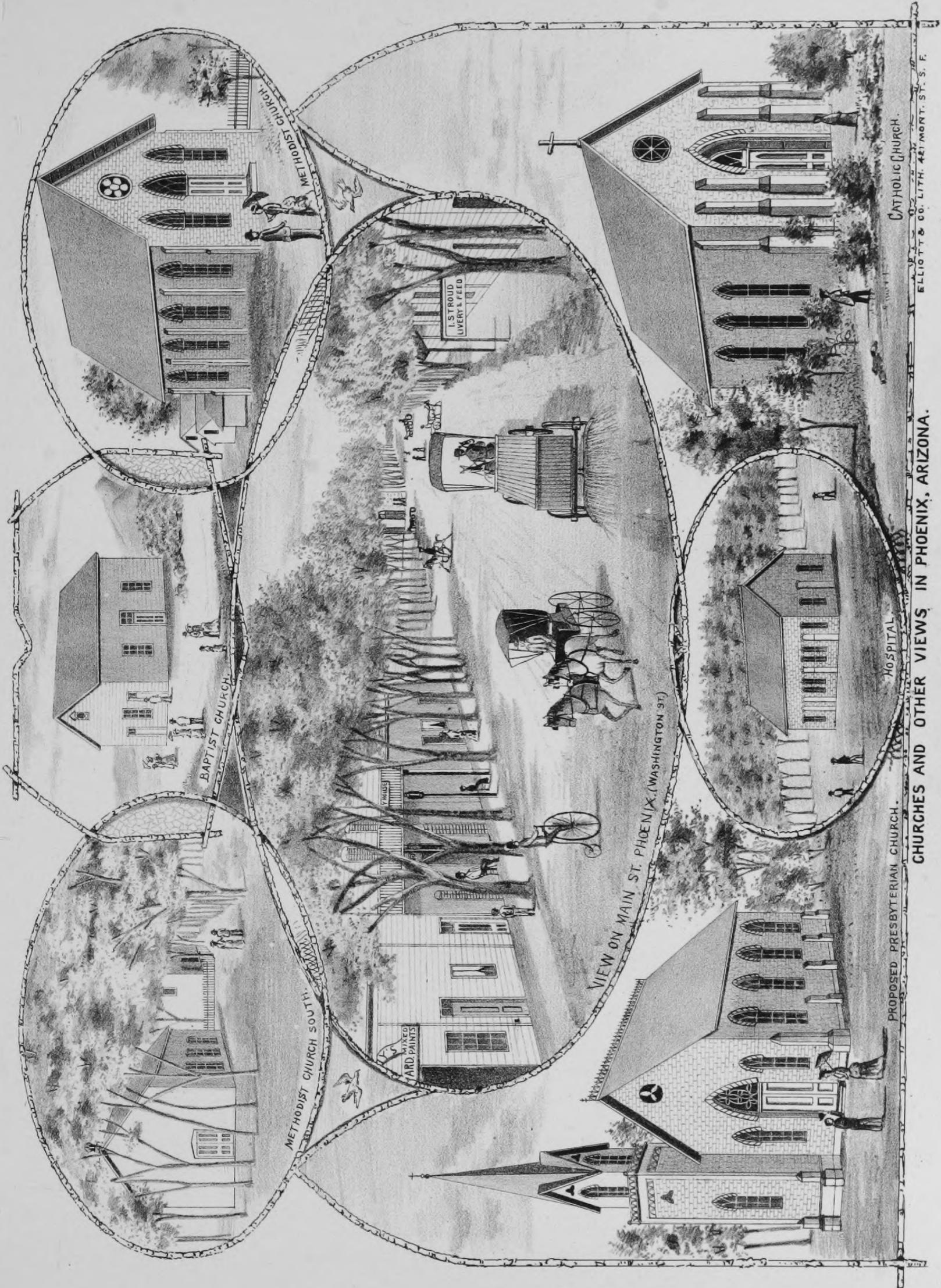
Mr. J. Y. T. Smith was thus the first white sojourner in this now populous section, although the presence of old adobe ruins, and numerous channels of ancient canals, show that a numerous people, who have left no history, have, at some far distant epoch, inhabited and cultivated these fertile lands.

#### FIRST IRRIGATING CANAL COMPANY.

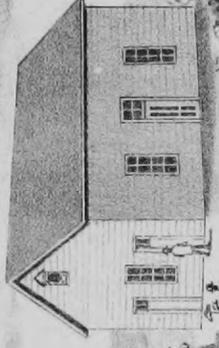
It was in September, 1867, that J. W. Swilling, more familiarly known to the old residents of Arizona as Jack Swilling, had occasion to stop at J. Y. T. Smith's camp for a few days. While there, he noticed the lay of the land, and considered the feasibility of bringing water upon it. On his return to Wickenburg, by his reports on the fertility of the soil and the ease with which it could be irrigated, he soon induced others to join him in agitating the question of organizing a joint stock company to take out a ditch in that section. As a result of these efforts, a meeting was held on the sixteenth day of September, 1867, at which a stock company was formed, calling itself the Swilling Irrigating Canal Company, with a nominal capital of \$10,000, consisting of fifty shares at \$200 each.

Most of these pioneer stockholders have since left the country, several of them are dead, and not one of the number is at present a stockholder in the company.

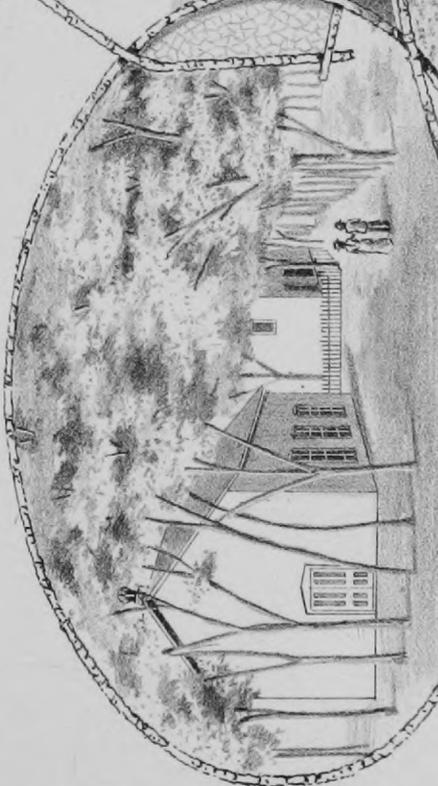
It must not be understood that these men were capitalists; indeed, very few of them had any money at all. They all of them, however, had stout hearts and willing hands, the requisites of the pioneer in any country, most of all, in Arizona. It was only by heroic energy and by enduring many dangers and privations, that they suc-



METHODIST CHURCH.

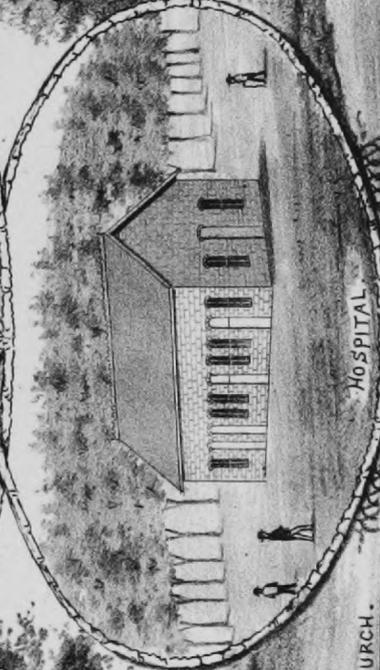


BAPTIST CHURCH.

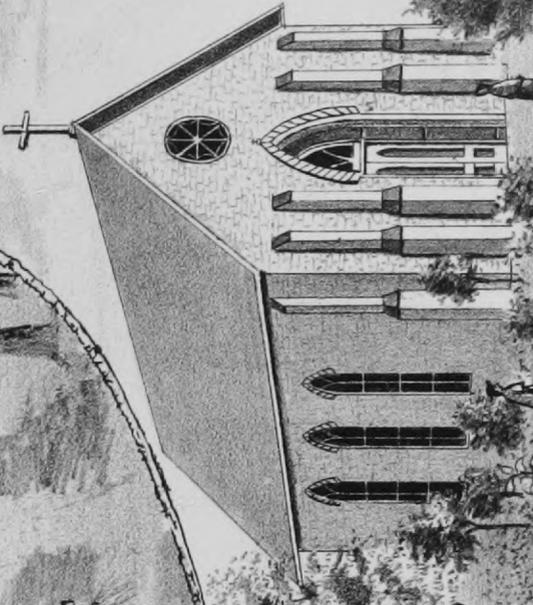


METHODIST CHURCH SOUTH.

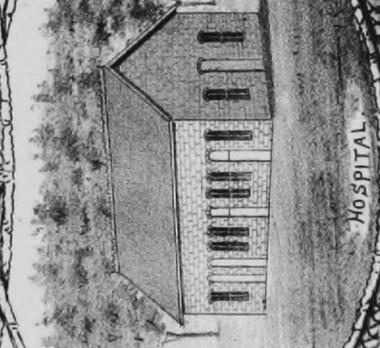
VIEW ON MAIN ST. PHOENIX (WASHINGTON ST.)



PROPOSED PRESBYTERIAN CHURCH.



CATHOLIC CHURCH.



HOSPITAL.

CHURCHES AND OTHER VIEWS IN PHOENIX, ARIZONA.

ELLIOTT & CO. LITH. 421 MONT. ST. S. F.

ceeded in laying the corner-stone, as it were, to the wealth and unexampled prosperity of Salt River Valley. There is many a page in the personal history of each one of these brave pioneers which would make a thrilling romance, and many a noble, heroic deed, that perhaps will forever remain unwritten, and even now is almost forgotten.

In the early part of December, 1866, Henry Wickenburg, accompanied by Jack Swilling, Darrell Dupper, John Lawsen, and others, left Wickenburg with an eight-mule team, loaded with provisions and tools for commencing work on the proposed canal.

The first place chosen for the head of the ditch was on the north bank of the river, nearly opposite the present site of Tempe. Here they started in with a will, and soon accomplished over \$500 worth of work. But finding that it became necessary to cut through solid rock, and not having the means wherewith to accomplish such a task, this place was abandoned and a new head was started five miles lower down the river, at the very spot where John Y. T. Smith had located his hay camp.

Here the work proved more successful, for in six months from the time of starting, several miles of the canal had been completed, and the end of the year 1868 saw many crops harvested, and many new ranches being taken up.

#### PIONEER FEMALE SETTLER.

Among the very first settlers was Mr. C. H. Gray, now one of the wealthiest ranchers in the valley. His family is the only one that settled here in those early days and still remains, though there are others here who settled shortly afterwards. Mrs. C. H. Gray is consequently the first American lady who came to the Salt River Valley to make a home.

It was on the sixteenth day of August, in the year 1868, when Mr. C. H. Gray pitched his tent on the quarter-section which is now known as Lum Gray's ranch. This is a mile east of the eastern boundary line of the city of Phoenix.

Riding over the desert intervening between the Gila and Salt Rivers, Mr. Gray camped towards evening on the identical spot on which his house now stands. The river was flowing within one-quarter of a mile, and as far as the eye could reach the country was covered with a luxuriant growth of grass standing two feet in height, dotted here and there with an occasional mesquite tree, as if for ornament, and looking, to his eyes, long accustomed to the barren deserts of New Mexico and eastern Arizona, like a veritable paradise. He brought his family at once from Maricopa Wells, and took up a section.

#### THE DUTCH DITCH.

Mr. Gray's place was nearly four miles below the then

settlement, and, in connection with his neighbors, the Starar Brothers, who preceded him in arrival by about two months, also Underwood (since killed by Indians near McDowell), and J. Ammerman (Pump Handle John), he took out what is known as the Dutch Ditch. This is a branch of the original Swilling Ditch, and leaves the latter at a point nearly one mile above Vail's Mill, branching off to the south, and carrying water upon those ranches which lie contiguous to the river. This Dutch Ditch, or southern branch of the Salt River Valley Canal, passes along the southern boundary of Phoenix and ends on the ranch of John B. Montgomery, while the main stream of the canal, running almost parallel with, and half a mile to the north of the former, bounds Phoenix on the north, and furnishes its inhabitants with water, sending a rippling stream through every street, so that, instead of the usual gutter seen in Eastern cities, there is a running rivulet between the sidewalks and the roadways.

During the summer of 1868, a few crops of corn were raised by irrigation, also four or five acres of barley, on Sawyer's ranch. Perhaps Sawyer will be better known to old inhabitants as Frenchy, as this was his sobriquet in those days.

Dennis, Mowry and Murphy became residents in the year 1869, also many others. J. I. Dennis is at present one of the largest land owners in the valley, and also owns many city lots in Phoenix.

George E. Mowry is, and has been for years, the Postmaster at Phoenix, and was the first Treasurer of Maricopa County.

#### FIRST STORE STARTED.

Jim Murphy started a little store, the first in the valley, and the building still stands. It may be noticed on the Teme road, just outside the city limits. It is a small adobe house, and is interesting as being the pioneer store, and almost the first building erected near Phoenix.

#### MARICOPA CANAL.

Some of the original ditch company had taken out another head for the Swilling Canal, at a point which they considered more favorable for a permanent head. This spot was nearly three-quarters of a mile above the original work. Crismon's flouring-mills are now built near the same spot. The original head was intended for a mere temporary affair, to enable the first farmers to bring water upon the land, while the more difficult work of opening a permanent water head was being actively pushed.

This latter was known as the North Extension, and when completed and flowing about one mile joined its waters to those of the former, near Jack Swilling's house (now the residence of Major C. H. Veil). Then dissensions arose among the stockholders, and the difficulties were adjusted by the formation of two separate companies,

the North Extension calling itself the Maricopa Canal Company, and carrying its water on a parallel one mile north of the Swilling Canal. It still bears the name of the Maricopa Canal, and irrigates some 14,000 acres of fertile farming land.

#### FIRST HOUSE ON SALT RIVER.

The house near which the two canals met and separated was the first house built in the valley. It is now owned by Major C. H. Veil, and is a large and commodious building, in the Mexican style of architecture. It was erected in the fall of 1868 by Jack Swilling, and soon became a general rendezvous and stopping-place for all who were passing through the valley. Swilling was a free, open-hearted fellow, willing to share his last loaf with any one; and so long as the sack of flour lasted, and the side of bacon hung in his chimney-corner, no man could pass his door hungry.

Let this, at least, be remembered to his honor, for in other respects he had the reputation of being a headstrong and violent man, and many lawless acts are laid at his door.

#### THE GRIFFIN DITCH.

This was started in 1869 by Frenchy Sawyer, who had a section of land west of Underwood, and about two miles further down the river. He did not succeed in obtaining water from it for his first crop, and had to depend on the Swilling Ditch, which was one mile north of him.

In 1870, M. P. Griffin bought in with Sawyer, and the following year the ditch was completed and incorporated by Griffin and Barnet. Its total length is three and a half miles. It is now lying idle, owing to the difficulty of obtaining water during the summer months when the river is low, having given its supply to the many irrigating canals further up the river.

#### THE PRESCOTT DITCH.

In the fall of 1870, before the Griffin Ditch was hardly completed, work was commenced on the Prescott Ditch, on the south side of the river, and nearly opposite the head of Griffin Ditch.

The ditch was completed on the fourteenth day of February, 1881. Its total length was about three miles, bringing under irrigation three or four hundred acres.

W. H. Downard says: "On the fourteenth day of February the ditch was completed to the west line of Broadway's ranch, and we all broke camp and divided up what little provisions we had, and each one went to his ranch to commence for himself. It was a hard time for some of us. I lived from the 14th of February, to some time in May, on flour straight, and cleared about twenty acres of land. Then, through the kindness of Mr. Metzler, I got some seed-corn and other seed, and planted a good summer

crop. To-day you will only find Mr. Broadway and Mr. Burrell farming on the ditch, though there is a settlement of Maricopa Indians farming on the lower end, who keep the whole ditch in order for a share of the water.

"Maddox and Van Arman made the canal now known as the Maddox Ditch, which heads just below Broadway's ranch, on the south side of Salt River, and can supply water for the irrigation of about 300 acres. At present there is only one farmer, Charles Fox, farming on this ditch."

#### FIRST SETTLERS ON SALT RIVER.

By this time, 1871, quite a little community of farmers had gathered together in this part of the valley. W. B. Hellings commenced to build his flour-mill in the fall of 1869, and by the spring of 1870 the mill was completed, which had a capacity of 100 pounds per day of flour, that brought \$10.00 per hundred. The machinery for the mill was brought in at great expense *via* Ehrenberg, on the Colorado. The freight paid was twelve and a half cents a pound, gold, greenbacks being then worth eighty cents on the dollar. A few buildings soon sprung up around the mill, among them a small store, by A. L. Rogers, and a stage station on the old route, between Fort McDowell and Wickenburg. Here the settlers used to congregate, on any important occasion, and this little nucleus of a settlement was called Mill City.

Another house, where these hard-working pioneers frequently met and exchanged news, was at Major McKinney's, the ruins of whose house may be seen about one mile east of Phoenix, on the north side of the Tempe road. Here Major McKinney kept a little saloon, and here was sold the first whisky ever retailed in the Salt River Valley. Close to Jack Swilling's house, W. A. Hancock kept a small store awhile, and then moved down to Murphy's house, which still stands near Phoenix, on the Tempe road. The post-office was also kept there, with George E. Mowry as clerk and Postmaster.

#### CHOOSING A TOWN SITE.

During the year 1870, the choosing of a site for a town was a favorite subject of conversation, and also caused a good deal of discussion. Major McKinney, and many others, were for having it laid off about one mile east of its present position, while the Starar boys, C. H. Gray, John Montgomery, and others, were in favor of the present site, and Hellings, Swilling, etc., on the other hand, wanted to see a town grow up around the flouring-mill. At last, Major McKinney's place was partially decided upon, and some, Capt. W. A. Hancock among them, even commenced to build. Captain Hancock already had a town site partially surveyed at this place, when discontentment again arose among the settlers. To adjust difficulties, after two or three informal meetings at McKinney's

saloon, a meeting was finally called at the house of Moore, which brought order out of chaos, and brought forth, also, the town of Phoenix, now the most important city in Arizona.

#### PHOENIX LOCATED.

At a mass-meeting of the citizens of Salt River Valley, convened at the house of Mr. Moore, on the twentieth day of October, 1870, for the purpose of selecting a suitable spot of unoccupied public land for a town site, a committee was appointed to select a suitable site on which to locate a town; Darrell Dupper, Moore, and M. P. Griffin were selected as said committee.

They recommended the north one-half of section eight, township one north, three east, as the most suitable site for a town to be located, and that said town be called "Phoenix."

The meeting then resolved itself into an association, to be called the Salt River Valley Town Association, and organized, by electing J. T. Alsap, J. Murphy, and J. T. Ferry as Commissioners. The name of the association was the Salt River Valley Town Association. The articles were signed by the following citizens of Phoenix:—

Darrell Dupper, W. B. Hellings & Co., Barnett & Block, Thos. Barnum, Jas. Murphy, J. T. Dennis, W. A. Holmes, Jas. W. Buck, Jacob Starar, J. T. Alsap, C. H. Gray, M. P. Griffin, Jas. McElliot, J. P. Perry, Wm. Rowe McConnell, Daniel Twomey, C. C. McDermott, E. Irvine, J. P. Osborne, Andrew Starar, Paul Becker, J. D. Monihon.

#### WHY CALLED PHOENIX.

The new town was named Phoenix at the suggestion of Darrell Dupper, and the name is not only singularly appropriate, but even prophetic, for a new and flourishing civilization has here sprung up on the ashes of the old. Scattered everywhere through the valley are ruins of immense houses and villages and aqueducts, while pottery and stone implements strew the surface of the ground. On every acre may be found evidence of a by-gone age and of a powerful race who have departed, leaving only ruins to mark their dwelling-places. Thus the Salt River Valley had been lying, a lonely and desolate waste, for unknown ages, until the arrival of a little band of American settlers, coming from Prescott, through the gorges of the Bradshaws, from the Colorado River, from Tucson, and New Mexico, over weary, burning deserts, enduring hunger, and thirst, and Indian cruelties, meeting at last in this valley and building the town of Phoenix.

As soon as the commissioners appointed by the Salt River Valley Association had received their instruction, they employed Capt. W. A. Hancock to survey and plan out the chosen town site, and by the fourteenth day of December, 1870, a sufficient number of lots had been surveyed to enable the town trustees to hold a sale, and thus

secure funds enough to prosecute the work of surveying. This work was necessarily slow and interrupted, as money was scarce, but by the spring of 1871, the last lot had been surveyed, and the map furnished by Captain Hancock showed a town site one mile in length by half a mile in width, divided into ninety-eight blocks.

On the tenth day of April, 1874, through the efforts of Hon. J. T. Alsap, the then Probate Judge of Maricopa County, the town site received a patent from the United States Government, at a total cost, including all expenses, of \$550.

#### FIRST SALE OF TOWN LOTS.

The first lot sold was that on the southwest corner of Washington and Montezuma Streets. It was bought by Judge Berry, of Prescott, for \$104, while the adjoining lot brought \$40.00. These two lots are now covered by Irvine's building, and are worth many thousands of dollars. Hancock's lot on the opposite corner, for which Ellis & Co. recently paid \$8,000, brought \$70.00.

#### FIRST HOUSES CONSTRUCTED.

The first house completed was a small adobe building on Washington Street, near to Montezuma, which has been recently demolished to make room for the fine brick building of Ellis & Co. This little house played quite an important part both in the history of the town and the county. Before the separation of Maricopa County from Yavapai, and until the county Court House had been built, it did duty as court room and Justice's office, and the Probate Judge, Treasurer, Recorder, Sheriff, and, in fact, all the county as well as the town officers, transacted their business here. Here assembled the first Board of Supervisors, and its narrow walls echoed to the sound of many a stormy debate.

"Mike's Brewery," situated on Washington Street, midway between Montezuma and Maricopa Streets, was the next house completed, and this was followed by the Loring Buildings, which were erected by John George, who afterwards sold them to Buchard, who opened a store there. Other houses quickly followed, and soon the main street was lined on both sides with quite a little group of houses.

Before the summer of '71, the County Court House was erected on a lot facing the Court House Plaza from the east. This house still stands, and is the property of Capt. W. A. Hancock.

Wm. Smith, the first store-keeper in the new town, occupied the little Hancock Building, and Dennis and Murphy opened a store in the building now occupied by Hooper & Co., near "Mike's Brewery."

Barnett & Block commenced doing business about the same time, also E. Irvine. These were the pioneer merchants of Phoenix.

The Masons were also presented with a lot, to aid in the advancement of the community.

Buchard's Mill was presented with an entire block on which to erect a flouring-mill, with the proviso that he should commence building the mill by the 1st of May, 1871, and have his machinery on the ground by July, 1872. Buchard fulfilled his agreement, but the mill took fire and the machinery was destroyed shortly after its completion. The old building was afterwards occupied by G. Cecher as a brewery, and was subsequently torn down to make room for a corral and livery stable, by George Hamlin.

#### FIRST SCHOOL ORGANIZED.

Even in the early days of this little settlement the value of education was not forgotten. The town trustees with wise forethought, set aside a block for a school house, and to-day Phoenix boasts the finest school building in the Territory.

The first school was organized in the fall of 1871, and it will readily occur to the reader that there were as yet very few children to attend it. Their number, however, was constantly on the increase. School was first held in what was then called the new Court House Building, though the county was actually paying for it at the rate of \$60.00 per month.

It was only after a series of changes running through many years that the public school at length reached its present beautiful and convenient quarters, which are represented in this work.

#### FIRST SHERIFF OF MARICOPA.

CAPT. W. A. HANCOCK was appointed Sheriff pending the first county election in May, 1871, and held the office from the preceding February. He reports that in the four months during which he held the office, he only made two arrests, and even they were for minor offenses. During the first six months Phoenix had no jail.

The first bloodshed in or around Phoenix was the killing of J. Favorite by Chenoweth, and arose out of an unhappy misunderstanding between the parties, who were at that time candidates for the office of Sheriff. Chenoweth, the survivor, gave himself up, stood his trial, and was acquitted, though he withdrew from the candidacy. Tom Barnum was elected Sheriff in the May elections, and was the first elected Sheriff of Maricopa County.

#### THE POST-OFFICE.

The post-office was kept at first at the pioneer store of Dennis & Murphy, with W. A. Hancock as Postmaster and Geo. E. Mowrey as Deputy. Subsequently it was moved to the store of Smith & Stearns in the old Goldman Building, and afterwards to Loring's store. Its next location was in Peralta's store, in the building now occupied by Goldman & Co.

Then Geo. E. Mowrey was appointed Postmaster, and after the failure of M. L. Peralta, he moved the office to the Meyer Block, where it still remains. James Grant had the mail contract between Ehrenberg and Florence, and also ran a weekly buckboard.

The original butcher shop was kept by Pete Holcomb, in the little building that was doing duty at the same time as Court House, Justice's office, store, etc. It was in truth an original meat market, for Pete merely killed the steer, cut it in quarters and hung them up. All customers had to cut off what they wanted, furnishing their own knives, and paying from 25 to 30 cents per pound for it. In those days only one beef was consumed in one week; now the butchers of Phoenix have to kill twenty-four or twenty-five, besides mutton and fresh pork.

#### THE OLD COURT HOUSE.

The building on Washington Street known as the Court House, was built by a Mexican, Clemente Romo by name. He sold it soon after to Goldwater & Brother, who started a store there. In 1875 the County Supervisors thought they were paying Hancock too much for his building on Cortez Street, and bought Goldwater's property for \$3,000, thereby obtaining room for a commodious jail and jail yard, a good court room and offices for the county officials. Goldwater then moved his goods to the building on the corner of Montezuma and Jefferson Streets, which is now known as the Phoenix Flouring Mill. This building was started by Lum Gray in 1871, and he sold it in 1872 to Goldwater, the walls being ten feet high. Goldwater finished the building and opened the store as above stated. This same building was afterwards occupied by Smith & Stearns as a store, and is now the Phoenix Flouring Mill, owned by J. Y. T. Smith.

The first deed given by the Probate Judge, under town patent, was to Jake Starar, May 18, 1875. This was lot 12, in block 10, and now occupied by W. F. McNulty's private residence. There were thirteen other additional lots and parcels of town property deeded on the same day.

The office of Probate Judge was not an elective one until at an act of the Legislature in 1878, the Governor appointed one for each county. J. T. Alsap held the office until December, when the present Judge of the Probate Court was elected, and again re-elected in 1882.

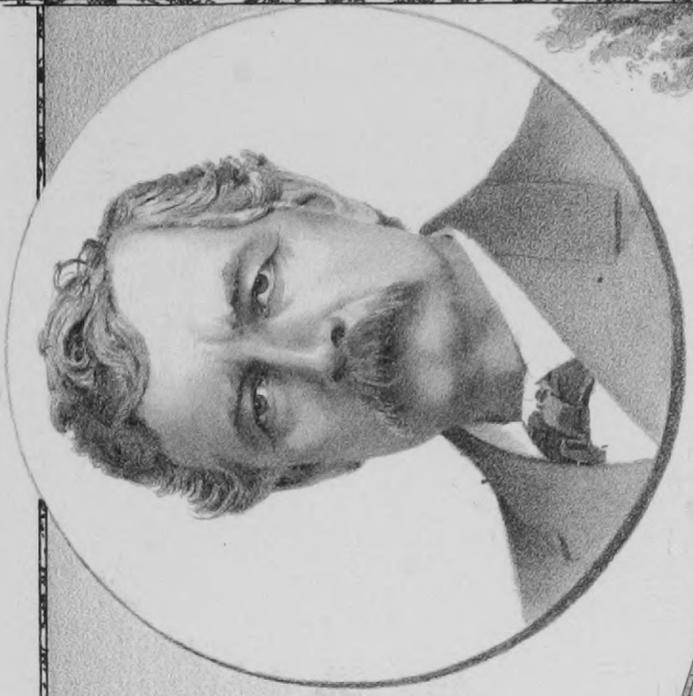
#### MODERN PHOENIX.

It was not laid out and built directly upon the bank of the river, as towns usually are, but north thereof about one mile and a half on a level plain that is neither bottom land nor *mesa*, but intermediate between the two, being as level as a table (that being what *mesa* means) and rich as the alluvial bottoms of the Nile or Ganges.

The streets are broad and regular, running with the cardinal points of the compass. The main streets run



*Eliza Mark Lemon*



*A. D. Lemon*



“LEMON HOTEL,” PHOENIX, ARIZONA, A. D. LEMON & SON, PROPRIETORS.

north and south, and are crossed at right angles by others of less business importance, which divide the city into blocks 300x300 feet. The city proper covers one-half section, or 320 acres of land. There have been one or two additions laid off, that are slowly building up, the main growth, however, being confined to the original town site.

The city is not as handsomely built up as could be desired, but it is, fortunately, fast passing the adobe age. There are several large brick buildings now in existence. The Court House is one of the handsomest and most complete in the Territory. With the exception of the exterior finish it will be a fac-simile of that at Tombstone, which, though costing only about one-half of that at Tucson, gives far better satisfaction.

#### CHURCHES OF PHOENIX.

First Methodist Episcopal Church of Phoenix was organized April 5, 1874, by Rev. Geo. H. Adams. At its first organization there were but three members. The membership is now twenty-five and fast increasing. Rev. Geo. L. Pearson is pastor. They have now a neat and commodious brick church, and small parsonage, which is valued at \$4,500.

Methodist Episcopal Church, South, was organized in 1873 by Rev. Alexander Groves. They have a membership of forty-four. Their church is an adobe surrounded by shade trees. Rev. James S. Chapman is pastor.

The Baptist Church was organized in March, 1883, but efforts for a building were not made until later in the year, and completed March 15, 1884. Rev. U. Gregory was chosen pastor. They have a nice frame church building. Their membership is twenty-five.

The Presbyterian society have a brick church, and hold regular services. Rev. S. D. Fulton is pastor.

The Catholics have a neat adobe building, where services are held regularly. Rev. Father Bloise is in charge. Services are held in both Spanish and English.

#### PRIVATE RESIDENCE.

Of private residences that of M. W. Kales, Esq., is the most ornate and ostentatious, and, situated as it is back from the street amid a forest of trees, it has a charming appearance. M. W. Kales was formerly a resident of the State of New York. The great West, however, claimed his attention at quite an early day, and in 1866 he was located at Austin, Nevada, where he engaged in banking.

He now resides at Phoenix, Arizona, being one of the leading bankers of that city. He is also largely interested in other enterprises, which are of vital importance to Maricopa County.

His residence, the finest in Phoenix, is surrounded by spacious grounds containing numerous varieties of shade trees, and also fruit trees in great abundance.

#### KALES & LEWIS, BANKERS.

This old and reliable banking firm consists of M. W. Kales and Sol. Lewis. They conduct a general banking business, and will purchase or advance on gold and silver bullion, county bonds and warrants, discount commercial paper, receive deposits repayable on demand, and undertake collections. Their correspondents are the Bank of California, at San Francisco, and Messrs. Laidlaw & Co., New York.

#### "THE VALLEY BANK OF PHOENIX."

The above is the name of a new banking house organized in Phoenix recently, by the officers of the First National Bank of Phoenix, who are the officers of the new bank except as to the President. Hon. M. H. Sherman is President of the new bank; Col. Wm. Christy is its Cashier, and E. J. Bennett, Esq., is Assistant Cashier.

It succeeds the First National Bank, which has been prosperous, and has done a good business, which was rapidly increasing, and the new bank will succeed to that business, assume all liabilities, and become the owner of all its assets. The policy of the new bank will be more liberal than that of the old, because the law will permit it. A banking institution with such men at its helm as the officers of the Valley Bank, will insure safety to its depositors, and accommodations and fair dealings with its customers generally.

#### READING-ROOM.

The ladies of Phoenix have completed arrangements for opening a suite of rooms and supplying them with choice literature, which will be placed, free of charge and free of obligations other than those that govern good morals, at the service of the public. They have conveniences for writing, simple games, and amusements. There is no charges or expenses, but a cordial invitation to the public to visit the rooms in their leisure hours. Gentlemen and ladies from the country can find conveniences for refreshing their toilet, and a glass of ice water.

At the last meeting of the W. C. T. U., held May 1st, the following officers were elected: President, Mrs. Pinney; Vice-Presidents, Mrs. Stanton, Mrs. Wharton, Mrs. Montgomery, Mrs. Chapman; Treasurer, Miss Dole; Corresponding Secretary, Mrs. McNulty; Recording Secretary, Mrs. Millay.

#### SECRET SOCIETIES.

Arizona Chapter, No. 1, R. A. M., hold stated convocations on the second Monday of each month. M. W. Kales, H. P.; F. A. Shaw, Secretary.

Arizona Lodge, No. 2, F. and A. M., have stated meetings on the Tuesdays on or preceding the full moon. S. E. Patton, W. M.; W. F. McNulty, Secretary.

Phoenix Lodge, No. 2, I. O. O. F., meets in Odd

Fellows' Hall every Saturday evening. Lincoln Fowler, N. G.; J. E. Wharton, Secretary.

Phoenix Lodge, No. 5, A. O. U. W., have regular meetings every Wednesday evening in Masonic Hall. S. D. Lount, M. W.; Joseph Campbell, Recorder.

Phoenix Lodge, No. 2, K. of P., meets on first and third Fridays of each month, in Masonic Hall. S. E. Patton, C. C.; H. W. Ryder, K. of R. and S.

Garden Valley, No. 1, I. O. G. T., meets Monday evening at Presbyterian Chapel. G. L. Pearson, W. C. T.; G. M. Fowler, W. S.

THE PHOENIX "GAZETTE" was established in 1880, by Chas. H. McNeil & Co. H. H. McNeil succeeded the firm in 1881, and the *Gazette* Printing and Publishing Co., of which H. H. McNeil is President, purchased the business May 2, 1884. The *Gazette* is a wide-awake paper, is chuck full of local items, and is ever ready to advance the interests of Phoenix and Arizona generally. We are indebted to it for much valuable information.

THE PHOENIX "HERALD," weekly, was established February 22, 1878, by Chas. McClintock & Co., who also, October 1, 1879, established the daily *Herald*. W. A. Morford, Esq., has the editorial management. His able pen has done much to call attention to the resources of the valley in the many exhaustive articles describing its productions and capabilities.

#### THE LEMON HOTEL.

This fine new hotel is located on the corner of Washington and Pima Streets, fronting on Washington 150 feet, and on Pima 125 feet. The open court is nicely ornamented with shrubbery. It has a bath-house. The hotel building is double, and comparatively fire-proof. The rooms are elegant and well ventilated. The fare is good, and the employes polite and attentive; and the traveler who stops, finds himself enjoying all the comforts of a pleasant home. This hotel fills a place and supplies a want long felt in the young and growing city of Phoenix, the gem of the desert, the beauty and pride of the Territory, whose crown is silver, whose shield is copper, and whose jewels are her brave frontiersmen.

#### LEADING MERCANTILE HOUSE.

The large and substantial building, a view of which will be found among our illustrations of Phoenix, is one of the finest buildings in the city. It was built in 1879 by Edward Irvine. It is located on the corner of Washington and Montezuma Streets, and fronts the large plaza. It is built of brick, and is two stories in height. The foundation is nine feet beneath the surface, the bottom of the wall being seven feet in width, and tapering to eighteen inches at the surface of the ground. The walls are thirty

feet in height. The ground plan of the building is 50x80 feet. The second story is occupied by the Masons and Odd Fellows, who have a nice hall fitted up for their use, while the balance is used as offices.

From the first this establishment has carried on a large business with no reverses. In 1877, Mr. Irvine associated with him, as a full partner, his son, J. A. R. Irvine. They continued in business till 1881, when they sold out their stock to Rosenthal & Kutner, and leased the store to them. They then purchased the store, property, and grocery business adjoining, of George Brown. Since that time they have conducted a general grocery, fruit, and provision store.

EDWARD IRVINE was born near Glasgow, Scotland, November 29, 1838. At an early age he removed with his parents to New Brunswick, and settled in the town of Woodstock, Carleton County. Before he was eighteen years of age, he began teaching school, which he followed for several years, and then studied law. He then engaged in the mercantile business in Carleton County, which business he followed until 1868. Having a desire to see something more of the world, he disposed of his business, and took passage for California, going by way of Panama, arriving in San Francisco the same year. He remained there but a short time when he removed to Monterey. Here he taught school for a few terms, and then went to San Diego, where he also taught school, and was soon after admitted to the practice of law in San Diego City. In the fall of 1870 he moved to Phoenix, where he has since resided, having during this time spent nearly two years in Missouri. He followed the practice of law until 1877, when he engaged in the general merchandising business.

Mr. Edward Irvine was married in 1858 to Miss Deborah Rideout, a native of New Brunswick. Mrs. Irvine died in 1860, leaving a son, Joseph A. R. Irvine. On June 11, 1880, in Phoenix, he was married to Miss Izora E. Jackson, who is a native of Wisconsin. They have two children, one boy and one girl, Edward A. M., and Izora J. Irvine.

JOS. A. R. IRVINE was born in Brighton, Carleton County, New Brunswick, November 2, 1858. When ten years of age, he accompanied his father to California, and from there to Phoenix, Arizona. When nineteen years of age, he was taken in business with his father as full partner in the large mercantile establishment on the corner of Washington and Montezuma Streets. Since that time he has been associated with his father in business.

In 1875-76 he attended Heald's Business College in San Francisco. He married Miss Nancy J. Gregg, September 11, 1878, who is a native of Missouri. They have one boy and two girls, Deborah T., Mary N., and John E. Irvine.

## PUBLIC SCHOOL BUILDING.

Phoenix prides herself as having one of the best school houses in the Territory. It is a two-story brick structure, of which the main building is 40x60, with projection in front, of 15x40 feet, which contains the stairways and wardrobes, and which is surmounted by a tower, containing a bell that can be heard over the entire city.

The first floor has two rooms, separated by brick partitions, each room being 30x40, and each seating sixty pupils. Blackboards extend entirely around each room above, while the walls are plastered and hard finished, and the ceiling is made of redwood and painted. The second floor has two rooms, separated by a wooden partition, provided nearly its whole length with folding doors, so that they may be thrown into one room for exhibitions and public exercises.

The walls are also finished as below. These rooms seat 50 each, making the total seating capacity for pupils 220. The grammar room is supplied with an organ, which adds much to the furniture of the room and to the pleasure and interest of both pupils and teacher. The rooms are all seated with modern improved desks. The building occupies an entire block, that was originally set apart by the town trustees for school purposes, and has been neatly finished and improved with shade trees, making a pleasant play ground even in the warmest weather. This handsome building stands in great contrast to the little adobe building that stands upon the side of the lot, and was once the only school room in Phoenix. It certainly is a distinct mark of the progress of the now thriving city during the past five years.

## MARICOPA COUNTY COURT HOUSE.

The Court House is the finest building in the county, having recently been completed at a cost of nearly \$35,000. It is a two-story brick structure in the form of a cross, measuring eighty feet in length and sixty feet crosswise through the wings. It is located upon a full block, and faces upon the principal business street. It is conveniently located, and its interior arrangement is both convenient and roomy. From the main entrance a spacious hall extends back through the center of the main wing forty feet to the inner wall of the jail, which occupies the rear wing from this main corridor. Offices open on either side, and six circular stairways start from it on the right in the center of the building. The Treasurer's and Recorder's offices are provided with implements to provide for safe keeping of the county's moneys and records. Upon the second floor are also offices, judges chambers, jury rooms, and supervisors and district court rooms, all of which are high, light, and airy. The whole structure is mounted with a handsome tower seventy-five feet high,

containing a tower clock with four dials, and large bell that serves to regulate the hours of business throughout the city.

The jail is a substantial and secure department by itself in the rear wing, built up with heavy brick walls, and lined inside with pine timber, thoroughly spiked together in a manner that would baffle the most cunning criminals. It contains six wooden cells for ordinary offenders, and four cages of boiler iron with grating doors, all worked by levers, for the criminal prisoners. The jail is so connected with the jailor's room and guard room that ingress or egress would be very difficult.

## THE ICE BUSINESS.

The ice for Phoenix is manufactured by George and Samuel D. Lount, the former being one of the original Hassayampers, and the latter an experienced ice-maker and inventor of ice-making machinery, who arrived in Phoenix February, 1879, and purchased the lot on Washington Street, where the business is still prosecuted. Samuel D. Lount went immediately to San Francisco and built a small apparatus on his plans, which they erected and had in operation about June 1st of that year, making the first ice ever manufactured in Arizona. The original investment was \$3,000, and the business was successful from the start. In the spring of 1883 they put in a larger machine. The present machine has a capacity of two and one-half tons per day, and the firm has so far invested over \$7,000 in the business.

WM. ISAAC was born in East Tennessee. He lived in Indiana ten years, in Missouri nineteen years, and in Colorado fifteen years. He started from Salinas City, Colorado, May 19, 1875, arriving in Prescott, Arizona, July 13, 1875, and came from there to Phoenix, Maricopa County, his present home, in May, 1876, and began improving his present farm the same year. He has a fine place of 400 acres, nicely improved, with a fine residence. The farm is located four miles from the county seat, thirty miles from the railroad, one mile from school, and four miles from church and post-office. He raises chiefly grain and alfalfa. The grain yields 1,800 pounds per acre, and the alfalfa six tons per acre. He has a large orchard of 200 trees, containing peach, apricot and apple. He also raises stock, having sixty cattle, thirty horses, and five mules. He is a civil engineer and surveyor by profession. In 1848 he married Miss Jennie Netherton, a native of east Tennessee. They have four sons and three daughters, W. O., E. E., J. H., F. A., and Nettie, Clara and Edna L. Isaac.

J. M. GIBSON is a native of Missouri, and was born in Osage County, in 1831. His early life was spent on the farm, but in 1858 he emigrated to Texas, and commenced stock-raising in the southwestern part of that State. Here

he remained until 1869, when, in company with twenty-three others, he started for California, his object being to continue the stock business there. With this in view, the party drove a band of cattle across the plains. When at a point on the Paquos River, about one hundred miles above Horse-head Crossing, they were attacked by Apaches, but escaped with the loss of but one member of the party, a brother of Mr. Gibson. One Indian was also known to have been killed. Reaching California, Mr. Gibson located in Los Angeles County, where he remained until 1880, when he came to Phoenix, where he still resides. Mr. Gibson opened a livery stable at this place, and now, in partnership with his son Jack, keeps a first-class establishment. Mr. Gibson was married to Miss Margaret Matilda Powers in 1850, who died in 1876. The remaining members of the family are Margaret Elizabeth, now the wife of J. R. Beauchamp, Esq., of Los Angeles County, California; James T., who resides with his family in Phoenix, and John P. Gibson, who is in California.

H. N. ALEXANDER, a view of whose residence appears in another part of this work, is one of the foremost lawyers of Arizona. He has for many years been a resident of the Pacific Coast, and has had much experience in many different parts of that country. He has finally settled at Phoenix, where he has built up an extensive practice in his profession.

SIMON NOVINGER, who forms the subject of this sketch, is a native of Dauphin County, Pennsylvania, where he was born January 4, 1832. In 1864 he set out to seek his fortunes in the far West. He finally, after traveling in several other States and Territories, commenced mining operations in the Black Foot country, Montana. He was thus engaged for four years, when he went to California, stopping but one winter, then going to White Pine, Nevada, and engaging in contracting wood for the use of quartz mills. After some time spent in this enterprise, he returned to Tulare County, California, where he remained until 1871, when he came to Arizona, where he has since resided. His first five or six months were spent in sowing and reaping a crop of wheat and barley on a piece of ground of which he had become possessed, after which he set out on a prospecting tour, in company with two others, Charles Bessmer and Jerome Larkin, in the Four Peak Range.

While riding alone on the side of a steep cañon one day, he was surprised by a party of Tonto savages, who, when discovered by him, were preparing to fire at him, but before they did so, Mr. Novinger had unslung his repeating rifle and commenced firing upon them, which had the effect of routing them. While they were endeavoring to

escape, Mr. Novinger, concluding that he would be unable to hit any one of the party with his rifle, sprang from his horse, and, seizing his shotgun, which he also carried with him, essayed to try the effect of a charge of buckshot upon the retreating Indians; but, unfortunately, he stepped upon a loose rock, which precipitated him down the declivity a distance of about thirty feet, his gun exploding in the descent, the charge taking terrible effect in his right thigh. In this frightful condition he was found a few minutes later by his comrades. No surgeon was nearer than Fort McDowell, a distance of 120 miles. For this post they immediately set out, Mr. Novinger being obliged to ride his horse the whole distance, the journey lasting three days and four nights. He was under treatment 140 days, when he was able to return to Phoenix, where he was variously engaged for two years, when he purchased the Elliott ranch, one and one-half miles southwest of that city, and commenced farming. He has since purchased additions to the original place, and now has one of the finest ranches in Maricopa County, consisting of 320 acres. Mr. Novinger is a practical farmer, and has been very successful. His place is well stocked with many varieties of fruit, and is well provided with buildings, his residence being among the finest in the country.

#### GREGORY HOUSE.

MR. J. M. GREGORY was born in Lincoln County, Ontario, November 29, 1829. Finding the farm life which he had been leading a humdrum existence, he concluded in 1854 to seek more stirring scenes, and accordingly in May of that year sailed for California, *via* the Panama route. He resided in Santa Clara County most of the time until 1878, when he started for Arizona, leaving San Jose April 28th. After a trip occupying two months, he reached Prescott June 30th, but the following January moved to Phoenix. After securing a home, he soon after engaged in the lumber business, being the pioneer lumberman of the place. To this business he soon added that of undertaking, and was the first to import burial cases to his town.

By strict attention to business and honest dealing, he has been able to increase his business, so that now he keeps in stock a full line of building material, including paints, oils, and a full line of undertaker's ware always on hand.

Besides his lumber interests, he is owner and proprietor of a first-class lodging-house, which is very completely and comfortably furnished. It is situated on the main street of the place, within easy access of the business portion of town. The writer of this article takes pleasure in recommending this house to the public.

N. HERRICK, one of the foremost business men of Maricopa County, was born in Dane County, Wisconsin, in 1849. Though reared in the far West and not wanting

# Arizona Gazette.

VOL. 8.—NO. 116.

PHOENIX, ARIZONA, TUESDAY EVENING, MAY 13, 1884.

DAILY EDITION.

## Germania Beer Hall

JOS. THALHEIMER, Proprietor,  
Cor. Washington & Montezuma Streets  
PHOENIX, ARIZONA.

## BOCA BEER

Which is always kept ICE  
COLD on draught.

## DESIRABLE RESIDENCE PROPERTY FOR SALE.

I have perfected arrangements for placing on the market, in lots to conform with the survey of Phoenix, and of the size of the blocks in said city, my property adjoining the town on the south. The property is easily irrigated and productive; suitable for homes.

## TERMS TO SUIT PURCHASERS.

For further particulars inquire of or write to  
H. H. LINVILLE, Phoenix.

## J. M. SCHRIVER, Contractor and Builder

N. W. Cor. Adams and Maricopa Streets.  
PHOENIX, ARIZONA.

## O. J. THIBODO, M. D.

Druggist and Apothecary  
PATENT MEDICINES, TOILET ARTICLES  
Perfumery, Brushes, Etc.  
OPP. POST-OFFICE PHOENIX ARIZONA

## THE PARLOR

Washington Street,  
Opposite the Plaza, Phoenix, Arizona.

## JAS. McNAMARA, Proprietor!

Just Opened, with a FINE ASSORTMENT OF  
LIQUORS AND CIGARS.

The Public is invited to call on me  
often and "smile."

## BANK EXCHANGE HOTEL

E. GANZ, - - Proprietor.  
ON THE EUROPEAN PLAN.

Nicely Furnished Rooms, by the Day  
Week or Month. A First Class Restaurant is located in the hotel building.

## BONSTELL, ALLEN & CO

News & Book Paper  
Also, Flat Cap, Bill Heads, Card Stock,  
Manilla and Straw Wrapping Paper,  
Paper Bags, Envelopes, Etc.

## FAMILY LIQUOR STORE

Washington St., Opposite Post-Office.  
**PURE**  
Wines and Liquors for Family  
and Medicinal Purposes  
a Specialty.

## J. M. MONTANO, Proprietor.

## THE CORNUCOPIA SALOON & CARD ROOM

Washington Street,  
Three Doors East of - Phoenix, Arizona  
None but the choicest Wines,  
Liquors and Cigars kept.

TEDROW Proprietor



## AN HONORED CAREER.

John K. Knox, Ex-Comptroller of the United States, has, after an honored and successful career in the public service, resigned his position to engage in private business. In view of Mr. Knox's long and conspicuous public service we present our readers with an excellent likeness of the gentleman who has so long presided over our national banking system.

Comptroller Knox was appointed deputy comptroller October 10, 1867, and comptroller on April 12, 1873, and thus has had a continuous service of seventeen years in the office. Previous to his appointment as deputy comptroller, he had charge of the mint and coinage correspondence, and was sent by Secretary McCulloch to San Francisco in 1866 to examine the branch mint in that city. His report was published with a complimentary notice by Secretary McCulloch in the finance report of that year. April 25, 1870, he completed a revision of the mint and coinage laws of the United States, which was transmitted to congress with an elaborate report. Upon his recommendation the coinage of the silver dollar was discontinued, and subsequently the bill which he proposed was passed by congress with a few amendments, and is now known as the "Coinage act of 1873."

The comptroller subsequently visited New Orleans and discovered in the office of the assistant treasurer the largest defalcation ever known in the history of the government. The failure of the First National bank of New Orleans followed, and Mr. Knox remaining for some weeks in that city acting as assistant treasurer. He was reappointed comptroller without his knowledge previous to the expiration of his firm term, and confirmed by the senate without reference to any committee. He was again appointed to a third term on April 12, 1882.

It was well known to Senator Sherman and other senators that the comptroller was the first choice of the late President Garfield for secretary of the treasury, and this fact was communicated by the president to a well known gentleman, to whom the president said that he was only prevented from carrying out his original purpose by political complications which afterward grew up in filling other places in his cabinet.

Mr. Knox has accepted the presidency of the National bank of the republic, which owns, jointly with the First National bank of New York, the "United Bank Building," on the corner of Wall street and Broadway. It is an old institution, originally organized in 1850, and has a capital of \$1,600,000 and a surplus of \$600,000.

New York is the center of the cigar-making trade. She has nearly 4,000 factories, and turns out 1,000,000,000 cigars a year. Pennsylvania, Ohio, and Illinois rank after New York. There were made in this country last year 4,177,860,952 cigars, about forty for every pound of tobacco used. About 35,000,000 were imported, this making a total of about 3,350,000,000, or 60 for every man, woman and child in the United States, and 250 for every man over twenty one years of age.

## WM. B. HOOPER & CO

—DEALERS IN—  
GROCERIES, WINES, LIQUORS, CIGARS,  
OILS AND MINING SUPPLIES.

## M. ASHER & BRO.

—DEALERS IN—  
Dry Goods, Clothing, Hats, Caps,  
BOOTS AND SHOES,  
CARPETS, FURNISHING GOODS, ETC.

We carry a full line of General Merchandise, in which is represented the latest and most desirable styles.

## SOLE AGENTS FOR SCHUTTLE'S WAGONS

THE BEST IN THE MARKET

## MINOR'S HALL BUILDING, PHOENIX, ARIZONA

## St. Cloud Restaurant!

WASHINGTON STREET,  
One Door East of Bank Exchange Hotel

THE FINEST APPOINTED EATING HOUSE IN ARIZONA.

Anything the Market Affords can be had here—at all hours—Cooked and served by men who understand their business.

SINGLE MEALS, 50 CENTS BOARD PER WEEK, \$7.00

WINE, LIQUORS AND CIGARS  
OF ALL KINDS, SERVED EXTRA.

PERSONS GOING ON TRIPS FROM THE CITY CAN HAVE FINE BASKET LUNCH put up here that will last them through, and be of a great convenience to travelers.

## Phoenix Bottling Works!

GEO. W. JOSSELYN, Prop.

West Adams Street, Phoenix, Arizona.

SODA, SASSAPARILLA, GINGER ALE, SYRUPS  
OF ALL KINDS, CIDER, ETC.

Goods Delivered Free of Charge to  
any part of the city.

## ARIZONA NURSERY

One Mile South-East of Phoenix.

15 ACRES IN NURSERY.

ORDERS TAKEN NOW FOR FALL PLANTING.

FRUIT AND ORNAMENTAL TREES  
Of all kinds, true to name and reliable.

Send for my terms before buying or  
ordering eastern trees.

## P. MINOR

DEALER IN ALL KINDS OF  
**LUMBER!**

SHINGLES, DOORS, SASH, BLINDS  
Mouldings and

BUILDING MATERIAL

FIRST-CLASS MATERIAL  
AT REASONABLE RATES.

LUMBER YARD  
CORNER ADAMS & MONTEZUMA STS

One Block North of the Plaza.

## WM. B. HOOPER & CO

—DEALERS IN—  
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Anything the Market Affords can be had here—at all hours—Cooked and served by men who understand their business.

SINGLE MEALS, 50 CENTS BOARD PER WEEK, \$7.00

WINE, LIQUORS AND CIGARS  
OF ALL KINDS, SERVED EXTRA.

PERSONS GOING ON TRIPS FROM THE CITY CAN HAVE FINE BASKET LUNCH put up here that will last them through, and be of a great convenience to travelers.

## Phoenix Bottling Works!

GEO. W. JOSSELYN, Prop.

West Adams Street, Phoenix, Arizona.

SODA, SASSAPARILLA, GINGER ALE, SYRUPS  
OF ALL KINDS, CIDER, ETC.

Goods Delivered Free of Charge to  
any part of the city.

## ARIZONA NURSERY

One Mile South-East of Phoenix.

15 ACRES IN NURSERY.

ORDERS TAKEN NOW FOR FALL PLANTING.

FRUIT AND ORNAMENTAL TREES  
Of all kinds, true to name and reliable.

Send for my terms before buying or  
ordering eastern trees.

## P. MINOR

DEALER IN ALL KINDS OF  
**LUMBER!**

SHINGLES, DOORS, SASH, BLINDS  
Mouldings and

BUILDING MATERIAL

FIRST-CLASS MATERIAL  
AT REASONABLE RATES.

LUMBER YARD  
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One Block North of the Plaza.

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BRICK BUILDING, ROOM NO. 1, PHOENIX, A. T.

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Special attention given to Collections.

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GIVES SPECIAL ATTENTION TO OBSTET-  
RIC AND DISEASES OF WOMEN. Resi-  
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OFFICE WITH DR. O. L. MAHONEY, AT  
the Phoenix Drug Store, Washington Street.  
Office Hours—11 to 12 A. M. & 5 to 9 P. M.

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Room 11, Bank Exchange Hotel, Phoenix,  
Arizona.

## SECRET SOCIETIES.

MASONIC—Arizona Chapter No. 1, R. A. M.  
Holds stated convocations on the second Monday  
of each month, at 7:30 P. M., in Masonic Hall,  
No. 12 North Washington Street. For further  
information apply to the following: S. E.  
FAY, W. M.; W. F. McVURT, Secretary.

I. O. O. F.—Phoenix Lodge No. 2, F. & A. M.  
Holds stated convocations on the second Monday  
of each month, at 7:30 P. M., in Masonic Hall,  
No. 12 North Washington Street. For further  
information apply to the following: S. E.  
FAY, W. M.; W. F. McVURT, Secretary.

A. O. U. W.—Phoenix Lodge No. 2, F. & A. M.  
Holds stated convocations on the second Monday  
of each month, at 7:30 P. M., in Masonic Hall,  
No. 12 North Washington Street. For further  
information apply to the following: S. E.  
FAY, W. M.; W. F. McVURT, Secretary.

K. of P.—Phoenix Lodge No. 2, F. & A. M.  
Holds stated convocations on the first and third Friday  
of each month, at 7:30 P. M., in Masonic Hall,  
No. 12 North Washington Street. For further  
information apply to the following: S. E.  
FAY, W. M.; W. F. McVURT, Secretary.

I. O. G. T.—Garden Valley, No. 1, meets  
Monday evening at 7:30 P. M., in Masonic Hall,  
No. 12 North Washington Street. For further  
information apply to the following: S. E.  
FAY, W. M.; W. F. McVURT, Secretary.

## RAILROADS AND STAGES.

## S. P. R. R. OF ARIZONA.

TRAINS ARRIVE AT MARICOPA AS FOLLOWS:  
7:40 P. M. DAILY—Passenger Train West  
from Phoenix, connecting at Lathrop with the  
Atlantic, Pacific and Northern, Sacramento,  
Pacific and Omaha, sleeping car attached from  
Denver, N. M., to Oakland, Cal.

Through Freight and Express, 6:15 A. M.  
7:45 A. M. DAILY—Passenger Train East  
from Phoenix, connecting at Lathrop with the  
Atlantic, Pacific and Northern, Sacramento,  
Pacific and Omaha, sleeping car attached from  
Denver, N. M., to Oakland, Cal.

Stage leaves Phoenix, daily, at 7 P. M., for  
Tucson and Globe, Tucson, Benson (Stages for  
Tombstone, Wilcox, San Simon and Douglas,  
connecting with the A. T. S. P. R. R. for Kansas  
City and the East).

Through Freight and Express, 1:45 A. M.  
T. H. GOFFMAN,  
Gen'l Pass. & T. R. Agt.  
A. K. TOWER, Gen'l Supt.

## ARIZONA STAGE LINE!

JAMES STEWART, Superintendent.

Stage leaves Phoenix, at 3:30 P. M., for Prescott,  
via Sycamore and Wickenburg, on Mondays, Wed-  
nesdays and Fridays. Returning stage arrives at  
A. S. on Tuesdays, Thursdays and Saturdays.

Stage leaves Phoenix, daily, at 10:30 A. M., for  
Maricopa, and returning arrives at 2 P. M.

Stage leaves Phoenix, daily, at 7 P. M., for  
Tucson via Black Canyon and Gilbert. Return-  
ing stages are daily, at 9:30 A. M., from Phoenix  
on the same route.

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Doors, Windows, Blinds, Mouldings,  
Lime, Hair, Plaster, Cement,  
and everything pertaining to  
the Building Business.

## UNDERTAKERS' GOODS

Of Different Styles and Patterns  
Constantly on Hand.

## ALL ORDERS WILL RECEIVE Prompt and Satisfactory Attention

OFFICE AND YARD  
**SOUTH SIDE OF THE PLAZA**  
PHOENIX, ARIZONA.

## O. L. MAHONEY, M. D.

## Physician & Surgeon

WASHINGTON STREET,  
Opposite the Plaza, Phoenix, Arizona

Will make diseases  
of the EYE a special-  
ity, but not to the  
exclusion of a general  
practice of medicine  
and surgery.

## LIVE AND LET LIVE.

## CITY MEAT MARKET.

## BALSZ & WELLS

## BUTCHERS

MONTEZUMA STREET,  
Opposite Plaza, PHOENIX, ARIZONA

## BEEF, VEAL, PORK, MUTTON

And Everything Usually Kept in a  
First-Class Meat Market.

We do not believe in monopolizing any  
business. Shall spare no pains to please  
and solicit only our share of the public  
patronage.

## WE HAVE COME TO STAY,

## E. IRVINE

## General Merchandise

FRESH GROCERIES,  
Canned Goods, Teas, Ground  
and Roasted Coffee, Fresh  
and Dried Fruits, Spices,  
Candy, Nuts, Etc.

Washington Street, PHOENIX, A. T.

## BUTTER, EGGS AND FARM PRODUCE OF ALL KINDS BOUGHT AND SOLD.

## Family Supplies a Specialty

BEST BRANDS. LOWEST PRICES.

GOODS DELIVERED FREE OF CHARGE.

## R. E. FARRINGTON,

## General Merchandise

HANDLE GRAIN  
IN LARGE OR SMALL QUANTITIES

## ROLLED BARLEY A SPECIALTY

## W. P. BRITTON, CARPENTER

## BUILDER,

Cor. Maricopa and Adams Sts.

Any work entrusted to me  
will receive prompt attention,  
and be done in a substantial  
and mechanical manner.

Plans and Specifications Furnished.

## The Eclipse Saloon

Cor. Washington and Maricopa Sts.  
PHOENIX, - - ARIZONA.

KERN & LUKE, Proprietors.

THE FINEST PUBLIC ESTABLISHMENT  
IN CENTRAL ARIZONA.

Billiard, Pool and Card Tables at the  
Disposal of Customers.

THE BAR IS SUPPLIED WITH ONLY THE  
BEST LIQUORS AND CIGARS.

Courteous treatment universally shown to  
visitors. Drop in and enjoy yourself!

the adventurous spirit so characteristic of those living on the frontier, he remained in his native county till the spring of 1864, when he started out to see the world. In company with about twenty others, he set out, overland for Montana. For three years he traversed various parts of Montana, Idaho, and Washington Territory, when he again set his face homeward. He safely reached his native State, but not long to remain, for he soon departed for Iowa, and from there traveled south, remaining for a time in Kansas, Texas, and New Mexico, where he was in the employ of a stage company. From this Territory he came to Arizona, where he has since resided. Unlike most men who have formed a taste for roaming, he seemed content to settle down at Phoenix, where he commenced blacksmithing. So diligently and wisely did he conduct this business, that he soon greatly increased his working force, and now employs many men. Since coming to Phoenix, he has been united in marriage to Miss Ann Kellogg, a native of California. This union has been blessed with one child, a son.

WM. A. HANCOCK is one of the pioneers of Arizona, and also a large land owner and farmer. He was born in Barre, Massachusetts, in 1831. When twenty-two years of age, in company with two brothers, he started for California. Reaching Iowa, they purchased a band of cattle, which they drove across the plains. Reaching their journey's end, they settled five miles above Sacramento. Here Mr. Hancock remained with his brother for eight years. In 1864 he enlisted in the Seventh California Volunteers, and in the spring of 1865 came to Arizona, where he was promoted to rank of Lieutenant in Company C, First Arizona Volunteers. In December, 1865, Mr. Hancock, while on a scouting trip in Greenback Valley, Gila County, found a \$100 bill in a deserted Indian camp, supposed to have been stolen by them from settlers in New Mexico. From this incident the valley obtained its name. In the summer of 1866 Mr. Hancock was detailed to the position of post adjutant, of Fort McDowell. He was relieved about a month before, being mustered out, which was in September, 1866. He was afterward appointed superintendent of Government farms at Fort McDowell, and after serving in this office for some time, was appointed post trader at Camp Reno, in Tonto Valley, which position he held until Camp Reno was broken up in 1870. He then went to the Salt River Valley, where he surveyed the site for the city of Phoenix, and built the first building erected in that place, which was used as a store. He was also the first to hold the office of Sheriff in Maricopa County.

In 1873 he married Miss Lillie B. Kellogg, a resident of Phoenix. His family consists of two children, Henry Lee, aged ten years, and Mabel, aged eight. Mr. Hancock has been practicing law for a number of years in

Phoenix, and attending to his extensive farming interest. He has 640 acres about ten miles west of Phoenix, and 160 acres about five miles northwest of this city.

#### LIVERY STABLE.

IRA STROUD & SON furnish some of the finest turn-outs in Phoenix, at their livery stable on Washington Street. He came to this place from Millerton, Fresno County, California, in 1878. He was born in Newport, Vermillion County, Indiana, July 4, 1826. In 1839 he removed with his parents to Iowa City, Iowa, where they remained one winter and again set out, this time for Clarksville, Red River County, Texas, remaining here four years, and again removing to the San Gabriel River, where two years later he joined the Texas Rangers and went to the Mexican War. He remained in his country's service till 1848, when his company was mustered out. During the same year he married Miss Rebecca Caroline Williams, who was a native of Alabama. He then moved to Belton, Bell County, Texas, where he remained until April, 1852, when he and his family, which then consisted of his wife and two children, started for California, where he settled at Millerton, Fresno County, and engaged in stock-raising. But the emigrating spirit was not yet weaned, and in 1878 he went to Phoenix, Arizona, where he has since resided, being at present interested in the livery business.

SAM. M. HUSTON is a native of Butler County, Ohio, where he was born January 25, 1861. He came to Arizona in 1881. He has been a resident of Maricopa County for the past two years, engaged in the drug business in Phoenix.

#### LEADING FARMERS.

SAM. F. WEBB has, about three miles north of Phoenix, a beautiful farm of 160 acres, which is well stocked with various kinds of fruit, besides supporting a few cows, fifteen horses, and about a hundred hogs. His orchards aggregate 600 trees, including apricots, plums, peaches, nectarines, and grapes. Beside those he has one of the largest vineyards in Arizona, containing 5,000 vines. The place is well fenced, much of the fence being lined with rows of cottonwood trees. Mr. Webb has another place containing 640 acres, which is twelve miles west of his residence. This place is comparatively new, not many improvements having been made, but it takes but a few years in the Salt River Valley to improve a place so that to a stranger it will appear to have had many years of care and attention, and there is no doubt but what this immense place will, in a comparatively short time, be among the finest in the country.

Mr. Webb is a native of California, and was born in Nevada County, in 1853. When quite young he removed

with his parents to Mendocino County, and from there, in 1869, they moved to Los Angeles. While in that country he worked at blacksmithing at Gallatin. In 1872 he again removed, with his parents, to San Diego, where himself and father engaged in stock-raising. While in San Diego County, Mr. Webb married Miss Mary Jane Miller, a native of Tennessee. The fruit of this union has been four children, three of whom are living. Their names are: George Washington, John Morgan, and Samuel Fleming Webb. During 1877, Mr. Webb turned his attention to Arizona, and set out for that land of promise with his family, and father-in-law, who joined him in the stock business. They crossed the Yuma desert, driving 400 head of cattle, which they brought to Little Cottonwood, seventy miles below Phoenix, on the Gila River. Here Mr. Webb also kept a station for the accommodation of travelers and teamsters. He remained at this place until 1877, when he moved to Gila Bend (North), where, in company with his father-in-law, he took charge of the ditch known as the Webb Ditch, which they sold to Mr. Webb's father, in 1880. Mr. Webb then purchased the place described previously, where he has resided since October, 1880. In 1882, Mr. Webb was elected to the Twelfth Legislative Assembly of Arizona, representing Maricopa County, of which body he is still a member.

#### THE LINVILLE RANCH.

The Linville Ranch is situated at Phoenix, the seat of Maricopa County, Arizona, adjoining the original town site on the south. A portion of the tract is, in fact, an addition to that city, officially recorded as Linville's Addition to Phoenix.

In all Arizona a more comfortable or prettier home is nowhere to be found. The east line of the quarter-section of the Linville Ranch faces the county road, and is fringed with large shade trees from one end to the other, forming a live fence, and producing a most pleasant effect to the view. The residence sits back from this road fully a hundred yards, and is approached through an avenue of foliage which the trees on each side afford. It is scarcely distant one-half mile from the Court House, school, and business center of Phoenix. The larger portion of the ranch is devoted to pasture, and the evergreen coat of fragrant alfalfa contributes to the general appearance of comfort and thrift which is on every hand presented. The soil is susceptible to the highest degree of cultivation, and a prolific orchard and an extensive vineyard give evidence of this fact. A portion of the ranch is also in the hands of gardeners, and the soil responds almost magically to the touch of cultivation.

#### MESA CITY.

The pioneers of the Mesa City colony were as follows: G. W. Serrine, W. L. Serrine, T. C. Serrine, P. F. Serrine,

F. M. Pomeroy, J. H. Pomeroy, E. Pomeroy, and Charles Mallary, all from Idaho; Chas. Chrismon, W. G. Smith, W. Schwarz, Wm. Newell, and Chas. J. Robson were from Salt Lake City, Utah, the whole consisting of about seventy souls, including their families.

This colony traveled by way of Lee's Ferry on the Colorado River, by Brigham City, on the Little Colorado, and across the Mogollon Mountains to Beaver Head, at which point they sent out exploring parties, hunting for suitable location for settlement. While one of these parties were out, they found Major Braton at Camp Verde, who was one of the best posted men on the resources of this Territory that they had found. He advised them to come and look at the present site of the village of Mesa.

Accordingly, the company fitted out a wagon with four horses and C. Chrisman, G. W. Serrine, F. M. Pomeroy, and Chas. J. Robson, to come and look at this country. They arrived at the settlement of Jonesville, January 8, 1878. After viewing the country, location of ditches, etc., it was agreed upon by D. W. Jones, in behalf of the Jonesville Company, and the four above-named, in behalf of the Mesa Company, that the two should go together. They made arrangements for lots, permanent water rights, and for enlarging the ditch. They left C. Chrisman to look after their interests, while the other three returned with glad tidings to the rest of the company, who gathered up their stock and were on the road in a short time, headed for the Salt River, where, on arrival, they learned that Elder D. W. Jones had reconsidered his proposal, and other plans were adopted.

#### MESA CANAL.

CAPTAIN W. A. HANCOCK located and surveyed a ditch, but on investigation by the company it was thought too much of a job for so small a number. If the plan had been carried out, the ditch would have tapped the river near where the present Arizona Canal is being taken out, but on the south side, very nearly opposite. Hence they dropped back to the present site of the Mesa Canal, which was surveyed by Mr. A. M. Jones, in February.

Captain Hancock came and established the corners on some twelve sections of Government land, and it was decided to locate the town on the present site. At the visit of Captain Hancock all the arrangements were made for incorporation, under the laws of the Territory. Captain Hancock suggested the name of Mesa, which was adopted as the title of the canal company, and the name of the city or village incorporation.

The city plat was surveyed by A. M. Jones, and drawn by lots by the stockholders, according to their investments in the canal. The persistent effort of these pioneers, and others uniting with them, continued for a period of over four years, wherein, when their stock and finances were

exhausted, they would draw off in parties to replenish their supplies. Although under discouraging circumstances, they would return to the work again, some going as far as Utah, and others to different parts of the Territory, but still pursuing their part in this task until they have made it a final success.

The canal is owned by a joint stock company, there being, at the present date, 130 stockholders. There are 200 shares in the company, and they are valued at \$200 each at the present time. Some of the shareholders own as many as three shares, but many of them only one. The length of the main canal is nine miles, but it is not all finished to its full size.

Several miles of the canal follow the bed of an old Aztec ditch that had been cut through a layer of cement along the bluff of the *mesa*, where it slopes down to the river bottom. This pre-historic water-way was not less than thirty feet wide on the top and twenty on the bottom through this cement, and of an average depth somewhat greater than its successor. It is estimated that a saving of about \$25,000 was made by following the alignment of this old canal, which, to a poor people, was a large item, and made the success they attained possible. Every year since 1878, work has been done in enlarging the main canal, and sub-canals have been added, taking in an area of 5,000 acres, that have been cultivated, first and last.

#### PLAN OF SETTLEMENT.

The settlement felt much the lack of a permanent organization and leadership during the month of October, 1878. Hon. Erastus Snow and a party of traveling elders arrived on Salt River, and appointed Jesse N. Perkins, H. C. Rogers, and G. W. Serrine to oversee the Mesa settlement.

President A. F. McDonald was appointed by John Taylor, who arrived at Mesa, February, 1880. He continued H. C. Rogers and G. W. Serrine as his assistants, encouraging the promotion and completion of the canal, correcting and fixing the city survey with its squares and burial ground, exploring for roads and ranch grounds, and otherwise directing the efforts of the people.

In December, 1882, apostles E. Snow and Moses Thatcher visited Mesa City, and effected a permanent religious organization, with A. F. McDonald as President of the State, H. C. Rogers and C. J. Robson his assistants; E. Pomeroy, Bishop of Mesa; Thomas E. Jones, Bishop at Jonesville, and David Le Barren as President Elder at Tempe.

There are in Mesa precinct seventy-five families, with a school population of 200. During the past year several substantial improvements have been made, and others are in progress. We give a view of the neat little school house

at Mesa. Schools have been maintained about nine months during the past years. The tone and spirit of the community is progressive; perfect toleration of faith exists. Men are free to believe and worship what they may, there being quite a representation of what is termed infidel sentiment who are respected by their neighbors in the exercise of their opinions. A majority of the people favor co-operative action in business matters; however, individual property and possessory right is the rule.

In addition to the general doctrinal views, Abrahamic code and covenant as recorded and witnessed in the Old and New Testament is revered, as is also the book of Mormon, which is regarded as the sacred history of this American continent with its aboriginal remnants, as the Bible is of the Asiatic or Eastern Hemisphere with its patriarchal tribes and prophets, the two books combining to bear the gospel witness to all kindreds of the earth that God has set his hand again, the second time, to recover the remnants of his people Israel, the Jews, to their own land, the remnants among the Gentiles on this continent to unite with the aboriginal remnants upon this land in the redemption of Zion.

The town of Mesa City was laid out with wide streets, and into ten-acre blocks, which were sub-divided into lots of one and one-fourth acres each. Most of the residents own from two lots to a whole block, which have been improved by building comfortable houses, many of them more than ordinarily large and tasty for a new place. They are nearly all built of adobe, the soil having been first ground in a brick mill, and thus reduced to a state of homogeneity uncommon to this very common building material. The result is a smooth, solid surface, that when laid into a wall, looks as well as the ordinary plaster finish. This first care, with the matter of large windows, good doors and shingle roofs, gives them a cheerful, home-like appearance. Each owner has planted wisely and well, of alfalfa, fruit trees and vines, all surrounded by a border on the streets and inner lines of the lots of cottonwood, ash, or locust, or all of these. This gives the place a shady, cheerful aspect. The fruits most cultivated are the apple, pear, peach, apricot, nectarine, plum, fig, and grapes.

Through the liberality of the citizens of Mesa City, we have given a view of this prosperous little village.

#### MESA CITY FRUIT FARM.

A splendid fruit farm of forty acres, near Mesa City, which the writer of this article had the pleasure to visit, is that owned by Daniel Bagley. This place is laid out in four squares of ten acres each, twenty acres being set out in grapes, and twenty acres in fruit trees. The growth of vines and fruit trees upon this place is very thrifty. Mr. Bagley utilizes his grapes by making them into wine, which has been pronounced, by competent judges, of excellent

quality. His fruit includes apricots, pears, plums, peaches.

Daniel Bagley, Esq., is one of the most extensive fruit-growers of the Salt River Valley. He is a native of Decatur County, Indiana, where he was born February 24, 1829. When six years of age, he, with his parents, removed to Missouri, from which State, in 1839, they removed to Iowa. Here Mr. Bagley remained for thirteen years. While residing in this State, he married Miss Mary Wood, also a native of Decatur County, Indiana.

In 1852 Mr. Bagley started with his family, consisting of his wife and one child, for Utah. They traveled by ox-team, and were on the way three months and three days, arriving at Salt Lake City about the middle of September. He finally settled in Toole County, where he engaged in farming. He remained here until the year 1866, when he removed to southern Utah, where he settled, and entered into the business of fruit and grape growing.

In 1877 he moved to Arizona. He engaged in farming at Silver Creek and Forest Dale, Apache County, until 1881, when he moved to Maricopa County, and now resides at Mesa City. A view of his fruit farm will be found elsewhere. Mr. and Mrs. Bagley are the parents of two children, both daughters, Melissa and Cedenia. Three of his grandchildren reside with him, who are regarded by their grandparents as members of their own family. Their names are Thomas, Joseph, and Rachel.

CHARLES J. ROBSON'S farm, a view of which is given, is another illustration of what energy and perseverance will do in a new country. He arrived on the present site of Mesa City February 6, 1878, and on the 11th commenced surveying the Mesa Canal, and on the 18th commenced its construction, with only sixteen able-bodied men. This was a big undertaking, when you take into consideration that it was estimated it would cost \$50,000.

In January, 1879, the first water was brought on the town site, through their canal. It was, of course, insufficient to supply their needs, but the work has been diligently prosecuted, until now the canal carries 4,320 inches of water, under a four-inch pressure, affording ample means of irrigation. Mr. Robson's farm consists of thirty acres, and three and one-half acres in Mesa City. The chief products are wheat and alfalfa. He has, also, a fine orchard of 300 peach, apricot, and apple trees. He has also one acre of grapes. He is now Secretary of the Mesa Canal Company, also a Notary Public, and Recorder.

Mr. Robson is a native of Northumberland, England, having been born there February 20, 1837. He was apprenticed to, and learned the trade of a paper-maker. He came to America in 1854, and located in Salt Lake City, Utah. In 1861 he assisted in starting a paper-mill at a place known as Sugar House Ward, where he lived till 1877. He came to present location by way of Lee's Ferry,

on the Colorado River, across the Mogollon Mountains. In 1861 he married Miss Sarah Ann Barnet, a native of Indiana. They have five children, one son and four daughters, Mary, Bell, Frank, Urlana, and Lucretia Robson.

JOHN H. POMEROY, one of the founders of Mesa City, has a neat home there. In addition to this location he has two hundred acres close by, on which he raises wheat and alfalfa. He was, together with his father (since dead), instrumental in getting out the Mesa Canal.

Mr. Pomeroy was born in Salt Lake City, September 1, 1852. In the spring of 1862 he moved, with his father's family, to Weber River, Utah, and assisted in settling up Summit County. In 1864 he moved, with his father, to Bear Lake County, Idaho, where he assisted in locating and building up Paris, in that county. Here they lived thirteen years. He married Miss Emily Statten, and, accompanied by his own and father's family, moved to his present location. Here they did much to make Mesa City what she is to-day, a beautiful place. He has an orchard of 130 bearing trees of peach, plum, figs, and apples, beside 1,600 grape-vines.

#### JONESVILLE SETTLEMENT.

The settlement at Jonesville was commenced in March, 1877; the members composing the colony were from Mormon Valley, Idaho, and from Provo City, Utah, Cory and San Pete Counties, Utah; in all, about seventy souls. The company was organized at St. George, Utah, by direction of President Brigham Young, in the winter of 1876, under the leadership of D. W. Jones.

Soon after their arrival, they located the Utah Ditch on the south bank of the river. This location was made by the advice of Winchester Miller, of Tempe. They succeeded in getting out the water that same season, and raising some corn. The present ditch carries about 4,000 inches of water, and will irrigate that number of acres.

The experiments and experience of the people with crops, have been varied. The natives have grown wheat and cultivated other crops very successfully. Alfalfa, barley, wheat, corn, and fruit have been grown profitably. The growth of the settlement has been retarded by the force of circumstances. Its present population is twenty-six families, making about 150 souls.

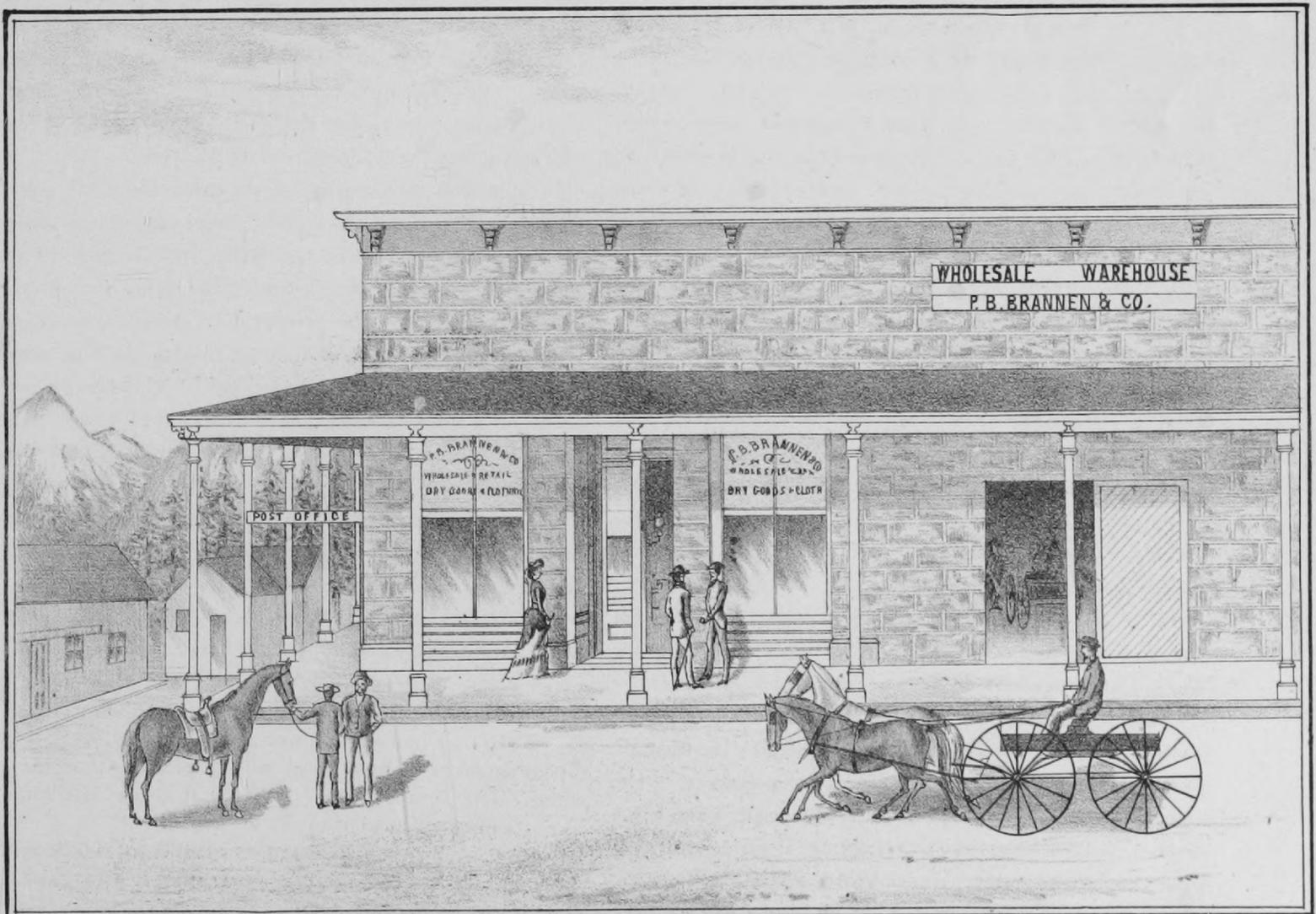
Jonesville has a substantial school house, 23x33 feet, with a school population of forty children; a view of it is given in our illustrations.

TEMPE is half-way between Phoenix and Mesa City. The settlement is small, and but little business is transacted. The Tempe Hotel is a neat and clean little home-like stopping-place, kept by T. W. Brown.

Raman Brown is foreman of Hayden's blacksmith shop, and we find him an intelligent citizen, who gave us much valuable information.



RESIDENCE OF E. J. COOK, PRESCOTT.



COMMERCIAL HOUSE OF P. B. BRANNEN & CO. COR. OF RAILROAD & SAN FRANCISCO AVENUE, FLAGSTAFF, ARIZONA.

## BIOGRAPHICAL SKETCHES.

**HON. F. A. TRITLE**, Governor of Arizona, appointed by President Arthur, entered upon his duties February 6, 1882. He has proved by his acts to be one of the most energetic Governors Arizona has ever had. Possessed of a genial, kindly nature, coupled with untiring energy, he not only makes friends, but imbues those with whom he comes in contact with a measure of his own energy and enthusiasm. He has been foremost in advancing the interests of Arizona, wherever the opportunity presented itself. Perhaps no other man in Arizona is more thoroughly posted as a mining man than Governor Tritle.

A long residence in Nevada, together with seventeen years spent in operating on the Comstock, gave him the opportunity to become what he is, an intelligent and experienced mining man. To Governor Tritle belongs the honor of developing the now justly celebrated United Verde Mines. The recently incorporated Arizona Central Railroad owes its inception to the Governor; and, by his influence, which is felt in the money centers, its early completion is assured. Not only does he attend to all the various duties of his office, but he devotes a large share of time to the consideration and completion of plans for the advancement of the interests of the Territory.

**HON. H. M. VAN ARMAN**, the present Secretary of Arizona, is a native of Ohio. He was born at Euclid, February 17, 1839. In 1846, he removed with his parents to northern Illinois. He was educated as a surveyor, but joined the army during the late war, holding the position of Lieutenant in the 58th Illinois Infantry. He was in the battles of Donaldson and Shiloh, being wounded in the latter engagement. In 1862, he resigned his commission, and was appointed Recruiting Superintendent of the 2d Congressional District of Illinois, in which capacity he did good service.

In 1868, Mr. Van Arman removed to Nebraska, where he held the office of Immigration Agent, in 1871, and was said to be one of the most able and efficient of the corps of six. Subsequently, he was city editor of the Nebraska State *Journal*, at Lincoln. In 1874, he removed to San Francisco, where he resided a short time, when he removed to Oakland. He was engaged on the editorial staff of the San Francisco *Evening Post* for over five years. He also published, while a resident of the coast, the *Pacific Life*, the *Golden Gate Sentinel*, and a book called "Public Lands of California." He took an

active part in politics, and while a member of the City Central Committee of Oakland, in 1882, was appointed to his present position, the office of Secretary of Arizona Territory.

Mr. Van Arman is very genial and generous in his disposition, and makes hosts of personal friends, wherever he has lived, and is a true type of the Western man. He is immensely popular in Arizona, and, both as Secretary and acting Governor, filled the positions acceptably to the people. In politics, he is a stalwart Republican, believing firmly in the principles of that party.

**HON. JAMES ALBERT ZABRISKIE**, of Tucson, was born in New Brunswick, New Jersey, May 29, 1843. He attended school at Rutgers' College Grammar School, in New Brunswick. At the age of ten he removed to Hackensack, New Jersey, and from thence to Erasmus Hall College, on Long Island. After graduating at this college, he went to West Point, where he remained until 1856, when he resigned, and journeyed to California. He came by way of Nicaragua, during the excitement of Walker's filibustering expeditions, but passed through in safety, paying a short visit to Granada on the way. When within about forty miles of the Golden Gate, the steamer struck on a sunken rock, and came near being lost, reaching San Francisco, May 10, 1866, with four feet of water in the hold.

Soon after his arrival, he began the study of law with his father, and was admitted to practice in the Supreme Court of California. At the outbreak of the Rebellion, he entered the army as Adjutant of the 5th California Infantry, and was afterwards appointed Adjutant-General of the Southern District, and marched to Texas. After the war he was appointed United States District Attorney for Texas, in which capacity he continued for ten years. He bore a prominent part in the political reconstruction of Texas after the war; was one of a delegation led by Governor Hamilton, in 1871, to secure from President Grant recognition for Southern Republicans; and was identified with the scenes of reconstruction in the South. He was appointed United States Attorney for Arizona, in 1882, which office he still holds. He was married, in 1863, to Miss Adelaide Stephenson, a native of Texas. They have four boys and one girl, named William Alexander, Walter Scott, Brevoost Jacob, Victor Hugo, and Mary Adelaide Zabriskie.

**P. J. BRANNEN** was born March 30, 1856, near the city of Ottawa, Canada. He was the oldest of six children, and at his father's death, in 1873, considerable re-

sponsibility in the care of the family devolved upon him, not the least of which was the settlement of a lumbering business, in which his father, Michael B. Brannen, with a partner, was engaged, and which, though supposed to be worth thousands of dollars, did not pan out well in the settlement, and left but little for the family.

The subject of this sketch, therefore, at the age of seventeen, started out in life without capital, but made a very successful engagement with Noxon Bros., manufacturers of agricultural implements, as agent for them in Metcalfe, during the year 1873. The following spring the family returned to the farm near Ottawa, which they had left in 1867, and conducted it for four years, at the same time continuing the agency for Noxon Bros. In the spring of 1877, he left the arduous work of the farm, and took a commercial college course in Ottawa, that fitted him for the position of bookkeeper in the house of J. B. Brannen, of the same city. Soon after, he removed to Winnipeg, Manitoba, and spent about two years there, part of the time as agent for Noxon Bros., and part of the time in the flour and feed business with his uncle.

Leaving Winnipeg at the solicitation of an uncle, then located in Prescott, Arizona, he passed through San Francisco, in April, 1880, and arrived in Prescott in June, and engaged in business there for about a year, removing thence to Flagstaff, where he started a branch house, conducting business in a tent for more than two years, at first in the old, and afterwards in the new town, where he now resides, and where he erected, in 1883, one of the largest store buildings in northern Arizona. The firm (J. B. Brannen & Co.) carries a very large stock of goods, perhaps the largest in the Territory. The subject of this sketch is also largely interested in the cattle business, in the Mogollon Mountains. He is Postmaster at Flagstaff, where the office was established in 1881. He is also Notary Public, and occupies other positions of responsibility, showing the confidence placed in him by citizens.

HON. CHARLES GRAFTON WILBERTON FRENCH, who has, for two successive terms, filled the position of Chief Justice of the Supreme Court of Arizona, was born in the town of Berkeley, Bristol County, Massachusetts, August 22, 1822. For several successive generations his ancestors were engaged in maritime pursuits. His grandfather, Capt. James French, was an eminent navigator, and his father, Capt. Ephraim French, during the whole of his life, was extensively engaged in shipping interests as a ship builder and ship owner.

At that time Newport, Rhode Island, was one of the shipping and commercial ports of the country. Robert Robinson, Edward Easton, the Bowens, and other merchants of Newport, were, at different periods, extensively associated

with Captain French in the shipping trade between American and English and Swedish ports.

Judge French's boyhood was passed in his native town, where, under the tuition of Rev. Thomas Andros, father of Milton Andros, of San Francisco, and at Bristol Academy, at Taunton, and Pierce Academy, at Middleborough, he was thoroughly fitted for college. He entered Brown University, Providence, Rhode Island, in 1838, and was graduated with honors in 1842. Rev. G. M. Bartol, Professor Harkness, Edwin Metcalf, and several other eminent men were his classmates at the University. During his course at the University he devoted much of his time to legal studies, reading Blackstone, Warren's course of legal studies, Hoffman's legal outlines, and legal elementary works generally.

After graduating he was engaged in teaching, still continuing his legal studies, and at the close of the three years' course in the offices of counselors, practicing in the Supreme Court—then an indispensable pre-requisite for admission to the Bar of Massachusetts—passed in the offices of Hon. Horatio Pratt, of Taunton, David Perkins, of Fall River, Wm. P. Sheffield, of Tiverton, and C. M. Ellis and Benjamin R. Curtis, of Boston. He was admitted to the Bar at New Bedford, and immediately commenced practice in Boston, his office being in conjunction with C. M. Ellis, at 21 Old State House. He also established a branch office at Dedham, being the old Fisher Ames' Office in that town. Some classes of business, at this time, made frequent visits to Washington requisite, and there he was brought into frequent intercourse with parties from the Pacific Coast, who portrayed the advantages and attractions of that portion of the country in glowing terms, and as especially inviting to the legal profession.

Moved by these accounts, and encouraged by the counsel of eminent friends, among whom were Daniel Webster and Benjamin Robbins Curtis (whose letters of commendation Judge French still holds and treasures), he embarked for California, arriving in January, 1851. After some time he proceeded to Placer County, where he resided till 1854, when he removed to Sacramento County, where he continued the practice of his profession. His careful and steady devotion to business, his ripe scholarship and full legal learning, united with a character for integrity so marked that it could not fail of attention, soon made him one of the most valued and esteemed members of the Sacramento Bar, where he remained in the steady practice of his profession up to the time of his appointment to the Chief Justiceship of Arizona Territory, on the 16th of December, 1875.

Judge French, from the inception of the party, has always been an earnest Republican. During his residence in California, although busy in his legal work, he fre-

quently took part in the political campaigns as a speaker, especially in presidential campaigns. He was also frequently called upon for literary addresses, and often complied with such requests. His orations and addresses, both political and literary, have been much admired; but he never seemed to care for applause or distinction in this line.

The writer of this portion of this sketch was one of a committee, of whom the other members were A. T. Arrow-smith and Rev. John E. Benton, now of Oakland, who were chosen to wait on Judge French and request a copy of his oration delivered at Folsom during the Civil War, for publication. It was universally pronounced and was one of the most finished and eloquent orations that I had ever heard; but he declined publication on the plea that it was only partly written, and that he had no time to prepare it. At the session of the Legislature of California of 1871, Judge French represented Sacramento in the Assembly, and was Chairman of the State Library Committee, having been trustee of said library for many years, and was also Chairman of the Committee on the Codes, which were prepared and adopted at that session. The codes, consisting of the Criminal Code, the Civil Code, the Practice Code, and the Political Code, were all passed upon by the Code Committee of that session, after the most laborious and exhaustive examination and consideration. On his appointment, the Bar of Sacramento, after many complimentary speeches, unanimously passed and presented to Judge French the accompanying resolutions:—

“WHEREAS, Hon. C. G. W. French has been appointed Chief Justice of the Territory of Arizona, and is about to retire from the practice of his profession, therefore, be it resolved by the Sacramento Bar,

“First, That the appointment of C. G. W. French as Chief Magistrate of the Territory of Arizona by the President and Senate of the United States, is a just recognition of his legal and scholastic attainments and of his exemplary character.

“Second, That we cheerfully bear testimony to his uniform courtesy and professional integrity during a continuous practice at this Bar of over twenty years. His untiring industry and extensive research into precedents and authorities made him a valuable assistant and a formidable opponent. He will carry with him to his new field of labor the fraternal regard of every member of this Bar and the good wishes of the community at large. While we regret his loss to the Bar, we rejoice at his promotion to the Bench.”

The leading newspaper of the capital of California, then edited by the learned and accomplished Parsons, spoke as follows of his appointment:—

FROM THE SACRAMENTO RECORD-UNION, DEC. 15, 1875.

“Our dispatches yesterday stated that the President had sent to the Senate for confirmation the name of Mr.

Charles G. W. French, as Chief Justice of the Supreme Court of Arizona. Mr. French is a resident of Sacramento, an old Californian, an accomplished jurist, and in all respects thoroughly well fitted to do honor to the appointment. He is a native of Massachusetts, and graduated from Brown University, where he acquired that mental discipline which he has turned to the best account in his studies since. He is a classical scholar, in the old-fashioned significance of the phrase, and is a member of that now rare class of men who carry through life the taste for elegant literature acquired at the knees of their *Alma Mater*, and who prize their Aldines and Elizevirs for the treasures of the text, and not for the curiosity of edition or binding. His reputation as a jurist stands eminently high with the profession, and we believe that his appointment will be regarded by the Bar and Bench alike as one eminently fit to be made. His idiosyncrasy, indeed, is rather judicial than forensic, and his mastery of the science of law has long been recognized by his colleagues, among whom it has been a common observation that Judge French studies the cases of other lawyers with as much care as though they were his own, and with as much conscientiousness as though he were required to pass upon them. In politics he is a Republican, and represented Sacramento in the State Legislature two years ago, sitting upon the Special Code Commission appointed for that session. In these censorious times it may perhaps be worth while to add that Judge French has lived a blameless private life, and that during a residence of some sixteen years he has acquired the esteem and respect of his fellow-citizens, all of whom will agree in indorsing the propriety and fitness of his present appointment. As to the people of Arizona, they may congratulate themselves upon the prospect of a Chief Justice who is a scholar and a gentleman, and whose decisions will very certainly be good law.”

FROM THE SACRAMENTO BEE OF DECEMBER 14, 1875.

“Col. C. G. W. French, of Sacramento, has been appointed by the President, Chief Justice of Arizona. And we can say, knowing whereof we speak, that this appointment was one fit to be made. His testimonials from the California Bench and Bar are of the very highest character. Ex and present Supreme Court Justices, District and County Judges, and the most eminent attorneys have attested, over their own signatures, to his worth as a man and qualifications as a Jurist. The appointment is not for life, but for four years..”

After his first four years of service on the Bench as Chief Justice, the Bar of the Territory asked his reappointment in a long petition, of which the following is the concluding sentence:—

“From the most ample testimonials, submitted with

this, it will fully appear that Judge French presents that rare but good example of a learned and accomplished lawyer in full practice, honored and loved alike by the Bench and Bar of California (see his letters from Bench and Bar and proceedings of the Bar in his leaving) for his profound legal learning, ripe scholarship, the purity of his life, character, and conduct, coming to this then remote and isolated Territory and devoting his whole time, talents, and energies to building up a sound, beneficent structure of jurisprudence here.

"No doubt many Judges excel Judge French in many respects, yet in our opinion it may very reasonably be questioned whether there be more than a very few Judges on any of the Federal Benches in the United States who in scholarship and general culture, legal learning, high and decisive integrity, elevation of character, purity of life and conduct, utter impartiality on the Bench, entire freedom from any and all interests that might, by any possibility, become a subject of judicial determination or consideration in his Court, perfect fearlessness in the discharge of duty, utmost promptness and efficiency in the dispatch of Court business, yet painstaking and laborious in preparation therefor, very rare and almost if not quite unparalleled economy in the expenses of his Courts, alike whether on Territorial or Federal business, absolute devotion to the duties of his office, and all the other minor qualifications that go to make up the model Judge—can claim a great superiority over the unpretending gentleman who has so ably and uprightly, faithfully and fully executed and fulfilled all the duties of the Chief Justice of the Supreme Court of Arizona for the past four years.

"We, therefore, most earnestly and with utmost confidence ask for his reappointment."

After his eight years' service he has retired with the sustained and enlarged esteem of the Bar and people of Arizona, all the duties of his office having been fulfilled with the most scrupulous fidelity. During the whole of his long term of office, he has been almost constantly engaged in holding the District Courts, a work of which no record is published. It is much to be regretted that he has not been able to devote more time to appellate work, such as writing opinions, etc., which remain not only on public record in the Courts, but which are published in the reports.

Judge French's whole life has been almost entirely devoted to legal pursuits. The records of the Courts of Massachusetts and California attest his success at the Bar and of his many thousands of rulings, orders, decisions, and judgments during his long incumbency upon the Bench of Arizona, but few have been questioned or appealed from, and *not a single one has ever been reversed* by the appellate Courts

HON. E. P. CLARK, the subject of this sketch, and present Auditor of Arizona, was born November 25, 1847, on his father's farm, near Iowa City, Iowa. His father was a native of Waterburg, Connecticut, his mother, of New York. When eight years old, in order to give him and his sisters better educational advantages, his father moved to Grinnell, Iowa, where Iowa College is situated. At the age of twenty he went with his father to southwest Missouri, settling near Neosho, Newton County, where he, with his father, engaged in farming. During the winter months he taught school.

In the summer of 1873 he was afflicted with a stroke of sciatica, which nothing seemed to benefit. After being crippled more than a year, he concluded a change of climate was the only remedy; consequently, in company with his present partner, Mr. A. D. Adams, May 25, 1875, he started for Prescott, Arizona. The particular feature of the trip, which was made by wagon all the way, was, that before a month had elapsed he was entirely free from rheumatism, and has never been troubled since.

Prescott was reached August 11, 1875. Finding nothing particularly tempting to do, he went to Williamson Valley, to making hay. About the 1st of October he accepted a position as clerk for Mr. T. W. Otis, the newly-appointed Postmaster of Prescott. In August of the following year, 1876, he accepted a clerkship with C. P. Head & Co., at a better salary. During the following summer of 1877 he was appointed to the office of Territorial Auditor, date of commission, July 2d, issued by John P. Hoyt, Governor of Arizona. He was reappointed by Gov. J. C. Fremont, Governor Hoyt's successor, February 10, 1879; and again by General Fremont, February 21, 1881, and March 9, 1883, by Hon. F. A. Tritle, Arizona's present Governor.

In the spring of 1878, having resigned his position with C. P. Head & Co., in company with Mr. Adams he purchased from A. O. Noyes the Pioneer Saw-mill (the first saw-mill in Arizona), and embarked in the lumber business, in which he is still engaged. In 1883, in order to supply their increasing demands, a new and complete mill was purchased and put in operation, which, after about four months' run, was entirely destroyed by fire, as was also nearly their whole stock of lumber, consisting of several hundred thousand feet of first quality lumber and shingles, making a loss from which it will take some time to recover. In the spring of 1884 the old Pioneer Mill was again placed in operation, on the site of the one burned.

April 8, 1880, he married Miss Lucy H. Sherman, sister of Hon. M. H. Sherman, who was the then Superintendent of Public Instruction for the Territory, also

Principal of the Prescott High School. She was born in New York, where her parents still reside. They have two daughters, Lucy M., the oldest, nearly three years, and Mary, about one year old. He has all his life been identified with the church and Sabbath-school. He is an active member of the First Congregational Church of Prescott, being identified with it from its organization.

HON. FRANK M. MURPHY, of Prescott, Arizona, was born in Jefferson, Lincoln County, Maine, September 4, 1854. He moved with his parents to Manitowoc, Wisconsin, in the spring of 1856, and received a fair education in the common schools of Wisconsin, but was early thrown upon his own resources, and rapidly developed great business ability. He moved to Santa Rosa, California, in 1875, at the age of twenty-one, and was identified for a short time with the Grand Hotel, as clerk and manager. Subsequently, he took charge of a system of stage lines on the North Pacific Coast, which he managed successfully until 1877, when he moved to Prescott, Arizona, where he has since resided.

For the past seven years, he has been prominently connected with the principal business and political interests of northern Arizona, and has taken an active part in developing the mineral and industrial interests of the Territory. He was selected by the Governor to represent Arizona at the Inter-State Exposition held in Denver, Colorado, in 1883, and has been appointed by the President Commissioner from this Territory to the World's Centennial Cotton and Industrial Exposition, New Orleans, Louisiana, 1884-85. He is Lieutenant-Colonel of the Territorial Militia and aid to the Governor. He is personally very popular and commands the esteem and confidence of all who know him.

HON. THOMAS FITCH was born in New York City, January 27, 1838. He is of Connecticut stock. One of his ancestors, of the same name, was the last Colonial Governor of Connecticut. Another ancestor, also of the same name, was in command of the New England regiments during the French war, and was second in command under Ethan Allen at the surrender of Fort Ticonderoga. The subject of this sketch received a common school education, and at fifteen years of age started in life on his own account as clerk in a New York dry goods importing house.

Three years later, after a brief experience in sailing the ocean blue, he settled in Milwaukee, Wisconsin, and was employed for about three years as bookkeeper and cashier of a grain house. In 1859 he left mercantile pursuits, and engaged in journalism as one of the editors of

the Milwaukee *Free Democrat*. The next year he emigrated to California, where he first exhibited that aptitude for public speaking which speedily gained for him the sobriquet he has since retained of "The Silver-tongued Orator of the Pacific." On the Pacific Coast he continued for some years to follow journalism, being connected with several papers in California and Nevada. In 1864 he was admitted to practice in the Supreme Court of Nevada, and surrendered journalism for the practice of law, in which he has since been actively engaged. He was a member from Storey County of the convention which framed the Constitution of the State of Nevada.

In 1865 he was appointed District Attorney of Washoe County, and held the office until 1867, when he removed to Belmont, Nevada, whence he was elected in 1868 to the 41st Congress. In that body he speedily made for himself a national reputation as an orator. In 1870 he was renominated by the Republican Party of Nevada for Congress, but shared the defeat which the Republican Party sustained in Nevada that year. At the expiration of his term in Congress he removed to Salt Lake City, where he was employed as counsel by Brigham Young and the Mormon authorities for about two years. During this time he served as a member of the convention to form a constitution of State government for Utah, and was chosen one of the United States Senators to represent the proposed State.

In 1874 he returned to San Francisco, where he remained until 1877, when he removed to Arizona, where he has since resided. In 1878 he was elected as representative from Yavapai County to the Territorial Legislature. He has taken no active part in the politics of the Territory, his time being occupied in his profession.

HON. A. D. LEMON was born in Lawrence County, Indiana, August 17, 1834. He was the second son of John A. M. and Cynthia H. Lemon, who were among the frontier settlers of Kentucky, but removed to Lawrence County, Indiana, in an early day. Mr. Lemon was reared in the country, near Bloomington, Indiana, on a beautiful and well-cultivated farm, where he formed an early and strong attachment for that business and mode of life, and for many years took an active part in the agricultural and horticultural interests of the Hoosier State.

In 1858 he graduated in the Literary Department of the State University of Indiana, and the following year at the Law Department of the same school. In March of that year he commenced the practice of law at Bedford, Indiana, which he has steadily and successfully pursued since that time. He took an active part in the Douglas campaign of 1860, and in 1861 was elected to represent

Lawrence County in the Indiana Legislature. In 1868 he wrote several pamphlets, entitled, "Facts for the People," which were widely circulated in the Seymour campaign of that year.

In 1872 he was chosen as one of the members of the Democratic Central Committee for the State of Indiana, and was on the Greeley electoral ticket for the State at large, for that year, and made an active canvass of the State for the State and national Democratic ticket.

In the spring of 1873 he came West, and for several years resided in San Diego, California; in 1877 he settled in Phoenix, Arizona, his present home, and for four years was the Prosecuting Attorney for Maricopa County, and in 1882 was elected to the Territorial Council from the district composed of the counties of Maricopa and Gila and served in that body with credit and honor to his district and the Territory.

Mr. Lemon has abiding faith in the permanency of the prosperity of Arizona, and in the steady and successful development of her mineral, agricultural, and grazing interests.

Our Territory, among her many energetic, bright, and faithful women, presents no name more honored than that of the subject of this sketch, Mrs. Eliza Work Lemon, whose maiden name was Work. She was born at Greencastle, Indiana, July 13, 1838, and was married June 20 1860, by the Rev. Prof. Elisha Ballentine, of the State University of Indiana, to her present husband, Hon. A. D. Lemon, of Phoenix, Arizona. Her family was highly connected, President Tyler being among their near kinsmen, As early as her sixteenth year she wrote with credit for the press, since which time she has contributed articles of high merit to different papers and magazines.

In the spring of 1873, she, with her husband and family, moved from Bedford, Indiana, to San Diego, California, and during their residence in that sunny land for four years, she made many true and warm friends.

In the early spring of 1877 she accompanied her husband and family across the Colorado desert, and after a weary travel of five weeks, arrived in Phoenix, Arizona, over dim and but slightly traveled roads, where but a few years before the Indians held control and made every valley and mountain pass a dark and bloody ground.

Arriving in Phoenix, May 18, 1877, they went to work in earnest to make a true home and assist in building up the material, moral, and social prosperity of a new country.

Mrs. Lemon, by her generous heart and social influence, did much to make Phoenix what it now is, one of the brightest young cities of a productive and rapidly developing Territory. Six children (five sons and one daughter) bless her home, and to their education she is now devoting much of her time.

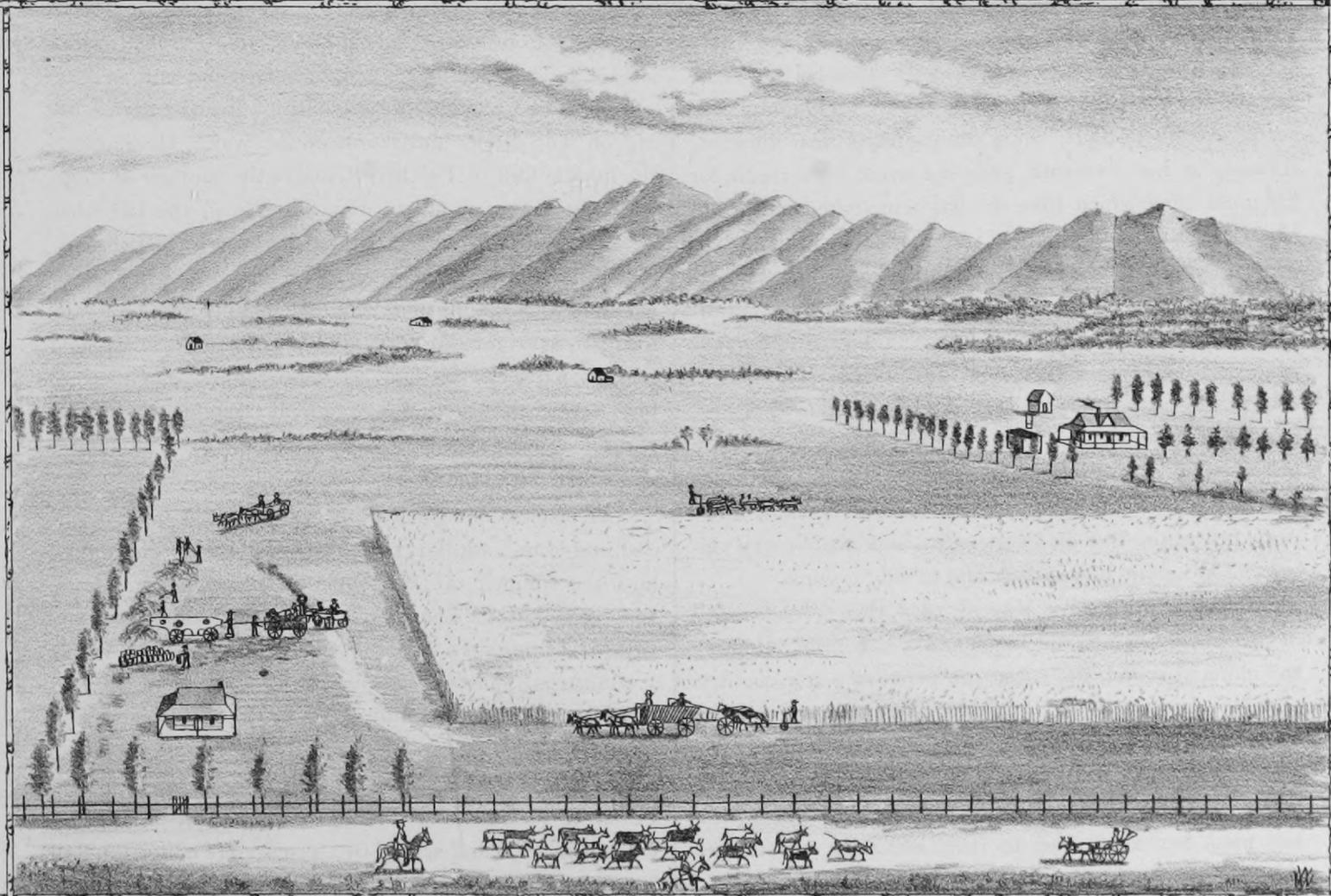
HON. T. J. BUTLER, Territorial Treasurer of Arizona, and Vice-President of the First National Bank of Prescott, was born on Leatherwood Creek, near Bedford, Indiana, February 5, 1826, of Virginia and Kentucky parentage. His father, Alexander Magruder Boteler, was descended from an old Huguenot family that fled from France in the reign of Louis XIV., and settled in Virginia. The original name was Botelaer. In time the "a" was dropped, and the name continued "Boteler" until about 1836, when the family gradually adopted the present orthography. His mother's parents, the Barnhills, were both born near Londonderry, in the north of Ireland, and were descended from the Scotch. The subject of the present sketch was sent to school in the rude log school houses of the time, to ruder teachers, where he remained until fourteen years old, when the family removed to Bedford, and he attended school in a brick school house, with windows and desks. His school experience closed by one year's attendance at Woodward's Academy, at Springville.

He was engaged as clerk in a store in Bedford four years, making a trip to New Orleans on a flat boat, each spring, for the firm. He left Bedford, March 1, 1849, for California, and traveled with ox-teams from St. Joseph, Missouri, and arrived at Lassen's Ranch, now Vina, September 21, 1849. He mined at Readings Springs, now Shasta, until November 10th, when he started for Sacramento, with two others, in a canoe, got wrecked, swam ashore, and traveled barefoot, bareheaded, and without coats 150 miles to Fremont, at the mouth of Feather River, living on wild grapes and acorns on the way. He dammed the middle fork of Feather River, in the summer of 1850, and kept a store at Ophir, now Oroville, in the fall, when he went to Evan's Bar, Trinity, and mined until February, 1851, when he went to Salmon River, now Klamath County, where he was caught in the famine, paying \$2.50 a pound for flour, \$3.00 for salt pork, sugar, etc., and \$6.00 a pound for salt, nails, etc., as long as these things were there to buy. After that there was a general scramble for venison and mule meat, until the snow blockade on the mountains was raised, and provisions came in by pack train.

He then went to San Francisco, *via* Gold Bluff, Trinidad, and Humboldt Bay, but returned to Trinity and mined until the summer of 1852, when he bought a pack train, and packed from Shasta to Weaverville and elsewhere. In 1852-53 he kept a store in partnership with A. H. Webb, at Baldhills, Shasta County. In 1854 he went to Red Bluff, in the employ of Bull, Baker & Co., as salesman in a store. He then engaged in the cattle business, bought the Luna House, and Star Ranch, the firm being Vincent, Butler & Webb. He was elected first clerk of Tehama County, in 1856, and served two terms. He edited the Red Bluff *Beacon* in 1857, his brother, John S. Butler, now of



RESIDENCE OF M.D. LANGLEY. KIRKLAND VALLEY, YAVAPAI CO. ARIZONA.



RANCH OF MISS G.G. HANCOCK

BIRD'S EYE VIEW FROM THE N.E.

RANCH OF WM. A. HANCOCK.

Oakland, being owner. He ran for the Senate in 1858, but was beaten by A. J. Logan, now of Mohave County, Arizona. He was elected to the Assembly from Colusa and Tehama, in 1862, and was appointed Brigadier-General of the Fifth Brigade, California Militia, by Governor Stanford.

He went to Idaho, in 1863, and with his brother, John S. Butler, started the *Boise News*, in September of that year, at Bannock, now Idaho City. In 1864 he sold out to Street & Bowman, who changed the name to *Idaho World*.

He went to Montana with a pack train in 1865, and edited the *Radiator*, at Helena, five months, but returned to Idaho in 1866, and with his brother and the late J. F. Dye, built a granite-store house in Silver City, and engaged in merchandising until 1879, when he started a paper called the *Tidal Wave*, but sold it to John McGonigle.

He was nominated by the Republican Convention in 1868, for Congress, and made a thorough canvass of the entire Territory, but was beaten by Hon. J. K. Shaffer, his Democratic opponent, by about eight hundred votes.

In 1870, he was again nominated for Congress; he made no canvass, the Republicans being in a hopeless minority. Hon. Samuel Merritt was his successful opponent.

He ran the *Elko Chronicle*, as a campaign paper, at Elko, Nevada, during the campaign of 1870, in advocacy of F. A. Tritle's election for Governor, and Thos. Fitch for Congress.

He returned to Red Bluff, and started a forwarding house (Butler & Jaynes), at Redding, acting as agent for Barlow, Sanderson & Co.'s stage line, at that point, forwarding the military supplies to the Modoc War. He sold out to Bush & Johnson, and went to Oakland, where he assisted Joe. Wasson in editing the *Oakland Tribune*, but left in December, 1874, for Arizona, coming by steamer to Wilmington, by rail to Spadra, and by buckboard to Prescott, *via* Dos Palmas, and Ehrenberg, arriving at Prescott December 20, 1874.

He bought the *Arizona Miner* of John H. Marion, in January, 1875, and took possession February 1st., and published it until he sold it to Beach & Marion, in 1877. He was appointed Territorial Treasurer by Governor Hoyt, in 1877, by Governor Fremont, in 1879 and 1881, and by Governor Tritle in 1883. He is now (1884), serving his eighth year as Treasurer.

He was married August 9, 1881, to Miss Caroline E. Blake, a native of Boston, Massachusetts. He resides on McCormick Street, Prescott.

HON. M. H. SHERMAN, Adjutant-General of Arizona, was born in Salem, Washington County, New York, December 3, 1853. His early life was spent upon a farm, among the picturesque hills of Washington County, the head-waters of the Hudson River. At an early age, he graduated from the classical course of the Oswego (New York) State Normal School, and in 1873 came to Prescott, Arizona, as Principal of the schools of Arizona's capital city. He remained Principal of Prescott schools for eight years, during which time he was appointed by Gov. John C. Fremont, Arizona's first Superintendent of Public Instruction. In 1880, he was elected to this important office; as a proof of the high esteem in which he was held by the people, he it said that he was the only successful candidate on the Republican ticket. In 1883, Mr. Sherman received the appointment of Adjutant-General of Arizona, which appointment he still holds. He is also president of the Valley Bank of Phoenix.

P. MINOR, of Phoenix, Arizona, is one of the most extensive lumber dealers in Maricopa County. His lumber yard is the best arranged of any in the city of Phoenix, every portion except two passageways for teams being sheltered by well-constructed sheds, thus preserving the lumber from the destructive influences of sun and rain. Mr. Minor has constantly in stock every description of wooden building material which the trade of his section demands and includes besides lumber, blinds, windows, doors, shingles, pickets, etc. Besides his lumber yard, Mr. Minor is the owner of other valuable property in Phoenix; this includes two dwellings on Adams Street, one of which is used for renting, and also a large two-story brick building on Washington Street, the ground floor being used as a renting store, and the upper story as a hall. His private residence on Adams Street is a neat brick, being very comfortable, and conveniently arranged. The bath-house, kitchen, and wash-room are separated from the main structure, in separate buildings in the rear. By profession Mr. Minor is a civil engineer, and in the pursuit of his calling has traveled very extensively.

DOUGLAS GRAY. To write the biography of a good man must surely be a pleasant task for the historian—particularly so for one who knows him well, and loves him. If it be true that a man's good deeds live after him, and warm the hearts of those who, having felt the sunshine of his presence, revere his memory, and hold in fond affection his many virtues, it is none the less true that an upright, honorable man may, while yet in the flesh, enjoy the reward of his rectitude.

But, lest the writer be charged with fulsome praise, where the truths he tells are but the realism of irrefutable

facts, let me say that I shall not attempt here to say the half of that which occupies my thoughts in viewing mentally the virtues which adorn the subject of this sketch. "According to his virtue, let us use him."

Douglas Gray is a name not unknown to the good people of Arizona. He is a representative man in a community where moral worth and honesty are valued above worldly goods. That he has the confidence and esteem of his fellow-citizens, is shown by the important trusts they have confided to him. That he is worthy of the high place he holds in the estimation of his peers, he has proved by an honorable and blameless course in his private life, and in all his business dealings.

Mr. Gray was born in Staunton, Virginia, June 18, 1855, of the best old Virginian stock. He is of Scotch descent, and inherits many of the national traits of his ancestors. He passed most of his boyhood days in the place of his birth, where he received a liberal education in the local institutions of learning.

In 1875, when but twenty years old, he came West to California, locating in San Francisco, where he studied assaying and metallurgy, with Dr. Thomas Price, and where he received a thorough practical training in his profession. He may be truthfully said to be a master of his business. Previous to entering the laboratory of Doctor Price, Mr. Gray was engaged for some time with William Irelan, Jr., & Co., in the Merchants' Exchange Building. Here, as in every position he has since occupied, Mr. Gray won golden honors, and enjoyed the confidence and respect of his employers, and a host of friends who loved him for his many excellent qualities of mind and heart.

Afterwards, Mr. Gray was actively engaged as superintendent of the Vanderbilt Mine, in Humboldt County, Nevada, leaving this position to assume the management of Messrs. Haggins' and Tevis' irrigation scheme in Kern County, California.

He went to Arizona in 1880, locating in Tombstone, Cochise County, where he resided until the fall of 1883. Here he established an assaying business, under the firm name of Gray & Gladwin; afterward with Frank C. Earl (Gray & Earl).

As an expert in everything that pertains to mines and mining operations, Mr. Gray is one of the foremost men of the day. As a sampler of mines, he is said to be without an equal in the Territory. Numerous incidents might be related, (as the writer has heard them from the lips of those who know whereof they speak), tending to illustrate the probity of his nature, and, in some instances, of his remarkable nerve and fearlessness when roused to the necessity of action in the interest of truth and justice. But these are not pertinent to this sketch, and would but offend a man who is neither an egotist nor a braggart.

He was, in 1882, appointed by Prof. John A. Church (then Commissioner from Arizona), to assay and classify ores from the northern part of the Territory, for the Denver Exposition of that year. In 1883 he received the appointment (*vice* Professor Church), from Governor Tritle, as Commissioner from southern Arizona to the Denver Exposition. In this position he demonstrated his fitness for the important trust confided to him. He took to Denver, as an exhibit of Arizona's mineral wealth, the finest collection of minerals ever shown in a single display in this country.

Mr. Gray here evinced the stubbornness peculiar to his race when the managers of that deceptive institution gratuitously insulted the people represented, and sought, by fraud and chicanery, to debar Arizona from the fruits of a laudable enterprise.

In October, Mr. Gray, having received substantial inducements from influential parties in Chicago, took the rare collection of ores and specimens in his charge to the great Inter-State Industrial Exposition then in progress in that city. When the exhibition closed, he returned to Denver and, single-handed, and at no inconsiderable expense (defrayed from his private fund, as were mainly the entire expenses of the trip to Denver and Chicago), fought and vanquished the managers of the Denver Exposition, and departed triumphant for his home.

Having disposed of his business in Tombstone, Mr. Gray removed, in November, 1883, to Prescott, where he is at present located. Through the influence of Governor Tritle he was appointed as Alternate Commissioner to the World's Industrial Exposition, to be held in New Orleans, in December, 1884.

A personal acquaintance with Mr. Gray has enabled the writer to discover those traits which have made him so deservedly popular. Straightforward in all his dealings, honorable to a fault, slow to form a friendship, but firm when assured that the object is worthy—and equally firm and decided when forming a dislike—genial in his deportment, and generous in his treatment of all, he is loved by his friends, and respected by his enemies.

It has been said that "every man has his price." In the abstract this may be true. If this be the rule, there are certainly some notable exceptions—some shining examples of integrity that would put to the blush the sophist who promulgated so sweeping a theory. The subject of this sketch is one of those whose life and deeds prove the fallacy of this assertion. Trained in a school whose teachings, while not in any sense puritanical, were of an order to fit him for the higher walks of life, he has combined with an inherent integrity, a stern adherence to the Golden Rule. In short, Douglas Gray has lived thus far a life singularly pure and blameless. His unswerving

honesty and singleness of purpose eminently fit him for the high position he to-day occupies in the confidence and respect of his fellows and the affections of those who, happily, are intimately associated with him.

“Constant as the northern star,  
Of whose true-fixed, and resting quality,  
There is no fellow in the firmament.”

He stands the peer of the best and noblest of those among whom he has cast his lot, in the sun-kissed land of his adoption. As a woman, tender, true, and devoted in his regard for those he loves; as a man—like a Roman of old—staunch in the nobleness of his nature, he is a shining light in the galaxy amid whose coruscant brightness he is conspicuous.

In the future history of the rich and great State of which he is now an honored representative, it shall be written:—

“He only, in a general, honest thought,  
And common good to all, made one of them.  
His life was gentle, and the elements  
So mixed in him that nature might stand up  
And say to all the world: ‘This was a man!’”

S. E. PATTON is one of the live, energetic men of Arizona. He was born in Centre County, Pennsylvania. At an early day he went to Washington, District of Columbia, where he lived for several years. Becoming desirous of seeing something of the great West, he left Washington in May, 1875, and made a permanent stopping-place in San Diego, California. At this place he remained for four years, and was during this time chief clerk of the California and Arizona telegraph lines. He received the appointment of Chief Clerk of the Military Telegraph Office, at Phoenix, Arizona in 1879, to which place he removed. On the 20th of November, 1881, he resigned his position, and entered into business as a contractor and builder, at which business he has been very successful. The new Court House of Maricopa County, which is conceded to be one of the finest in the Territory, was built by Mr. Patton. The County Hospital is another building erected by him. The extensive infantry quarters at Fort McDowell were built by Mr. Patton, during the year 1883.

#### A BEAUTIFUL HOME.

The neat and tasty residence of Mr. Patton, a view of which will be seen elsewhere, was designed and built by himself, and is one of the finest residences in Phoenix. His grounds are tastefully ornamented with choice trees, shrubs, and flowers, while his land adjoining is set out to various kinds of fruit trees. He has taken much pains in making a pleasant home, which he enjoys with his family. He is not afraid of work, and is an active, energetic man. His aim has been to do nothing but first-class work, and an examination of the buildings which he has constructed

for the county and for the Government, by the proper authorities, brought him flattering commendations, as to his honesty, skill, and efficiency in his work. Mr. Patton has now associated with him in business Mr. Creighton, and this firm is doing a large and increasing business. Mr. Patton is master mason of the Masonic Lodge of Phoenix, and also C. C. of Knights of Pythias.

LEVI RUGGLES, ESQ., the subject of this brief notice, was one of the first settlers in Arizona. He was born in Huron County, Ohio, April 27, 1824. His father was a farmer, but Levi, at the age of seventeen, learned the carpenter's trade, which occupied his time during the summer months, while in winter he followed the profession of teacher. In July, 1846, he went to Missouri, and located in Pike County, where he was employed as architect and builder. In 1862 he joined the State militia, and in 1863 he was appointed Commissary of Subsistence, by Abraham Lincoln. He remained in the service until 1866, having been in the field part of the time, but was stationed at Kansas City, Missouri, for two years. In March of 1866, he was mustered out of service, and was appointed Indian Agent in Arizona for the Pimas, Papagoes, Maricopas, and a few “tame” Apaches. This appointment was made by the Secretary of the Interior, the office being at that time a special agency. He held this office until 1869. In 1868 he moved to Florence, where he now resides. He was the founder of that town, and also laid out the village. In 1872 he was elected member of the Territorial Council, and served during the January and February term of 1873. In March of 1873, he was appointed Registrar of the Gila Land District, by General Grant, the office being at Florence. In this capacity he served until the fall of 1876, when he resigned to take the office of Member of the Territorial Council, to which he was again elected. Having served during that term, he was appointed Receiver of the land office at Florence, and in 1880 he resigned this office.

Mr. Ruggles has a beautiful place at Florence, the dwelling-house being one of the best in the village, and the grounds profuse in shade and fruit trees, vines, and shrubbery. The fruit includes apples, peaches, plums, apricots, grapes, and nectarines. He also has about forty almond trees. Mr. Ruggles takes especial pride in his roses, having some sixty different varieties. Besides his village property, Mr. Ruggles owns a renting farm of 200 acres, adjoining the town site. (See illustration.)

In 1870 Mr. Ruggles was united in marriage to Miss Cynthia M. Tharp, a native of Missouri. This estimable lady died in October, 1883, leaving bereft four children, two boys and two girls, who still reside with their father.

Mr. Ruggles is now proprietor of a store in Florence, dealing in groceries, fruits, canned goods, etc.

## E. F. KELLNER'S BUSINESS HOUSES.

The accompanying lithograph of the New York Store gives a correct representation of the principal establishment of E. F. Kellner. His Arizona residence adjoins his store. This business was established in 1876, by Morrill & Kellner, in Globe, Arizona Territory, then a large business firm of Silver City, New Mexico. In 1878 a dissolution of partnership occurred, Mr. E. F. Kellner assuming the Arizona business, and Mr. J. B. Morrill retaining that of the Silver City house. Since Mr. Kellner started on his own account, he opened two branch stores, one at McMillen, Arizona, and one at Richmond Basin, Arizona. Besides these three stores, all of which did a large and satisfactory trade, the result of energetic and fair dealing, Mr. Kellner run and managed his saw-mill, lumber yard in Globe, his Miners' Bank, and a number of large freight, wood, coal, and lumber contracts, until he was taken sick from overwork, in the summer of 1882, when he sold out his two branch stores, and discontinued his bank. After a three months' tour through Europe, Mr. Kellner returned in better health, and has since developed his other business enterprises to their fullest capacity. The New York Store in Globe, does all the business and trade of the Old Dominion Copper Mining Company, which company turns out from fourteen to seventeen tons of copper bullion per day, and which bullion runs from 95 to 98 fine. All the supplies for the mines, smelters, and employés, and all the wood, charcoal, timbers, merchandise, and utensils are furnished on yearly contracts by Mr. Kellner to the Old Dominion Copper Mining Company. A spanking delivery team of four fine black horses, is constantly kept on the go, and occasionally delivers merchandise twenty-five and thirty miles from Globe, to adjacent mining camps. The large twelve-mule wood teams owned by Mr. Kellner, and delivering wood for the smelters, are quite a sight. They haul from ten to twelve cords of wood to each team, and make daily trips a distance of eight to ten miles to the smelters. The powder magazine connected with the store, is about two miles from Globe, and here large quantities of giant powder, black powder, fuse, caps, etc., are always kept in stock. The parent store in Globe, Arizona Territory, is 50x50, with a cellar and half-top story, and three large warehouses in the rear of the store. An elevator of the capacity of one ton, lowers and hoists goods in the store proper. Every article that is required for the household, or in the mines, or by the farmer or mechanic, is here, the number of different articles in stock being over 5,000. The whole establishment is filled to repletion, and bespeaks management of a high order, "a place for everything, and everything in its place." The freights received by this house run from three-fourths to one million pounds per year. There are a large number of teams and

men employed in carrying out the different contracts which Mr. Kellner usually controls. Mr. James W. Ransom is Mr. Kellner's right hand and confidential man and manager, in charge of all the business when Mr. Kellner is absent.

## PORTRAIT OF KELLNER.

The center-piece is a good picture of Mr. E. F. Kellner. He was born in May, 1849, in New Braunfels, Corral County, Texas, of German parentage. He is nearly six feet high, square shoulders, and fair complexion. He graduated at the German-English Academy at New Braunfels, and at the age of sixteen entered on a tour on his own account, having a natural turn for trading, and the fixed determination to establish his own business, and the accumulation of wealth. He sold goods from place to place on the large plantations in lower Texas, bartering for cotton.

At the age of twenty, in 1869, he opened a store in San Antonio, Texas, which he continued for several years, and during which time he gained an excellent mercantile experience, and was quite successful. After this he traded in bot hold and New Mexico, till he secured the appointment of military post trader at Fort Selden, New Mexico, where he remained till the post was abandoned.

In 1876 the Silver City house was opened, with the one at Globe City as a branch house.

Mr. E. F. Kellner was married in August, 1876, in Silver City, to Miss Mary Walker Bennett, daughter of Hon. N. V. Bennett, of New Mexico. This marriage caused quite a romantic episode. Mr. N. V. Bennett died in February, 1876. His last wish was that his daughter return to St. Louis to thoroughly finish her education, and secure all her diplomas before she was wedded. In order to comply with the old gentleman's wish, and also be able to better care for each other and satisfy the anxieties of all lovers' tribulations, Mr. Kellner and Miss Bennett were duly married at her uncle's house in Silver City, but parted then, she to return to school and he to return to his business alone for another year. Such is life in the far West. Mr. Kellner is of a very domestic nature, and has now two boys and two girls—two pair, and as good a hand as anybody needs. By indefatigable energy and perseverance, and excellent business habits, he has acquired quite a reputation as a merchant and financier. He never takes an active part in politics, but attends strictly to his own business, and is head and front in any and all enterprises that will benefit the district.

Mr. Kellner attributes his good success in life chiefly to his happy and contented home life influences, for it is there where he gathers renewed strength and courage to baffle with the many vexatious business competitions, and carry his enterprises to a successful termination.

## SILVER STAMP MILL.

The picture of Mr. E. F. Kellner's silver stamp mill at Richmond Basin, hardly does justice to this establishment. The mill is thoroughly equipped with stamps, re-torts, pans, settlers, assay office, etc., capable of reducing, amalgamating, and milling seven to ten tons of silver quartz rock per day. It is at present managed by the Kellner Mill and Mining Company, organized in New York City, of which Mr. Kellner owns the controlling stock. The mines owned and worked by this company proved unprofitable, but Mr. Kellner calculates to work in other mines, by which he expects to make a paying concern of it. The mill, etc., cost over \$40,000 originally, and only requires the development of neighboring mines to make it a very valuable piece of property. The engines and machinery, etc., are all first-class, and Mr. Kellner keeps the mill in good running order, ready to start up when the developments in the adjacent mines justify the starting up of the mill.

## PINE CREEK SAW-MILL.

The picture of Mr. Kellner's Pine Creek Steam Saw-mills shows only the mill building proper. There are stables, blacksmith shop, carpenter shop, mess house, office, cabins, corrals, poultry houses, etc., etc., to make the whole quite a settlement. It is about eight miles from Globe. The mill turns out from 6,000 to 10,000 feet of pine and fir lumber per day. It is supplied with a planer and matcher, cut-off and turning saws, shingle machine, 54-inch bottom and top saws, and employs from thirty-five to forty men, and from fifteen to twenty teams. Mr. Kellner has spent \$23,000 in building roads to get out timber since he started his mill in 1880. His toll road, over seven miles long, from the foot and extending into the heart of the Pinal Mountains, has cost over \$6,000 alone. This being a legally chartered toll road enables Mr. Kellner to virtually control all the good timber on his side of the mountain.

The timber cut is on mineral lands, and used for domestic and mining purposes only. None is exported, and no trees less than eight inches are cut, and some trees run to forty-six inches in diameter. If the winter is mild, the mill runs all the year round. It is well equipped in every department, and is independent of sub-contractors, as everything money could buy or good management suggest is on hand. It requires from seventy to seventy-five good, well-trained work oxen and from twelve to fifteen mules to do the logging. There are from 6,000,000 to 7,000,000 feet of timber accessible to the present road system. The price realized for lumber in Globe City is \$40.00 to \$60.00 per 1,000 feet. Mr. Kellner has a lumber yard in Globe City, where a general stock of from 100,000 to 150,000 feet of lumber are always kept on hand.

The business has cleared Mr. Kellner considerable money already, and promises to be a flourishing business for many years to come.

## RESIDENCE IN SANTA BARBARA.

The last picture in this group represents Mr. Kellner's residence in Santa Barbara, California, and where his family make their home. Mr. Kellner spends a few months in Santa Barbara twice a year. His residence is located in the best part of the city, one block above the Arlington Hotel. It has a very fine orchard, grapery, and all kinds of shrubbery and flowers attached. The house is a commodious cottage, containing all modern improvements throughout. Santa Barbara is generally admitted to be the garden spot of the United States. The beautiful sea, lofty mountains, and a magnificent climate, together with good society, good schools and churches, make it a very desirable place for a home. Strawberries, roses, and flowers grow out-doors all the year round, as there are only from six to eight degrees difference in temperature during the whole year. The surf-bathing, boating, fishing, and pleasant driving on the beach help to make a visit quite a holiday, and one from which Mr. Kellner always returns in good spirits and health, and ready to tackle business with renewed vigor.

H. H. LINVILLE is a pioneer of the Pacific Coast, born in Jackson County, Missouri, in 1828. He married at an early age, wedding Miss R. S. Mothersead, in Gentry County, Missouri, early in 1850, after which the newly united couple left to seek their fortunes in California. Mr. Linville first settled in Nevada County, where for nearly four years he followed placer mining, with varying results. The excitement of a life of this kind wearing off, and the uncertainties of the business becoming distasteful to Mr. Linville, led him to seek other fields, and in the fall of 1854 he moved to Sonoma County, California, and engaged in agricultural pursuits.

In 1868 he again changed his residence, going to Santa Barbara County, where he also farmed. Here he remained until 1875, when, becoming convinced that he had not yet found a place of habitation exactly conforming to his ideas and desires, Mr. Linville disposed of his interests, and, with his family, moved to Arizona. His past experience in agricultural pursuits led him to grasp at once the situation at that time occupied by the Salt River Valley. Phoenix was then a small hamlet, and agriculture was but an experiment with the few inhabitants at that period, but Mr. Linville saw in the vast bodies of level land, covered with mesquite and sage-brush, and in the ease with which it could be cultivated through a never-failing source of irrigation which the Salt River afforded, the making of a great agricultural region, particularly adapted to the

production of fruits. With this understanding he purchased the ranch he now occupies, and established a permanent home for himself and family.

His ventures have proven most successful, and he now literally reclines under his own vine and fig tree, in the possession and enjoyment of such blessings as energy, industry, and intelligence will ever command when combined with thrift and frugality.

In addition to his ranch, Mr. Linville is extensively engaged in the cattle business, his range being located some twenty miles west of Phoenix, and in Maricopa County. He is also a large stockholder in two of the principal irrigating canals of the Salt River Valley, and besides has heavy interests in some valuable gold mines.

Although fifty-six years of age, Mr. Linville is in perfect possession of the vigor and faculties incident to the prime of life. He is active and energetic, a man of rarely failing judgment, and very positive character. He takes much interest in public affairs, particularly in matters relating to education, and is a moving spirit as a member of the Board of Trustees which controls the Phoenix Public School, the foremost institution of learning in the Territory.

It was only in the present year that Mr. Linville concluded that he could spare a portion of his home ranch, and had a tract (embracing about twenty-five acres and adjoining the south line of Phoenix) surveyed into town lots. These lots are meeting with ready sale, being particularly desirable for the making of homes, which can be beautified and ornamented with flowers, shrubbery, and shade trees, common to the most fertile soil in a semi-tropical climate.

If the future of Phoenix turns out to be anything like present indications direct, it will not be many years before Linville's Addition is dotted with pleasant and attractive homes, while the increasing population will be importuning for more building sites within the original quarter-sections. It is doubtful, however, if Mr. Linville will ever consent to further sacrifices in this direction.

#### LEADING LUMBER DEALER.

HENRY W. RYDER, during the year 1880, under the firm name of Roberts & Ryder, began a business, as dealer in lumber and building materials. Himself and partner, Mr. Orlando P. Roberts, being both practical carpenters and builders, built up an extensive business.

In October, 1881, Mr. Ryder bought out Mr. Robert's interest, at which time a younger brother to Mr. Ryder came from the East and has since been an assistant in the business.

Most of the lumber in which Mr. Ryder deals, is shipped from California to Maricopa County, Arizona,

from which place it is hauled by teams owned and used in the business, to Phoenix, a distance of twenty-eight miles.

A short sketch of the celebrated Redwood lumber, which is being so extensively used in Arizona, will not here be out of place.

#### HUMBOLDT REDWOOD INTRODUCED.

In 1861 there was sawed, and shipped on the schooner *Dashaway*, the first full cargo of redwood lumber that had been shipped from Humboldt Bay. Previous to this, the redwood in Humboldt County was considered to be of no value, and unfit for any purpose, but now is considered the best on the coast.

The demand for it is increasing steadily every year. During the last few years there have been from 40,000,000 to 60,000,000 feet shipped from the bay annually. A great deal of it is now being shipped to such foreign ports as Mexico, South America, Sandwich Islands, Australia, and other places, the demand increasing steadily as the people learn the many advantages of the redwood. New York and other Eastern cities are also beginning to use redwood lumber and redwood shingles. The main supply of southern Arizona comes from this bay, while New Mexico receives its greatest share from this region.

In one year a single firm sawed and shipped to San Francisco and various foreign markets 20,000,000 feet of redwood lumber and shingles, valued at over a quarter of a million dollars.

Redwood is used as a framing lumber, especially when any portion of the structure is to be in the ground or water. It is a good finishing lumber, and when wanted for that purpose, can be procured entirely free from knots and sap. When once fixed in place, it retains its position, and when finished with oil and varnish, the effect is not surpassed by any wood in use. Redwood shingles are of excellent quality, and no other kind is used on the Pacific Coast.

#### ANNUAL DESTRUCTION OF TIMBER.

Who would suppose that it requires 30,000,000 trees annually to supply railroad ties in this country; that 6,500,000 cords of wood are used for locomotives; that the fences of the United States are valued at \$1,800,000,000, costing \$78,000,000 per annum for repairs; and that in 1871, 10,000 acres of forest were stripped to supply the city of Chicago alone with fuel; that 63,928 establishments, employing 393,378 persons, and using material to the value of \$310,000,000, were engaged in 1869, in manufacturing articles entirely of wood, besides 743,840 persons partly employed on wood, and using annually wood to the value of \$554,000,000?

#### THE TIMBER SUPPLY.

The timber area of the Territory of Arizona is, says the *Phoenix Gazette*, far below the percentage of the

country at large, yet there is no section of the country that is suffering more rapid destruction in this respect. The large mills on the Atlantic and Pacific Railroad, aside from their lumber business, have been cutting and shipping railroad ties into Mexico. It is not improbable that in a few years the valleys dependent upon the mountain streams for the water that gives life to crops, will severely feel the results of these depredations.

The southern and central portions of the Territory are not as fortunate in the supply of timber as the northern part, but along the foot-hills and the arroyos, many fine and valuable bodies of mesquite, ironwood, etc., are to be found. They are more particularly valuable and indispensable to us, owing to their scarcity. In many instances, they afford the greatest value to the land upon which they grow, as affording the only shade to stock, and making the property suitable for settlement. Without doubt, it is against the law to cut this wood and leave the land worthless. The future value as fuel will be much greater than at present.

As the lands belong to the people, the timber to the Government, it should be protected and left intact as an inducement to settlement. Recent efforts of Government officials may or may not have been misdirected in this particular; we are not sufficiently informed in the premises to venture an opinion. But we do know that nowhere in the United States is the question of forestry more important to the present and future prosperity of the people, than Arizona. What little timber we now have, should be preserved, and inducements held out for the planting and cultivation of trees.

It is hoped that lumber dealers, like those of Phoenix, may be able to supply our commands with lumber from our own forests.

HENRY W. RYDER is one of the most enterprising lumber dealers in Maricopa County, and a son of Warren H. Ryder. He was born in Barnstable, Massachusetts, November 28, 1855. At the age of seventeen, he was apprenticed for three years to Mr. John Hinckley, of Barnstable, to learn the trade of a carpenter, boarding at home during that time. After the completion of his apprenticeship, he was seized with the Western fever, and on the twelfth day of March, 1879, he left Barnstable for the Golden State, going by rail. Staying in San Francisco but one week, he started for his present home, Phoenix, Arizona, where he arrived April 7, 1879, after the tedious stage trip it was then necessary to take from the terminus of the railroad, which at that time was at Gila Bend. He immediately commenced working at his trade and found his services in constant demand.

By upright, honest dealing, Mr. Ryder has built up a

thriving business, not only in lumber, but in almost every class of building material which the trade demands, including shingles, shakes, split posts, doors, windows, blinds, lime, hair, plaster, cement, etc.

His yard and buildings are on Jefferson Street, south side of the plaza, the buildings consisting of two structures, used as office and carpenter shop, and a lumber shed 100 feet long by 20 feet wide. He is also intending to build sheds to the amount of 200 feet in length, which, when completed, will be sufficient to shelter all lumber and building material in stock.

He has recently added an undertaker's department to his already increasing business, and is ready at all times to wait on those who may need his services.

#### JOHN A. LUTGERDING'S RANCH.

Arizona, like all countries where irrigation is carried on to any extent, is a land of strong contrasts. This fact becomes more apparent after a long trip during the summer months in these portions of the Territory where but little water is available for irrigating purposes, and then returning to other portions where "through the scent of water," vegetation grows in great luxuriance. Although the plains of Arizona present a more varied and pleasing prospect than many other sections of the Union embraced between the same meridians, the sight of the irrigated valleys, after a hot, dusty drive over the arid portions, is a most satisfying spectacle. The writer was convinced of the truth of the foregoing statement, upon his return to the Salt River Valley, after an absence of several weeks. It is probable that no section in the United States, of the same age, has a more advanced appearance as regards its general development than has this beautiful valley. A drive from Phoenix to the west undoubtedly offers the best opportunity for inspecting the immense scale on which agriculture is conducted in this vicinity.

Among the many fine farms situated on this road, that of Mr. John A. Lutgerding cannot fail to attract much attention. Mr. Lutgerding was born in the kingdom of Hanover, Germany, September 1, 1846. When a small boy he emigrated with his parents to America, locating at Quincy, Illinois, where his father engaged in farming; he is still living near that place. In 1864 John left home and went to San Bernardino, California, where he worked at blacksmithing, having previously learned the trade in Illinois. In April, 1866, he left San Bernardino for La Paz, Arizona, on the Colorado River. He remained at this place and the new town of Ehrenberg, to which La Paz was removed, for four years, when he went to Wickenburg, where he formed a partnership with J. M. Bryan, for the purpose of hauling quartz for the Vulture Mine. He followed this business until 1871, when he commenced that

of freighting, being employed at various points all over the Territory. In 1875 he removed to Phoenix, still continuing the freighting business, and also engaged in blacksmithing at that place, employing about eight men in both enterprises, and using three twelve-horse freight teams. In 1881 he sold out his interests in both enterprises, and commenced farming and stock-raising. Besides the ranch, which is about three and a half miles west of town, and which forms the subject for an illustration in this work, Mr. Lutgerding has another ranch of 380 acres, situated about fourteen miles northwest of Phoenix. Both of these farms are largely used for grain-raising, there being on both an aggregate of 800 acres utilized for this purpose the present season, to secure which Mr. Lutgerding uses two headers, and the accompanying wagons and machinery.

Speaking of Mr. Lutgerding's farming operations, the *Phoenix Gazette* of 1883 says: "John A. Lutgerding has 480 acres four miles west of town, home farm. Has 12 acres alfalfa, 45 acres wheat, 1,400 pounds per acre—63,000 pounds; 25 acres barley, 1,200 pounds per acre—30,000 pounds. He has 100 acres barley hay, 200 tons; has 120 fruit trees, 100 vines, 200 head of hogs, and 19 horses. He farms 300 acres with derrick. They have 100 acres of wheat, 1,800 pounds per acre—180,000 pounds; 200 acres of barley, 1,000 pounds per acre—200,000 pounds. He also has last ranch on Grand Canal, 200 acres, 120 acres wheat, 1,500 pounds per acre—180,000 pounds; 80 acres barley, 1,500 pounds per acre—120,000 pounds. This is the first crop on the land. He owns five shares in Grand Canal, and one share in Salt River Valley Canal. In addition to the above, he is interested with H. H. Linville in a stock ranch on the Gila River, twenty miles west of town, on which they have 80 acres of alfalfa, and 150 head of cattle."

At the home ranch, however, Mr. Lutgerding has also a fine orchard of peach and other fruit trees; also raising vegetables for his own use. He has also a fine start in stock-raising, now possessing about 160 head of cattle, 500 hogs, and about 30 horses. His stock range is located about thirty miles west of Phoenix, on the Gila River.

He also is a stockholder in the Grand and Salt River Valley Canals. Besides the before-mentioned property, Mr. Lutgerding owns a neat brick dwelling in the village, surrounded by a dense growth of fruit and shade trees. Mr. Lutgerding was married to Miss Rusilla Linville, in 1879. Mrs. Lutgerding is a native of California, and came to this Territory about the year 1877 with her parents, who now reside near Phoenix. They have one son, George, aged two years.

H. C. HOOKER was born in Hinsdale, New Hampshire, in 1828, where he resided on a farm until 1849. He

spent the year 1850 in New York in mercantile business, and then went to Kansas City, Missouri, where he traded with the Salt Lake and California immigrants. While in Missouri he gained much experience as an Indian trader, in which position he gleaned much information about the habits, customs, peculiarities, and general characteristics of the savage races, which, in after years in Arizona, proved highly useful to him in many ways.

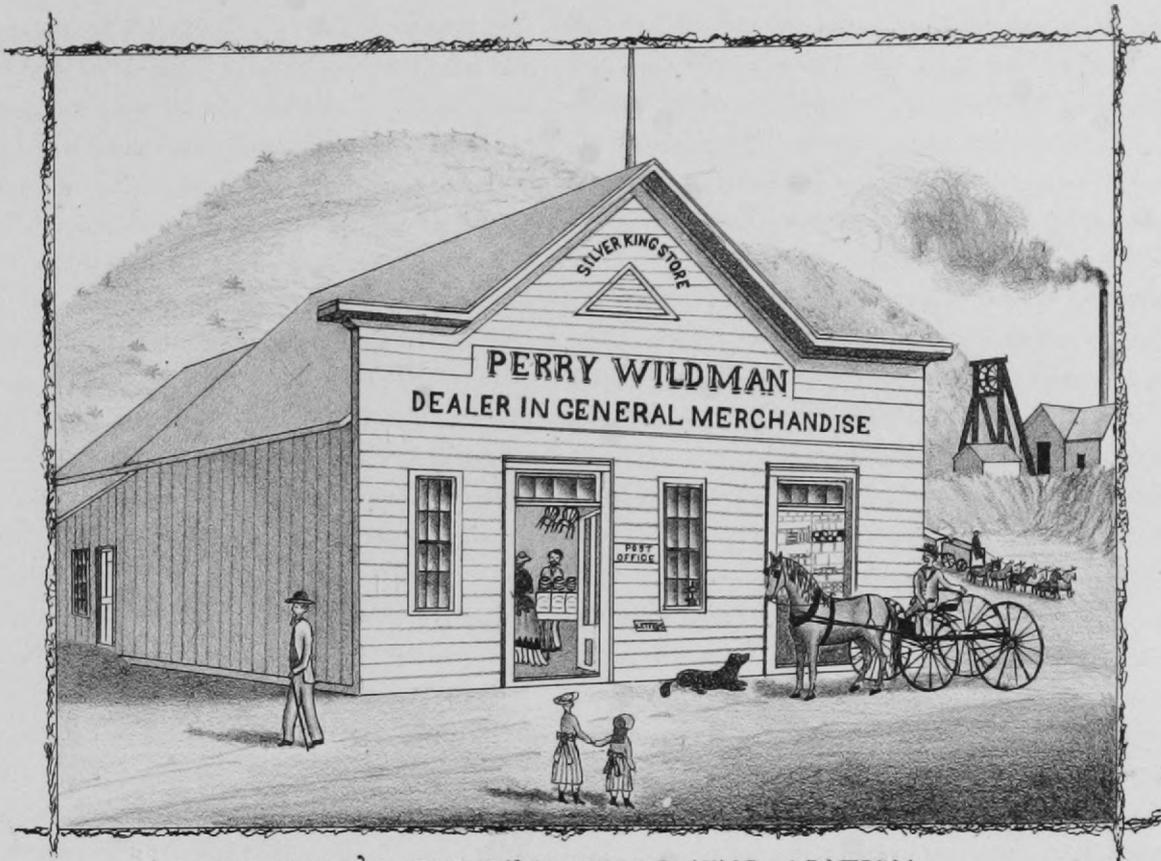
In 1853 he moved to El Dorado, California, where he engaged in general mercantile business very successfully, and was also very largely engaged in stock business, which he not only had a liking for, but had also gained considerable knowledge of from his early training on a farm, which in many respects was useful to him. While quite young, too, he had learned to become quite handy in the use of tools, as well as farming implements; but here he got his first lessons in the handling of men and working them to the best advantage, using them in such a manner as he would like to be treated were he in their place, and always manifesting the utmost firmness, along with due respect towards all his employes. He remained in Placerville from 1853 to 1860, after which he experienced some of the ups and downs incident to early California life. For some years he engaged in driving cattle from California to Nevada, and many a time, in the dead of winter, when the snow was deep, he has driven cattle over the drifts that covered the telegraph poles along the road to Virginia City.

#### LIFE IN ARIZONA.

In 1866 he moved to Arizona. The first point in which he did business was Fort Goodwin, where he remained for three years, until the fort was abandoned. During that time he was outside general business manager and partner in the firm of Hinds & Hooker, who furnished the entire military department of Arizona with beef, and several of the posts with hay and grain. At one time this firm had no less than forty ten-mule teams employed, over thirty of which were their own. The Indians were so bad at this time that the firm had to import all their cattle from Mexico, Texas, and California.

#### INDIAN DEPREDATIONS.

The risk and loss of human life was very serious, and sometimes large numbers of their cattle were run off by the blood-thirsty Apaches. The noted Cochise's band was then raiding, and but few droves of cattle or horses had a chance to pass along without paying their tithe, at least, to the redskins. During these troublous times, Mr. Hooker has had forty men in his employ, who have been killed by the Indians. They were either killed by raids of large bands, or, becoming careless, were shot down by roving Indians. Mr. Hooker says when traveling about the country, that his invariable custom was to travel in an open



WILDMAN'S BUILDING SILVER KING. ARIZONA.



THE WILLIAMS HOTEL. SILVER KING. ARIZONA.  
ROBERT WILLIAMS PROPRIETOR.

buggy, taking with him a trusty man. While Mr. Hooker drove the team with a Winchester rifle lying across his knees, a revolver and long knife in a holster on the dashboard, within easy reach, he kept a sharp look-out ahead while his companion, who rode with his legs over the end of the buggy seat, where he could keep a look-out behind, carrying a double-barreled shotgun, as well as revolver and knife, while a third gun lay along the back of the buggy-seat. In this way he was enabled to traverse the sections of country between military posts and escape attack. It was a remark of Cochise, that Hooker was never caught napping, and the wily chief conceived a respect for him that undoubtedly saved him from much annoyance.

#### DISSOLVING PARTNERSHIP.

In 1871 the partnership was dissolved. Mr. Hooker then went to California, where he remained about a year, and then returned to this Territory, and became half owner in the two years' contract of W. B. Hooper & Co., for furnishing the whole army of Arizona with beef, in the fulfillment of which over 30,000 beeves were required, averaging over 800 pounds each. Since that time he has devoted his undivided attention and care to his own personal business in perfecting titles, acquiring water-rights, and gradually accumulating the immense possessions of lands and herds which he now enjoys. As a noteworthy incident, as well as a very unusual circumstance, especially in frontier districts, we may mention the fact that some of the employes still in his service have been with him since 1867.

That speaks his praise as a master, and requires no comment. When he first settled upon this beautiful estate, he camped for a time in the foot-hills; but, soon seeing the advantages of a more central location, built on what is now occupied as the Home Station. His father, being a general New England farmer, early impressed upon his son the advantages of raising only good stock, and this has been one of the chief causes of his success in handling the immense business he now carries on. In twelve years he has built up a business second to none in the Territory. Possessed of untiring energy, and good business habits, he has succeeded where many men would have failed. Genial, kind, and hospitable, none are ever turned away hungry from his door. His name is known and honored everywhere, and the Sierra Bonita Ranch has a wide reputation.

Mr. Hooker was united in marriage to Miss Elizabeth Rockwell, in 1856. Mrs. Hooker was born in Pennsylvania, but removed with her father's family to California at an early day. The father is still living in that State. The remainder of Mr. Hooker's family consists of two sons, Edwin and Joseph, and one daughter, Ida, now Mrs. M. W. Stewart, of Wilcox, Arizona.

E. R. HOOKER, his eldest son, was born at Placerville, California, in 1861. He received part of his education at the Lincoln, and part at the Model School of San Francisco, and finished at the High School, and Heald's Business College. Since that time he has been on the ranch with his father, where he is possessed of large interests in stock.

J. S. MANSFELD was born on the 9th of November, 1832, in the town of Pasewalk, in Prussia. He received a common German school education. Was four years an apprentice in a mercantile business, and three years clerk in the same. After a short service in the army, he was disgusted with the condition of the affairs of the country, and emigrated to California in 1856. Was clerk three years in Shasta, California. He then became partner of the book store in that town, the same store formerly owned by A. Roman, now of San Francisco. He started a branch business in Virginia City, and gave up his store in Shasta, but speculations by his partner ruined both of them. He started business again in Idaho City, in 1865; but three days after opening he lost everything in the great fire in that city, but with undaunted perseverance he again started business, and was again burned out in the fire that visited that city in 1867. He then left for Silver City, Owyhee County, Idaho. Here he stopped but a few months, when the stampede for the White Pine Diggings broke out. Silver City was nearly deserted, and Mr. Mansfeld was compelled to follow the crowd. He carried the first bundle of newspapers, in what is now Pioche, at that time called Ely District.

In 1869 he left Idaho for Arizona. The Indians were on the war-path in those days, and he was obliged to go by way of San Bernardino and San Diego, California, where he remained for some months, and then proceeded to Arizona. He started, in 1870, the first news depot and book and stationery business, and opened the first public library in the Territory. For the past seven years, he has worked alone and unremittingly to establish his business, and has now a prosperous business, built up by his own energies and business tact. He is also interested in valuable real estate. Mr. Mansfeld is one of Tucson's self-made business men.

ALEX. F. MACDONALD was born in the parish of Kintail, Rosshire, Scotland, September 15, 1825. His father's name was Duncan MacDonald; his mother's name, Mary Macrae. They adhered to the Presbyterian faith. About the year 1829 his father started to go to Canada, but was induced by his uncle to remain in Perth, Perthshire, where young MacDonald went to school, and was also apprenticed to the business of ship building. About the middle of December, 1846, for the first time, he heard an elder of the

Mormon Church preach, in the town of Perth, and all his sentiments regarding religion being instilled by the rules of the church of Scotland, some of which he had strong reasons to doubt, led him to inquire into the faith of the Latter-day Saints, and he became convinced that their doctrines were correct, and in harmony with the Former-day Saints, or Christians, and was duly baptized by immersion for remission of actual sin, and confirmed by laying on of hands for the gift of the Comforter, and membership in the church according to the ancient pattern. His father with his two brothers leased a farm, and followed that business. But after he left the highlands, he took up the business of milling in Perth. Young MacDonald, however, worked at his trade, and also followed the sea, having made several trips to British America and the United States, also in the British Coast trade. In 1851 he married Elizabeth Graham, at Perth, agreeable with the usages of the Scottish law. By her he had eleven sons, six of whom are now living. In May, 1852, he went to Liverpool in a missionary capacity, after having traveled in Scotland for some time teaching his kindred and others those doctrines he had embraced.

In March, 1854, he left Liverpool for New Orleans, thence by river steamers to Kansas City, Missouri, where, in company of others, they fitted up ox-teams, and prepared to engage in the novel effort of making an overland trip to Salt Lake City, the gathering-place of the Saints. They arrived the following October.

He continued to labor at building and farming, also opening up settlements at new places in Utah, until May, 1872, when he removed to St. George, in southern Utah, and aided in the labor of developing that place. In January, 1880, he started for Salt Lake Valley, Arizona, arriving there on the 5th of February, having been called by proper authority to take the oversight of the Latter-day Saints residing there, who a short time before had succeeded in bringing water a distance of nine miles from the river on the beautiful but desert plain where Mesa City now stands, and they are now planting their orchards, vineyards, and grain fields; also building up their little homes, and village, called Mesa City, watering and cultivating the thirsty soil of this sunny land.

The work of pioneering in this interior region, or mountain range, has been entirely opposite to any early expectations, previous to embracing the faith and doctrines of the Latter-day Saints. Yet for the past twenty-five years, he has seen and taken pleasure in the working of that divine power, and organizing law revealed through Joseph Smith, the "American Prophet," for the establishment of the united and peaceful kingdom, or government of God, preparatory for the second coming of our Redeemer and reign of rest as promised. With such a

faith and hope, they work to make "the desert blossom as the rose," gathering from all nations to this favored land as the warning voice of coming events reaches us. While we are looking forward to the early return of the Jews to Jerusalem, the gathering-place of their fathers, so that in this land of Zion, and Jerusalem *only*, will deliverance be found, and in the remnants whom One, "the Lord our God, shall call," we shall be better known and less spoken against, wherever the truth is understood.

JOSEPH R. WALKER was born in Jackson County, Missouri, April 30, 1832. He was a farmer's son. He went to Santa Clara County, California, in 1850, and remained there occupied at farming one year. He then engaged in mining in Merced County, continuing in this business one year, when he went back to the coast counties, following farming up to 1861, when he joined the farmers' Walker Party, his uncle, Joseph Walker, being the leader of the party. They passed through Arizona, going to New Mexico, then to Colorado, and in 1863, came back to Arizona, settling at Prescott, Yavapai County, where he has since remained. He was elected Sheriff in 1878, and was retained in that office for four years, serving two terms. He is now engaged in the butchering and stock business. His range is about fifty miles east of Prescott. He has about 600 head of stock.

CHARLES B. RUSH was born in Glasgow, Missouri, February 2, 1855. He came from Fayette, Missouri, August 18, 1877, to Arizona. He has been practicing law ever since his arrival in the Territory. He was elected in the fall of 1882 to the office of District Attorney of Yavapai County, which office he still ably fills.

ALFRED D. OTIS, the founder of the firm of A. D. Otis & Co., of Tucson and Tombstone, is one of Tucson's live business men. He is a native of Michigan, and was born in Bellevue, Eaton County, April 21, 1851. Most of the early part of his life was spent in Detroit, at which place he obtained his education. At the age of twenty he left Detroit, and went to Newport, Kentucky, where he remained for three years, and then left for Arizona. Here he took up his residence in Tucson, and in 1879, he began the mercantile house, which bears his name, and which is known as one of the largest and most complete establishments in southern Arizona. In 1882 he was elected Supervisor of Pima County for the four year term, and is Chairman of the Board. While a resident of Kentucky, he was married to Miss Kate B. Walker, a native of Louisville, Kentucky. They have five children, Alfred D., Maggie, Harry, George, and John Otis.

SAMUEL PURDY was born in Buffalo, New York, January, 1847. His early years were spent in the city of New York, where he attended school. At the age of thirteen, he removed with his parents to California, and finished his education at Santa Clara College, Santa Clara, California. Soon after completing his education, he enlisted in the volunteer service as Second Lieutenant, and afterwards entered the regular service as First Lieutenant.

In 1874, he came to Arizona as Superintendent of the Colorado Commercial and Land Company. Nine months after his arrival, he was elected to the Arizona Legislature, and again re-elected in 1878, from Yuma County. He has, at various times, held the offices of Probate Judge, County Recorder, and District Attorney of Yuma County.

Mr. Purdy has been actively engaged in mining enterprises, and built the first quartz mill on the Colorado River. He has been foremost in advancing the mineral resources of Yuma County, and is one of her most respected and energetic citizens.

Mr. Purdy is the son of ex-Governor Purdy, of California, and brother of Gen. E. Sparrow Purdy, late Pasha of Egypt, both recently deceased. He married, in 1880, Miss Rosa Avila, a native of Mexico, by whom he has two children; he has also one daughter by a former wife. Their names are Samuel, Samuela, and Rosa Purdy.

P. A. CRAIGUE was born in Westerfield, Windsor County, Vermont, April 14, 1830. His father was a farmer. At the age of nineteen, he left this State for California, arriving in 1849, and immediately commenced mining in Trinity and Tuolumne Counties. He remained in those counties most of the time, till 1860, when he went to Aurora, Nevada, where he again engaged in mining. From there he went to Virginia City, thence to Pioche, from which place, in 1872, he was elected to the third Legislature of Nevada. While a member of that body, he aided in electing J. P. Jones to the United States Senate.

In 1874, he came to Prescott, Arizona, where he has since resided. He has been engaged in various mining enterprises. He was a member of the Tiger Mining Company at one time.

In 1880, Mr. Townsend Cox, Jr., discovered the Dosoris Mine, when Mr. Craigue joined with him in its development.

#### THE DOSORIS MINE.

The name "Dosoris" was given from Dosoris Island, the property of the Townsend family, from which Mr. Cox's mother descended. This island is situated in Long Island Sound, near the coast of Long Island.

The Dosoris Mine is situated twelve miles south of Prescott, in the Hassayampa Mountains. The ore consists of spar, galena, brittle silver, and gray copper. The yield of silver from this mine is almost unparalleled. One hundred tons of ore recently shipped, yielded six hundred ounces of silver to the ton.

#### THE BUZZARD MINE.

The Buzzard Mine was purchased by Cox & Craigue for \$5,000, about the time the Dosoris was discovered. The indication being unfavorable, work was suspended for three years. A tunnel has recently been run into the mountain, striking the vein 120 feet below the old workings, and proving very rich, assaying from 250 to 300 ounces of silver per ton. This mine is located half a mile southwest of the Dosoris. The mines are fully illustrated in another part of this work.

S. C. MILLER, who forms the subject of this sketch, was one of the earliest settlers of Arizona. He was born at Peoria, Illinois, November 5, 1842, and was reared on a farm. When only fourteen years of age, he commenced farming on his own responsibility, having secured a farm joining that of his father. In 1858, he left Illinois, and went to Virginia City, Nevada, where he engaged in freighting, running a pack train from Virginia City to Placerville, California. He was also quite largely interested in mining and stock-raising at the same time.

In 1861, he took his departure from Virginia City, having disposed of his stock ranch and other property for about \$4,000, the same property selling for \$12,000 the following year. He left his mining interests in the hands of a cousin, and went to New Mexico for the purpose of benefiting his health, which had failed in Nevada. The company which he joined was the famous Walker Party, a full account of which is given elsewhere.

The course which the party took lay through Arizona, to which section the party went in search of gold on the Little Colorado. Failing to discover any, the party proceeded to Albuquerque. Here Mr. Miller remained, being employed by the Government as Wagonmaster. In the spring of 1862, he went to Colorado, rejoining the old party, and with them engaging in mining. In 1862, the party returned to Arizona, passing through New Mexico and wintering at Fort West, on the head-waters of the Gila River.

In the spring, they set out for the locality in which Prescott is now situated, passing by Tucson, the Pima villages, and then to Hassayampa, where they discovered gold on the 13th of May, 1863. These mines not proving eminently profitable, the party went to Lynx Creek, in Yavapai County, where they found some rich mines. Here

Mr. Miller engaged in mining for two years. In the meantime he had taken up the ranch where he now resides. This ranch, added to that of his brother, Mr. Jacob L. Miller, and other lands purchased by them, aggregates 320 acres, lying one mile northwest of Prescott. In the fall of 1863, the brothers settled upon their ranches, and commenced farming.

The Indians were very troublesome during the first few years of their residence here. At one time, while Mr. J. Miller was in California, the Indians surrounded the cabin, and appeared so bent on mischief that Mr. Sam Miller decided to go to his placer mines, where he had men at work, as means of safety. On his way he was attacked by them, and received a bullet wound in the leg, but escaped without further injury. During his absence, the savages burned the cabin. The following spring, however, the brothers rebuilt the cabin, and put in a crop. Since then the brothers have prospered unusually well, and now possess much valuable property.

Mr. S. C. Miller married Miss Mary F. Sanders, who was also a native of Illinois. The remainder of his family consists of four children, two boys and two girls; their names are respectively as follows: Robert E., George H., Celia D., and Mary H. Miller.

JACOB L. MILLER was born at Rock Castle County, Kentucky, February 22, 1830. He removed with his parents to Illinois in 1836. When his brother came West in 1858, he accompanied him, and has been connected in partnership with him ever since.

In 1851, he married Miss Jane Reeves. She remained in Illinois when Mr. Miller came to the coast. Three children of Mr. Miller are now living in Arizona, all being married.

JOHN W. TEDROW is a native of Oregon. He was born in Lane County, in 1854. His father was a farmer, and John passed his early years working on his father's farm. When he reached his majority, he left Oregon for eastern Idaho, having engaged as a vaquero for a Mr. Starr, with whom he left Oregon with a band of stock. He staid but one year, however; returning to Oregon, he went to Douglas County, where he went into the stock business with F. M. Mognette. In 1881, in company with Mr. Mognette, he left for Arizona. The next year he went to Albuquerque, New Mexico, where he took charge of a hotel for Thomas Post. He remained here six months, when he was employed by Ellwood Madden, with whom he staid six months. He then returned to Arizona, and stopped in Phoenix. He was employed as bar-tender for Mr. J. M. Cotton, also for W. T. Smith, for some time, when he started in business for himself in the Cornucopia Saloon.

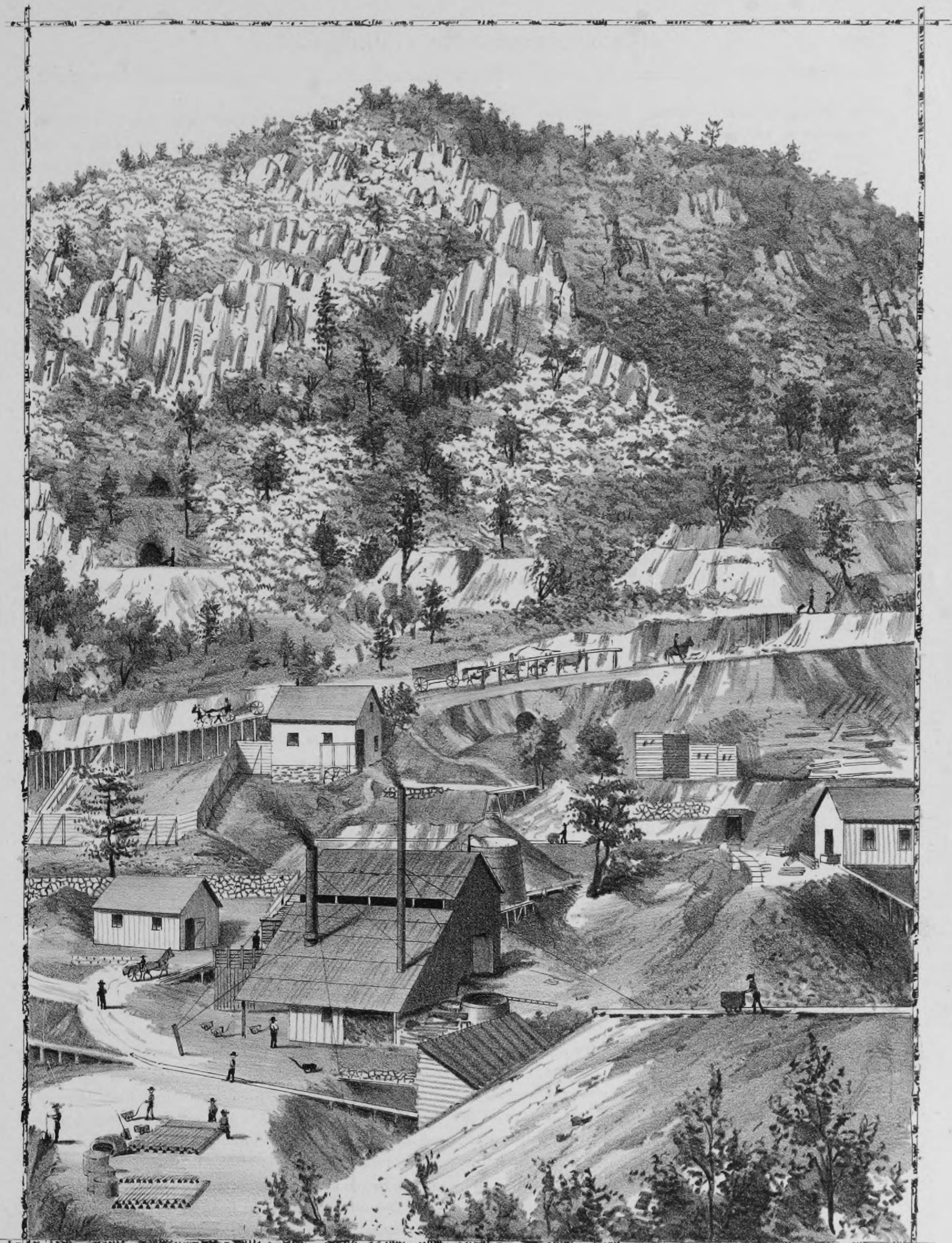
He has a fine stock range about fifty miles east of Phoenix, on Salt River, on which he has 250 head of cattle and other stock. He was married in 1883 to Miss Mary True-love, a native of California. They have one son, Clarence W. Tedrow.

GEORGE D. LOUNT, one of the pioneers of Arizona, was born in Upper Canada, March 19, 1825. His early life was spent in that country, until he was thirteen years of age. His father being dead, his mother moved with the family to the United States, settling in Michigan. George being of a roving disposition, went on the lakes as a sailor when only eighteen years of age. He soon after went on the high seas, and in 1849 sailed around Cape Horn to California, arriving in February, 1850. In the spring of 1851 he accompanied an expedition to establish a settlement at Port Orford, Oregon. Here he lived till 1858. Becoming restless, and hearing stories of the rich gold mines to be found in Arizona, he left in 1858, in company with his brother and a small company for that country. They went as far as the head-waters of the Mohave River, where they were surprised by Indians, and compelled to return, his brother being mortally wounded. They succeeded in reaching Los Angeles, where his brother died. This affair broke up the expedition at that time, and they returned to California. In 1861 Mr. Lount helped organize the Walker Party, an account of which will be found on page 207. In 1863 Mr. Lount settled in Prescott, where he now resides. A sketch of his residence, and portrait of himself, are given in this work. Mr. Lount is one of Prescott's most respected citizens.

HENRY WICKENBURG, who is still a citizen of this Territory, first reached here from California in 1862. He traveled to Yuma, and from thence *via* the Colorado River to La Paz.

From La Paz, he struck across the country with companions who wished to explore, and reaching the villages of the friendly Pima Indians on the Gila, pushed into California. He returned, and in company with other prospectors, went down the Hassayampa, on a search for the Pinihatchipet Gold Mine, which was supposed to lie somewhere on the west side of the Haquihala Mountains, an unexplored range lying forty miles west of the creek.

This Pinihatchipet Gold Mine has been eagerly searched after by many Arizona prospectors, but is still unfound. It was while returning from a fruitless search for the Pinihatchipet Gold Mine, that Henry Wickenburg and his two companions discovered the celebrated Vulture Gold Deposit. Wickenburg held on to the property he had claimed, and in the spring of 1875, he sold it to Betnel & Phelps for \$85,000.



TUNNELS OF CHROME MINE.

UNITED VERDE COPPER COMPANY'S WORKS.  
JEROME YAVAPAI CO. ARIZONA.

EUREKA MINE.

## UNITED VERDE COPPER MINES.

THE United Verde Copper property is one of the big bonanzas of the day. The present development substantiates this so strongly that it may be stated positively, without a qualification. It has far exceeded the anticipations as well as the hopes of those interested, and stranger than all this, as development has progressed, it has equaled the wonderful stories told by the press and people concerning it.

To F. A. Tritle, Governor of Arizona, belongs the honor of the enterprise, and together with Mr. F. F. Thomas, who has the direct supervision of the property, is deserving of much credit for building such a successful and grand business and mining enterprise. Associated with these men from an early period in the inauguration of their enterprise has been Mr. Wm. B. Murray, who has taken an important part in the organization and conduct of the business affairs. Governor Tritle obtained his mining experience by a residence in Nevada, and seventeen years spent in operating upon the Comstock. He entered into the present undertaking an intelligent and experienced mining man.

Mr. Thomas, although a younger man, has been thoroughly schooled for an enterprise of this magnitude. Graduating from the chemical department at Yale College, he next spent five years in the scientific department and since then has spent many years upon the Pacific Coast in acquiring a practical knowledge of the direct working of these mines. Long and faithfully have these men toiled, shunning wild cat schemes and doubtful properties, until at last they have received a deserved reward, and "made their stake." Their innumerable friends rejoice, and legitimate mining has received one more strong indorsement.

Last March a company was organized in New York, for the purpose of developing and working this property. The officers are: President, Jas. A. Macdonald, M. S. Manager of the Queen Insurance Company, New York; Secretary and Treasurer, Eugene M. Jerome, New York; Directors, F. A. Tritle, Arizona; Charles Lening, Philadelphia; John P. Logan, Philadelphia; Jas. A. Macdonald, New York; Eugene M. Jerome, New York.

Work was commenced on the eighteenth day of April, 1883, by breaking ground upon the road leading to the mines. Since then, they have built through a rough and rugged mountainous country, 8 miles of road to the mines, and 6 miles from the mines to the Verde River, at a cost of about \$40,000. A pipe line has been laid through a rough country for  $2\frac{1}{4}$  miles, at a cost of \$10,000. This consists of 2-inch gas pipe, and furnishes the mines and smelter with an abundant supply of water. There has been erected a 36-inch water jacket smelter,  $4\frac{1}{2}$  Baker blower, 8x10 Blake crusher, a 16 horse-power engine for blower, a 12 horse-power engine for crusher, two steam pumps, 784 feet bullion tramway, wood, coal, and coke shoots, boarding and lodging houses, assaying office, business office, blacksmith shop, store rooms, etc.

## JEROME MINE.

As a result of the work of this company, a town of 250 people has sprung into existence, and as a compliment to the Secretary and Treasurer, who is also a large shareholder, is named Jerome. It is situated in the westerly part of the large Verde District, close by the most important mines, and twenty-eight miles northeast of Prescott, and has a large store, boarding-houses, saloons, etc. It is a live and prosperous mining-camp.

The company owns eleven mining properties and three mill sites. The most important of these are eight adjoining properties. They are on either side of, and ex-

tend across, a gulch on the easterly slope of the Black Hills, about four miles from the Verde River. This is a rough and rocky location, with juniper and live oak, while on top of the hills there is an abundant supply of pine.

The hills are capped with silurian limestone; under this, stratified silicious lime, and still below, stratified brown sandstone. Diorite extends from the sandstone to the mines and forms the west country, but whether the west wall or not is doubtful, as there is more or less quartzite intervening. On the east is silurian slate—at least of the Hampton and Eureka Mines—and the veins in the slate and the slate extending to lime, which forms the eastern part of the district. The surface croppings are bold upon both sides of the gulch, and consist of copper ore, quartz, and some quartzite. These croppings extend for 1,500 feet in length, and, with silurian slate intervening, for about 300 feet in width. The surface showing, including the surface prospecting, and the work below, all tend to show that this vast amount is in place.

At the time this property was purchased by the company, considerable prospecting was done, and there were about 1,200 tons of ore on the dump. At the present time the showing is as follows:—

## THE VENTURE MINE.

This mine is situated about eight miles from the eight properties referred to, and the smelter which is upon these properties. It has been opened by a 75-foot shaft, a 75-foot drift, and a 15-foot winze below the 75-foot level in ore. There is from two to four feet of ore, being azurite, malachite and oxide of copper, associated with a very little copper glance. This is the richest copper ore which is being mined, and averages 40 per cent. The strike of the vein is northerly and southerly, with walls of metamorphic slate. Returning to the eight properties, we find that the Hermit Mine has been opened to a depth of about 80 feet, and has produced about 400 tons of oxide ore, averaging from 20 to 30 per cent.

## THE CHROME MINE.

This mine presents the appearance of having been worked hundreds of years since. Thousands of tons of material have been moved. In the present workings an old shaft has been cut vertically for many feet. This shows the old shaft filled with *debris* so compact that it now stands as a wall, and upon this, at the surface, grows a large-sized pinon tree. The pinon tree is a stunted pine of remarkably slow growth, and this tree must have been ages in attaining its present size. In the old workings have been found stone hammers, a red cross painted upon a stick, indicating that the mine was worked by the Jesuits, and the horn of a buck, which presents the appearance of having been used for a pick.

The present workings upon this property consist of 5 tunnels, there being about 50 feet between each of the different levels. These tunnels are driven from the gulch into the mountain in a southerly direction. One of them is far down in the gulch and is the lowest working on the south side. It has been driven 175 feet entirely in ore and shows about 4 feet in width of carbonate, oxide and sulphuret ore. Tunnel No. 2 has been driven 140 feet and shows same as No. 1. No. 3, 140 feet, with same showing. No. 4, 118 feet, showing azurite and malachite. Nos. 3 and 4 are connected by a shoot, which is entirely in ore. No. 5, 60 feet, carbonate and red oxide. Nos. 4 and 5 are connected by a shoot entirely in ore. To the east of these tunnels, there is one driven 60 feet, which shows red oxide ore in irregular quantities.

## THE CHROME NORTHERLY.

This mine has a tunnel driven 25 feet with green carbonate ore running from 15 to 20 per cent. copper and some silver.

## THE EUREKA MINE.

This mine makes a strong surface showing with its bold croppings. At one place these croppings are about 40 feet across, carrying red and black oxide, some silicate of copper and silver. At another place the cropping is from 20 to 28 feet in width, about 20 feet in height above the surface, and 185 feet in length. As the rest of the surface is covered by wash at this place, it is impossible to tell the extent of the ore body. This cropping averages 30 per cent. copper and carries some silver. Upon this property a tunnel has been driven from the gulch south into the mountain, and under these croppings, with which it is connected by a shoot. Below this tunnel some 30 feet, and 85 feet to the west, is a tunnel driven 274 feet. At 90 feet from the mouth of the tunnel, oxide and some carbonate ore were encountered, which averages 20 per cent. copper.

At 110 feet, a cross cut has been run at right angles, and is in silver-bearing vein matter for a distance of 145 feet, where a body of oxidized sulphuret of copper, or oxy-sulphide, was encountered. This extends for 81 feet to the wall of silurian slate, upon the other side of which is a vein of ore 6 or 7 feet in width within the Chrome ground. This oxy-sulphide ore averages 30 per cent. copper. A connection has been made between this body of ore on the west side, and the surface, by means of an air shaft, and shows the oxy-sulphide extending towards the surface 40 feet, capped by carbonate ore. In the cross cut on the west side of the body of oxy-sulphides and west of the air shaft, a winze has been sunk for 50 feet, and it shows the body of ore continuously, but not oxidized.

## THE HAMPTON MINE.

This mine is situated north of the Eureka, west of the Chrome northerly, and upon the north side of the gulch. This mine has bold surface, croppings extending from 20 to 30 feet above the surface. These croppings show ore averaging 20 per cent. copper, \$50.00 silver per ton, and some gold. This is about 200 feet above the lower workings in the mine. The top of the main shaft in this mine is on a level with the main tunnel in the Eureka on the opposite side of the gulch, and 230 feet north therefrom. At a depth of 80 feet in this shaft, a drift has been run north into the hill for 40 feet, where a body of ore was encountered 100 feet below the surface.

To the north of the cross cut, the ore is broken sufficiently to be seen for 30 feet, and shows the same character, while the same may be said of the ore above, and that it is all first-class ore. Another shaft upon this mine is 60 feet in depth, with a cross cut 16 feet west at the 60-foot level in ore. From the 100-foot shaft, a drift of 36 feet has been made to connect with this level for an air drift. This level extends for 96 feet in vein matter towards the Eureka, being 225 feet from the mouth of the tunnel, and extending under the bottom of the gulch 20 feet below.

The east wall has not been reached at any place upon this mine. The west wall is perfect and well defined. As shown in the 60-foot level, in the winze, and from the body of ore in the 100-foot level, it is dipping to the west 45°, and also changing in its course to the west. The body of ore is increasing in width from the 60 to the 100-foot level on

the west side, and does not diminish upon the east so far as developed. Total to December 15, 1883, is as follows: Number of feet of workings, 3,000; tons of ore extracted, 6,000; daily capacity of (30-ton, 36-inch) smelter, 50 tons; bullion produced, 847 tons; running time since August 1, 1883, 3½ months; lost time, 1 month, because sufficient coke could not be secured; product, silver, \$130,000; copper, \$263,973; total production, \$393,973; bullion on hand, 15 tons; coke consumed per month, 250 tons; wood consumed per month, 65 cords; cost of mining and reduction of ore, per ton, \$14.00; tons of ore worked, 4,500; tons of ore on the dumps, 1,500; cost of producing and delivering bullion in New York, 8¼ cents per pound; average silver per ton of ore, \$28.88; average copper, 19 and a fraction per cent. The bullion rates as good Western, and sells for about ¾ per cent. less than Lake copper.

## THE FUTURE PROSPECTS.

From all the croppings and the work done upon these adjoining properties, I am of the opinion that there are several large positive parallel veins, separated by silurian slate, which forms the walls, or that there is one enormous vein with different ore veins, and that the silurian slate forms part of the filling or vein matter. The ore is of such a character that an ordinary 30-ton smelter treats 50 tons instead. With only one such smelter, the bullion is produced and marketed at a total cost of 8¼ cents per pound, and by the addition of only one more such smelter, this can be accomplished at less than 8 cents per pound.

Hoisting works have been ordered for the Hampton Mine. Another smelter is to be added next spring.

With the mines extensively worked, and a railroad connection with the Atlantic and Pacific Railroad, to save sixty-five miles of hauling coke and bullion, this property has such an enormous and wonderful future, that I am compelled to leave it to the reader to compute, rather than attempt a description.

With the exception of the Calumet and Heckly, it costs to produce and market Lake copper over 12 cents per pound, while this company, working upon a small scale, produces and markets copper at 8¼ cents per pound. As it sells for about three-fourths of a cent less than Lake copper, it equals Lake produced and marketed at 9 cents. Worked upon a large scale like the Lake Mines, it can doubtless produce and market its copper at 7¼ cents, which, with three-fourths of a cent, the difference, added, is equal to Lake copper produced and marketed at 8 cents, instead of more than 12 cents, the cost of producing and marketing Lake copper, a difference of more than thirty-three and one-third per cent. in favor of the United Verde Mines in Arizona. H. R. H.

January 10, 1884.

Since the above date, the United Verde Copper Company has paid \$60,000 in dividends, and will pay another during the coming month. It has built a new road across the Verde Range to Ash Fork, shortening the teaming distance to the railroad some 20 miles. Many important developments have been made in the mines at greater depths. The smelter reduces from 50 to 60 tons of ore per day, and produces about 300 tons of black copper, containing about 150 ounces silver per ton, monthly. This is the product of one 36-inch water-jacket smelter, and the average product is greater than has ever been obtained elsewhere with a furnace of this capacity. It is the intention of the company to erect another smelter during the present summer.

## THE FORESTS OF ARIZONA.

Vast Forests; Variety of Timber; Kinds of Lumber; Extent of Forests; Saw Mills; Price of Lumber; Annual Lumber Productions, etc.

### ARIZONA TIMBER.

ARIZONA is looked upon generally as a treeless waste, destitute of timber, or if any, only inferior scrub trees or bushes, whereas the fact is that the Territory has immense tracts of fine timber forest. It is safe to estimate 20,000 square miles of Arizona covered by a heavy growth of timber.

There are many large forests of pine, spruce, fir, juniper, cedar, oak, mesquite, with a fair supply of other wood and timber, such as ash, black walnut, poplar, cottonwood, palo verde, alder, willow, etc. Timber is not continuous, but is in scattered bodies nearly everywhere on the sides and slopes of the mountains. It is invaluable for mining purposes as well as for building.

"The timber found in Arizona," says Governor Tritel, "is, to some extent, limited, but sufficient, if properly husbanded, to supply the wants of our population for many years to come. The United States have enacted laws to prevent its waste, and also exportation without the boundaries of the Territory. I would submit that it is important that an act be passed making the use, waste, and exportation as prohibited by acts of Congress, an offense under a law of the Territory, with proper penalties affixed, and that it be made the duty of the District Attorneys and Sheriffs of the several counties to see that the law is properly enforced."

### TIMBER IN NUMEROUS LOCALITIES.

In Mohave County the tops of the high ridges are covered with large pines, and the valleys and ravines with scrub oak, birch, cedar, and alder. But Mohave County depends mostly on the timber of Mount Hope, in Yavapai County, some ten miles or more east of the Mohave County line, and six miles south of the road from Mineral Park to Prescott, near old Camp Hualapai. The forest of pine is in a beautiful valley to the east of Mount Hope, at the nearest point a half mile distant, and extends for six miles in a nearly north and south course. The whole amount of good sawing timber is estimated to be from twelve to fifteen million feet. Mills are constantly cutting.

In Pima County timber is found in abundant supplies in the adjacent Santa Rita Mountains, where there are

now saw-mills which furnish timber for Tucson and the military posts. These Sierras are formed of three parallel ranges, with deep transverse valleys. The south side is covered with heavy pine timber, and all over it, in the open intervals and lower sides of the ranges, are to be seen low, broad-branched oak trees, with an occasional mesquite. Iron wood is common in these parts. It is gnarled and hard and does not readily decay. The large pine forest that crowns the Santa Catalina Range remains undisturbed. The wide stretches of timber lands in the Huachuclas and the Chiricahuas contain thousands of acres of virgin forest.

Gila County has large forests in the White Mountains. The whole country from Camp Apache to the foot of the mountains on the east and northeast is covered with a fine growth of pine, in quantity sufficient to supply all Arizona with lumber for the next century. This belt of pines is at least forty miles wide, and extends north and northwest for hundreds of miles. Clear, cold springs are abundant at short intervals all through the mountains.

Graham County has timber about Mount Graham which is magnificent in quality and variety, as well as liberal in quantity. In the winter there is a heavy snow-fall on the mountains. The Gila Range, as also the mountains about Clifton, are covered with timber of fair quality.

Cochise County has timber in the Chiricahua Mountains, south from Camp Bowie, consisting of pine and oak. Los Cabesas is the highest peak in the southern part of Arizona. White and yellow pines and firs grow on the mountain-tops in unlimited quantities, and to a considerable height, with trunks sometimes five feet in diameter. The juniper tree, the berries of which are used as food by the Indians, also grows on these mountains; and sparingly along the margins of the streams grow the cottonwood oak, sycamore, and willow. Mesquite is most conspicuous and abundant from the base of the mountain to a certain altitude, and sparse on the *mesa*.

In Yavapai County, between the Grand Cañon and Cataract Creek, is a range of forests of cedar and pine called the Coconino Forest. The pines are of considerable size. These are at an elevation of from 3,000 to 6,000 feet. For several miles south the valley is from two to ten miles in width, hemmed in by *mesa* walls, at whose base there are springs at several points, and a fair supply of timber skirting its edge. The Black Forest is at the head-waters of Cataract Creek.

Extending along the south side of the Colorado River are patches of timber.

Yavapai County has more timber lands than any other section; piñon and cedar cover the lower grounds, and larger pines the higher.

Says Doctor Parry: "There are vast forests of gigantic pines, intersected frequently by extensive open glades,

sprinkled all over with mountain meadows and wide savannas, filled with the richest grasses, which was traversed by our party for many successive days. We have in these elevated districts a climate favoring a growth of trees, a more equable distribution of rain and dew throughout the year, especially adapted to the production of nutritious grasses, and the cultivation of grain without resorting to the expensive processes of irrigation. These desirable climatic features are especially noticeable along the elevated slopes of the San Francisco Mountains, where magnificent pine slopes are agreeably interspersed with beautiful grassy valleys, parks, and numerous springs."

#### LARGE BODY OF TIMBER.

The largest body is the so-called Mogollon Forest, which begins at San Francisco Mountains and extends northwest a distance of about 200 miles, and an average width of fifty miles. This body of timber is larger than the combined area of two or three of the smaller States of the Union. Very little of this timber has been cut. Only a few saw-mills have been at work, and scores of them will make little impression on this vast body of fine timber, which will outlast many generations. If a contemplated railroad does pass 100 miles through this tract, it will open it up, and the timber will be required and used for mines and building purposes. This vast tract contains about 7,000,000 acres, and estimating 20,000 feet of lumber to the acre, we have 14,000,000,000 feet. If it were possible to cut 14,000,000 feet annually, it would require 1,000 years to use up this one timber tract. So it is preposterous to suppose Arizona to be ever destitute of timber. The pine is of the pitch and sugar varieties, and makes fine, clear lumber, well adapted for building and for other purposes. These pines sometimes rise to a height of 200 feet; and specimens are not uncommon of 100 feet without a limb, and from four to six feet in diameter at the butt.

In the southeast part of Apache County, in the Escudilla Mountains, is an abundance of water and timber, mostly pine, oak, and spruce; there are ash, maple, and cottonwood in the cañons.

South of Fort Defiance is the Navajo Forest. This is also a fine grazing country, especially in the Tunicha Mountains, which are well watered by springs and covered with pine. Between Fort Defiance and Escudilla Mountains the country is very dry and sandy, covered with scrub cedar and piñon.

There is enough pine timber on the Sierra Blanca to last the whole Territory for several years. The *pinus ponderosa* reaches a height of seventy feet; some firs are higher. The oak, resembling white oak, is branchy, close-grained, and solid, the trees being tall, straight, and remarkably free from limbs.

#### ALTITUDE DETERMINES KINDS OF TIMBER.

In Arizona, as elsewhere in southern climates, the altitude generally indicates the different varieties of wood and timber which may be looked for. Along the low river bottoms the cottonwood, willow, etc., are found, and on the plains, *mesas*, and valleys, below 4,000 feet altitude, the mesquite, palo verde, and other kindred varieties flourish, and at about 4,000 feet, in the foot-hills and ravines leading into the mountains, the oak, ash, black walnut, etc., flourish. From 4,000 to 7,000 feet the juniper, cedar, piñon, pine, etc., are found, and from 5,000 to 10,000 feet, pine, spruce, and fir are found in great abundance. A large portion of northern Arizona is an elevated plateau, from 5,000 to 8,000 feet in altitude, most of which is covered with grand forests of pine, spruce, fir, juniper, and cedar.

#### THE TIMBER BELT OF ARIZONA.

Arizona has been generally considered devoid of timber, and until the opening of the Atlantic and Pacific Railroad, but little was known of its extent and value. The exact acreage or area cannot be definitely stated, as no statistics can be found at the Land Offices, but from those who have traveled more or less through the timber belt, it is safe to place the number of square miles at 10,000.

The timber begins at the Colorado River on the north, and extends in a southeasterly direction, along the San Francisco and the Mogollon (Moggyown) Mountains about 200 miles, with an average width of fifty miles. This is not all a continuous belt, neither is it all heavily timbered. The peaks of the mountains rear their heads far above the timber line, while their sides are covered with dense forests of pine.

Numberless "parks," as they are termed, varying in size from one to several hundred acres in extent, are found in this timber belt. Many of these parks about Williams and Flagstaff are now being farmed, and produce crops without irrigation.

Near Prescott, in the Sierra Prieta Range, is also a large body of timber yet untouched, although mills have been sawing there for many years. Large belts of pine timber can also be found, in detached bodies, in the various mountain ranges of the Territory. Besides the pine there are large bodies of oak in the Sierra Blanca Range. In fact, Arizona is well timbered. Large quantities are already being shipped to New Mexico and other points.

#### BREMEN'S MILL

Is situated on the north side of Pinal Mountain, about eight miles from Globe, and some two thousand feet above the base of the mountain. It was started in October, 1876, by M. W. Bremen, the present proprietor. The cutting capacity of the mill is 8,000 feet in ten hours, and the demand at present is such as to keep it working close up

to that amount all the time. Mr. Bremen has a depot in Globe, though most of the lumber is sold at the mill, at \$60.00 per thousand feet. There are about thirty men engaged, who have constant employment all the time; and forty yoke of oxen are employed. The boiler has four flues, and is fifty inches in diameter by twenty-three feet in length. The engine is twenty-eight horse-power; the upper saw thirty inches, and the lower fifty-four inches. It was all brought through New Mexico; was manufactured in Cincinnati, Ohio, by Lane & Bodley. Connected with the mill there is a large-sized planer and matcher, a shingle saw, blacksmith shops, and everything necessary to make this property complete in all its appliances. Much of the lumber sawed in this mill is used for timbering in the mines, and for building purposes. The demand is largely increasing.

TIMBER REGION ABOUT FLAGSTAFF.

When the traveler reaches Flagstaff, whatever may be his tastes or longings, he will be delighted. The train rolls smoothly through broad, grassy plains into tall forests of pine, with grand glacis and valleys beautifully carpeted with light grasses, reaching their long, circling arms amid the pines and linking in one grand embrace the loveliest forest scene on earth. A carriage may be driven anywhere through these forests, and there is scarcely a stone or stick to disturb your course, and the scene reminds one more of a cultivated park than a wilderness. The trees are generally from twenty to thirty feet apart, and are from one to six feet in diameter at the base. These forests extend from a point north of Flagstaff 15 miles to 125 miles south, and have a breadth of 30 to 40 miles.

It is one of the grandest and most valuable timber belts between Oregon and California and the great northern pineries. There are three saw-mills in operation here that employ over 300 men, and 200,000 feet of lumber are turned out daily. Besides this are lath, planing, and shingle mills, and all controlled by Ayer & Co. The hauling of this lumber gives employment to a large number of teams. The character of the lumber is equal to Chicago pine, and will compete with it in all the western markets.

AMOUNT OF LUMBER PRODUCED YEARLY.

Ayer's Mill, at Flagstaff, last year, sawed 20,000,000 feet of lumber. The capacity of the mill is 100,000 feet per day. They will saw about the same amount the present year. The trees from which this lumber is cut are taken from railroad land, and the distance that logs are hauled is six miles. The mill has been running now for six years. There are three other mills in the vicinity, and it is safe to say that the production of lumber will reach, the present season, 75,000,000 feet.

REVIEW OF IMPORTANT EVENTS.

First Legislature; Chief Legislative Acts; Officers and Members of the Legislature; List of Officers; Votes Cast, etc.

REVIEW OF IMPORTANT EVENTS DURING 1864.

THE first Legislative Assembly of the Territory of Arizona, convened at Prescott on the twenty-sixth day of September, 1864. The organic act passed and became a law February 24, 1863. It says: "That all that part of the present Territory of New Mexico situate west of a line running due south from the point where the southwest corner of the Territory of Colorado joins the northern boundary of the Territory of New Mexico, to the southern boundary line of said Territory of New Mexico, be and the same is hereby erected into a temporary government, by the name of the Territory of Arizona."

An act was passed to organize the Territory into four counties, namely: Yavapai, Mohave, Yuma, and Pima, with boundaries. No record of this act can be found among the laws passed at the first session, but reference is made to it in the fourth or fifth session:—

To appropriate money for the support of public schools.

To authorize the raising of rangers.

To promote education.

To incorporate the Arizona Railway Company.

FIRST OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor. . . . .	John N. Goodwin. . . . .	Prescott.
Secretary. . . . .	Richard C. McCormick. . . . .	"
Chief Justice. . . . .	William F. Turner. . . . .	"
Associate Justice. . . . .	William T. Howell. . . . .	Tucson.
" " . . . . .	Joseph P. Allen. . . . .	La Paz.
District Attorney. . . . .	Almon Gage. . . . .	Prescott.
Surveyor-General. . . . .	Levi Bashford. . . . .	Tucson.
Marshal. . . . .	Milton B. Duffield. . . . .	"
Supt. Ind. Affairs. . . . .	Charles D. Poston. . . . .	"

Members of Council elected for the Territory at large:—

COUNCIL—Coles Bashford, Francisco S. Leon, Mark Aldrich, Patrick H. Dunne, of Tucson, Geo. W. Leihy, José M. Redondo, King S. Woolsey, Robert W. Groom, Henry A. Bigelow.

HOUSE—W. Claude Jones, John G. Capron, Gregory P. Harte, Henry D. Jackson, J. M. Elias, of Tucson, Daniel H. Stickney, Nathan B. Appel, Norman S. Higgins, Gilbert W. Hopkins, Luis G. Bouchet, George M. Holaday,

Thos. J. Bidwell, Edward D. Tuttle, William Walter, John M. Boggs, Jackson McCrackin, James Garvin, James S. Giles.

The officers of the Council were:—

President, Coles Bashford; Secretary, Almon Gage; Assistant Secretary, Edmund W. Wells, Jr.; Chaplain, Henry W. Fleury; Translator and Interpreter, W. Claude Jones; Sergeant-at-Arms, Carlos Smith; Doorkeeper, Jas. H. Lane; Messenger, Neri Osborne; Watchman, Thomas J. Johnson.

The officers of the House were:—

Speaker, W. Claude Jones; Chief Clerk, James Anderson; Assistant Clerk, Clayton M. Ralstin; Chaplain, Henry W. Fleury; Translator and Interpreter, W. Claude Jones; Sergeant-at-Arms, John C. Dunn; Doorkeeper, Robert F. Piatt; Messenger, John B. Osborne; Watchman, Alex. McLaughlin.

ARIZONA VOLUNTEERS.

Lieutenant-Colonel King S. Woolsey organized the first company of volunteers, consisting of miners, ranchers, and others, to the number of 100, and left Prescott March 29, 1864, to punish the Pinal Apaches, who had been making raids and committing murders. They were overtaken, and a number killed.

Two other expeditions were afterwards led by him against the Indians.

There was no record to be found of volunteers raised during the Civil War.

1865.

The second session of the Legislature convened at Prescott, on the sixth day of December, 1865.

An act was passed to create the county of Pah-Ute, from the county of Mohave.

An act creating a Board of Supervisors in the several counties of the Territory.

A memorial regarding the death of Abraham Lincoln.

In relation to placer mining and mines.

In relation to liens.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor . . . . .	John N. Goodwin . . . . .	Prescott.
Secretary . . . . .	Richard C. McCormick . . . . .	"
Asst. Secretary . . . . .	Henry W. Fleury . . . . .	"
Chief Justice . . . . .	William F. Turner . . . . .	"
Associate Justice . . . . .	Henry T. Backus . . . . .	Tucson.
" " . . . . .	Joseph P. Allyn . . . . .	La Paz.
District Attorney . . . . .	Almon Gage . . . . .	Prescott.
Surveyor-Gen . . . . .	John A. Clarke . . . . .	Santa Fé, N. M.
U. S. Marshal . . . . .	Milton B. Duffield . . . . .	Tucson.
Supt. Ind. Affairs . . . . .	Geo. W. Leihy . . . . .	La Paz.

MEMBERS OF THE LEGISLATURE.

YAVAPAI COUNTY.—Council, King S. Woolsey, Robert W. Groom, Henry A. Bigelow; House, Jackson McCracken, James S. Giles, Daniel Ellis, James O. Robertson.

MOHAVE COUNTY.—Council, William H. Hardy; House, Octavius D. Gass, C. W. C. Rowell.

YUMA COUNTY.—Council, Manuel Ravenna; House, Peter Doll, Alexander McKey, William K. Henninger.

PIMA COUNTY.—Council, Coles Bashford, Francisco S. Leon, Patrick H. Dunne; House, Daniel H. Stickney.

The officers of the Council were:—

President, Henry A. Bigelow; Secretary, James Anderson; Assistant Secretary, Marcus D. Dobbins; Translator and Interpreter, Alex. McKey; Sergeant-at-Arms, Thos. J. Bidwell; Doorkeeper, John H. Dickson; Messenger, Thaddeus Buckman; Watchman, John R. Masterson.

The officers of the House were:—

Speaker, James S. Giles; Chief Clerk, James E. McCaffrey; Assistant Clerk, Edmund W. Wells, Jr.; Translator and Interpreter, Alexander McKey; Sergeant-at-Arms, William G. Poindexter; Doorkeeper, John J. Backus; Messenger, John W. Osborne; Watchman, Robert F. Piatt.

1866.

The third session was held in Prescott, beginning on the third day of October, 1866.

Among other acts passed at this session was an act to create the office of Auditor.

To provide for the civil expenses of the Territorial Government.

Concerning roads and highways.

To create the office of District Attorney.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor . . . . .	Richard C. McCormick . . . . .	Prescott
Secretary . . . . .	James P. T. Carter . . . . .	"
Asst. Secretary . . . . .	Henry W. Fleury . . . . .	"
Chief Justice . . . . .	William F. Turner . . . . .	"
Associate Justice . . . . .	Henry T. Backus . . . . .	Tucson
" " . . . . .	Joseph P. Allen . . . . .	La Paz
Surveyor-General . . . . .	John A. Clark . . . . .	Santa Fé, N. M.
U. S. Marshal . . . . .	Edward Phelps . . . . .	Prescott
Supt. Ind. Affairs . . . . .	George W. Leihy* . . . . .	La Paz
Attorney-General . . . . .	Coles Bashford . . . . .	Tucson
Adjutant-General . . . . .	William H. Garvin . . . . .	Prescott
Auditor . . . . .	James Grant . . . . .	"
Treasurer . . . . .	John T. Alsap . . . . .	"
Del. to Congress . . . . .	John N. Goodwin . . . . .	Washington

YAVAPAI COUNTY.—Council, W. Simmons, Daniel S. Lount, Lewis A. Stevens; House, John B. Slack, Daniel

\* Killed by Indians, November 18, 1866.

Ellis, Hannibal Syper, William S. Little, Underwood C. Barnett.

MOHAVE COUNTY.—Council, William H. Hardy; House, Alonzo E. Davis.

PAH-UTE COUNTY.—Council, Octavius D. Gass; House, Royal J. Cutler.

YUMA COUNTY.—Council, Alexander McKey; House, Marcus D. Dobbins, Robert F. Piatt, William H. Thomas.

PIMA COUNTY.—Council, Mark Aldrich, Mortimer R. Platt, Henry Jenkins; House, Granville H. Oury, William J. Osborn, Henry McC. Ward, James S. Douglass, Oscar Buckalew, Michael McKenna, Solomon W. Chambers, Thomas D. Hutton.

The officers of the Council were:—

President, Mark Aldrich; Secretary, John M. Rountree; Assistant Secretary, William Cory; Translator and Interpreter, Octavius D. Gass; Chaplain, Charles M. Blake; Sergeant-at-Arms, A. John Moore; Doorkeeper, Julius Sanders; Messenger, Neri F. Osborn; Watchman, Thomas W. Simmons; Engrossing Clerk, Lafayette Place; Enrolling Clerk, Joseph C. Lennon.

The officers of House were:—

Speaker, Granville H. Oury; Chief Clerk, James S. Giles; Assistant Clerk, Ralph Shelton; Translator and Interpreter, Octavius D. Gass; Chaplain, Charles M. Blake; Sergeant-at-Arms, Thomas Hodges; Doorkeeper, Andrew H. Elliott; Messenger, John W. Osborn; Watchman, Daniel M. Bornman; Engrossing Clerk, Ralph Shelton; Enrolling Clerk, Henry Clifton.

1867.

The fourth session was held at Prescott, commencing on the fourth day of September, 1867. During this session an act was passed:—

To authorize sheriffs to employ convicts at some kind of labor.

To prevent and punish the sale of liquor to Indians.

Authorizing the construction of wells on desert roads.

To punish vagrants, vagabonds, and suspicious persons.

To prevent the improper use of deadly weapons.

To permanently locate the capital at Tucson.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	Richard C. McCormick....	Prescott
Secretary.....	James P. T. Carter.....	"
Asst. Secretary...	Henry W. Fleury.....	"
Chief Justice.....	William F. Turner.....	"
Associate Justice..	Henry T. Backus.....	Tucson
"	Harley H. Cartter.....	La Paz
Surveyor-General..	Lawrens Upson.....	San Francisco

U. S. Marshal..... Edward Phelps..... Tucson  
 Supt. Ind. Affairs.. George W. Dent..... La Paz  
 Adjutant-General.. William H. Garvin..... Prescott  
 Auditor..... James Grant..... "  
 Treasurer..... John T. Alsap..... "  
 Del. to Congress.. Coles Bashford..... Washington

YAVAPAI COUNTY.—Council, John W. Simmons, Daniel S. Lount, Lewis A. Stevens; House, James S. Giles, John A. Rush, John H. Mathews, Edward J. Cook, Allen Cullumber, John T. Dare.

MOHAVE COUNTY.—Council, William H. Hardy; House, Nathaniel S. Lewis.

PAH-UTE COUNTY.—Council, Octavius D. Gass; House, Royal J. Cutler.

YUMA COUNTY.—Council, Alexander McKey; House, Oliver Lindsey, B. W. Hanford, John Henion.

PIMA COUNTY.—Council, Daniel H. Stickney, Henry Jenkins, Mortimer R. Platt; House, Charles W. Lewis, John B. Allen, Marvin M. Richardson, Underwood C. Barnett, Francis M. Hodges, Solomon W. Chambers, Philip Drachman.

The officers of the Council were:—

President, Octavius D. Gass; Secretary, Almon Gage; Assistant Secretary, William H. Ford; Chaplain, Charles M. Blake; Sergeant-at-Arms, George Lount; Doorkeeper, Julius Saunders; Messenger, Coles Bashford; Watchman, James B. McKinnie; Engrossing Clerk, George W. Barnard; Enrolling Clerk, Joseph C. Lennon.

The officers of the House were:—

Speaker, Oliver Lindsey; Chief Clerk, Follett G. Christie; Assistant Clerk, Augusta Brichta; Chaplain, Thomas H. Head; Sergeant-at-Arms, Horace E. Lindsey; Doorkeeper, George W. Huff; Messenger, Henry Wunderlick; Watchman, Thomas Vonday; Engrossing Clerk, Joseph P. Bourke; Enrolling Clerk, Joseph Tyson.

1868.

The fifth session convened in Tucson, on the tenth day of December, 1868. During this session an act was passed to permanently locate the Territorial prison.

An act to create the office of Attorney-General.

To establish public schools in the Territory; also, a memorial in regard to artesian wells.

To prevent and punish the sale of arms and ammunition to Indians.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	Richard C. McCormick....	Prescott
Secretary.....	James P. T. Carter.....	"
Chief Justice....	William F. Turner.....	"
Associate Justice..	Henry T. Backus.....	Tucson
"	Harley H. Cartter.....	La Paz

Surveyor-General.. Sherman Day.....San Francisco  
 U. S. Marshal..... Edward Phelps.....Tucson  
 Supt. Ind. Affairs . George W. Dent.....La Paz  
 Adjutant-General . Daniel H. Stickney.....Tucson  
 Auditor..... Charles H. Lord..... "  
 Treasurer..... John B. Allen..... "  
 Del. to Congress .. Coles Bashford.....Washington

YAVAPAI COUNTY.—Council, John G. Campbell, John T. Alsap, F. M. Chapman; House, Thomas W. Brooks, Follett G. Cristie, William S. Little, John Smith, E. Lumbley, G. R. Wilson.

YUMA COUNTY.—Council, Joseph K. Hooper; House, James P. Lugenbul, Thomas J. Bidwell, Oliver Lindsey.

MOHAVE AND PAH-UTE COUNTIES.—Council, Octavius D. Gass; Mohave County, House, U. C. Doolittle; Pah-Ute County, House, Andrew S. Gibbons.

PIMA COUNTY.—Council, Estevan Ochoa, Daniel H. Stickney, Alexander McKey, Henry Jenkins\*; House, Jesus M. Elias, Francis H. Goodwin, Hiram S. Stevens, John Owen, Robert M. Crandall, John Anderson, Sol. W. Chambers.

OFFICERS OF THE COUNCIL—President, John T. Alsap; Secretary, G. W. Pierce; Assistant Secretary, A. W. Haskell; Chaplain, A. B. Salpointe; Sergeant-at-Arms, M. M. McKenna; Doorkeeper, James Speedy; Messenger, M. Ramirez; Watchman, W. G. Knight; Engrossing Clerk, L. M. Jacobs; Enrolling Clerk, B. M. Jacobs.

OFFICERS OF THE HOUSE—Speaker, Thomas J. Bidwell; Chief Clerk, James E. McCaffrey; Assistant Clerk, Charles H. Naylor; Sergeant-at-Arms, Reuben Jones; Doorkeeper, William C. Furguson; Watchman, Abraham Lyon; Engrossing Clerk, L. D. McCormick; Enrolling Clerk, Clark W. Culver; Messenger, Feliciano Montano.

[NOTE.—The sessions of the Legislature were changed from yearly sessions, held in December, to biennial sessions, held in January, and the next one following the change, was held in 1871.]

1871.

The sixth session was held at Tucson, beginning the eleventh day of January, 1871.

At this session, the act creating the county of Pah-Ute out of the county of Mohave was repealed.

To create the county of Maricopa.

To fix the time of holding the general elections for the Territory.

To provide revenue for the Territory of Arizona, and counties thereof.

An act concerning divorces.

To provide for a revision and printing of the laws.

\*Died during session, November 20, 1868.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	A. P. K. Safford.....	Tucson
Secretary.....	Coles Bashford.....	"
Chief Justice.....	John Titus.....	"
Associate Justice..	Isham Reavis.....	Yuma
"	C. A. Tweed.....	Prescott
District Attorney..	C. W. C. Rowell.....	Yuma
Surveyor-General..	John Wasson.....	Tucson
Marshal.....	I. Q. Dickason.....	Prescott
Supt. Ind. Affairs..	Herman Bendell.....	"
Col. Int. Revenue...	Thomas Cordis.....	"
Assr. Int. Revenue..	H. A. Bigelow.....	Tucson
U. S. Depository...	C. H. Lord.....	"
Dept. Col. Customs	James E. Baker.....	"
Reg. Land Office ..	W. J. Berry.....	Prescott
Rec. " "	George Lount.....	"
Del. to Congress...	R. C. McCormick....	Washington
Adjutant-General..	Samuel Hughes.....	Tucson
Auditor.....	Charles H. Lord.....	"
Treasurer.....	John B. Allen.....	"
Attorney-General..	James E. McCaffrey.....	"

YAVAPAI COUNTY.—Council, John T. Alsap, Harley H. Cartter, Andrew J. Marmaduke; House, J. H. Fitzgerald, John L. Taylor, William J. O'Neil, G. A. Wilson, Joseph Melvin, James L. Mercer.

YUMA COUNTY.—Council, John H. Phillips; House, Marcus D. Dobbins, C. H. Brinley, Thomas J. Bidwell.

PIMA COUNTY.—Council, Hiram S. Stevens, Daniel H. Stickney, Estevan Ochoa, Francisco S. Leon; House, J. W. Anderson, F. H. Goodwin, William Morgan, W. L. Fowler, Ramon Romano, Juan Elias, Rees Smith.

Mohave and Pah-Ute Counties not represented.

The officers of the Council were:—

President, Daniel H. Stickney\* (succeeded by Harley H. Cartter); Secretary, John Anderson; Assistant Secretary, William J. Osborn; Chaplain, Antonio Jouvencean; Sergeant-at-Arms, John W. Owen; Doorkeeper, Martin Sweeney; Messenger, Martin Hinds; Watchman, William Kelley; Watchman, William H. Reed; Engrossing Clerk, Joseph A. Byers; Enrolling Clerk, Henry Smithson.

The officers of the House were:—

Speaker, Marcus D. Dobbins; Chief Clerk, William J. Boyd†; Chief Clerk, James E. McCaffrey; Assistant Clerk, James E. McCaffrey; Assistant Clerk, John H. Purcell; Chaplain, Peter Bernal; Sergeant-at-Arms, David Gibson; Doorkeeper, Samuel C. Whipple; Messenger, George

\* Daniel H. Stickney died before the end of the session, and Harley H. Cartter was elected President of the Council.

†William J. Boyd resigned, and James E. McCaffrey was made Chief Clerk, and John H. Purcell, Assistant.

H. Tinker; Watchman, William G. Knight, Engrossing Clerk, Solomon W. Chambers; Enrolling Clerk, Charles H. Naylor.

1873.

The seventh session was held in Tucson, beginning on the sixth day of January, 1873.

During this session, acts were passed to provide for obtaining the statistics of the Territory.

To appropriate money for educational purposes.

To encourage the sinking of artesian wells.

To provide for the incorporation of religious, social, and benevolent societies.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	A. P. K. Safford.....	Tucson
Secretary ....	Coles Bashford.....	"
Chief Justice.....	John Titus.....	"
Associate Justice ..	C. A. Tweed.....	Phoenix
" "	De Forest Porter.....	Yuma
District Attorney..	James E. McCaffrey.....	Tucson
Surveyor-General..	John Wasson .....	"
U. S. Marshal.....	I. Q. Dickason.....	Prescott
Supt. Ind. Affairs ..	Herman Bendell.....	"
Col. Int. Revenue ..	Thomas Cordis.....	"
Assr. " "	H. A. Bigelow.....	"
U. S. Depository..	C. H. Lord.....	Tucson
Dep. Col. Customs	J. W. Hopkins.....	"
Reg. Land Office..	W. N. Kelley.....	Prescott
Rec. Land Office...	George Lount.....	"
Adjutant-General..	J. S. Vosberg.....	Tucson
Auditor.....	A. C. Benedict.....	"
Treasurer.....	John B. Allen.....	"
Attorney-General..	James E. McCaffrey.....	"
Del. to Congress ..	R. C. McCormick.....	Washington

YAVAPAI COUNTY.—Council, A. O. Noyes, J. P. Hargrave; House, John H. Behan, William Cole, Fred Henry, Thomas Stonehouse, Henry Wickenburg.

YUMA COUNTY.—Council, Thomas J. Bidwell; House, C. W. C. Rowell, J. M. Redondo, C. H. Brinley.

YAVAPAI AND MARICOPA COUNTY.—Council, King S. Woolsey.

MARICOPA COUNTY.—House, G. H. Oury.

YUMA AND MOHAVE COUNTY.—Council, W. F. Henning; House, George Gleason.

PIMA COUNTY.—Council, H. S. Stevens, Mark Aldrich, Juan Elias, Levi Ruggles; House, John B. Allen, William C. Davis, Lionel M. Jacobs, J. S. Vosberg, F. M. Larkin, John Montgomery, John T. Smith, John W. Sweeney.

The officers of the Council were:—

President, J. P. Hargrave; Secretary, J. T. Alsap;

Assistant Secretary, William J. Osborn; Chaplain, Rev. G. A. Reeder; Sergeant-at-Arms, J. S. Douglass; Doorkeeper, Cerelio S. Leon; Messenger, Master J. Holt; Watchman, W. C. Furguson; Engrossing Clerk, A. Caballero; Enrolling Clerk, A. Brichta.

The officers of the House were:—

Speaker, G. H. Oury; Chief Clerk, Hyler Ott; Assistant Clerk, William Wood; Chaplain, Rev. Antonio Jouvencean; Sergeant-at-Arms, Edwin Preble; Doorkeeper, John McCann; Page, Elmore E. Rowell; Watchman, John Dobbs; Engrossing Clerk, Wm. Ohnesorgen; Enrolling Clerk, Jacob L. Cohn.

1875.

The eighth session was held in Tucson beginning on the fourth day of January, 1875. At this session, acts were passed.

To create the county of Pinal.

To encourage the sinking of artesian wells.

To provide for the care of indigent persons.

To tax the net proceeds of mines.

To permanently locate the Territorial seat of Government at Tucson.

To establish public schools in the Territory of Arizona.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	A. P. K. Safford .....	Tucson.
Secretary.....	Coles Bashford .....	"
Chief Justice .....	E. F. Dunne.....	"
Associate Justice ...	C. A. Tweed.....	Phoenix
" "	De Forest Porter.....	Yuma
District Attorney...	James E. McCaffry.....	Tucson
Surveyor-General ..	John Wasson .....	"
Marshal .....	F. H. Goodwin.....	Yuma
Collector Int. Rev..	Thomas Cordis.....	Prescott
U. S. Depository...	C. H. Lord .....	Tucson
Dep. Col. Customs.	J. W. Hopkins.....	"
Reg. Land Office ....	W. N. Kelley .....	Prescott
Rec. " "	George Lount.....	"
Reg. " "	Levi Ruggles.....	Florence.
Rec. " "	M. L. Stiles.....	"
Del. to Congress....	Hiram S. Stevens.....	Tucson.
Adjutant General...	J. S. Vosberg.....	"
Auditor.....	A. C. Benedict.....	"
Treasurer.....	P. R. Tully.....	"

YAVAPAI COUNTY.—Council, J. P. Hargrave, John G. Campbell, L. S. Stevens; House, C. P. Head, Hugo Richards, A. L. Moeller, Levi Bashford, W. J. O'Neil, Gideon Brooke.

MARICOPA COUNTY.—Council, King S. Woolsey; House, John T. Alsap, Granville H. Oury.

MOHAVE COUNTY.—Council, A. E. Davis; House, S. W. Wood.

YUMA COUNTY.—Council, J. M. Redondo, House, H. Goldberg, Samuel Purdy, Jr., R. B. Kelley.

PIMA COUNTY.—Council, William Zeckendorf, S. R. De Long, P. R. Brady; House, F. M. Griffin, John Montgomery, George H. Stevens, Alphonso Rickman, S. H. Drachman, J. M. Elias.

The officers of the Council were:—

President, King S. Woolsey; Chief Clerk, E. S. Penwell; Assistant Clerk, C. F. Cote; Sergeant-at-Arms, W. J. Tompkins; Doorkeeper, John Castillo; Messenger Antonio Van Alstine; Watchman, Robert Frazier; Engrossing Clerk, J. H. C. Waltemoth; Enrolling Clerk, A. Brichta.

The officers of the House were:—

Speaker, J. T. Alsap; Chief Clerk, Andrew Cronley; Assistant Clerk, S. W. Carpenter; Sergeant-at-Arms, Josephus Phy; Doorkeeper, Robert Plumridge; Page, Ignatio Ortiz; Watchman, Henry Gifford; Engrossing Clerk, C. W. Culver; Enrolling Clerk, C. H. Naylor.

1877.

The ninth session was held in Tucson, beginning on the first day of January, 1877. An act was passed to permanently locate the Territorial seat of Government at Prescott, Yavapai County.

To authorize the Governor to raise a company of volunteers to protect the settlers against hostile Indians.

To provide for the civil expenses of the Territorial Government.

To provide for a revision and publication of the laws of the Territory of Arizona.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	A. P. K. Safford.....	Tucson
Secretary .....	John P. Hoyt.....	"
Chief Justice .....	C. G. W. French.....	"
Associate Justice..	C. A. Tweed .....	Phoenix
Associate Justice...	De Forest Porter .....	Yuma
District Attorney..	E. B. Pomeroy .....	Tucson
Surveyor-General..	John Wasson.....	"
U. S. Marshal.....	W. W. Stondefer.....	Prescott
Col. Int. Rev. ....	Thomas Cordis.....	"
U. S. Depository...	C. H. Lord .....	Tucson
Dep. Col. of Custom.	J. W. Hopkins.....	"
Reg. Land Office..	W. N. Kelley .....	Prescott
Rec. " "	George Lount. ....	"
Reg. " "	C. D. Poston .....	Florence
Rec. " "	M. L. Styles .....	"
Adjutant-General..	C. E. Curtis .....	Tucson
Auditor .....	J. S. Vosberg.....	"
Treasurer.....	P. R. Tully.....	"
Del. to Congress..	H. S. Stevens....	"

YAVAPAI COUNTY.—Council, John A. Rush, George D. Kendall, Lewis A. Stevens, Andrew L. Moeller; House, W. W. Hutchinson, C. B. Foster, S. C. Miller, G. Hathaway, Hugo Richards, John H. Marion, Wm. S. Head, Ed. G. Peck.

MARICOPA COUNTY.—Council, King S. Woolsey; House, J. A. Parker, M. H. Calderwood.

YUMA COUNTY.—Council, J. M. Redondo; House, J. W. Dorrington.

PINAL COUNTY.—Council, Levi Ruggles; House, George Scott.

PIMA COUNTY.—Council, F. H. Goodman, F. G. Hughes; House, D. A. Bennett, Wm. Ohnesorgen, Estevan Ochoa, M. G. Samaniego, George H. Stevens.

MOHAVE COUNTY.—House, James P. Bull.

The officers of the Council were:—

President, King S. Woolsey; Chief Clerk, John T. Alsap, Assistant Clerk, Hylor Ott; Sergeant-at-Arms, B. A. Hussey; Doorkeeper, E. D. Wood; Messenger, Sterling R. Wood; Watchman, John Ammerman; Engrossing Clerk, Mary Stevens Maxey; Enrolling Clerk, Ida McIvor Stevens.

The officers of the House were:—

Speaker, M. H. Calderwood; Chief Clerk, Andrew Cronley; Assistant Clerk, Thomas J. Drum; Sergeant-at-Arms, John H. Behan; Doorkeeper, W. D. Fenter; Messenger, Horace B. Appel; Watchman, John Dobbs; Engrossing Clerk, G. W. Jones; Enrolling Clerk, Arthur Borton.

1879.

The tenth session was held in Prescott, beginning on the sixth day of January, 1879.

Among the sixty-five acts passed at this session were the following:—

To provide a sinking fund for the redemption of Territorial prison bonds.

To restrict gambling.

To establish public schools in the Territory of Arizona.

To fix the time for holding the District Courts.

To create the county of Apache.

OFFICERS OF TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	John C. Fremont.....	Prescott
Secretary.....	John J. Gosper.....	"
Chief Justice.....	C. G. W. French .....	Tucson
Associate Justice...	De Forest Porter.....	Phoenix
" "	Charles Silent .....	Prescott
District Attorney...	E. B. Pomeroy .....	Tucson
Surveyor-General...	John Wasson.....	"
Marshal.....	C. P. Dake .....	Prescott
Col. Int. Revenue..	Thos. Cordis.....	"

U. S. Depository...	C. H. Lord.....	Tucson
Dep. Col. Customs.	J. W. Hopkins.....	"
Reg. Land Office...	W. N. Kelley.....	Prescott
Receiver.....	Geo. Lount.....	"
Del. to Congress....	John G. Campbell.....	"
Adjutant-General...	William Bashford.....	"
Auditor.....	E. P. Clark.....	"
Treasurer.....	T. J. Butler.....	"

YAVAPAI COUNTY.—Council, C. C. Bean, W. S. Head, W. A. Rowe, E. W. Wells; House, W. M. Buffum, John Davis, Thomas Fitch, Pat. Hamilton, P. McAteer, E. R. Nicoles, J. A. Park, James Stinson.

MARICOPA COUNTY.—Council, E. H. Gray; House, John T. Alsap, J. D. Rumburg.

YUMA COUNTY.—Council, F. D. Welcome; House, Samuel Purdy, Jr.

PINAL COUNTY.—Council, P. Thomas; House, W. K. Meade.

PIMA COUNTY.—Council, F. G. Hughes, J. M. Kirkpatrick; House, A. E. Fay, C. P. Leitch, James Speedy, M. W. Stewart, Walter L. Vail.

MOHAVE COUNTY.—House, John H. Behan.

The officers of the Council were:—

President, F. G. Hughes; Chief Clerk, Hinson Thomas; Assistant Clerk, Neri Osborn; Sergeant-at-Arms, J. E. McDowell; Doorkeeper, Henry Krowell; Page, Sterling R. Wood; Watchman, O. F. McCarty; Engrossing and Enrolling Clerk, Hattie Sprinkle.

The officers of the House were:—

Speaker, M. W. Stewart; Chief Clerk, B. A. Fickas; Assistant Clerk, C. M. Marshall; Sergeant-at-Arms, G. W. Carpenter; Doorkeeper and Assistant Sergeant-at-Arms, Thomas Steen, Pages, Manuel Padillo, Henry Thibido; Watchman, J. E. Brown; Engrossing and Enrolling Clerk, Mattie Tucker; Assistant and Enrolling Clerk, Miss Parker.

1881.

The eleventh session was held in Prescott, beginning January 3, 1881.

At this session among other acts were the following:—

- To create the county of Cochise.
- To create the county of Gila.
- To create the county of Graham.
- To prevent the destruction of fish.
- To incorporate the city of Phoenix.
- To incorporate the city of Prescott.
- To incorporate the city of Tombstone.
- To encourage mining.
- To create the office of Territorial Geologist.
- To provide for the taking the census of the several counties in the Territory.

OFFICERS OF TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	John C. Fremont.....	Tucson
Secretary.....	John J. Gosper.....	Prescott
Chief Justice.....	C. G. W. French.....	"
Associate Justice..	De Forest Porter.....	Phoenix
"	W. H. Stillwell.....	Tucson
District Attorney..	E. B. Pomeroy.....	"
Surveyor-General .	John Wasson.....	"
Marshal.....	C. P. Dake.....	Prescott
Col. Int. Revenue.	Thos. Cordis.....	"
U. S. Depository.	C. H. Lord.....	Tucson
Dep. Col. Customs.	J. W. Hopkins.....	"
Reg. Land Office..	W. N. Kelley.....	Prescott
Rec. " "	George Lount.....	"
Reg. " "	Henry Cousins.....	Tucson
Rec. " "	J. G. Daily.....	"
Del. to Congress..	G. H. Oury.....	Florence
Adjutant-General.	Clark Churchill.....	Prescott
Auditor.....	E. P. Clark.....	"
Treasurer.....	T. J. Butler.....	"

PIMA COUNTY.—Council, B. H. Hereford, B. A. Fickas, Geo. H. Stevens, W. K. Meade, H. G. Rollins; House, H. M. Woods, J. K. Rodgers, M. G. Samaniego, John Roman, John McCaffety, Thos. Dunbar, E. H. Smith, John Haynes, E. B. Gifford, M. S. Snyder, M. K. Lurty.

PINAL COUNTY.—Council, J. W. Anderson; House, D. Robb, A. J. Doran.

YAVAPAI COUNTY.—Council, M. Masterson; House, Geo. E. Brown, R. B. Steadman, L. Wollenburg.

YUMA COUNTY.—Council, J. W. Dorrington; House, G. W. Norton, I. F. Knapp.

APACHE COUNTY.—Council, S. Barth; House, J. Barton, G. R. York.

MARICOPA COUNTY.—Council, A. C. Baker, R. S. Thomas; House, W. Sharp, P. J. Bolan, J. R. McCormack.

MOHAVE COUNTY.—Council, A. Cornwall; House, D. Southwick.

The officers of the Council were:—

President, Murat Masterson; Chief Clerk, Jos. C. Perry; Assistant Clerk, Neri Osborn; Sergeant-at-Arms, Henry Krowell; Assistant Sergeant-at-Arms, T. J. Morgan; Doorkeeper, C. J. Franklin; Pages, E. K. Ellis, Chas. Parker; Watchman, D. Dwyer; Engrossing and Enrolling Clerk, Mattie Tucker; Assistant Enrolling Clerk, Carrie Wilkins; Journal Clerk, Georgia McClintock.

The officers of the House were:—

Speaker, J. F. Knapp; Chief Clerk, Richard Rule; Assistant Clerk, Frank Murphy; Sergeant-at-Arms, John H. Marion; Assistant-at-Arms, D. C. Steadman, Pages, A. W. Robinson, Claud Cook; Watchman, F. Delaney;

Engrossing and Enrolling Clerk, Angie Mitchell; Assistant Enrolling Clerk, Ida Burnett; Journal Clerk, A. D. Snedeker.

1883.

The twelfth session was held in Prescott, beginning the eighth day of January, 1883. At this session an act was passed requiring every road overseer to put up at the forks of every highway, and every crossing of county roads within his road district, a guide or fingerboard to protect landmarks.

To establish a public school system.

To prohibit the keeping of opium dens.

To encourage the cultivation of cotton.

To re-incorporate the city of Tucson.

To prevent the cutting and shipping of timber beyond the limits of the Territory.

OFFICERS OF THE TERRITORY.

POSITION.	NAME.	LOCATION.
Governor.....	F. A. Tritle.....	Prescott
Secretary.....	H. M. Van Arman.....	"
Asst. Secretary....	H. P. Garthwaite....	"
Treasurer.....	T. J. Butler.....	"
Auditor.....	E. P. Clark.....	"
Attorney-General..	Clark Churchill.....	"
Surveyor-General..	J. W. Robbins.....	Tucson
Adjutant-General..	M. H. Sherman.....	Prescott
Supt. Pub. Instruct..	W. B. Horton.....	Tucson
Chief Justice....	Sumner Howard.....	Prescott
Associate Justice...	D. H. Pinney.....	Phoenix
"	— Fitzgerald.....	Tucson
U. S. Marshal.....	Z. L. Tidball.....	"
U. S. Court Com....	Wm. H. McGrew.....	Prescott
U. S. Dist. Attorney,	J. A. Zabriskie.....	Tucson
Col. Internal Rev...	S. W. Fisher.....	"
Dept. Col. Int. Rev.,	R. J. Butler.....	Prescott
Reg. Land Office...	T. Wing.....	"
Rec. Land Office...	Alex. W. De Long.....	"

COCHISE COUNTY.—Council, E. H. Wiley; House, W. H. Savage, D. K. Wardwell, J. F. Duncan.

COCHISE AND GRAHAM COUNTIES.—Council, P. J. Bolan; House (Graham County), A. Solomon, D. Snyder.

YAVAPAI COUNTY.—Council, E. W. Wells, M. Goldwater, Murat Masterson, F. K. Ainsworth; House, C. A. Randall, A. Allen, R. McCallum, R. Connell, E. H. Gobin, John Ellis, Charles Taylor, W. A. Rowe.

GILA COUNTY.—House, William Graves.

APACHE COUNTY.—Council, H. E. Lacy; House, C. A. Franklin.

MARICOPA COUNTY.—Council, A. D. Lemon; House, J. P. Holcomb, S. F. Webb.

MOHAVE AND YUMA COUNTIES.—Council, L. S.

Welton; House (Mohave County), L. J. Lassell; House, (Yuma County), J. W. Dorrington.

PIMA COUNTY.—Council, J. F. Knapp, F. G. Hughes; House, R. C. Brown, E. B. Gifford, Moye Wicks, J. H. Fawcett.

PINAL AND PIMA COUNTIES.—Council, J. W. Davis; House, Pinal County, J. W. Anderson.

The officers of the Council were:—

President, Edwin H. Wiley; Chief Clerk, J. H. Carpenter; Sergeant-at-Arms, James Speedy; Watchman, J. S. Furnas; Engraving and Enrolling Clerk, Samuel Furman; Messenger, C. L. Cook; Chaplain, E. G. Fowler.

The Officers of the House were:—

Speaker, Winthrop A. Rowe; Chief Clerk, A. E. Fay; Sergeant-at-Arms, Warren J. Pace; Watchman, Joe Curtis; Engrossing and Enrolling Clerk, C. Douglass Brown; Messenger, M. Archibald; Chaplain, W. S. Truett.

TERRITORIAL EXPENSES.

Hon. E. P. Clark, Territorial Auditor, makes the following report, showing the expenses of conducting the Government for the year ending with 1882. Aside from the salaries of the several Territorial officers, the current expenses had very greatly increased.

"The penitentiary, on account of the large increase of criminals, has in its expenses increased over twenty per cent.

"The account for the care and treatment of insane is nearly twice as great as for the two years previous, owing entirely to the increased amount of patients sent from the Territory.

"The increase in expense to the Territory from all other sources has swelled the Territorial expenditure to the sum of \$115,931.06, as against \$84,918.57, for the two preceding years.

"While these facts exist, there is up to this date outstanding warrants of the

Series of 1879 and 1880.....	\$46,700 74
Series of 1881 and 1882.....	115,931 06

Making a total of.....\$162,631 80

While the total amount of outstanding warrants for the two years previous was, as per my last report, \$100,289.71, showing that actually the Territory is \$62,342.09 farther behind than it was in 1880.

"There is now levied and collected for the current expenses of the Territory, the sum of twenty-five cents upon every one hundred dollars valuation of assessed property.

"Chapter lxxxv. of the Compiled Laws makes it the duty of the several County Assessors, while in their rounds assessing, to take complete information of all industrial operations in their respective counties, also all prop-

erty, a complete list of all items of interest, to constitute a statistical report, which shall be turned over to the Recorder of the county, who shall make a complete copy of same, and forward to the Territorial Auditor. The law has never been complied with. It appears that under existing circumstances there is no compensation allowed these officers for performing such services, and as the law now stands, is entirely inoperative. The attempt has been made to have a statistical report, but signally failed from the fact that but one or two counties reported.

"There is nothing in any of the offices of the Territory to show its resources, nothing by which any officer of the Territory can know the amount of taxable property of the Territory, nothing by which an intelligent direction of the financial affairs of the Territory can be reached."

TERRITORIAL INDEBTEDNESS.

Outstanding warrants.....	\$162,631 80
Probable amount of interest.....	25,000 00
Outstanding bonds.....	110,000 00
<b>Total.....</b>	<b>\$297,631 80</b>

SALARIES OF OFFICIALS.

From Copp's Salary List and Civil Service Law, we gather the following interesting statistics relating to the salaries of public officials in the Territory:—

Governor, \$2,600; Chief Justice, \$3,000; two Associate Justices, \$3,000; Secretary, \$1,800; Interpreter (Translator), \$500; Collector of Internal Revenue, \$2,250; two Deputy Collectors, \$1,100; Deputy Collector, \$1,000; Surveyor-General, \$2,500; Chief Clerk, \$2,500; Draughtsman, \$1,500; Spanish Translator, \$2,500; Mineral Clerk, \$2,000; Mineral Draughtsman, \$1,505; Transcribing Clerk, \$1,200; two Registers and Receivers of Land Officers fees, \$500; Special Treasury Agent, p. d. \$800; Superintendent Quartermaster's Department, \$1,200; Packmaster, \$1,200; Cargador, \$900; Quartermaster's Transportation Agent, \$1,500; two Clerks in Quartermaster's Office, \$1,600; Clerk in Quartermaster's Office, \$1,400; Clerk to Commissary, \$1,800; Clerk to Commissary, \$1,600; Messenger to Commissary, \$900; three Paymaster's Clerks, \$1,200; six Acting Assistant Surgeons, \$1,200.

VOTES CAST FOR DELEGATE TO CONGRESS.

COUNTIES.	1864.			1866.		
	John N. Goodwin.....	Charles D. Poston.....	Joseph P. Allen.....	Colos Bashford.....	Charles D. Poston.....	Samuel Adams.....
Yavapai.....	409	52	118	226	217	48
Mohave.....	80	56	29	27	65	89
Yuma.....	56	149	26	89	146	31
Pima.....	162	3	203	526	89	
Pah-Ute.....				141	1	

COUNTIES.	1868.			1870.	
	John A. Rush.....	R. C. McCormick.....	Samuel Adams.....	R. C. McCormick.....	Peter R. Brady.....
Yavapai.....	425	202	9	482	620
Mohave.....	40	23	9	51	1
Yuma.....	300	80		738	33
Pima.....	71	932	14	522	178
Pah-Ute.....				89	

COUNTIES.	1872.	1874.		
	R. C. McCormick.....	C. C. Bean.....	Hiram S. Stevens.....	John Smith.....
Pima.....	652	22	700	257
Pinal.....				
Yuma.....	650	106	248	31
Mohave.....	349	219	31	17
Maricopa.....	262	88	159	184
Yavapai.....	609	641	304	82

COUNTIES.	1876.		
	Hiram S. Stevens.....	W. H. Hardy.....	G. H. Oury.....
Pima.....	497	26	206
Pinal.....	75	3	205
Yuma.....	164	6	29
Mohave.....	26	202	57
Maricopa.....	32	11	251
Yavapai.....	400	801	259

In 1878 the aggregate vote of the Territory was 4,461, as follows:—

John G. Campbell, D., 1,452; A. E. Davis, Gr., 1,097, A. S. Stevens, D., 1,090; K. S. Woolsey, I. D., 822; Campbell's plurality, 355.

COUNTIES.—10.	1880.		1882.	
	Oury, Dem.	Stewart, Rep.	Oury, Dem.	Porter, Rep.
Apache.....	309	290	444	617
Cochise*.....			1,500	1,224
Gila*.....			394	316
Graham*.....			375	188
Maricopa.....	644	368	453	438
Mohave.....	132	137	294	161
Pima.....	1,692	1,792	924	880
Pinal.....	541	254	487	187
Yavapai.....	698	815	1,103	1,068
Yuma.....	160	122	147	164
<b>Total.....</b>	<b>4,095</b>	<b>3,606</b>	<b>6,121</b>	<b>5,141</b>
Maj. for Oury.....	489		980	
<b>Total vote..</b>	<b>7,701</b>		<b>11,262</b>	

\* Not organized in 1880.

## MEANS OF COMMUNICATION.

First Stages; First Steamer; Early Ferries; Overland Stage Lines; Southern Pacific Railroad; Atlantic and Pacific Railroad; Wonderful Progress, etc.

### PIONEER STAGE LINES:

TWO great overland stage lines were in operation for many years. The oldest was the Southern Pacific Mail Line, owned by Messrs. Kerens & Mitchell, and extended from San Diego, on the Pacific Ocean, to Mesilla, New Mexico, on the Rio Grande River, a distance of 850 miles, at which point it made connections with other lines running to different cities and railroads east.

This great stage line entered Arizona on the west at Yuma, and on the east at the Steins Peak Mountains, fifteen miles east from Apache Pass. It was a daily route, and the trip was made in eight days from San Diego to Mesilla. The line was well stocked with horses, Concord coaches, and closed buckboard carriages. Good Concord coaches run over most of the route.

The force of men and animals employed in stocking and running such an enterprise is very much larger than one unacquainted with the business can imagine; for it involves not only the providing of coaches, animals to draw them, and men to drive and care for these, but the locating of stations, the providing of provender, water, and food for both man and beast, employer and traveler, and that, too, over a wide stretch of country in many portions of which these are not to be had, except by transporting them to the place of use. The entire length of the Southern Overland Stage Company's routes, and their connections, will aggregate nearly or quite two thousand miles.

The coaches were run promptly on the schedule time prescribed by the Government. The proprietors, superintendents, and employés on the route, were well informed, affable, and attentive to every duty. This route is shown on our map as passing through Arizona *via* Camp Bowie, Tucson, Florence, Sanford; thence following the Gila down to Yuma, connecting with the Southern Pacific Railroad. It is 300 miles from Yuma to Tucson. The stage made regular trips in three days between these points; fare from San Francisco to Tucson, \$100.

In August and September, 1857, the San Antonio and San Diego semi-monthly stage line, under the direction of I. C. Woods, was established, James Burch acting as contractor. This continued until the Butterfield semi-

weekly line was put upon the route, in August, 1858, under a contract of six years with the Postmaster-General, at \$600,000 a year. The usual time was twenty-two days from San Francisco to St. Louis, and until the outbreak of the southern civil war in 1861, there was not a single break in the service. During these years, Arizona nominally formed part of the Territory of New Mexico; practically, it was under the control of the Apaches.

### SECOND OVERLAND STAGE ROUTE.

The California and Arizona Stage Line was the other great stage line of Arizona. This line connected with the Southern Pacific Railroad at Indian Wells, run thence to Ehrenberg on the Colorado River, thence to Wickenburg, from whence the main line ran to Prescott and intermediate stations, and a branch line to Phoenix and Florence, where it intersected the Southern Pacific Mail Line before mentioned. Both the main and branch lines were tri-weekly.

Another route, run by the California and Arizona Stage Company, was a weekly, from Prescott, *via* Mineral Park and Cerbat, to Hardyville, on the Colorado River. The officers of the California and Arizona Stage Company were Mr. James Stewart, President, and Dr. J. H. Pierson, Secretary, Messrs. Thomas and Nichols, Superintendents.

The two stage companies above mentioned for many years kept up their several lines under the greatest difficulties imaginable, and with hardly a day's interruption. During the long years of the Indian wars, their coaches were often attacked by the savage foe, coaches rifled and burned, stock killed or driven off, employés murdered, and great pecuniary damage sustained in addition to loss of life; yet, through all these difficulties and dangers, they, with indomitable will and courage, fulfilled their obligations to the Government and people, kept up their several lines, and are deserving of the thanks and gratitude of all in Arizona. These two companies employed 400 horses, 100 men, and fifty coaches.

There was a weekly stage line from Tucson, running south into the Mexican State of Sonora, and thence to Guaymas, on the Gulf of California.

A tri-weekly stage line ran from Phoenix to Camp McDowell, thirty-five miles. Another one ran from Phoenix to Maricopa Wells, connecting the two first described main lines; distance, thirty miles.

A weekly stage line ran from Prescott, *via* the Chiquito Colorado and Camp Wingate, to Santa Fé, in New Mexico.

A horseback mail route ran from Camp Grant, *via* old Camp Goodwin and Safford, to the Clifton Copper Mines. At Camp Goodwin it was intersected by a military post rider, who took the mail, *via* San Carlos, to Camp Apache. From Camp Apache, the military post

route ran north to the Chiquito Colorado, connecting with the line from Prescott to Santa Fe.

Another horseback mail route runs from Yuma, *via* Castle Dome, Ehrenberg, Colorado River Reservation, Aubrey, and Camp Mohave, to Hardyville.

Another one ran from Cerbat and Mineral Park, *via* Stone's Ferry of the Colorado River, to Pioche, Nevada.

A semi-weekly mail was carried from San Bernardino, California, to Prescott, *via* Ehrenberg and Wickenburg. Passengers were carried through on this line in six days; fare, \$75.00. A semi-weekly mail was carried from Tucson to Sanford, Florence, Camp McDowell, Phoenix, and Wickenburg to Prescott; distance, 280 miles. Passengers were carried through in five days; fare, \$50.00. A semi-weekly mail was carried from Yuma up the Colorado, *via* Ehrenberg, Camp Mohave, Hardyville; thence to St. George, in Utah Territory. A weekly mail was carried from Prescott, *via* Camp Beal Springs, Cerbat, Mineral Park, and Chloride, to Hardyville. A weekly mail was carried from Tucson to the Sonora line at Sasabi Flat; also a weekly mail from Tucson to Tubac, Kitchen Ranch, and Camp Crittenden.

#### SOUTHERN OVERLAND ROUTE ABANDONED.

Suddenly the overland mail was withdrawn; then the troops, and the settlements in the valleys above-named, succumbed almost at once to the attacks of the Apaches. Many lives were lost; property of all description was abandoned; crops to an enormous amount were left standing in the fields, never to be gathered. Never was desolation so sudden, so complete. Over 150 miles of beautiful country, studded with ranches and farms, were found comfortable houses, out-buildings, fences, and tilled fields utterly abandoned and tenantless. The mining interest suffered at the same time.

#### MODERN STAGE ROUTES.

Two stages leave Tucson for Quijotoa daily, for Calabasas; tri-weekly to Arivaca, Oro Blanco, and tri-weekly to Riverside, Pioneer, and Globe.

Two daily stages run between Tombstone and Fairbanks, making connection with the Arizona Territory and San Francisco Railroad; also a daily stage between Tombstone and Charleston and Bisbee.

From the Southern Pacific there is a daily stage from Maricopa to Phoenix and Prescott; from Casa Grande to Florence, Silver King, and Globe; from Wilcox to Fort Grant, Thomas, San Carlos, and Fort Bowie; from Bowie Station to Solomonville, county seat of Graham County.

From Prescott there are daily stages running to Flagstaff, on the Arizona Pacific Railroad, also to Seymour, and other points. These stage lines are all under good management, stocked with elegant coaches, fine horses,

and good eating stations along the lines for the accommodation of the traveling public.

The Arizona Stage Company run coaches from Maricopa to Quijotoa, and to other places in Arizona. James Stewart is the general manager.

#### FIRST TELEGRAPH LINE.

By an act of Congress, approved March 3, 1873, the sum of \$50,311.80 was appropriated "for the construction of a military telegraph line from San Diego, California, *via* Fort Yuma and Maricopa Wells, to Prescott and Tucson," to be expended under the supervision of the Quartermasters' Department of the United States army, under which appropriation 540 miles of line were built at seventeen posts to the mile. Fearing that the appropriations might be defeated, a sum sufficient to equip the line with good posts was not asked for, which occasioned some adverse criticism unwarranted by the facts. By an act approved June 23, 1874, \$40,000 were appropriated to enable the line to be extended to Camps Verde and Apache, and payment of running expenses of the previous line was authorized to be made from its receipts. By an act approved March 3, 1875, \$30,000 were appropriated for the extension of such lines in Arizona and New Mexico. In July, 1875, Lieutenant Reade arrived at San Diego, and there assumed control of the military telegraph lines, between 500 and 600 miles of which were then in operation from San Diego to Tucson, *via* Maricopa Wells, with a branch to Prescott. Detachments of troops were that summer occupied in extending the lines to Camps Grant, Apache, and San Carlos, and into New Mexico. The telegraph poles, twenty-five feet high, were often covered up with drifting sands of the Colorado Desert.

During 1884, Tucson has been connected by wire with Guaymas and other cities in Sonora, through the telegraph line of the Arizona Territory and San Francisco and Sonora Limited, and with Clifton, a few days since, by the branch line from Lordsburg to that point. A branch line has also been built from Pantano to Total Wreck. All the principal towns of the Territory are in communication by wire with this center of trade: Prescott and Phoenix *via* military line which connects with the Western Union at Maricopa, Globe, Florence, San Carlos, Fort Thomas, Fort Apache, by military line which taps the Western Union at Willcox.

#### NAVIGATION ON THE COLORADO.

The following account will give an idea of a trip up the Colorado after leaving Yuma, and of the scenery from river steamers' decks, also the time required on this trip. This article, prepared by Capt. J. A. Mellen, we commend to our readers. He has been engaged in the navigation of the Colorado for about thirty years, and fully understands the subject he writes about. This is the first true

history of the navigation of that stream ever published. At present the Captain is engaged in running the steamer *Mohave* on the Upper Colorado from Needles to the mouth of the Virgin River.

"After passing through the heads, the river runs through valley land until you reach Castle Dome, thirty-five miles distant. At that point the mountains come down to the river, and for thirty-five miles it runs through them. Then commences the great valley of the Colorado, 130 miles long by ten miles wide; fifty miles of the upper end of this valley are set aside for an Indian reservation. The valley ends at Williams Fork Range of Mountains, through which the river runs for forty-two miles—the scenery in this cañon is grand—then emerges into Chimeavis Valley, fifteen miles long by seven wide. This little valley looks beautiful in the spring. You then enter the Needles, or Mohave Cañon, and for eighteen miles it goes through picturesque scenery, after you enter Mohave Valley, which is thirty miles long by about eight wide, ending at Fort Mohave.

"From Mohave to the Virgin River, a distance of 140 miles, the river runs over a rocky bed, and most of the way through grand cañon scenery. Nine miles above the town of Mohave is the town of Hardyville, and 520 miles above is El Dorado Cañon, quite a mining camp, with two quartz mills in operation when they can obtain fuel. It is situated in Lincoln County, Nevada. El Dorado is not a cañon of the Colorado, but a lateral cañon running out west from the river. Three miles above El Dorado commences Black Cañon of the Colorado. This cañon is 36 miles long, and the scenery for wild and varied grandeur is incomparable. It is reported that a steamer may run on the St. Johns River in Florida and be shaded from the sun all the time by the trees; here you may run with a steamer 170 feet long, 31 beam, and be shaded from the sun by the walls of the cañon, which rise perpendicularly.

#### GRAND VIEW OF THE CAÑON.

"In many parts of it it is impossible to see the heavens except straight ahead or astern. The deck of the steamer projects nine inches over the cabin windows; by sitting at the window, looking out and up, you cannot see over one-third the distance up the wall of the cañon. In many portions of the cañon you cannot see the moon until it is five days old, nor the sun, when south of the equator, until 10 o'clock. After passing out of this cañon, the river runs twelve miles through Vegas Wash-basin, at the head of which is situated Colville, a deserted Mormon town. The hills in this basin are beautifully variegated, being stained with mineral. After passing Colville, you enter Devil's Gate Cañon, which is a repetition of the

one below, until you reach the Devil's Gate. On first sight one thinks the steamer must stop or go through a tunnel, but on going further you make a sharp turn to port, then hard a starboard, and you are out into daylight, and the Virgin River country, which is *mesa* for a few miles back, to the foot of the mountains. Twelve miles through this kind of country and you reach the junction of the Virgin with the Colorado. This is the highest point yet reached by steamer; here are located the celebrated salt mines of the Southwestern Mining Company.

"It takes a steamer six hours from the Needles to Mohave, fourteen hours from there to El Dorado Cañon, four hours added to this sometimes in heaving over rapids; and from El Dorado Cañon to the Virgin, seventeen hours is the actual running-time. In some stages of the water, steamers have to use lines in heaving over rapids; then from six to eight hours must be added. Down stream, from the Virgin to El Dorado Cañon, two hours and forty minutes is the run, and from there to Mohave, three hours and twenty minutes.

"The fastest time ever made down stream, recorded, was made on the Colorado, in 1872, by the steamer *Cocopah*, which was from Mohave to Yuma, distance, 300 miles, in thirteen and a half hours, making eight landings. The Colorado is navigated a greater distance without any portage than any river that empties into the Pacific Ocean, and yet the Federal Government has never appropriated one cent for the improvement of the navigation, although a few thousands of the large amounts spent on streams east that are frozen up half the year and dry the other half, would assist greatly to remove some of the boulder bars causing difficulty in the navigation of the great Colorado of the west, which has been the only highway to Arizona, southeastern Nevada, and portions of California."

Freight from San Francisco was carried by sailing vessels, in a voyage of three or four weeks, to the mouth of the Colorado, at a cost of \$20.00 per ton. These steamers carried it to La Paz, for \$75.00 per ton. Steamers required six days from mouth of river to La Paz.

#### FIRST STEAM-BOATS.

When the United States Government established Fort Yuma, they opened proposals for taking freight from San Francisco to Yuma by way of Gulf of California. George A. Johnson, now collector of the port of San Diego, was the lowest bidder, and got the contract. He put the freight, seventy-five tons, on a schooner called the *Sierra Nevada*. On deck he took rough lumber enough to build three flat-boats. On arrival at the mouth of the river he built the boats and cordeled (or pulled by hand) them. It was hard work pulling all day and standing watch all night, but they made the trip successfully.

The next contract that was given, a man named

Turnbull being the lowest bidder, received it. He brought the freight to the mouth of the river on a sailing vessel, and there built a small steamer, having brought the material with him. He called it the *Uncle Sam*, but it was a total failure, for when it reached the rapid current, which at the time was swollen and running about eight knots an hour, it was not able to stand it. They landed the freight at a point about fifty miles below Yuma, and from there the Government had it hauled by teams to the fort. They got the steamer to Yuma, at low water, without freight, and there at the bank, through carelessness, it sank, it being the first boat that run on the Colorado, and the only one that ever was lost. This was in 1852.

Geo. A. Johnston received the next contract, and brought the side-wheel steamer, *General Jessup*, to the river (it was ninety feet long), and from that day until the day the Southern Pacific Railway reached the Colorado, Geo. A. Johnston and his associates controlled the river traffic.

The next steamer built was the *Colorado*, 120 feet long, stern wheeler. The next was the *Cocopah*, 140 feet long. The next was the *Colorado No. 2*, 145 feet long. The next was the *Mohave*, 135 feet long, 30-foot beam, being about 3 feet more beam than its predecessors. The same year the *Mohave* was built.

#### OPPOSITION STEAMERS.

Another boat, called the *Esmeralda*, ninety feet long, came from San Francisco, to run opposition. It was owned by Thomas E. Trucworthy, a successful steam-boat man of the Upper Sacramento. That same fall, 1864, the Philadelphia Mining Company built a stern-wheel boat, called the *Vina Tilden*. They steamed around from San Francisco, under command of the late Paddy Gorman. Trucworthy made a failure of it on the river. Two years after, or in 1866, the Philadelphia Mining Company failed. There was then a new navigation company formed, for the purpose of running opposition to Johnston. The new company bought the *Esmeralda* and *Vina Tilden*, with their barges, and commenced operations, but through lack of management or skill in navigating the river, they too failed, and left the field clear to Johnston.

#### COLORADO STEAM NAVIGATION COMPANY.

In 1872, George A. Johnston incorporated a company, and called it the Colorado Steam Navigation Company, stock being held by the owners, Ben. Hartshorn, Captain Wilcox, and George A. Johnston. They bought the steamship *Newbern*, and put her on the route between San Francisco and the mouth of the Colorado, Port Isabel. She was the pioneer line; previously, nearly all freight was brought by sailing vessels. The year following, they put on the steamship *Montana*. She was burned in 1877,

about four months before the Colorado Steam Navigation Company sold out to the Southern Pacific Railway. In the same year, the Colorado Steam Navigation Company had about 110 men in their employ at the time of their selling out to the Southern Pacific Railway. Now there are only about thirty men employed. The cause is the advent of railroads in the country. It has been hard on steam-boat men, but the country otherwise has been benefited.

#### LIST OF STEAMERS EVER ON COLORADO.

The following gives all the steamers that plied on the river: *Uncle Sam*, side wheel; *General Jessup*, side wheel; *Colorado*, stern wheel; *Cocopah*, stern wheel; *Explorer*, stern wheel (iron), built by the Government, in 1857, for exploring the river; *Colorado No. 2*, stern wheel; *Mohave*, stern wheel; *Esmeralda*, stern wheel; *Nina Tilden*, stern wheel; *Cocopah No. 2*, stern wheel, three boilers; Barge *No. 1*, built in 1864 (first); Barge *Black Crook*, built in 1864; Barge *No. 2*, built in 1865; Barge *No. 3*, built in 1867; Barge *White Fawn*, built in 1867; Barge *No. 4*, or *Yuma*, built in 1872.

#### FERRY RATES.

Bonellis Ferry is on the Colorado, near Virgin River. It consists of a flat-boat, which a man pulls across the river with a line. It carries wagons and horses over. For two persons and a light wagon the charge is *only* \$10.00, besides fifty cents for all extra passengers. The time required to cross is about five minutes. The water here is shallow, and can be forded, but, owing to the quicksands on the bottom, is very dangerous. Many men and animals have been lost in attempting to ford it.

#### ADVANTAGE OF RAILROADS.

The greatest factor in the development of the dormant resources of Arizona has been the railroads, reducing cost and time of transportation, thus making it possible and remunerative to operate mines heretofore valueless, and giving means for the transportation of ores and products. In this, the Southern Pacific stands the pioneer, and since its coming and passing through the Territory, Arizona's natural resources have developed over 400 per cent. The value of realty has appreciated 300 per cent., and all other interests in proportion.

Not a mile of railroad was constructed in Arizona in 1877. In 1878, thirty miles were built; in 1879, 152 miles; in 1880, 198 miles; in 1881, 141 miles. During the next three years the remainder of both great lines was constructed.

#### SOUTHERN PACIFIC RAILROAD.

The Southern Pacific Railroad reached Yuma in May, 1877, and in the fall of that year a bridge was constructed, of six spans, of 80 feet each, and a Howe truss draw,

of 187 feet, easily worked by one man. After leaving Yuma, it follows up the Gila River Valley, a general due east course to Maricopa Wells. From this point it bears southeasterly, to Tucson. After leaving Tucson, the road runs in a northeasterly direction for some distance, thence turning due east it passes the Dragoon, the Chiricahua and the Steins Peak Ranges, to Deming, in New Mexico, where it forms a junction with the Atchison, Topeka, and Sante Fé road. Its length through the Territory is 384.17 miles, and its course is between the thirty-second and thirty-third degrees of latitude.

The building of this road was the building up of Arizona. Every industry has felt the advantages of quick and reliable rail connection, and mining, more especially, shows a marked improvement since its completion. Many prosperous towns and camps have sprung into existence; cattle-ranges have been established; prospectors, speculators, and traders have poured into the country, and capital has sought investment. The railroad company had little to encourage them, as the region through which it passes is not a very inviting one, and a stranger gazing at the vast stretches of dry, treeless plains and barren mountains, is not apt to be favorably impressed with the country.

#### WHAT RAILROADS ARE DOING FOR ARIZONA.

Through means of the railroads, this country, heretofore possessing but a sparse population, will fill up rapidly; its resources will be developed, and its wealth in mineral and other productions will be found even greater than was ever supposed. The railroads will have ample returns from the enormous movement of freights that will be necessary for the consumption of the New Southwest, the resources of which will be tributary to one or other of these systems. New Mexico, Arizona, and old Mexico will each pour forth their wealth; new commercial centers will be opened up that will rival in splendor and importance the ancient capital of the Montezumas. It seems like magic to think of the great transformation that will follow the working of these various roads; yet the changes that have already been brought about by one line only, converting a country that was away beyond the outskirts of civilization into the most attractive spot in the world to-day for immigrants, were but a few years ago equally unlooked for and much more improbable. The Southern Pacific Railroad has already proved the crowning glory of this country, bringing, as it does, into our midst capital, brains, refinement, comfort, and a grand civilization—opening up new fields for the world to explore—as it pierced our mountain ranges, peopling our valleys with active industry, and giving fresh chances for labor to make another grand triumph. This great rail-

road has successfully traversed the whole of our Territory, and still goes onward, wending its way steadily and fearlessly, and will soon reach our Atlantic seaboard, and make our Eastern States familiarly acquainted with the former civilizations that once existed but have long since passed away, in this land of ancient ruins and forgotten races. The iron horse is now running his swift race from ocean to ocean in such a short space of time as to bring the East and the West into very close connection. But a few years ago persons would scarcely venture as far as the other side of the Colorado River; now they are ready and willing to go in thousands to Texas, New Mexico, and old Mexico, while Arizona is already considered quite at home. Some of the mines of Arizona are to-day worth quite ten millions, cash down, and yet these same mines would be worth little but for the superior facilities of transportation afforded by the railroad.

Connecting with the Southern Pacific Railroad, are many stage lines at different points. At Fairbanks, by a ride of 9 miles by stage, Tombstone is reached. At Bowie, 100 miles east of Tucson, stages run to Globe and the San Carlos Indian Agency. They pass through the Pueblo Viejo Valley, one of the finest bodies of farming lands in the Territory, only 35 miles north of the railroad.

At Casa Grande, the Kerns & Griffith Stage Company run a line of commodious coaches to Florence, the county seat of Pinal County, 25 miles distant. At Florence the line branches, one to Pinal and Silver King, and the other to Globe, by way of Riverside. From Florence to the King is 35 miles over a good natural road.

From Yuma to Silver District, there is also a well-appointed stage line, which makes tri-weekly trips, the fare being \$6.00 each way.

The California and Arizona Stage Company, at Maricopa, take passengers to Phoenix, 28 miles distant, and to the towns and camps of northern and central Arizona. The coaches of this company are large and commodious, the stock good, and the drivers careful. The fare to Phoenix, the handsomest town in Arizona, is \$3.00, and from there to Prescott, the capital of the Territory, \$20.00; time, twenty-six hours.

At Tucson, 978 miles from San Francisco, a daily line of coaches runs to Tubac, Calabasas, Arivaca, and all points in northern Sonora. This is a well-equipped line, six-horse coaches being used, and the road being one of the finest natural thoroughfares in the Territory.

#### ATLANTIC AND PACIFIC RAILROAD.

The most important railroad event of the year in the Territory, was the completion of the Atlantic and Pacific Railroad through northern Arizona, crossing the Colorado at

the Needles, there uniting with the Pacific road builders, thus giving to the Territory two through continental railroads. The completion of this line has given a wonderful impetus to immigration and flow of capital to that whole section of the Territory. The available lands for stock and agriculture are sought after. The mining interests have taken a great leap forward, which is resulting in the shipment of large quantities of bullion and ore that heretofore lay dormant in the mountains for want of cheap and rapid transportation.

Although the route of the Atlantic and Pacific Railroad from Albuquerque to the Colorado River is naturally defined by the topography of the country, it was not well known to the early Spanish explorers. The earliest explorers of the country, coming north by the Sonora coast of the Gulf of California, naturally followed the valley of Yaqui River, and crossed the Gila, and passed the Indian village of Zuni, and reached the Rio Grande near the vicinity of the present Socorro, or by Acoma to where Albuquerque now holds the key of future growth and wealth.

Of the several routes surveyed for a railroad to the Pacific, the Salt Lake route was selected, and the Union Pacific Railroad chartered by Congress, during the continuance of the war, the thirty-fifth parallel route being then in the Southern Confederacy, so called. The favorable conditions of the route were not, however, forgotten, and in 1866, a national charter was granted for the Atlantic and Pacific Railroad, with a land grant from Springfield, Missouri (to which place a road was in course of construction from St. Louis), by the Canadian River to Albuquerque, and by some suitable pass to the head-waters of the Chiquito Colorado, and the most practical route to the Pacific Ocean, Springfield and Albuquerque being the only localities of the route definitely given.

In 1870, the newly-organized Atlantic and Pacific Railroad Company prosecuted surveys under the engineership of Jacob Blickensderfer, a well-known civil engineer of Ohio, who had successfully built several roads, and is now the chief engineer of the Union Pacific Railroad. The route by the Galisteo, and now San Felipe and San Mateo, was recommended by him.

The company was so hindered in their efforts to build their road in the Indian Territory, that they were unable to make any progress, until the Atchison, Topeka and Santa Fé Railroad was built to Albuquerque, in 1880, crossing their route, when arrangements were made for the purpose of building the Western Division (from Albuquerque to San Francisco), and with such vigor was this purpose carried out, that within three years from 1880, to April, 1883, 575 miles of railroad have been most thor-

oughly and successfully built, in a first-class manner, all the supplies and material being hauled from Kansas City and Chicago, 900 and 1,200 miles. The road was surveyed and located, and principally constructed under Chief Engineer H. R. Holbrook, who was the assistant engineer who surveyed, under General Palmer, the greater portion of the route occupied. Mr. F. W. Smith, however, as general manager, has had charge of the work, and to his able management, the rapid progress, early completion to the Colorado River (border of California), and the successful establishment of traffic operations as a part of the great "All the Year Route" to California, are mainly due.

Mr. Lewis Kingman succeeded Holbrook, and subsequently W. A. Drake succeeded Kingman as chief engineer.

The road—western division—as built, departs from the Rio Grande, at the Indian pueblo of Isleta, thirteen miles south of Albuquerque, and runs nearly due west, crossing the line of Arizona near Momuelito, 174 miles west of Albuquerque, through the finest scenery in Arizona, 575 miles to the Colorado River at the Needles, California.

#### BEAUTIFUL SCENERY.

The scenery is entirely new and grand, and constantly changing with every turn of the kaleidoscope. It has been pronounced by traveled tourists as the Alps of America. No finer scenery is to be found on any road than can be found on sections of this. Running through the magnificent timber belt of Arizona, its proximity to the Grand Cañon of the Colorado, the valuable mineral and agricultural lands that it intersects, makes the road an assured success from the start.

#### THE CENTRAL ARIZONA RAILROAD.

The Central Arizona Railway Company was incorporated May 10, 1884, under the laws of the Territory of Arizona, for the construction of a railroad from a point on the Atlantic and Pacific Railroad to Prescott, and also to Phoenix, the cereal center of Arizona, with a branch from the main line to Jerome, at which point the extensive interests of the Middle Verde will be served. The organization at present includes the representative men of the section traversed by the line. The officers and directors are: Gov. F. R. Tritle, President; Col. C. P. Head, Vice-President; Bank of Arizona, Treasurer; N. O. Murphy, Secretary; Hon. Clark Churchill, General Counsel. Directors: J. N. Rodenburg, Hon. Hugo Richards, Hon. L. Bashford, Col. C. P. Head, Hon. Clark Churchill, Hon. E. P. Clark, Hon. Nathan Ellis, N. O. Murphy, Esq., Alfred Eoff, Esq., Hon. John G. Campbell, F. K. Ainsworth, M. D., Hon. Ed. Wells, Hon. F. A. Tritle.

The surveyed line of the first division from the Atlantic and Pacific Railroad to Prescott is about seventy-four

miles in length, adhering for the entire distance to valleys and side-hills, involving light work, and assuring not only minimum cost of construction, but most satisfactory results in operation. It is adjacent to points at which large freight shipments originate, and so situated as to develop a large tributary area of agricultural and grazing lands in the Chino, Williamson, and Granite Creek Valleys.

The junction with the Atlantic and Pacific line, at a point about thirty miles west of Ash Fork, the present shipping station for southern traffic, is convenient to the extensive pine forests of the San Francisco and Bill Williams Mountains, and so situated as to command, in connection with the trunk line, the entire lumber business of the South.

The live stock interests of the country intervening between the Atlantic and Pacific Railroad and Prescott have not only already attained large proportions, but are increasing with wonderful rapidity, and with facilities afforded for shipment of surplus, additional capital will be invested in this direction and effect a material advance in this branch of the traffic, which at the start is certain to be large.

The traffic originating in the Middle Verde will reach the main line of the proposed road at a point about fourteen miles north of Prescott; from there to Jerome a branch road fifteen miles in length will serve that section.

At the last-named place is located the plant of the United Verde Copper Company, the average freight tonnage of which concern for the past ten months, during which the company has been in active operation, has reached 600 per month.

The situation of Prescott as a distributing point for the large mining region to the south, necessitates the maintenance of large stocks of miscellaneous supplies. Ship-

ments of this description for the past year reached the handsome aggregate of 10,963 tons.

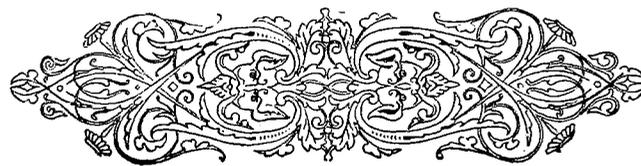
The present inadequate facilities have also retarded the shipping, to any great extent, of moderate grade ores. The mines in the vicinity of Prescott, whose product is of this character, have been practically closed, owing to the high charges for transportation, an obstacle which can alone be removed by the railroad. Beyond carrying of ore product, which is likely to prove a permanent source of profit, the introduction of necessary machinery and supplies will constitute a large return freight.

The central position of Prescott geographically establishes it as a most important point in the Territory, and in the nature of things the general course of traffic to and from the vicinity, not only in matter of passengers and express, but also of freight, must continue to increase very rapidly.

Scarcely less profitable than the line to Prescott will be the southern division to Phoenix, about one hundred and fifteen miles in length. The route throughout is practicable, with good alignment and light grades, while the business on the line will yield large returns.

It is estimated that at the present time, by the use of water furnished by existing canals to irrigate lands on the Phoenix and Tempe side of Salt River, about 30,000,000 pounds of barley, wheat, etc., could be produced if proper transportation facilities could be utilized in northern Arizona and along the line of the Atlantic and Pacific Railroad as far east as Albuquerque.

After the completion of the Arizona Canal, the product of the Salt River and Gila Valley will be increased to 100,000,000 pounds or more.



## NEWSPAPERS OF ARIZONA.

The following is a complete list of all newspapers published in Arizona in June, 1884. It comprises a list of twenty-five weekly, and eight daily papers. Three are published in Spanish, one devoted to live stock, one exclusively to mining. The oldest of the list is the *Miner*, of Prescott, first published March 9, 1864, by Hon R. C. McCormick. The Santa Rita Mining Company, of Cincinnati, in 1858, purchased a Washington press and started a paper in Tubac called the *Weekly Arizonian*, edited by Colonel Cross. The Tubac paper did not prosper and was not published for any length of time. This pioneer press passed through a great many hands and had quite an eventful career. It was last owned by A. E. Fay, of the Tombstone Nugget, and is now worthless, having been in the fire at that place some years ago.

NAME OF PAPER.	BY WHOM ESTABLISHED.	WHERE PRINTED.	DATE OF FIRST ISSUE.	NAME OF PUBLISHER.	NAME OF EDITOR.	DAILY OR WEEKLY.	PRESENT VOLUME.
Arizona Gazette.	C. H. McNeil & Co.	Phoenix, Maricopa County.	Oct. 28, 1880.	Gazette P. & P. Co.	H. H. McNeil.	Daily.	8.
Arizona Gazette.	C. H. McNeil & Co.	Phoenix, Maricopa County.	Oct. 28, 1880.	Gazette P. & P. Co.	H. H. McNeil.	Weekly.	5.
Phoenix Herald.	C. McClintock & Co.	Phoenix, Maricopa County.	Oct. 1, 1879.	N. A. Morford.	N. A. Morford.	Daily.	5.
Phoenix Herald.	C. McClintock & Co.	Phoenix, Maricopa County.	Feb. 22, 1878.	N. A. Morford.	N. A. Morford.	Weekly.	11.
The Clifton Clarion.	D. L. Sayre & Co.	Clifton, Graham County.	Feb. 2, 1883.	D. L. Sayre & Co.	D. L. Sayre.	Weekly.	2.
Arizona Citizen.	John Wasson.	Tucson, Pima County.	— 1870.	Citizen P. & Pub. Co.	W. W. Hayward.	Daily.	19.
Arizona Citizen.	John Wasson.	Tucson, Pima County.	— 1870.	Citizen P. & Pub. Co.	W. W. Hayward.	Weekly.	14.
Arizona Mining Index.	G. W. Barter.	Tucson, Pima County.	June 1, 1883.	Barter & Reymert.	G. W. Barter.	Weekly.	2.
Arizona Star.	L. C. Hughes.	Tucson, Pima County.	March, 1877.	L. C. Hughes.	L. C. Hughes.	Weekly.	8.
Arizona Star.	L. C. Hughes.	Tucson, Pima County.	March, 1877.	L. C. Hughes.	L. C. Hughes.	Daily.	8.
Live Stock Journal.	Cameron Bros.	Tucson, Pima County.	Jan., 1884.	Cameron Bros.	Cameron Bros.	Weekly.	1.
"El Fronterizo."	Carlos I. Velasco.	Tucson, Pima County.	Sept. 29, 1878.	Carlos I. Velasco.	Carlos I. Velasco.	Weekly.	6.
The Prospector.	Harry Brook.	Quijotoa, Pima County.	March 1, 1884.	Harry Brook.	Harry Brook.	Weekly.	1.
The Arizona Silver Belt.	A. H. Hackney.	Globe, Gila County.	May 2, 1878.	A. H. Hackney.	A. H. Hackney.	Weekly.	1.
The Arizona Journal.	Arizona Pub. Co.	Prescott, Yavapai County.	May, 1872.	J. C. Martin.	J. C. Martin.	Weekly.	9.
The Arizona Journal.	Arizona Pub. Co.	Prescott, Yavapai County.	May, 1872.	J. C. Martin.	J. C. Martin.	Daily.	18.
Prescott Courier.	J. H. Marion.	Prescott, Yavapai County.	Feb. 2, 1882.	J. H. Marion.	J. H. Marion.	Daily.	4.
Prescott Courier.	J. H. Marion.	Prescott, Yavapai County.	Feb. 2, 1882.	J. H. Marion.	J. H. Marion.	Weekly.	2.
The Arizona Miner.	R. C. McCormick.	Prescott, Yavapai County.	Mar. 9, 1864.	O'Neil & Gibbs.	W. O. O'Neil.	Weekly.	21.
The Arizona Miner.	J. H. Marion.	Prescott, Yavapai County.	Dec. 1, 1873.	O'Neil & Gibbs.	W. O. O'Neil.	Daily.	21.
The Champion.	A. E. Fay.	Flagstaff, Yavapai County.	Sept. 15, 1883.	A. E. Fay.	A. E. Fay.	Weekly.	1.
Tombstone Epitaph.	Reppy, Clum & Sorin.	Tombstone, Cochise County.	May 1, 1880.	Chas. D. Reppy.	Chas. D. Reppy.	Weekly.	4.
Tombstone Epitaph.	Reppy, Clum & Sorin.	Tombstone, Cochise County.	May 1, 1880.	Chas. D. Reppy.	Chas. D. Reppy.	Daily.	9.
Benson Herald.	W. A. Nash.	Benson, Cochise County.	Aug., 1883.	W. A. Nash & Co.	W. A. Nash.	Weekly.	2.
Arizona Enterprise.	Thos. F. Weedin.	Florence, Pinal County.	— 1880.	Thos. F. Weedin.	Thos. F. Weedin.	Weekly.	4.
Orion Era.	St. John P. & P. Co.	St. Johns, Apache County.	Jan. 6, 1883.	M. P. Romney.	M. P. Romney.	Weekly.	2.
Apache Chief.	Geo. A. McCarter.	St. Johns, Apache County.	April, 1884.	Geo. A. McCarter.	Geo. A. McCarter.	Weekly.	1.
Mohave County Miner.	Smith & Hyde.	Mineral Park, Mojave Co.	Nov. 5, 1882.	Anson H. Smith.	James J. Hyde.	Weekly.	2.
The Arizona Sentinel.	Sentinel Pub. Co.	Yuma, Yuma County.	— 1871.	J. W. Dorrington.	J. W. Dorrington.	Weekly.	13.
The Arizona Methodist.	Geo. H. Adams.	Tucson, Pima County.	Jan. 1, 1881.	Geo. H. Adams.	Geo. H. Adams.	Quarterly.	4.
"La Union."	Aguierre & Cellis.	Phoenix, Maricopa County.	— 1883.	Aguierre & Cellis.	Aguierre & Cellis.	Weekly.	2.
"El Mercurio."	F. T. Davilla.	Phoenix, Maricopa County.	June, 1884.	F. T. Davilla.	F. T. Davilla.	Weekly.	1.
The Holbrook Times.	Henry Reed & Co.	Holbrook, Apache County.	May, 1884.	Henry Reed & Co.	Henry Reed.	Weekly.	1.
Sulphur Valley News.	Montague & McFarlin.	Wilcox, Cochise County.	May, 1884.	Montague & McFarlin.	Montague & McFarlin.	Weekly.	1.

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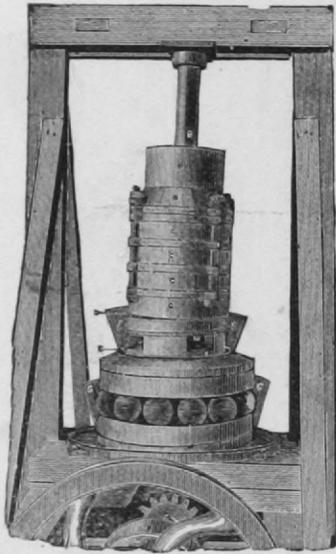
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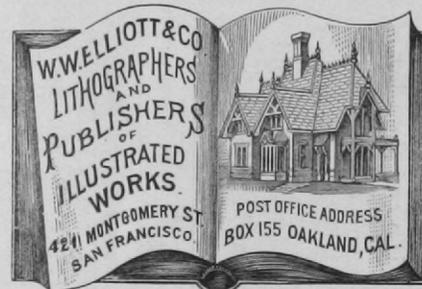
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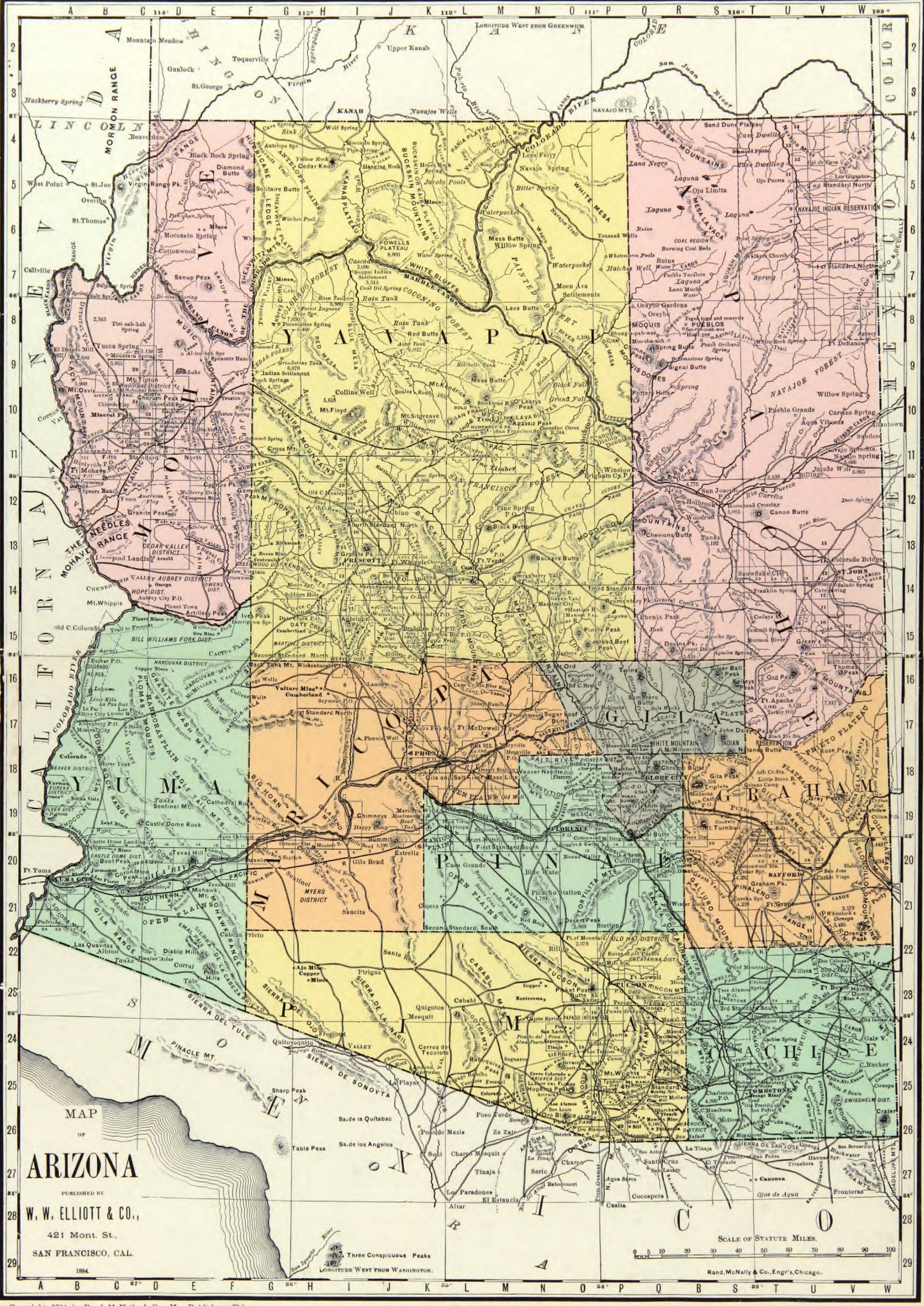
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