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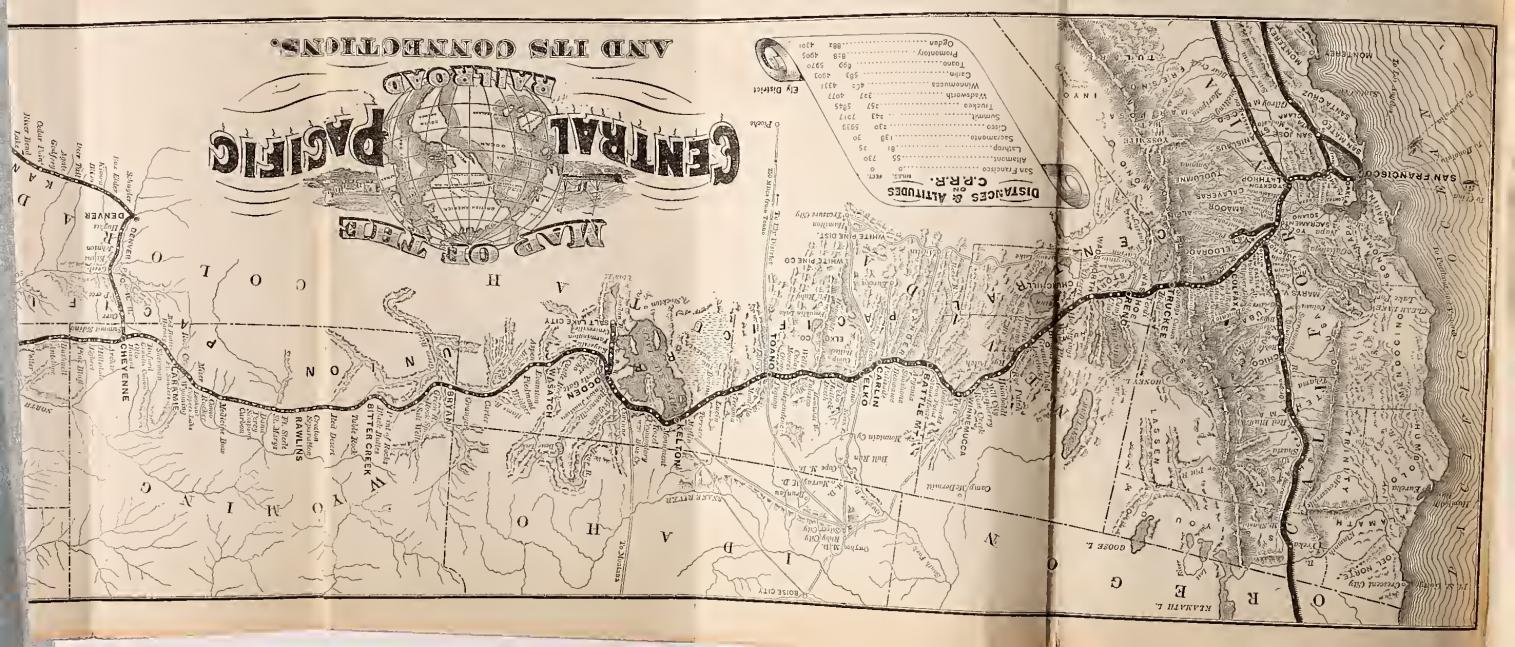
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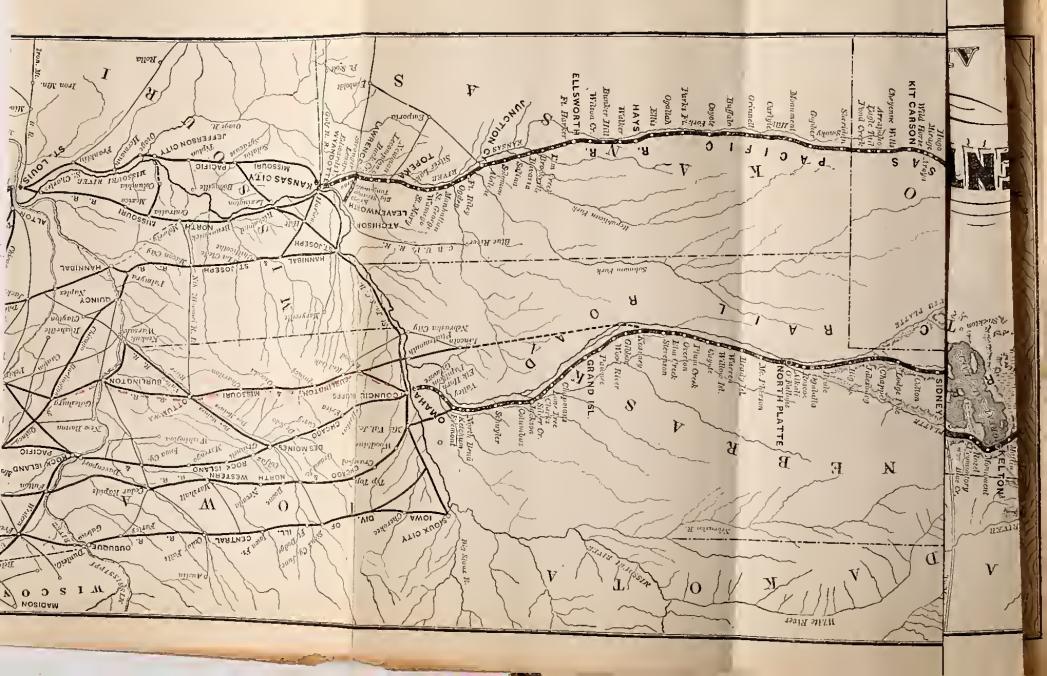
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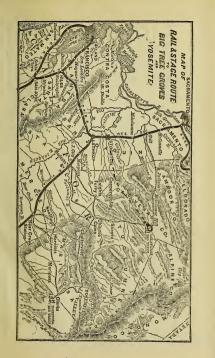












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omains more information about the States and Territories of the Paci Coast, and those twersed by the Great Trans-Continental Railroad, than any other Book extant. It gives a minutely detailed account of every (try, Town, Railroad Station, Mining District, Mountain, Valley, Lake, River, Hunting and Fishing Ground along the Great Trans-Continental Railroad, together with the Continental Railroad, together with the Continental Railroad, together TRIES, LAND, CLIMATE, AND HOW NEW.

where to find the Mines, what they yield, where to go, how to go, where to Fish, and where

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A VALLEY IN THE SIERRA NEVADA.

From a sketch by Fred. Whymer. See "Summit Valley," Page 246.



PREFACE.

In placing this work before the public, the publishers believe they are supplying a want very generally felt. But two Guide-Books for the great Trans-Continental journey have hitherto been published. They both begin at its Easters end, and both are wanting in much-needed information about California—the place of greatest interest on the whole journey.

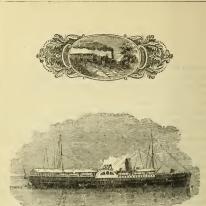
Hitherto, overland travelers going East from the Pacific coast, if they used a Guide-Book at all, had to begin at the end of the book and read backwards—an infliction that involved much trouble, and gave but little information. Moreover, this grievance would be felt, in an intensified degree, by all the travelers coming from the Australian Colonies, China and Japan.

It seemed to the publishers that to obviate this defect, the present work was needed.

There is also a strong desire in the minds of many persons residing in the Eastern States, Europe, and the Australian Colonies to obtain cheap, condensed and reliable information about the resources of California and the other States and Territories on the Pacific coast. Still another class of persons interested in mines, wintculture, still culture, etc., desire trustworthy information about the progress California is making in these specialties.

The publishers believe that besides supplying the information desired by all the classes mentioned, they have also given information on every subject likely to interest the traveler, the sportsman, the man of business, the miner, the immigrant and the statistician. With implicit confidence, therefore, they leave it to be judged on its merits by an intelligent public.

Revised editions of this work will be published semi-annually, in June and December, to correspond with the summer and winter arrangements of the railroads and steamers; and such additions will be made to it from time to time as shall make it the most useful Guido-Book extant.





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The Agent of this FAVORITE ROUTE will be found in his Office, No. 214 MONT-GOMERY STREET, SAN FRANCISCO, where tickets for the through route can be obtained, and herths on Sleeping Cars secured, for all points between San Francisco and all Atlantic Cities.

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SAN FRANCISCO.



ALTA CALIFORNIA

Pacific Coast and Trans-Continental

CALIFORNIA.

Have you ever been in California? No? Then be not content till you have seen it, for California is a land of wonders. It matters not whether you have driven tandem on the Great Wall of China, bathed in the public baths of Yokohama, hunted bears in the wilds of Siberia, the Bengal tiger in the jungles of India, or the snow-pheasant on the peaks of the Himalaya-you have done comparatively little, if you have not "done" California. It matters not if vou have been with Mark Twain through Egypt and the Holy Land, and with him shed tears over the grave of your paternal ancestor-Adam. Whether you have traced the source of the Nile, or accompanied the Abyssinian expedition, makes no difference. Whoever you are, or

whatever you are. California has much that will charm and interest you. To every one who looks on these pages we promise a rich treat in traveling through California. California is different from every other country. She has astonished the world "by her beds of lava, which, after filling up the beds of antediluvian rivers, were left, by the washing away of the banks and adjacent plains, to stand as mountains, marking the position of great treasures beneath; by lifting a hundred mountains from their beds; by six thousand miles of mining ditches; by aqueducts, less durable, but scarcely less wonderful than those of ancient Rome: by mud volcanoes, geysers and natural bridges; by a valley of romantic and sublime beauty, shut in by walls nearly perpendicular and more than three-quarters of a mile high, with half a dozen great cascades, in one of which the water

at two leaps falls more than the third of a mile;" by botanical prodligies, among which may be mentioned trees two hundred and fifty feet high, and one species that has reached a height of four hundred and fifty feet and a diameter of forty feet in the truth. It hase shings warrant us in promising you a treat if you travel in California. Whether you are a downeaster, a Southerner, a Western man, a Britisher, a Quadnia, Packah Maori or a "Colonia," matters not—each and all will be delighted with California.

If you are an American, we need not tell you the way here. If you are in England, take the steamer to New York and the transcontinental railroad to California. If you are in Australia or New Zealand, the California, New Zealand and Australian mail line will convey you here. And if you are in China or Japan, the splendid vessels of the Pacific Mail Steamship Company will carry you pleasantly to the Golden Gate.

It is hardly possible to over-estimate the importance of the new steamship line recently established between San Francisco, New Zealand and Australia. This connecting link was all that was wanting to unite to us, in a close compact of friendship, a people numbering nearly three millions, and speaking the same tongue and of kindred spirit with ourselves—a people, moreover, who, in 1869, spean nearly six millions of dollars in passage money, and almost twenty-five millions on account of freight!

By the new route from Australia to England and back, via America, a saving both in time and money will be effected, and the pleasure of the journey will be greatly enhanced. For that reason we may and do expect a large passenger trade between this port, New Zealand and Australia. Californians, as a rule, are "not forgetful to entertain strangers," although they may not always do so because the duty was divinely enjoined. With true Californian generosity, therefore, we will give our attention to entertain the strangers who may come to our shores.

Happily, traveling is no longer something to be dreaded for its privations and fatigues. Modern improvements have shorn it of all its horrors. Formerly, a voyage to the antipodes was never undertaken unless it could not possibly be avoided, and then with creat reluctance and dire forebodings of imminent misery and peril! Fond relations bid good-bye to the traveler about to set out on his journey, with feelings akin to despair, If ever he did rcturn, it would be after a long, dreary absence, sadly trying to the fond ones left at home. But now, all this is changed. Traveling is a delight; and a voyage to the antipodes a prolonged pleasure excursion. Instead of being undertaken with reluctance, it is sought after with avidity. In lieu of forebodings of misery and peril, the traveler is charmed by anticipations of comfort and safety! Relatives, instead of feeling sad at the traveler's departure, think it "awfully jolly," and look for his speedy return, loaded with presents for them, selected from the uttermost parts of the earth!

TRAVELING CONVEYANCES.

These happy changes are all brought about by immensely improved traveling conveyances. The tardy old vessel, with bad provisions, worse water, and small, badly ventilated cabins, has been supplanted by fast steamers, of great size and elegant appointments, having icopreserved provisions, an abundant supply of fresh water, and cabins large, well ventilated, and fitted with windows as large as those of country cottages.

Then look at our railroads and compare them with the old stage-coaches! With the discomfort of traveling for days. perhaps weeks, in the corner of a stagecoach, without room to move, contrast the luxury of a locomotive village, peopled by agreeable companions, and composed of hotel, smoking, drawing-room, sleeping, baggage and commissary cars! Now imagine the pleasure of crossing the snow-clad Sierra Nevada mountains, the great American desert, the grand Rocky mountains, and the rolling prairie on your journey. To all this add the pleasure of being with your friends at home within forty days from the time you left the antipodes. Think of all these things. and then stay at home if you can.

HOMEWARD BOUND.

The New Route from Australia to England and back, via America.

Naturally enough, Colonial people will desire to know something of this new and pleasant route between England and Australia. Its advantages are so numerous that, when they are generally known, this route will be chosen in preference to any other.

The voyage across the Pacific will be found one of the most pleasant in the

world. The placid waters of this ocean seem specially designed for steamers. The traveler there meets with no seas mountains high, no chilly winds and icebergs, such as are experienced off the "Horn." Nor are there any sickly fevers or suffocating heats, such as prevail during a portion of the year in the Red Sea. Seldom anything but gentle, balmy, invigorating, health-inspiring breezes. It has not yet been decided, so far as we know, which of the islands will be selected as a coaling station between the Colonies and Honolulu. One of them certainly will be chosen; and it makes little difference which, for they are all beautiful.

Who that has ever stood upon the deck of his vessel, and looked upon the many-colored huse of the placid water between him and the coal rest that guard the shores of the South Sea Islands, is not prepared to say that God's beautiful earth does not possess a more lovely picture? But a sight of these beautiful places is not the only advantage that will be gained. The monotony of the voyage will be broken, and fresh fruit and vegetables will be obtained. By eand by,

WE REACH HONOLULU,

One of the most beautiful spots in Gold's creation. As you approach the entrance through the reefs, just look at the entrancingly beautiful landscape before, you. See in the foreground that crescent-like beach with its fringe of graceful palan-trees; look beyond at the quiet little city embowered in trees, and then up at the lava-fassured mountains behind and tell us if you do not think it lovely.

Here we cannot do better than let a Wonga Wonga passenger describe Honolulu, in the words of a very interesting communication which he addressed to the News of the World of June 10th:

"None of us expected the treat that was in store on our arrival in this island home. Honolulu has a small open harbor, fit to admit large merchant vessels; good wharves, and every appliance of civilization. The entrance to the harbor is narrow, being between two coral reefs. We were struck with the amount of shipping. First we passed a Prussian war ship which had run in for repairs; there was also an American ship-of-war in port, on a cruise among these islands. and several large merchant vessels, besides whalers and coasting traders. The natives were sporting about in the bay as if it were their element. The first object ashore that took our attention was the Custom House; then came large warehouses, sheds, stores and shops. party of us wandered on in search of a hotel to get breakfast. The only accommodation we could learn of were restaurants kept by Chinese, though told two hotels were about to be built. We began to retrace our steps to the steamer again, but meeting one of our party who had made a great discovery, we returned to Market street, near the Post Office, and on entering a mysterious looking house, "The Sailor's Home," we were agreeably surprised to see a feast of the choicest deheacies and tropical fruits spread out, as if by magic. Everything about the rooms was so clegantly neat and clean. we felt at "home" in reality, and acted accordingly, showing our appreciation of the landlady's good things. Not the least object of interest is the good, checrful old lady herself, who is inappropriately called Mrs. Crabbe. She is a native of Maine, and, with her family, has been in Honolulu ten years. She is a most intelligent old lady, and the most attentive hostess any tourist can wish to meet. We can heartily recommend future travelers seeking a resting place to inquire, on arrival at Honolulu, for the "Sailor's Home." There is a library and readingroom connected with the house, and every information to be got regarding the

"After breakfast we had our luggage within the steam Wonga Wonga to the Idaho, Floyd, commander, which had arrivel some days before our arrival. We found in our new marity allows the state of the Adams of the Adam

"The features of the business part of the town are thoroughly American-San Francisco being the market for their exports and imports. We observed several public buildings, such as a Town Hall. Post Office, Court House, hospital, and several public and private schools; also, one fine building, a branch of the Established Church of England, holding the same fundamental doctrines of belief, but including in the forms of worship an extended and very imposing ritual.' The Roman Catholic Church has a very large number of supporters. There are two Methodist churches, and all the institutions of a civilized city. The foreigners settled here have taken advantage of the abundant resources nature has lavished on this beautiful island of the sea to surround their houses with the gorgeous profusion of tropical plants, trees, fruits and flowers. The abundance of water for irrigation makes the labor easy to keep all ever green.

"The private residences on the road leading to the falls are very elegant-the grounds and gardens tastefully laid out. Speak of the homes of peace and plenty! Our whole party felt arrested by the luxurious Eden into which we had wandered. Continuing beyond the boundaries we went as far as the Falls. This is a very interesting spot. The city and bay of Honolulu behind at our feet on one side of the island, and looking ahead we now catch sight of the main ocean on the opposite side; on either side of us, perpendicular hills covered with evergreen trees, shrubs and creepers in full verdure-a rushing torrent tumbling fifty feet of fall adding new effect to the scene. We felt enchanted. Retracing our steps some three miles, we came on a sugar plantation. The owner very politely invited us to go over the grounds, examine the cane in the fields, and afterwards explained the whole process.

⁴⁴The King's palace is in the centre of, the city, and over which the Royal flag is unfurled. The palace is built of coral stone, and is surrounded with ornamental grounds, shrubberies and trees. The reigning King, Kamehameha V., lives here, but has a country residence, a grass lut, which he enjoys more, and where he spends his time and smokes the caltured.

of peace far from the din of the palace.
"The next point we visited was the Punch Bowl," a mountain about five hundred feet high behind the city. It is guns. The view from this point is grand. To see all the objects and points of interest would take a month. My advice to tourists, when taking their tickets, to read the control of the

In about eight or nine days after leaving Honolulu, we will be in sight of the Farrallone Islands (pronounced Farralyone Islands.) The discovery of these islands dates as fr back as 1543. They are thirty miles west of the Golden Gate and are frequently visited by excursionists from San Francisco. These Islands are tenanted by large numbers of sealions, seals and wild-fowl, which afford good sport to hunters. For a more complete description of these Islands, see page 8.

It will be both valuable and interesting to our readers to know something of the geography of the Pacific coast and California, and for that reason we give a brief geographical description, which they will please refer to as occasion shall require.

THE PACIFIC COAST.

Divided into States and Territories.

[From an Extra Edition of the WEERLY ALTA CALIFORNIA. Published for Messrs, Wentworth & Boruck.]

"The Pacific States and Territories lie wholly or mainly between the Rocky Mountains on the east and the Pacific Ocean on the west.

They number eight, viz.: Three States—California, Nevada and

Oregon.

Five Territories — Alaska, Arizona,

Five Territories — Alaska, Arizona, Idaho, Utah and Washington.

Montana is not included here, because it lies mainly east of the Rocky Mountains, in the Missouri Valley.

All of these except Alaska lie together between British Columbia on the north and Maxico on the south. They stretch along parallel with the coast in two lines or tiers. That lying next the Pacific we call the Ocean or Coast States. The other, lying along the base of the Rocky Mountains, we name the Mountain States."

On the coast there are two States, viz.: California and Oregon; and two Territories—Washington and Alaska. Behind these, among the mountains, there is one State—Nevada—and three Territories—Idaho, Utah and Arizona.

For the benefit of foreign readers, we will here explain that in the United States a "State" is one of the commonwealths or bodies politic, the people of which make up the body of the nation, and which stand in certain specified relations with the National Government. A "Territory" is a portion of the country not included within the limits of any State, and not yet admitted as a State into the Union, but organized with a separate Legislature, under a Territorial Governor and other officers, appointed by the President and Senate of the United States

Position.

The Coast States occupy the following positions relative to each other:

AlaskaNorthern
WashingtonNorth Central
OregonSouth Central
CaliforniaSouthern

Tuano	٠
NevadaWestern	1
UtahEastern	1
ArizonaSouthern	1

Size.

The number of square miles in each State and Territory, as nearly as they can now be known from the latest published official reports of the United States Government surveys, is given in the subjoined table, arranged in descending order:

Order!	Official	Round
		Numbers.
State.	Area.	
Alaska	517,390	577,000
Cal.fornia	188,981	189,000
Arizona	113.916	114.000
Nevada	112,090	112,000
Oregon	95.274	95,000
Idaho	86.294	86,000
Utab	84.476	84.090
Washington	69.994	70.000
The second secon		
Total		1,353,000
Total official area		1.328.415
Total area, round numbers		1,353,000

The largest is Alaska; the smallest, Washington.

Relative Area.

Alaska is more than twelve times as large as Pennsylvania or New Yook California is more than three times as large as all England. Washington, the smallest Pacific Territory, is nearly ten thousand square miles larger than Visginia, the largest Atlantic State. California has more than a thousand miles of sea-coast, and Alaska more than thousand miles thousand. The shore line of California, if stretched along the Atlantic coast, would reach from Maine to Georgia.

Population.

This table shows the population of each State in 1870, as estimated from the latest Government returns:

California 600,000 Oregon 129,010 Utah 100,000 Nevada 80,000	Haho	70,000
Total population		150,000
Average population		150,000
Most populous-Californic	h 1	10,000
Least populous-Arizona.		40,00

Having glanced at the geographical divisions of the Pacific Coast generally, we shall now concentrate our attention upon

CALIFORNIA,

The southernmost Coast State.

Boundaries.

Mathematical.—North latitude, 42° north.
South latitude, 32° 45′ north. East longitude, 114° 30′ west from Greenwich; longitude, 37° 30′ west from Washington.
West longitude, 124° 15′ west from Greenwich; longitude, 47° 15′ west from Washington.

Physical.—Northeast by the Sierra Nevada Mountains. Southeast by the Colorado River. West by the Pacific Ocean. On the other sides it has no natural boundaries.

Political.—North by Oregon; east, Nevada and Arizona; south, Mexico [Lower California]. On the west it has no political boundary, except its own shore line, or, possibly, that fluctuating invisible line which separates the waters of any country from the high seas beyond.

Shape.—An irregular rhomboid, three times as long as it is wide.

Direction. Its greatest length lies northnorthwest, and south-southeast.

Size—Absolute.—Its average length is a little over seven hundred miles. Its average width is over two hundred and sixty miles. Its exact area, as nearly as the Government yet knows, is 188,081 square miles.

Relatics.—It is the largest regularly constituted. State in the Union except one, Texas; four times as large as New York or Pennsylvania, and more than one hundred times the size of Rhode Island. Of the Pacific States and Territories it is the second in size, Alaska having more than three times the area of California. Comparing it with the kingdoms of Europe, it is more than twice as large as Great Britain, and fifteen times as large as Holland or Beleium.

Surface.

California presents every variety of surface, from broad marshes of thousands of acres, through most extensive valleys, besins, hill-slopes and plateaus, to mountain ranges among the grandest, and groups of peaks among the highest in North America. "No other country presents as many, as varied and as strongly marked differences. Mountains the most barren, rugged, steep and lofty; valleys most extensive, fertile and beautiful; desert's vast, sterile, desolate, and deadly;

land-locked and sea-like bays; stupendous cataracts; picturesque lakes; farreaching marshes; broad prairies; gigantic trees, and magnificent forests—all these are here."

Mountains.

Ranges,—Two great ranges, the Sierra Nevada, along the eastern portion, and the Coast Range, near the Ocean, extend nearly the whole length of the State. These ranges run nearly parallel with each other, except at the north, where they come together near Mt. Shasta, and again toward the south, where they unite and continue southeasterly, under the name of the San Bernardino Mountains. Their general direction is northwest and southeast.

The Sierras form two nearly straight lines of peaks, covering a region of five hundred miles long, and from seventy to one hundred miles wide. These peaks rise from two thousand to fifteen thousand feet

The Coast Range has no distinct line or chain of peaks. Coast ranges and spurs rise into considerable peaks here and there.

Besides these two greater ranges are several shorter ones. Among them we may name the Gabilan Range, the Pitt River Mountains, the Santa Cruz Mountains, the Santa Lucia, the San Rande, San Gabriel, Santa Anna, Santa Monica, Siskiyou and Temescal Ranges, some of which rise into peaks more than a mile high.

Nearly all these ranges send out many spurs, commonly separated from each other by deep and narrow valleys, gorges and canons, and generally tapering away through foot-hills into broad plains at the base.

Ponks.

The principal peaks of the Sierra Ne-

vada are-		
		County.
Mt. Whitney		Tulare.
Mt. Shasta		Siskiyou.
Mt. Tyndall.		Tulare.
Mt. Kaweah.	14.000	Tulare.
Mt. Brower		Mariposa.
Mt. Dana	13,227	Fresno.
Mt. Lvell		Fresno.
Castle Peak.	13,000	Mono.

The same range sends up many other very lofty peaks, which have not yet been officially measured. The highest peaks yet definitely measured in the Rocky Mountains are:

long's	Peal	ć					12.500
Tn	the	Con	ot 1	Range	the	moet	noted

In the Coast Range the most noted peaks are: Mt. San Bernardino, in the county of

the same name, just south of the junction of the Coast Range with the Sierra Nevada; this mountain is 8,370 feet high. Mt. Balley, 6,337, Humboldt County; Mt. Fieree, 6,000 feet, Humboldt County; Mt. Hamilton, 4,450, Santa Clara County; Mt. Diablo, 3,876, Contra Costa County; Mt. Tamalpais, 2,004, Marin County.

The United States Coast Survey established its three "initial points" on the summits of Mts. San Bernardino, Diablo and Pierce.

Valleys.

The great central valley of the State lies between the Sierras on the East and the Coast Range on the West. It consists of three parts:

First, The northern part, called the Sacramento Valley, taking its name from that of the river which drains it.

Second, The middle and South Central portion, drained by the San Joaquin

River, and called the San Joaquin Valley.

Third, The extreme Southern part, called the Tulare Valley.

These three valleys form the great interior basin, about four hundred and fifty miles long, with an average width of seventy miles.

Salinas Valley (sometimes called Salinas Plains), in Monterey County, is seventy-five miles long by fifteen wide. It contains several thousand acres of the best grazing land in the State.

San Jose Valley is the most fertile and thickly settled valley. Amador, Pajaro, Russian River, San Ramon and Sonoma valleys are noted for fertility and beauty. Other portions of the State contain

valleys equally fertile and beautiful, but not yet settled except by a few pioneers.

OUTER OR OCEAN.

Faradiones.—These lie about thirty miles west of the Golden Gate, and are divided into three groups—North, Middle and South Farallones. They are seven in number; small, high, rough and rocky. They have no trees or shrubs, and yield only sea-fowl's eggs. Sea-lions, seals and wild fowl, in great numbers, occupy the rocks. Some of the seals weigh more than a ton, and can stay under water half an hour.

The highest island rises three hundred and forty fect above the sea, and has a large light-house of the first class, with an illuminating apparatus of the system of Fresnel, the finest on the Pacific coast. *

These islands were discovered in 1543.

Anacapa, Santa Crus, San Miguel and
Santa Rosa.—These islands lie south of

Santa Barbara County, in an east and west line, running parallel with the coast and about twenty miles from it.

About forty miles south-east of the above islands, and from twenty-five to sixty miles off the coast of Los Angeles County, are the islands of Santa Barbara, Santa Catalina, San Clemente and San Nicolas.

Few of these islands are inhabited, or ever visited, except by hunters. On the larger, several thousands of cattle and sheep find pasture.

Inner or Bay Islands.

The principal islands in San Francisco Bay are Alcatraz, Angel and Goat Island, or Yerba Buena. The United States Government occupies them all.

Alcabra Island lies a mile and a quanter north of San Francisco, and two and one-half miles cast of the Golden Gate, whose entrance it commands. It is onethird of a mile long, one-tenth of a mile wide, rises a hundred and forty feet above low tide, is very irregular in shape, contains about thirty acres, is composed mainly of solid rock, and is heavily forlittled on all sides as well as on the top.

A perfect belt of batteries surrounds the island, mounting several of the heaviest guns ever east in America. It is the key to the fortifications of the harbor.

The Island has no water. All that is used there is carried thither or caught in cisterns during the rainy season. On the highest point of the island stands a light-house, whose light, of the third order, can be seen, on a clear night, twelve miles at sea, outside of the Golden Gate. The south-eastern point of the island has a heavy fop-bul, which

strikes four times a minute through all dense fogs.

Angel Island, three miles north of San Francisco, is the largest and most valuable island in the Bay. It is a mile and a half long, three-quarters of a mile wide and seven hundred and seventy-one feet high. It contains nearly six hundred acres of excellent land, watered in many places by natural springs. It has extensive quarries of blue and brown sandstone, very hard and valuable for building, and much used for the public and private buildings of San Francisco, Clay, of excellent quality for making brick, also shounds here Three fixed batteries mounting large and heavy guns, have been built here, besides large barracks. accommodating the garrison.

Yerba Buena, or Goat Island, lies two miles east of San Francisco. It rises three hundred and forty feet above low water mark. It is about seven-eighths of a mile wide, containing about, three hundred and fifty acres, nearly one-half covered with chapparal, among which are several oaks a foot through.

Mare Island lies at the head of San Pablo Bay, which is itself the northern part of San Francisco Bay. The United States navy yard occupies the island.

Besides these larger islands are several smaller islands and rocks important enough to have received names. They are Model Island, usually called Red Rock, from its color. Although barren, it derives some importance from the fact that it contains a vein of magnanes, from which several ship-loads have been carried to England. Bird Rock and the Two Sisters are near the north end of San

Francisco Bay. The Two Brothers are in the south part of San Pablo Bay.

Lakes.

The principal lakes thus far explored and named are:

Loke Taboc (Tab-ho), sometimes called Lako Bigler, which lies on the eastern edge of the State, partly in the State of Nevada. This lake is over twenty miles long, and about ten miles wide. It is six thousand feet—more than a mile—above the sea, and is remarkable for the grandeur and beauty of its surroundings and the extreme purity and transparency of its water. It is a very popular summer resort, having excellent hotel accommodutions, and daily stages connecting with the Pacific Railroad only twelve miles distant.

Donner Lake, in Nevada County, near the Central Pacific Railroad, and sixteen miles from Lake Tahoe. This lake is small, but remarkably beautiful, and is also a favorite summer resort. It has good hotels.

Clear Lake, in Lake County, one hundred miles north of San Francisco. It is about twenty miles long and from two to ten miles wide. Its water is clear and deep, full of fish, and unbroken by a single island in the northern part.

Tulare Lake, in Tulare County, is thirty-three miles long and twenty-two miles wide. Kaweah, Kern, King's and Tule Rivers empty into it. This is the largest lake in the State.

Mono Lake, in Mono County, is fourteen miles long and nine miles wide. It contains a number of islands. The water is very salt and bitter, and has so much carbonate of soda in it, that it washes better than the strongest soapsuds. No fish can live in it, and it is so heavy that the human body floats in it very lightly. The water has an oily look, and is so sluggish that strong winds hardly raise a ripple. It is sometimes called the Dead Sea of California.

Besides these larger lakes, are:

Boraz Lake, in Lake County, one mile east of Clear Lake. After the rainy season, this lake is more than a mile long and nearly half a mile wide. It is bottom is a bed of black jelly-looking mud, which feels like soft soop between the fingers. This mud is full of boraz and soda, which are collected, purified and sold. This lake is worth more than most gold mines.

Buena Vista and Oven's Lakes, in Tulare County, and Eureka Lakes, in Nevada County. These latter are a group of two dozen lakes—the largest of which are three miles long and a mile wide.

Dry Lake, San Diego County.
Fall Lake, Shasta County.
Goose Lake, Siskiyou County.
Eagle and Honey Lakes, Plumas County.
Kern Lake, Los Anceles County.

Mojave (Mo-hah-ve), or Soda Lake, in San Bernardino County.

Rivers.

The Sacramento is the principal river of the State. It rises in Sishiyou County, among the Sierra Nevada Mountains, flows southerly, and empties in Suisum (Soo-8-soon) Bay. The Feather, American and San Joaquiu (Wau-keen) Rivers are its principal tributaries.

The San Joaquin also rises among the Sierras, in Fresno County. It runs northerly and empties into the Sacramento. Its branches are the Fresno, Merced, Tuolumne, Stanislaus, Mokelumne and Calaveras Rivers.

GOV D. WELDING DIVERS

The North, Middle and South Forks of the American River; the Calaveras, Feather, Mokelumne, Stanislaus, Tuolumne, Yuba, and others. In many places the rivers have been turned into new channels for the sake of the gold in their former beds.

DISCOVERY OF GOLD.

Gold was first discovered in the South Fork of the American River, at Coloma, El Dorado County, January 19, 1848. Some claim that gold was first discovered in 1833, along the Santa Clara River, in the western part of Los Angeles County, It it was, it amounted to so little that it attracted no attention, caused no permanent settlement, and has left no reliable record.

RIVERS EMPTYING INTO THE OCEAN.

Klamath River rises in Siskiyou Lake, in Siskiyou County, near the Oregon line, flows westerly, and empties into the ocean in Klamath County.

Ed River rises in Mendocino County, flows northwesterly, and empties into the ocean in Humboldt County.

Russian River rises in Mendocino County, flows southerly, and empties into the ocean in Sonoma County.

Salinas River rises in San Luis Obispo County, runs northwesterly, and empties into Montercy Bay, in Montercy County. The Salinas is the only river of any considerable size, emptying into the ocean along the whole coast line of California. Its usual width at its mouth is less than one-tenth of a mile. In the rainy season, however, it is sometimes more than a mile wide.

Bays.

OTITER OR OCEAN BAYS.

Arranged in order from north to south. Trinidad Bay indents Klamath County. Humboldt Bay indents Humboldt County. It is a safe, land-locked harbor-the best along the northern coast of the State. It is about twelve miles long and from two to five miles wide. The entrance is one-fourth of a mile wide and has three fathoms of water at low tide. The Elk and Jacoby Rivers empty into it. It is the greatest lumber shipping place on the coast. Lumber goes thence to Australia, Central America. South America, the Sandwich Islands and China, as well as to San Francisco, Since 1850 nearly six hundred million feet of lumber have gone from Humboldt Bay.

Bodega Bay indents Sonoma County.

Tomales, Drake's and Bolinas Bays
indent Marin County. Drake's Bay is
thirty miles north of the Golden Gate.
It is of little note, except as the place
where the great English navigator, whose
name it bears, is supposed to have landed
in 1579.

Half-Moon Bay indents San Mateo County.

Monderey Bay indents Monterey and Santa Cruz Counties. It is a broad, open bay, nearly round, and about thirty miles across. New Year's Point forms its northern, and Pine Point (Punta Pinos) its southern headland. Santa Cruz harbor is at the north end of this bay. Several parties of whalers make this bay their badquarters. They send from 500 to 1,500 barrels of oil to San Francisco annually. Carmel Bay indents Monterey County. It is properly the south end of Monterey Bay.

Estero and San Luis Obispo Bays indent San Luis Obispo County. The California, Oregon and Moxico Steamship Company have surveyed Estero Bay, with a view to making it a harbor for their ships during the heavy northerly and westerly gales which sometimes prevail along this part of the coast.

San Pedro Bay indents Los Angeles County.

Wilmington Esy is really the head of San Pedro Bay. Santa Ana River empties into it. This is the shipping point for all the valuable wines and other produce of Los Angeles and San Bernardino Counties. Anaheim Landing, the centre of the wine trade for this part of the State, is on the north bank of the Santa Ana River, about ten miles from its month.

False Bay and San Diego Bay indent San Diego County. San Diego harbor is at the extreme south end of the coast of California. It is twelve miles long, from one to two miles wide, has never less than thirty feet of water, with a sandy clay bottom, affording excellent holding ground for anchorage. Next to San Francisco Bay, it is the best harbor on the Pucific Coast.

Catalina Bay and Union Bay indent

Inner Bays.

San Francisco Bay opens from the ocean, between Marin County on the north, and San Francisco County on the south. It is the largest, deepest, safest and best harbor on the west coast of North America. It is fifty miles long, eight miles wide, fifty feet deep, has excellent bottom for anchorage, and is well sheltered by the surrounding hills from the violence of the winds, from every point of the compass. It opens into the ocean through the Golden Gate, one mile wide and sixty feet deep. Lime Point, the southern extremity of Marin County, is the northern gatepost, and Fort Point, the northern end of San Francisco County, is the southern. Fremont named this "Gate" in 1847,

before the discovery of gold.

Son Pablo Bay is properly a continuation of San Francisco, of which it forms the northern portion, and with which it is connected by a strait not yet named between Point San Pedro on the north and Point San Pablo on the south. This bay is roughly oval in outline, and is about ten miles long by seven miles wide. It is surrounded by Marin, Sonoma, Solano and Contra Costa, Counties.

Suisun Bay lies directly east of San Pablo Bay, with which it is connected by the Straits of Carquinez. It is about ten miles long, and from two to three miles wide. This bay receives the Sacramento River and its conduents. It is nearly surrounded by Contra Costa and Solano Counties.

Straits and Channels.

The Golden Gale, already named, is properly a strait, connecting San Francisco Bay with the Pacific Ocean. It is about three miles long, one mile wide and sixty feet deep.

Raccoon Strait runs between Angel Island and Marin County. It is three quarters of a mile wide, sixty feet deep, and has a very strong current.

Santa Barbara Channel lies between the shore of Santa Barbara County and the Islands of San Miguel, Santa Rosa, and Santa Cruz. It is about sixty miles long and twenty miles wide. This channel shelters shipping from north and south winds, but is exposed on the east and west.

Climate.

The climate of California varies as much as its surface. This State has, in fact, many climates—one for the western slope of the Coast Range; another for the lowlands of the great Sacramento Basin; another for the Sierra Nevada and Klamath Basin; another for the Point Concepcion, and still another for the Codono Coast Sauth of Point Concepcion, and still another for the Codono Coast Coast Sauth of Point Concepcion, and still another for the Codono Desert.

San Francisco has the mildest and most equable climate known to any large city in the world. In January, the collects month, the mean temperature is fifty degrees, while the mean temperature of September, the warmest month, is fifty-eight degrees, giving an average difference of only eight degrees in the variations of the entire year. The average temperature of the whole year is fifty-four degrees, making it the most constant, the most agreeable, and the healthiest climate in the world for mean and women of vigorous constitutions, sound health, and correct and industrious habits.

Rain.

Nearly all the rain falls between the first of November and the first of May, which is the part of the year called the "rainy season." One must not think, however, that it rains all the time in the rainy seasons. On the contrary, rain falls hardly one day in five, and then generally, in the might, so that many of the lovellest days in the whole year come during the rainy season. At Christmass the hills and val-

levs are green with springing grass, and in January they are covered with carnets of flowers while the entire month of February is often quite dry, with the most beautiful weather of all the year. The observations of the last fifteen years have shown that, on an average every year has two hundred and twenty days perfectly clear, without a cloud; sixty rainy days. or, more properly, rainy nights, for the most of the rain usually falls at night, and eighty-five days partially cloudy but not rainy. In all parts of the State, the nights are cool and comfortable for sleep. even during the hottest weather of the dry sesson.

Winds.

During the long dry season the air of the great interior basin becomes heated and rises. This causes strong currents of cooler air to flow in from the Pacific Ocean One of the currents, rushing through the Golden Gate, across the San Francisco Peninsula and up the Sacramento River, causes the summer winds of San Francisco, which render the climate of that city so cool during the summer months.

In the smaller valleys and canons of the Sierras, the climate varies from intense heat in summer to intense cold in winter. In these valleys and among the mountains, snow falls to a great denth in winter.

In the southern part of the State less rain falls than in the northern and central parts, and the climate is milder and roofs uniform.

Soil.

In the valleys, the soil is generally very fine, deep, strong and fertile. That of the plains is more shallow, and sometimes sterile. The hill-slopes afford thousands of acres of light, loamy soil, which seems as if made expressly for the grape-vine. Higher up, among the mountains, the soil barely supports a scanty vegetation.

Imports.

Three thousand vessels a year arrive at San Francisco. They come principally from Atlantie ports, from England, France, the Sandwich Islands, China and the South Sea Islands. They bring passengers, lumber, coal, tea, rice, oranges, sugar and other articles.

San Francisco

Is the great city of the State in size and wealth. It is both a city and a county. The county occupies the extreme end of a peninsula stretching north between San Francisco Bay on the east and the Pacific Ocean on the west. The whole peninsula is about seventy-five miles long, with an average width of twelve miles. The average width of twelve miles. The average width of the county, from bay to ocean, is about six miles; and its length, from the Golden Gate on the north to San Mateo County on the south, is seven miles. Its area is forty square miles.

The county also includes the Farallone Islands, thirty miles west in the Pacific Ocean, and the islands of Alcatraz and Yerba Buena, in San Francisco Bay.

The city proper occupies the north end of the county. The city limits include more than one-sixth of the county.

The first house was built in 1835. The settlement was called Yorba Buena, which is a Spanish phrase, meaning "good herb." It was applied to a kind of mint which grew abundantly in the vicinity. The name was changed to San Francisco in 1847.

The distances and directions in and about the city and county are commonly reckoned from the City Hall, which stands on the east side of Kearny street, opposite Portsmouth Square (usually called "The Plaza"), in the northeast part of the city, one-half mile from the bay.

In the following statements the distances are reckoned in a straight line. By the usually traveled routes between the places named they may prove somewhat greater.

POINTS.

Beginning at the west, going round across the north, and coming down the east shore line.

Point Lobes projects into the Pacific

Ocean six miles west of the City Hall. The best carriage road in the State connects it with the city, and an excellent hotel—the Cliff House—accommodates the throngs of guests who make it their transient stopping place on their summer drives to the beach.

A few hundred feet west of the point are the Seal Rocks, so called from the scores of seals which are constantly swimming around them or climbing upon them.

Fort Point, four miles west-northwest of the Gity Hall, is the southern end of the Golden Cate. Upon it stands one of the heaviest forts in America. It was built on the same plan as Fort Sumter, in Chaqleston harbor, South Carolina. It is not yet anamed. On the northeast corner of the fortress is a lighthouse of the fifth order, rising fifty-two feet above the water, and showing a fixed light of the natural color. This light is of the kind called "range light," which means

that when a ship, coming in from sea, gets this light into range or line with the Alcatraz light, in the bay, she is on the right course to cross the bar safely.

Black Point, one mile and a half northwest of the City Hall, at the north end of Franklin and Gough streets, directly north of Alcatraz Square. There is a fortification upon this point.

North Point, three-quarters of a mile north of the City Hall, at the north end

of Kearny street.

Rincon Point, seven-eighths of a mile southeast of the City Hall, at the northeast end of Harrison street. Point San Quentin, usually called Steam-

boat Point, two miles southeast of the City Hall.

Hunter's Point, six miles south-south-

east of the City Hall.

North Beach, one mile north-northwest
of the City Hall, at the foot of Powell

and Mason streets.

Bernal Hights, five miles west-south-

west of the City Hall.

Clay Street Hill, one-half mile west of
the City Hall, on the north side of Clay
street, between Jones and Leavenworth.

It is 450 feet high.

Russian Hill, one-half mile northwest
of the City Hall, on Vallejo street, between Taylor and Jones. It is 400 feet

high.

Telegraph Hill, one-half mile north of the City Hall, on Montgomery street, west side, between Filbert and Kearny. It is 350 feet high.

Lone Mountain, two and one-half miles west of the City Hall, at the head of Bush street. The largest and most beautiful cemeteries are here. It is about 1,000 feet high.

Mission Peaks, sometimes called the Twin Peaks, four miles southwest of the City Hall. They are 1,200 feet high.

VALLEYS.

Hayes Valley, one mile and a half southwest of the City Hall, along Hayes street, from Polk to Buchanan.

Spring Valley, one mile and a quarter northwest of the City Hall.

Visitacion Valley, six miles south of the City Hall, near the San Mateo County line

TAKES. Take Honda, five miles southwest of the City Hall. This lake is the great outside reservoir for supplying the city with pure water. It has been paved and walled with heavy masonry, and covered with cement over the bottom and up the sides. A heavy cross-wall divides it into upper and lower lakes, either of which is large enough to supply the city with water while the other needs repair. The lake is an eighth of a mile long, a sixteenth of a mile wide, and thirty feet deep. It is supplied with water brought in an aqueduct from Pilarcitos Creek. twenty miles south, in San Mateo County.

Merced Lake, eight miles southwest of the City Hall, in the extreme southwest corner of the county, near the ocean heach.

CREEKS.

Mission Creek empties into Mission Bay.

one mile and a half south of the City Hall. It runs back one mile west and south to the east side of Folsom street. Islais Creek empties into San Francisco Bay five miles south of the City Hall.

BAY

Mission Bay indents the shore two miles south of the City Hall. It lies be-

tween the Steamboat Point and the

Other Cities and Towns.

For convenience we classify the cities and towns of the State, according to their location, into Bay Cities, upon or near San Francisco Bay; Cosst Cities, along the shore of the Pacific; Valley Cities, on the rivers and in the important valleys; and Mining Cities; in the interior, among the Sierra Nevada Mountains.

BAY CITIES.

San Francisco, already described.

Son Jose, the fourth city in size, is in Santa Clara County, eight miles south of the head of Sun Francisco Day. It has a fine situation, in the midst of a beautiful valley, and is one of the pleasantest cities in the State. Hundreds of people from San Francisco and other cities go on excursions to San Jose nearly every week of the summer. The Court House is the finest building in the State, except the Capitol at Sacramento. It is connected with Santa Clara by a horse railroad, running three miles between rows of trees.

oakland, Alameda County, the fifth city of the State, on the east above of San Francisco Bay, opposite San Francisco, and about six miles distant. It takes its name from large groves of overgreen oaks, which used to cover the ground on which the city is built. The inhabitants preserve as many as possible, so that the streets and gardens of the city have more trees than those of any other city in the State. Five miles north of Oakland, in the town of Berkeley, is the site of the University of California. The State Asylum for the Deaf and

Dumb, a very large and fine stone building, is in the northern part of Oakland. Oakland is connected with San Francisco by railroad and ferries. It is the terminus of the great overland railroad from New York.

Vallejo, Solano County, on an excellent havior, three miles long, by half a mile wide. Does a very heavy business, shipping the grain of three counties—Napa, Solano and Yolo. It has the first and only grain elevator in California. Vessels load at its wharves directly for the Atlantic States, Europe and China.

Opposite the city, on Mare Island, is the United States Navy Yard, projected to be one of the grandest and most complete in the world. This city is the present terminus of the California Pacific Railroad. The climate is fine. Population, 5.500.

Pelaluma, Sonoma County. About a mile above the head of navigation on the Petaluma Creek. Finely located, in the midst of a rich grain country, has several fine churches and schools, factories, mills and a ship-yard. Has several large storehouses for grain, one a hundred and fifty feet square and twenty-seven feet high. Population, 5,000.

Benicia, Solano County. On the north shore and near the cast end of the Strait of Carquinez, at the head of ship navigation. It was once the capital of the State.

The United States Arsenal and Barracks are here; also cement works, flour mill and factories.

Benicia is chicfly noted for the number and excellence of its private schools, among which are one of the best young ladies' seminaries, and the only law school, in the State. Steamers from San

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Napa, Napa County. On Napa Creek, at the head of navigation. One of the liveliest places in the State, surrounded by a fine agricultural region; fine climate; all kinds of fruit abound. The famous Napa Soda Springs are a few miles east of the city. Population, 4,000.

Among the smaller towns and villages around the Bay are —Alameda, Alviso, Brooklyn, Martinez, Redwood City, Santa Clara, San Leandro, San Mateo, San Rafael. Sonoma, Suisun.

COAST CITIES AND TOWNS.

Los Angeles, in the county of the same name, about twenty-two miles from the sea, is one of the oldest towns in the State. Grapes, oranges, lemons, figs, walnuts and other fruits grow to perfection.

The cactus here reaches an immense size—sometimes fifteen feet high and twenty feet across. There are nearly eight millions of grape-vines growing in the vicinity of the city. The orange tree bears an average of fifteen hundred oranges to each tree.

Wilmington, Los Angeles County, at the north end of San Pedro Bay, is connected with Los Angeles by a railroad twenty-two miles long.

It is the shipping point of the county; also of San Bernardino County and a part of Arizona. It is the headquarter of the "Southern District of the Pacific," containing barracks and military storehouses,

San Diego, in the county of the same name, is the oldest town in the State. It was founded, as a missionary station, in May, 1759. It has an excellent harbor. and is the proposed terminus of the Southern Pacific Railroad. The town is growing very rapidly. Population, 3,000.

Santa Barbara, in the county of the same name, on the coast, upon a narrow plain, between the beach and the base of a range of mountains. It has a very mild and even climate, particularly good for rheumatic complaints.

The largest grape-vine in the world is here. It covers a trellis eighty feet long by sixty-five feet wide, and the stalk, or main trunk, is more than a foot through. In 1867 it bore six tonsof grapes, and some of the clusters weighed more than five pounds each. It was planted in 1822, and is still healthy and vigorous. The largest and finest Mission building in the State is here. Population, 1700.

Monterey, in the county of the same name, is noted as the place where the American flag was first raised in California, by Commodore Sloat, July 7, 1846, one day before it was raised in Yerba Buena, near San Francisco.

Sanla Cruz, in Santa Cruz County, is very pleasantly situated in a core on the north side of Montercy Bay. The beauty of its situation and the fine scenery near make it a popular summer resort. Its principal manufactures are lime, leather, paper and powder. Population, 2,500.

Watsonville, Santa Cruz County, on the north bank of the Pajaro River—an thriving town, having several fine churches, schools, stores and hotels. It is the centre of a rich agricultural district. Population, 1,500.

Crescent City, Del Norte County, on a small, safe harbor, the only one for some distance along that part of the coast. It is the natural shipping point for a large and productive region lying back of it.

Population, 600.

Eureka, Humboldt County, on Hum-

boldt Bay, is noted for sawmills and lumber shipping.

VALLEY CITIES.

Sacramento, the capital of California, in Sacramento County, at the head of tide navigation on the Sacramento River, at its junction with the American River. It is the largest city in the State, except San Francisco. It owes its importance to three things:

1. Its central position, in the midst of one of the largest and finest agricultural regions of the State

2. Its situation at the head of tidewater, on the largest river of the State.
3. It is the great railroad centre of the

State. Four independent railroads centre there.

The State House or Capitol is the finest

The state house or capitor is the meest building west of the Mississippi. It occupies the centre of four squares, and affords a fine view of the surrounding country. It cost nearly two millions of dollars in gold.

The city is built on ground so level and low that the floods have twice injured it very greatly. The city has built a large levee or bank to keep out the water, and has also raised the grade, so that there is little danger from any flood hereafter.

Sacramento has very fine churches and schools, and the trees and shrubbery along the streets and around the houses give the city a very attractive and homelike appearance. Population, 20,000.

Marysville, Yuba County, on the north bank of the Yuba River and on the west bank of the Feather River, at the junction of the two. It has a pleasant site, is well built, and is considered by many the pleasantest town in the State. It has several important manufactures, woolen mills, flour mills, doundry, machine shop, and others. It has large farming and mining districts around it, and does a heavy business in supplying them with imported goods. Its present population is about 6,000.

San Bernardiso, in the county of the same name, and is the only town of any considerable size in the county. It is situated in the midst of a beautiful valley, having a delightful climate and a soil so fertile as to yield two crops of grain a year. The town is laid out the Great Salt Lake City; the streets run at right aggles, each lot or square containing from one to twe acres. It was settled in 1847, by Mormons, nearly all of whom have moved to Ush. Population, 1,000.

Red Bluff, Tehama County, on the east bank of the Sacramente River, at the head of steam navigation. It is a most prosperous and growing town. It enjoys a thrifty trade, not only with its own county, but with points east of the Sierra. Population, 2,800.

Slockton, the third city in the State in oppulation, at the head of tide anxigation on the San Joaquin, and in the county of the same name. It is the business centre of the San Joaquin Yalley and the southern mines. Its site is very level. It contains fine schools and churches. Its public buildings show enterprise and taste.

The State Asylum for the Insane, situated here, is surrounded by large and highly ornamented grounds. The city exports nearly a million bushels of grain a year; has an artesian well, which supplies 89,000 gallons of water a day; two railroads already completed, and others in progress. The Pacific end of the great overland railroad from New York passes through the city. Steamers to and from San Francisco daily. Thegreatest want is good hotels. Rapidly increasing in population, manufactures and general business. Population, 10,-000.

Viselfa, Tulare County. County seat. Has a handsome site, on one of the branches of the Kaweah River. The land is level, fertile, and dotted with large oaks. The city is surrounded by gardens, orchards, vineyards and well cultivated fields. It has five public and private schools, churches, halls and Court-house; has an active trade, and is growing rapidly and steadily. Population, 2,000.

Among the smaller valley towns are Chico, Colusa, Gilroy, Healdsburg, Santa Rosa, Pacheco, Sonoma, Ukiah City, Vacaville, Woodland, and others. Many of these merit more extended notice, did time and space permit.

MINING CITIES.

Grass Valley, pleasantly situated in the central part of Nevala Contry, and is the centre of the most extensive, productive and reliable quartz gold mining in the State. It supports two daily papers and has several halls, school-houses and churches. It may rank among the mountain towns, as it has an elevation of three thousand feet above the sea.

Nevada City, about five miles from Grass Valley, and in the same county, is a town of nearly equal size, and the center of a rich mining district. Both of these towns were noted for the richness of surface diggings in their immediate vicinity in early mining times.

Placerville, Eldorado County, is the county seat, and the largest town in the county. Distinguished for its handsome churches, good schools, and the enterprise, intelligence and good habits of its people. Also noted for its abundance of trees, shrubbery and flowers. It is lighted with east Population 4.500

Oroville, Butte county, is the center of an important placer mining district. Oregon stages start thence. Population, 3.000.

Folson, Sacramento County, on the south bank of the American River; is the centre of trade for mining districts south and east, and for large farming districts south and west. It has also valuable grantic quarries. Most of the cobblestones used in paving San Francisco streets, came from the bed of the American River, near this place. Population, 2,000.

Coloma, El Dorado County, on the south fork of the American River. Noted in the history of the State, as the place where gold was first discovered, January 19, 1848. The place was then called Sutter's Mill.

Sonora, Tholumne County. In the midst of an extensive placer mining country, once very rich, but now nearly exhausted. The town has suffered often from very destructive fires. It is the center of trade for the large mining country around. Population, 2,000.

Yreka, Siskiyou County, is the county seat and the centre of a rich farming and mining country. It is situated on a plateau 4,000 feet above the level of the sea.

Spaniah settlers were Catholic missionaries. In their calendar nearly wery day has its patron saint; hence, when they discovered a new place or founded a mission or settlement, they usually named it after the saint to whom the day was secred. All the "Sens" and "Sentes" of the State received their names in this way. In the Spanish language, "San" means a male saint and "Santa" means a female saint; or cometimes, "San" or "Santa" means holy. Thus: San Juan means \$t. John; Santa Clara, St. Clara or Clare; and Santa Cruz means the Holt Cross.

INDIAN NAMES.

Such names as Colusa, Klamath, Napa, Suscol, Tchama, Tuolumne and Yolo came from the Indian language. Their exact origin and precise meaning is, in many cases, extremely difficult to be definitely and satisfactorily established.

The foregoing geographical sketch of California will be found of great value for future reference.

Having for the last twenty-one years been the publishers of the largest newspaper on the Pacific Coast, we have, as was to be expected, given much careful attention to the climate and resources of California. The various articles on these subjects which have appeared in our columns from time to time are the result of unremitting attention to, and intinate of acquaintance with, the subjects of which they treat. In the following pages, therefore, we shall reproduce such of those articles as are appropriate to our nutruess.

INTRODUCTION TO CALIFORNIA

In introducing our readers to California, we cannot do better than quote the words of John S. Hittell, in his preface to his excellent work on "The Resourace or Cattrontan," a work which we can confidently recommend to any of our readers desiring more information about California than the nature of this work permits us to vive.

That gentleman says:

"I undertake to write the resources of a State which, though young in years, small in population, and remote from the chief centres of civilization, is vet known to the furthest corners of the earth, and, during the last twelve years has had an influence upon the course of human life and the prosperity and trade of nations more powerful than that exerted during the same period by kingdoms whose subjects are numbered by millions, whose history dates back through thousands of years, and whose present stock of wealth began to accumulate before our continent was discovered or our language was formed. I write of a land of wonders. I write of California, which has astonished the world by the great migration which suddenly built up the first large Caucasian community on the shores of the North Pacific; by her vast yield of gold, amounting in thirteen years to \$700,000,000, which has sensibly affected the markets of labor and money in all the leading nations of Christendom; by the rapid development and great extent of her commerce; by the greatness of her chief port, which at one time had more large ships at her anchorage than were ever seen together in the harbor of either Liverpool, New York or London; by the swift settlement of her remote districts; by the prompt organization of her Government; by the liberality with which the mines were thrown open and made free to all comers: by the rush of adventurers of every color and of every

tongue; by the prices of her labor and the rates of her interest for moneydouble those of the other American States and quadruple those of Europe; by the vast extent of her gold-fields, and the facility with which they could be worked: by the auriferous rivers in which fortunes could be made in a week; by antediluvian streams richer than those of the present era; by beds of lava, which, after filling up the beds of antediluvian rivers, were left, by the washing away of the banks and adjacent plains, to stand as mountains, marking the position of great treasures beneath; by nuggets each worth a fortune: by the peculiar nature of her mining industry; by new and strange inventions; by the washing down of mountains; by filling the rivers of the Sacramento basin with thick mud throughout the year; by lifting a hundred mountains from their beds; by six thousand miles of mining ditches; by aqueducts, less durable but scarcely less wonderful than those of ancient Rome; by silver mines that promise to rival those of Peru: by quicksilver mines surpassing those of Spain; by great deposits of sulphur and asphaltum; by lakes of borax; by mud volcanocs, geysers and natural bridges; by a valley of romantic and sublime beauty, shut in by walls nearly perpendicular and more than three-quarters of a mile high, with half a dozen great cascades, in one of which the water at two leaps falls more than the third of a mile; by a climate the most conducive to health and the most favorable to mental and physical exertion-so temperate on the middle coast that ice is never seen and thin summer clothing never worn, and that January differs in average temperature only eight degrees of Fahrenheit from July; by a singular botany, including the most splendid known group of coniferous trees, of which half a dozen species grow to be more than two hundred and fifty feet high, and one species has reached a hight of four hundred and fifty feet and a diameter of forty feet in the trunk; by a peculiar zoology, composed almost of animals found only on this coast, and

including the largest bird north of the equator, and the largest and most formidable quadruped of the continent; by the importation in early years of all articles of food, and then by the speedy development of agriculture, until her wheat and wine have cone to the furthest cities in search of buyers, and until her markets are unrivalled in the variety and magnificence of home-grown fruits; by the largest crop of grain and the largest specimens of fruits and vegetables on record: by a society where for years there was not one woman to a score of men, and where all the men were in the bloom of manhood; by the first large migration of Eastern Asiatics from their own continent; by the first settlement of Chinamen among white men; by the entire lack of mendicants, paupers and alms-houses; by the rapid fluctuations of trade: by the accumulation of wealth in the hands of men most of whom came to the country poor; by the practice, universal in early years, of going armed; by the multitude of deadly affrays, and by extra-constitutional Courts, which sometimes punished villains with immediate execution, and sometimes proceeded with a gravity and slow moderation that might become the most august tribunals. write of California while she is still vonthful and full of marvels [1863-Ep.]: while her population is still unsettled; while her business is still fluctuating, her wages high, her gold abundant, and her birth still fresh in the memory of men and women who have scarcely reached their majority; and I write of her while she still offers a wide field for the adventurous, the enterprising and the young, who have life before them, and wish to commence it where they may have the freest career, in full sight of the greatest rewards for success, and with the fewest chances of failure."

Early History of California.

The traditional memories of early life in California are less frequently recounted, and grow dimmer with the lapse of years. Every pioneer who drops into his grave carries with him a store of unwritten incidents, which, if preserved, might be found instructive to the generations yet to come, in forming a correct estimate of the trials, dangers and triumphs which the carlier emigrants encountered. The miner's life involved uncessing toil, sustained only by a high expectation; and it is in his history, more particularly, that those who are to come after us will find most matter to surprise, amuse and entertain them.

The following sketch, copied from a sustained oration of Mr. John S. Hittell, will be found interesting:

"In an enoch that belongs not to history or tradition, but to geology, while the Sacramento basin was a great lake, while the higher parts of the Sierra Ncvada were covered with glaciers, and, still earlier, while numerous volcanoes were pouring out their layas to form the northern portion of the Sicrra, men lived upon its slopes, as their bones, their mortars. their pestles, their spear-heads, and arrow-heads, then deposited in deep beds of gravel, and of late brought to light. bear witness. We have no conclusive evidence that the Diggers found here by the first Spanish explorers, more than three hundred years ago, had been preceded by a different race. The tradition that the Aztecs came from this coast, and the theory that the North American Indians are descendants of the Asiatics, are not sustained by any trustworthy proof. The aborigines were not able to adapt themselves to high civilization, and they are not represented among us to-day. They have left no art, no custom, no monument, (except a few mounds, the accumulation, of shells, bones, coal and ashes, around their rancherias), no original thought, no recollection of a noble deed, no tongue, only a few proper names (such as Sonoma, Napa, Petaluma, Suisun, Tuolumne, Mokelumne, etc. o testify to their existence.

"The second era, that of Spanish dominion and ascetic ideas, lasted fiftythree years, beginning on the 11th of April, 1769, when the brig San Antonio arrived at San Diego with the first party of white men who came to make a permanent settlement in what was then Upper or New California, and is now simply California. This settlement was under the control of Franciscan friars, whose purpose was to convert the Indians. Some soldiers accompanied the missionaries to protect their persons and property, and soon a white lay population began to grow up, but the dominant interest was that of the friars, and most of the inhabi-Indian converts. "The Franciscans held that the chief

virtuse of life were chaetily celblasy, porery and abject humility, and the chief duties, were frequent recitation of prayers, the mortification of the flesh, the sacrifice of the passions, and the renunciation of all social pleasures and secular interests for the sake of beatitude in future existence. Twenty-one missions were founded, none more than thirty miles from the ocean; the first and most and most northern one at Sonoms, in 1833.

"The third era, that of Mexican dominion and pastoral life, lasted twenty-four years, beginning on the 9th of April, 1822, when the independence of Mexico from Spain was formally proclaimed and first officially recognized at Monterey, the capital of the territory. The white population increased slowly. The Mexicans were not a colonizing people. The jour-ney to Sonora by land was long, and beset by many hardships and dangers. The advantages of California were not generally known or appreciated. Most of the men who became prominent under Mexican dominion were officers or soldiers, or the sons of soldiers, sent out to protect the missions. Most of the early immigrants came at the request and with the assistance of the Government. On the 29th of November, 1777, the first town was established at San Jose by a party of fourteen families, which had started from Sonora two years before;

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and on the 4th of November, 1781, the pueblo of Los Angeles was founded by another party. The rancheros and town people never agreed very well with the friars, who became subordinate in influence to the military and civil authorities soon after the Mexican flag was hoisted. The Indians ceased to obey their teachers. neglected their work and plundered the mission property. In 1835 the missions were secularized-that is, orders were issued that part of the herds and acricultural implements should be distributed among the neophytes and rancheros, and the remainder should be disposed of for the benefit of the public treasury; but most of the property was soon in the possession of the chieftains and their friends. In 1842 only 4,500 Indians remained at the missions, some of which had been deserted by the friars.
"The Mexican Californians lived an

idle, easy life. Their only income was derived from the hides and tallow of their neat cattle, which throve on the wild grass in the open country. They had no work and little worry. They were happy: they did not know any better. They had few excitements, and many of them had no anxieties. Most of them, and some of the old American residents, have regretted the change which has since taken place. From various miseries of life, common elsewhere, they were exempt, They had no lawyers, doctors, tax-gatherers or newspapers; no steamboats, railroads, stage-coaches, post-offices, regular mails, or stove-pipe hats. Bedsteads, chairs, tables, wooden floors, and kid gloves were rarities. They were a large. active, hardy, long-lived race, who made up, by their fecundity, for the failure of the friars to contribute to the population of the territory. It was fashionable in those days to have large families. Ignacio Vallejo had twelve children; Joaquin Carrillo, (of Santa Barbara), twelve; Jose Noriega, ten; Jose Arguello, thirteen; Jose Maria Pico, nine; Francisco Sepulveda, eleven ; Jose Maria Ortega, eleven ; and Juan Bandini, ten. These were all the founders of the large families of their respective names, and in most cases

the progenitors of all of their name in the State. In the second generation there was no decline. Nasario Berrevesa had eleven children; Jose Sepulveda, twelve; Gaudalupe Vallejo, twelve; Josefa Vallejo, eleven; Filiciano Soberanes, ten; and Jose Antonio Castro, twenty-five. An old lady, named Juana Cota, died some years ago, leaving five hundred living descendants at the time of her death. There have been wonderful changes in California.

"As the children nearly all married, and the white families were not very numerous, (there were only seven hundred ranchos or country estates in 1846), it happened that nearly everybody was the relative of everybody else by blood or marriage, and where these two bonds failed, the spiritual relation of godfather or godmother supplied the deficiency. All were cousins or compadres (co-fathers). They were all one large family, not only willing but glad to entertain their relatives. and glad to be entertained. Time, with them, was not money; knowledge was not power. Leisure, horses, beef and beans the essentials in those days for making long journeys-were abundant, and so their life was a succession of paseos and fiestas-riding and feasting.

"Two parties of trappers came in 1827, one of which entered the State at Fort Yuma, and thus the middle and southern transcontinental trails were opened. Among those who came with the trapper parties were Yount, Wolfskill, Workman, Sparks, Lease and Graham. In 1839. Sutter came by sea, and established his fort (at Sacramento), which afterwards became an important center for American influence.

"In 1843 a party, including Bidwell and oding come. "In 1845 another, Reading, came. including Hensley and Snyder.

Anglo-Saxon husbands were married to five Carrillos of Santa Barbara, three Carrillos of Santa Rosa, four Noriegas, four Bandinos, three Ortegas of Santa Barbara, two Vallejos and one Sober-

"The gold discovery was made on the 19th of January, 1848, a month before the treaty of Guadalupe Hidalgo was signed, and five months and a half before peace was finally proclaimed and the American title to California acknowledged by Mexico. In June the whole Territory was excited, and on the 20th of September the first public notice of the discovery printed in the Atlantic States, so far as I can learn, appeared in the Baltimore Sun, attracting little attention. Letters of army officers and small shipments of dust began to arrive in November, followed soon by fuller and more favorable accounts, and in January the States were in a fever. It was then that most of us determined to seek our fortunes in the distant El Dorado, in a land almost unknown to geography, on an ocean almost unknown to commerce. Those near the Atlantic started to double Cape Horn: those in the Mississippi Valley to cross the Rocky and the Snowy Mountains. It was a bold adventure to go to a remote country of which we knew little, to engage in a business of which we knew nothing. Most of us, after getting our outfits, had no money left to bring us back or support us in case of adversity. The amount of gold which had arrived from the mines was small, and the statements that there were rich claims for all who might come were not justified by the knowledge of that time, though they were proved to be correct by subsequent discoveries. But the excitement was up, and we were not disposed to be critical or skeptical. The start was accompanied by the warnings of the old men, the tears of the women, and the envious and congratulatory remarks of our associates who wanted to come and could not. It was an impressive occasion, full of bright hopes and dark forebodings for many who remained as well as for all who came.

"Much we have seen—more we shall see. Our State is the Italy of the Now World, possessing a dower of beauty not inferior to that of the Latin peninsula; but, unlike that, not destined to be fatal in its attraction. The descendants of the Goth, the Vandal and the Hun, who crushed the ancient civilization of Italy under their ferore barbarism—of the Ger

man, the Frank and the Spaniard whose favorite battle-fields for centuries were the plains of Lombardy and Napleswill come not to contend with us in arms. but to compete with us in arts. We shall gain victories and celebrate triumphs more numerous and more glorious than those of Republican and Imperial Rome. but our triumphs will be those of good will-the triumphs of the architect, the road-builder, the engineer, the inventor, the farmer, the miner, the scientist, the author, the painter, the musician, the orator. They will be celebrated, not by processions, with Generals riding in gilded cars, dragging captive kings in chains, but by intellectual gatherings, art exhibitions and industrial fairs. The highest civilization will make one of its chief centres here. The coast valleys. from Mendocino to San Diego, on account of the mildness and equability of their chimate, surpassing even that of Italy, will be the favorite place of residence for many thousands from abroad. They will fill the land with wealth, luxury and art. California will occupy in the hemisphere of the Pacific, as a focus of intellectual culture, a position similar to that long held by Attica in the basin of the Mediterranean. Looking confidently forward to such a result, hoping to see much of it accomplished in our own time, let us endeavor to lay a broad, solid and gencrous foundation for the political, industrial and educational greatness of our State; let us be proud that we have taken part in a work which has contributed much and will contribute more to stimulate commerce and to extend civilization. and, as a consequence, to enrich and benefit mankind-a work which will be forever prominent in the history of humanity."

The Climate of California.

One of the most important elements of the wealth of California is its magnificent climate, which along the coast south of Cape Mendocino may be described as an eternal spring. In San Francisco the ro-

ses bloom throughout the year in the open air; and olive, fig. orange, and a multitude of other semi-tropical fruit trees thrive and bear fruit one hundred miles further north. The fecundity of some orange trees at Sacramento, which bore abundantly in November, 1869, has induced several persons to plant out a number of trees. It is a very rare event to see ice in San Francisco, and it does not form quarter of an inch thick once in five years The ground has not been white with snow in ten years, and the snow never lay on the ground twenty-four hours without melting; nor does the thermometer ever remain for twenty-four continuous hours below the freezing point. The same reasons that induce hundreds of thousands of the natives of Northern Europe to visit the shores of the Mediterranean every year, will drive the people of the colder portions of the North American Continent to resort to California. In clearness of sky, and mildness and equality of temperature, our coast surpasses Italy, and it will therefore be more attractive. The long shore of Southern Europe, from the Bosphorus to Gibraltar, has a mild climate, so that the pleasure seekers in Europe can enjoy it in any one of half a dozen kingdoms, but here the area of comfort is more restricted and the profit in that area must be greater. California occupies for America and Eastern Asia the same place that the Mediterranean coast does for Europe.

The Pacific shore of North America is washed by a warm current that runs north eastward from the Phillippine Islands; and so Washington, Oregon and California, near the coast, have much milder climates than the States in the same latitude

on the eastern side of the Continent. California has many climates. The coast is divided into three districts—by Cape Mendocino, in latitude 40°, and Point Coaception in 34°. North of Cape Mendecino, the rains occur frequently in the late spring and summer; the amount of rainfall is fifty per cent greater than at San Prancisco; the fogs are much heavier and longer in duration; the winds are stronger, and the temperature generally is colder.

South of Point Concepcion there are no steady breezes and no fog; the rainfall is thirty per cent. less than at San Francisco, and the summers are often oppressively hot, even very near the ocean.

The middle coast has an average annual temperature of 54°, January averaging 49° and July 57°, a difference of only eight decrees. Weather is uncomfortably cold at 45° and uncomfortably warm at 75°, and never did the average of any week in San Francisco reach either figure, although sometimes the thermometer has fallen to 32° and risen to 80°. Tee and snow are never seen in the streets. On the 29th of December, 1856, snow covered the hills about the city for a few hours in the morning, but there was not enough even for snowballing. There are not more than a dozen warm days in a summer; never a warm night. During July and August. strong northwest tradewinds blow regularly along the coast, and they bear the coolness of the ocean over the land. In the evening and morning they cause heavy fogs, which disappear about 10 a.m. and 11 P.M. These fogs and winds are often made the subjects of unfavorable comment by strangers, but they give to San Francisco the most equable climate in the temperate zone.

The Public Lands of California.

According to the United States surveys and estimates California contains 188 -981 square miles, or 120,947,840 acres. of which 30,408,426 acres have been surveyed, and of these 16,409,422 have been disposed of by the Federal Government before the 1st of July, 1868-the latest date to which we have a report. For schools and educational purposes, 6,765 -404 have been granted: 6.030.814 have been taken under Mexican grants: 500 -000 have been granted for internal improvements, 116,382 for railroads, and 6.400 for public buildings: 1.198.874 have been sold, and 368,321 have been taken under the Homestead Act: 470 452 under military warrant; 580,572 under "scrip;" 343,169 under swamp locations. and 28,129 under Indian scrip. Since June, 1868, nearly 2,000,000 acres more have been disposed of, and 86,000,000 acres of public land in the State are open to occupation. There are 50,000 square miles in the coast valleys and mountains. 50,000 in the Sierra Nevada, 30,000 in the low land of the Sacramento basin 30,000 in the Utah basin (which has no outlet to the sea), 20,000 in the basin of the Colorado River, and 8,000 in the basin of the Klamath.

Much land in the Utah and Colorado basins, three-fourts of that in the Sierra Nevada and Klamath basin, and a third of that in the coast district, may be considered as too rugged or barren to pay for cultivation in this century, with the exception of small patches. There remain 30,000 square miles in the Secramento basin, 32,000 in the coast, 12,500 in the Sierra Nevada, and 2,000 in the

Klamath basin—an aggragate of 95,000 asquare miles, or 83,000,000 acres, as available for tillage, half of it still belonging to the Government. No precise measurements have been made, but these figures are near enough to give a correct general idea. The area valuable for pasturage, but unfit for tillage, is half as great.

The acres of land inclosed number 4 200 000 or shout one in sixteen of that suitable for tillage: but only 2,000,000. or one in thirty-two, are tilled. The quantity held in private ownership is not known precisely, for large purchases which have not been reported have been made lately. Some Mexican claims are not yet finally settled, and some railroad donations have not been perfected. To the Central Pacific Railroad 1.394,000 acres have been granted; and to the Western Pacific, an area which probably does not exceed 500,000 acres of Federal land. The companies have complied with all the conditions of these grants. and have, or soon will have, the patents, The California and Oregon Railroad Company are to have about 2,800,000 acres; but only a small part of the road is built. The Copperopolis Railroad is entitled to 230,000 acres, if built within the period fixed by law. The Southern Pacific Railroad claimed 6,000,000 acres. but has not built the road so as to perfect the claim. We have here a total of 10.424.000 acres claimed by railroad companies.

The area of the confirmed Mexican land claims is 6,000,000 acres.

Previous to the 30th of June, 1868, the latest date for which we have the figures, 1,100,000 acres had been sold for cash by the Federal Government, 368,000 had been entered under the Homestead law, and 470,000 had been taken up under war land warrants. Since June 30, 1868, probably 1,000,000 acres more have been occupied under the Homestead law, and taken with warrants and scrip.

The most fertile land and that nearest to the market has been taken. The present settlers are men of more than ordinary intelligence, and they have sought to get the best. Nearly all the level bottom lands in the coast valleys from latitude 39° to the southern boundarv, are taken up, and so are the best parts of the low lands in the Sacramento Valley, within one hundred and fifty miles of San Francisco, and of the San Joaquin Valley within seventy-five miles of Stockton. All the land on which it is supposed that grain can be grown with a profit, at present, have passed out of the control of the Government. But the future profit depends, to a great extent. upon the means of transportation, and large districts that are now too far from market will become valuable when they shall have been made accessible by railroode

Many districts also may pay well when supplied with water by irrigation; and many others without irrigation may pay better in grapes and various fruits than any grain fields.

It is confidently believed that the hills will pay better in wine, dried fruit, preserved fruit, fresh fruit, and nuts, than the lowlands will in grain.

Nearly all the land belonging to the United States is offered for sale at \$1.25 per acre, and is called "minimum;" but in some places all the odd sections within ten or twenty miles of a railroad have been given to the road, and then the even sections are not sold for less than \$2.50, and they are called "double minimum" lands; and the pre-emptor and homesteader cannot take more than 80 acres of them.

It is impossible to explain here all the details of the federal land system, but the main points are given, and the others of any value can readily be learned by inquiry of intelligent farmers in those districts where there are public lands for sale It is of nouse to attempt here to give prices of land in detail. At least forty out of the fifty counties have some public lands. which can be got for \$1.25 per acre; but near the centre of the State this unoccupied land is usually hilly or covered with brush so as to diminish its value. Good grape or grain land in the coast valleys within 60 miles of the Bay of San Francisco is generally worth from \$20 to \$100 per acre; the price being higher in proportion to proximity to navigable water. In the Sacramento and San Joaquin Valleys, fertile land not subject to overflow ranges from \$5 to \$20 per acre, except near the larger towns, where it is higher. The prices in Los Angeles County are about the same, except that in the latter county lands that can be irrigated command a higher figure.

Information for New-Comers.

HOW TO OBTAIN PUBLIC LAND.

[From the "Resources of California."]

Many of the new-comers to California, who are possessed only of limited means, desire to secure farms upon the public lands, these being obtained at the lowest

prices and upon the easiest terms for poor men. They generally have some acquaintance with the national land laws, and are aware that five years residence and the payment of \$32 fees to the officers will secure them eighty or one hundred and sixty acres of land under the Homestead Law the amount depending upon whether the land is within or outside of the limits of a Railroad grant; or, that under the Pre-emption Law they can purchase the same quantity of land at \$1.25 per acre. in currency, after they have settled upon it. But the difficulty that they first encounter is that of finding the Government land they are in search of. The official figures show that there are yet over eighty millions of acres of Government lands in California undisposed of, and therefore open to all who wish to settle upon them. and that over half of these are arable. Nevertheless, it is not always such an easy matter as might be supposed to find public lands that will suit the new-comer.

While there are very few counties in this State in which available Government lands do not exist in greater or less quantities, it must be borne in mind that California is not a new territory from which the Indians have just been removed, leaving the whole country vacant Government land. California has been partially settled by the Americans for twenty years, while the Spaniards and Mexicans have occupied other portions from twenty to one hundred years. The Spanish and Mexican settlements, however, were mostly confined to the counties immediately around the bay of San Francisco and the coast counties south of them, and they did not extend far inland. The confirmed Spanish and Mexican

grants, however, only comprise about onetwentieth of the area of the State. The settlements of the Americans, made during the past twenty years, are mostly confined to portions of these grants, and the public lands lying in the counties adjacent to the Bay of San Francisco, the lower portions of the San Joaquin and Sacramento Valleys, and the mining districts, which comprise the land above the foot-hills of the Sierra Nevada and below the dense pine forests that lie near their summits. The Government lands vet undisposed of are to be found in detached parcels between the Spanish and Mexican grants, in the coast counties from Mendocino northward to Oregon, in the northern part of the Sacramento Valley. and the southern part of the San Joaquin Valley, in the foot-hills and between and above the mining settlements in the Sierra Nevadas, and in the southern part of the State east of the Mexican grants. which are mostly within less than fifty miles of the sea coast. No statement that we are aware of has ever been made showing the precise amount of land owned by the United States in each of the counties, as the Government surveys are made without reference to county boundaries and in accordance with straight lines drawn north and south, and east and west, which divide the land into numbered townships, each six miles square, the townships being afterwards subdivided into sections and quarter sections of a mile and half a mile square. Under the laws of the United States, a

settler can purchase or secure by preemption or homestead entry only one hundred and sixty acres, except of such lands as have been "offered" for sale

without buyers for a long time after survev. These latter were open to "private entry" at \$1 25 per acre, and were neglected as long as the bulk of our population directed their attention to mining and stock-raising in preference to agriculture. Within the past few years large tracts of these lands were secured by speculators, who have either resold them at a profit to settlers or others, or still hold them for advanced prices, though usually willing to sell portions to actual settlers on easy terms and long credits. Under the State law, however, settlers were at liberty to take possession of as large tracts of the Government lands as they chose, and hold them until some one appeared with a better title, to dispossess them. Consequently very much land is fenced in and occupied which really belongs to the Government, and is subject to be purchased and taken by new-comers if they are aware of the fact. This state of things is often very discouraging to the new-comer, who finds no vacant lands where he has been told that much more than he needs exists. Besides this, many of the lands which have been purchased by speculators, in the valleys of the Sacramento and San Josquin, as well as elsewhere, are still uninclosed, unimproved and vacant, and therefore not to be distinguished from the Government lands among which they lie. The survey stakes are also often wantonly or accidentally removed, or destroyed, or hard to find even where they still remain; and the Government employs no officer to point them out to the newly arrived settler. It will be seen, therefore, that to one not accustomed to the business, the search for Government land may prove more difficult and discouraging, as well as expensive, than he supposed; and for this and other reasons, many prefer to purchase cheap private lands. We proceed, then, to state how a settler may most readily find and obtain Government lands.

In the first place, the new-comer should endeavor to obtain such reliable and precise information concerning the population, climate, soil, water, timber, productiveness means of communication and other characteristics, advantages, and facilities of the different sections or counties of the State, as will enable him to make up his mind as to what part of the State he wishes to settle in. Then let him confine his inquiries as much as possible to that section, and he can soon come to a conclusion and arrive at practical results. This sort of information is to be obtained in a variety of ways. A number of works describing California have been published, among which may be mentioned "The Resources of California" by John S. Hittell. "The Natural Wealth of California" by Titus Fey Cronise, which may be had of all the booksellers, or examined in the public libraries or at the office of the California Immigrant Union, No. 316 California street, San Francisco. A pamphlet of eighty pages, entitled "All About California, and the Inducements to Settle There," published by that Association for gratuitous circulation, is also especially intended to supply such information. The reports of the State Surveyor-General and the State Controller of California. each contain very interesting statistics and other information concerning the different counties, which will interest

new-comers. Copies of these, also, can either be obtained or examined gratis at the office of the California Immigrant Union, which is also well supplied with other documents, maps, etc., for the same purpose.

When his mind is thus fixed upon any particular district, unless the new-comer has personal friends already located here, he should endeavor to procure letters of introduction to residents of the vicinity who may be able and disposed to assist him in his search. If he is a member of such organizations as Churches, the Masons. Odd Fellows, etc., etc., it is often well to make use of such connection in obtaining the addresses of those likely to receive him kindly on that account, in the district he proposes to visit. This sort of information is easily obtained in San Francisco at the headquarters of such associations, where residents of distant portions of the State are frequent visitors. In various parts of the State are responsible permanent residents, men of liberal ideas and public spirit, who wish to encourage and assist settlement in their neighborhoods, and have signified their willingness to do so by imparting to new-comers such special and local information as they may stand in need of, and fairly setting before them such opportunities and inducements for settlement in the shape of improved or unimproved private lands, and pointing out to them such public lands as exist in the vicinity. To this extent they act as local agents for the California Immigrant Union, and letters of introduction to them may be obtained by new-comers at its office.

At the United States Land Office of the district it is proposed to examine, may be seen the maps of all the Government lands which have been surveyed within its boundaries. Any of the land officers will be found ready to point out upon the mans to a person desiring to settle there lands which are vacant, or being unsold and not entered are supposed to be vacant, and for sale at Government prices. Having made his memoranda and obtained such general directions as will enable him to reach their locality, it will be necessary to visit and inspect them personally on foot, or on horseback, or otherwise. If other settlers have preceded him and pre-empted claims. or taken adjoining land under the Homestead Law, it is well to make notes of the townships, sections and quarter-sections upon which they are located, so that upon reaching their settlements their precise location upon the official map (according to which descriptions must be made) may be known, and that of any desirable tract of vacant land in the vicinity readily determined. Thus prepared, and being first assured of the existence of public land in a particular neighborhood, the new-comer can visit the vicinity, pretty certain of finding the lands without much trouble. In most cases, the presumption is, unless he is otherwise advised, that land wholly unoccupied and unimproved is Government land. Generally, some of the nearest settlers, who have themselves examined and become familiar with the Government maps and survey lines at the time of making their own locations, and have watched subsequent settlements as they were made, if so disposed, are able at once to point out the remaining Government lands and those which are most de-

sirable, and often the survey stakes which bound them and thus fix their description accurately. Usually, some or all of the settlers will be willing to do this, with or without compensation for the time necessary for the purpose, because they will be pleased to have desirablc neighbors. Men engaged extensively in stock-raising are often an exception to this rule, as their interest leads them to discourage settlement in their vicinity. in order that their cattle may have an open country to range over without expense to themselves, and they have often been known purposely to mislead newcomers as to the quality, value, and even the existence of Government land near them, on purpose to discourage others from settling there. Those cngaged in agriculture are usually most likely to impart information of this kind. and about their houses may be observed the evidences of the value and productiveness of the land and what sort of cultivation they consider it adapted to

If the new-comer succeeds in finding for himself, or, by means of his inquiries and letters of introduction, has pointed out to him a vacant piece of land in such a vicinity which he would be content to settle upon, the next thing is to ascertain its exact location, and then whether it is actually still owned by Government and open to settlement. If the nearest settlers, by showing him the corners of their claims or the survey stakes in the vicinity, are able to give him the legal boundaries of the piece of land he prefers, he has accomplished his first object. If however, they are too distant, or are unable or unwilling to do so, he will then have to call in the services of some one who is famil-

iar with the surveys and survey marks, if any have been made. In every county in the State, at the county seats, is an officer called the County Surveyor, whose duty it is to be familiar with all the survevs in the county. Connected with his office are usually other persons, whom, if unable to attend to the matter himself. he will point out, who, as his deputies, or as chain bearers, or otherwise, have acquired the same kind of knowledge, and by compass can trace out the lines from known points so as to designate with accuracy the piece of land the settler has selected. There are usually other competent private surveyors in every county who may readily be found when required.

Any of these persons, for a reasonable compensation, will locate the land of the new-comer, pointing out to him the proper boundaries, that he may institute inquiries concerning it at the United States Land Office, and enter it as his claim, if vacant.

If any difference in the quality of the land thereabouts exists-as, for instance, where part is valley land and part is rough and hilly-it is well for the settler to remember that he is not confined to a single quarter-section in making his selection, but may take the best of several adjoining quarter-sections, provided that in so doing he takes contiguous pieces, in square form, of forty acres each. Thus he may take the half of one quarter-section, and a quarter of each of the two adjoining quarter-sections, or one-quarter of each of four adjoining quarter-sections, thus making up his quantity of one hundred and sixty acres in one solid piece, though it may not be in precisely square form, but in the shape of the letters T or L.

This is a privilege the Government accords to pioneers, and often results in leaving detached small parcels of vacant Government lands in the midst of surrounding claims, which of course can only be known in the immediate vicinity or discovered by careful inspection of the maps in the Land Offices. It will be seen that to locate a claim in the manner shove described, the services of a professional surveyor will usually be necessary, unless the Government survey has been made quite recently and all or most of the stakes are still in their places, so that the lines are easily made out. If no Government survev has ever been made there, the settler who finds the land that suits him vacant has no further trouble. His course is to make his settlement at once, and under the law his settlement secures him in the possession until the Government Surveyors come along and make their survey. When this is done, it is then time enough to fix his exact boundaries and to enter his claim properly at the Land Office. But if the land has been previously surveyed, as soon as he has ascertained the precise location and boundaries of the land he wishes to secure, he should at once, if already well satisfied from such inquiries as he has made that it is vacant and open to settlement, make some improvement upon it, as evidence of his taking actual possession, or either go personally or write to the United States Land Office of the district to inquire whether it is vacant and open to settlement, and, if the reply is favorable, proceed immediately to take the necessary steps to secure it. This is done by making oath of his actual or intended occupation of the land, and entering it under the Homestead or Preemption Law and paving the legal fces. If entered under the Homestead Law. after paying \$22 he then has nothing further to pay for the next five years, at the expiration of which time he will have to prove up his actual occupation and pay \$10 more, and become entitled to reccive his patent from the Government. If entered under the Pre-emption Law,he has eighteen months within which to pay \$1.25 per acre for his land, unless he holds some one or other of the various kinds of land warrants or serin, which are receivable by the Land Officers instead of moncy in payment for Government lands. On surrender of scrip of these kinds, he will receive a receipt from the officer and in duc time obtain his title from the office as soon as it can be made out at Washington and forwarded to him. The land officers will explain his rights and duties under the law when he enters the land

Occasionally it will happen that a portion of the land which he would like to take has been already secured by some other person, in which case he should be prepared immediately to modify the lines of his claim so as to secure enough of the adjoining land which is yet vacant to make up the full quantity of one hundred and sixty acres, unless he is content with less. and pays only for what is obtainable. In examining the land he proposes to select, this contingency should be kept in view. It has been said that cases have occurred in which other persons, availing themselves of the information obtained by a new-comer, have managed to slip into the Land Office ahead of him and enter the whole or a part of the land which he has discovered to be vacant and desirable, and then attempt to keep it or to extort a profit

from him for relinquishing it to him. While it is hoped and believed that such cases are rare, and that the Land Officers will not be disposed to lend their assistance when the facts are known to them, it is well, by prompt action, as soon as the boundaries of the land are ascertained, to guard against such fraudulent attempts or untoward accidents. The law provides for a determination of such conflicting claims by a trial before the Land Officer of the district, but of course considerable expense and annoyance is occasioned when they occur.

The Agricultural Productions of California.

The value of the annual agricultural productions of California is not less than \$89,000,000.

The report of the Federal Commissioner of Agriculture for 1868, estimates the value of the crops of wheat, balley, potatoes, mairie, oats, rye, buckwheat and hay, for that year, in this State, at \$42,985,520, but he makes soom mistakes in the quantities produced; and the following table is suggested by his computation, but corrected according to the report of the State Surveyor-General.

	Bushels,	Bushel	Tot. Value.
Wheat	19,651,984	\$1.05	\$20,734,583
Barley	7,331,333	1 05	7.697.899
		0.56	1,807,118
Maize	986,224		986,224
			1,798,725
			48,266
Buckwheat	8,615	1 00	8,645
Aggregate	33,788,418		\$33,090,950

The hay crop reported was 388,133 tons, and at \$15 per ton was worth \$5,821,990, which, added to the above aggregate, makes \$38,902,850. The prices

are supposed to be a fair average for the year, though the fluctuations were numerous and great. The year 1868 is selected because it is the last for which we have official statistics.

The State produced, in 1868, 114,000 bundles of peas, 218,000 of beans, 137,000 of castor-beans, 154,000 of onions, 78,000 of sweet potations, 300,000 of beats, 180,000 of peanuts, 500,000 of peats, and 175,000 of turnips—making 1,869,000 bundles, worth in the aggregate about \$1,500,000. The kitchen vegetables of classes not measured by the bushel, and not mentioned in the official reports, were worth \$10 to the person, or \$5,688,270 —making a total of \$7,188,270 for the vegetable class.

There are 4,000,000 trees in the State most of them in full hearing and well cultivated. A good tree bears 100 pounds of fruit: but if we take 50 pounds as the average, we have 200,000,000 pounds. worth, on the average, two cents. The vield of wine was 2,500,000 gallons. worth 75 cents, and of brandy, 250,000 gallons, worth \$1 50, or \$2,250,000 for the wine and brandy. Most of the wine is made by the wine-growers. and although not worth 75 cents the first year, the crop that is sold in the market, of all ages, is worth that on the average. There are 20 000,000 vines. yielding, on an average, five pounds each, so that about half the grapes pass through the press, and the remainder, 50,000,000 pounds, consumed otherwise or wasted, are worth two cents per pound. many of them being of fine varieties, commanding from 10 to 25 cents at retail. The strawberry vines, and blackberry, raspberry, current and gooseberry bushes

number 20,000,000, and their crop is worth \$1,000,000. Here we have an aggregate of \$8,250,000 for the fruits.

If we assume that the increase of domestic quadrupeds is 30 per cent., and of poultry 200 per cent., we have 60,000 horses, 190,000 neat cattle, 600,000 sheep, 150,000 hogs, and 2,000,000 poultry. Some of the horses are worth only \$10 each, in their wild condition, but when tamed, and the taming is a branch of agricultural occupation, they are seldom worth less than \$20; while the majority are worth three or four times as much, and many of fine blood more than ten times as much. The coast, south of Santa Cruz. to which nearly all the wild horses of pure California blood are now confined, does not contain more than one-sixth of the horses of the State. A moderate average price for the horses is \$60. The neat cattle, including many fine dairy cows, are worth \$20; the sheep and hogs, \$2; the poultry 40 cents, and at those figures we have \$10,500,000 for the increase of livestock. The 5,500,000 pounds of butter were worth 1.100,000; the 4.440,-000 pounds of cheese, \$666,000; the 60,-000,000 pounds of wool, \$3,080,000. The increase and products of the herds amounted to \$15,346,000.

Improvements made on the farms by agricultural labor are worth not less than \$20,000,000.

The following is a summary:

Vegetable	3. 01	to							 7,183,270
Front, ote.							٠.		 8.250,000
Domestio	anir	pal	8.0	oto					 15,346,000
Improvem	onte	١					٠.		 20,000,000
Total									 \$89,687,120

The value of the wild pasture, the use of horses for pleasure and labor, are not counted. In 1860, according to the Fed-

eral census report of that year, the farm produce of California was worth \$35 .-575.842, and since then the production of wheat and of a number of other important articles has quadrupled. Our agricultural exports in 1868 were worth \$14,000,000, and we consume more than four-fifths in value of our agricultural produce. The character of this work does not permit any lengthy explanation and instification of the above figures. which, of course, can be misrepresented by partial criticism: but on a fair consideration of all the facts, they will probably be found to be approximately correct.

The preceding article deals with the agricultural productions of California generally. Some of those only briefly alluded to are worthy of special notice, and chief among them is

The Grape.

The cultivation of the grape is one of the leading branches of California agriculture. Many of the vines are very profitable, paying as much as \$500 net per acre; and some even as much as \$2,000. The Flame Tokay vines bear occasionally 12,000 pounds to the acre, and the grapes sell at wholesale for twenty cents per pound, making the gross yield per acro \$2,400, and the expenses are less than \$200. The White Tokay, the Muskat of Alexandria, the Black Malvoisie, the Golden Chasselas, the Rose of Peru, the Black Hamburg and the White Hamburg, all, in places well adapted to them, and near San Francisco, have yielded more than \$200 net per acre. The cheapest grapes are the Mission, and they have paid from \$50 to \$100 net per acre. Persons who have the Museat of Frontignan can probably sell the crop for several years at \$500 per acre. The prospects of the wine-growing interest are brilliant, and large areas are set out in grapes every vear.

California has great advantages for wins growing. The vines bear very abundantly. The average crop is 5,000 pounds to the acre, while in France it is 3,000, and in Joho 5,000. This difference is an item of vast importance. The yield is much more regular in this State than in France or the Mississippi Valley, where rots in the spring, hall in the summer, and rain in the fall often destroy the crop.

In some parts of Germany the winters are so cold that the vines must be cut off near the ground every fall and covered with manure—an expensive labor.

The land suitable for vineyards in Europe costs several hundred dollars per acre, and in California it can be had for comparatively nothing.

The warmth of our winters saves the expense of fires during the period of fermentation.

There are, on the other hand, some disadvantages. Many of our wine-growers are inexperienced, and do not know how to cultivate their vines or make they wises in the best manner. Labor, casks, bottles and transportation to the market are dear. The interest on money is high, and it is expensive to keep wine for years. The wine merchants have not yet established themselves firmly, nor can they get large supplies of wines of uniform quality; and uniformity is necessary to stability of market. These evils, however, will all be overcome, while the advantages will continue to operate in our favor.

The average crop of grapes, on vines more than seven years old, is about 8,000 pounds per acre, and about thirteen pounds of grapes go to a gallon of wine. making 600 gallons per acre. The lowest price of wine, when six months old carefully made, is 25 cents per gallon, leaving \$150 per acre gross, and at least \$50 net. But the average prices in November, 1869, were for Los Angeles, of 1869, 30 cents; Anaheim, of 1869, 35 cents; Sacramento, of 1869, 40 cents; White Sonoma, of 1868, 40 cents; Red Sonoma, of 1868, 45 cents: White Sonoma, of 1867. 50 cents, and Red Sonoma, of 1867, 55 cents. All those are wines made of Mission grapes, and are the cheapest varieties. Sonoma Zinfindel, of 1368, sold for 75 cents; mixed foreign, of 1868, 60 to 75 cents; Zinfindel, of 1866, 90 cents; Zinfindel, of 1867, 85 cents: Alexandrian Muscat, of 1869, \$1; and of 1867, \$1 25; Riessling, of 1868, 80 cents; and Frontignan Muscat, of 1868, \$1. The best wines. cannot be got at retail for less than \$3 per gallon.

It is the unanimous opinion of French and German whee-growers now here that California will in time make as good wine as any part of Europe. We produce excellent wines, similar to Port, Bargundy, Claret, Hock and Champagne, and as our wine-makers learn more of their business, the quality of their production is steadily improving.

In close connection with the "Grape" comes the vincyards and Native Wines.

Vineyards.

According to the report of the State Surveyor General there are 22,000,000 grape-vines set out in vincyard in California. The leading counties, with the respective numbers of their vines, are Sonoma, 4.112.279; Los Angeles, 3.840,-000 : Sacramento, 1.598.507; El Dorado, 1.147.250 : Santa Clara, 1.000,000 : San Mateo, 756, 376; Calayeras, 704,697; Amador. 683.623 : Solano, 654.396; Placer, 588,618; and San Joaquin, 525,000. The largest vineyard in the State is that of the Beuna Vista Vinicultural Company, comprising 306,000 vines, covering 450 acres, in Sonoma County, B. D. Wilson, of San Gabriel, has 176,800 vines on 260 acres. The Lake Vineyard Wine Company have 90 acres, with 61,000 vines, at the same place, and they intended to set out 260 acres more this season. There are many vineyards of more than 100,000 vines in the State.

Strength of the Wine.

As a general rule, the wine is stronger as the climate is warmer. High altitude. high latitude, and exposure to the ocean winds, prevent the formation of much sugar in grapes. As we go inland, the summer heat and the alcoholic strength increase. The mean temperature of July is 67° in San Francisco, 66° in Sonoma, 67° in Benicia, and 73° in Sacramento. In Napa the wines are stronger than in Sonoma, and in the northern end of Napa, beyond the reach of the ocean breezes, stronger than in the southern part of the valley. A ton of grapes from Green Valley will make more brandy than one from Santa Rosa. In the Sierra Nevada the summers are very warm and the wines are strong, but the vineyards are mostly confined as yet to the lower slopes and calons; at higher electations milder wines would be made. Those influences which check the formation of sugar in the grape, stimulate the development of the tannie and malie acids requisite to give the taxt taste, which is one of the chief merits of the light French and German wines.

Those vineyards nearest to the chief centres of population sell most of their grapes for the table. Veac Valley, though not very near to San Francisco, sends nearly all its grapes to this city, because they are first in the market and they command a better price than could be obtained for making wine or brandy.

Quantity of Wine.

The quantity of wine made in 1868the figures for 1869 have not yet been published-was 2,587,764 gallons, an inerease of 700,000 over 1867. Los Angeles made 1,111,200 gallons; Sonoma, 348,136; El Dorado, 168,638; Amador, 129,995; Napa, 103,365; San Bernardino, 74,500; Contra Costa, 61,370; Calaveras, 55,132; Placer, 51,300; Tuolumne, 50,397; Santa Clara, 47,450; and Butte, 30,828. these twelve leading wine counties, six are in the Sierra Nevada, and were a few years since devoted entirely to gold mining. They have produced more than \$500,000,000 of bullion, but the majority of their inhabitants are now looking to the wine-press with more hope than to the sluice. This mountain belt has now 6,000,000 vines, and at the present rate of increase will soon become the chief wine district of California

Los Angeles, which has not so many vines as Sonoma, makes thrice as much wine. San Bernardino is the furthest from the market of all the grape constitute and makes the largest proportion of wine. Sacramento, Santa Clara, and Solano, make each less than a gallon to twenty vines; Napa made a gallon to fitteen vines (using many of the grapes for brandy), and Los Angeles made two gallons to five vines.

Sparkling Wines.

The production of sparkling California wine has been established on a profitable and permanent basis, after many failures. The only district that supplies any large quantity of wine suitable for effervescence is Sonoma. The Mission grapes furnish most of the material so far, but Riessling. Chasselas, and Rhenish Muscatel, are preferred. The Muscat of Frontignan is used to give bouquet to Mission wines, in proportions varying from one-fourth to one-tenth. About 15,000 cases of Sparkling wine are made annually, and some of it compares favorably with good brands of Champagne. The method of making Sparkling wine in California does not differ from that practiced in Europe, save that the wine is kept warmer, so as to hasten ripening, and it is placed upon the market sooner.

Brandy.

The production of brandy in 1888, according to the Surveyor General's report, was 257,333 gallons, of which Los Angeles made 55,800 gallons; El Dorado, 47, 409; Napa, 46,143; Santa Clara, 11,500; San Bernardino, 10,500; Sonoma, 6,745; Volo, 6,261, and other countries smaller quantities. The quality has improved greatly within a few years. Formerly the stills were used only to extract the spirit from the pumico or refuse of the press, which was thrown into the kettle, and managed with little care or skill. It was an unfit material, and the brandy made, called *eguardiente*, was harah, bitter and lacking in nearly overy desirable quality save the possession of alcohol. Now, competent men have gone into the business, fine stills have been put up, the pumice is not now put into the kettles, and much good wine is distilled. The better the wine, the better the brandy; and some of that made in California is of very fine quality.

Most of the brandy is obtained from crude wine, which is made by separating the granes from the stems and leaves passing them between rollers which mash every berry, but do not crush the seeds. and letting them fall into a vat. in which the mass ferments from a week to three weeks, according to the warmth of the weather. When the fermentation is complete the wine is drawn off through a pipe to a tank, from which it is pumped into the still. After the wine has drained off, water is thrown in upon the skins. seeds and pulp remaining in the vat, and in a few days that is again drawn off, and the remnant is thrown away as worthless. The press is not used, and the wine is not clarified or carried to complete fermentation. It would not be considered fit to drink in the condition in which it is sent to the still. Sometimes wine is distilled because it has commenced to turn sour, and cannot be made palatable.

The wine of California contains from ten to fifteen per cent. of alcohol; and proof brandy contains fifty per cent. of alcohol. Five gallons of light wine will, therefore, make one gallon of brandy. Usually it takes twelve pounds of grapes to a gallon of wine, and sixty pounds to a gallon of brandy. The grapes used for brandy cost from 62% cents to \$1 per 100 pounds at Los Angeles, and from \$1 to \$1 \$125 at Napa. If it were not for the internal revenue taxes, California brandy could be made for about \$1 per gallon. The tax varies according to the amount made, from 65 cents, to \$1 per gallon. The greater the production the Jess the tax per gallon, but it never falls below 65 costs.

The Fruits of California.

Hittell, in writing of the fruits of California, says:

"As a fruit-growing State, California, takes a high position. In this particular, as in so many others, her climate gives no great obstances. In open to the world do fruit frees grow so rapidly, bear so early, so regularly and so shundantly, and produce fruit of so large a size. Nor is there any country where so great a variety of fruit can be produced in high excellence."

The Fig.

The fig is cultivated extensively in the State. It is a hardy and prolife tree—that is, in all places where it is not exposed to severe frosts. In the Secremente basin, below an elevation of 1,000 feet, and in the coact valleys, where not troubled by fog, it produces at least one crop annually by the one of the properties of the prope

Many figs have been dried, and some are equal in flavor, but not in appearance, to the imported. The common price in the market is from six to eight cents per pound. There are 40,000 fig trees in the State, the leading counties being Solano, Yolo, Los Angeles, Sacramento, San Joaquin, Santa Barbara, Calaveras, Butte, Tunlumpa and Yub.

Various Other Fruit Trees.
The apricot is cultivated extensively,
the number of trees in the State being
68,000. The tree is healthier than the
peach, and the fruit of some varieties
comes in callier, thus giving it a decided

advantage.

The nectarine ripens later than the apricet, has not so fine a flavor, and is not so prolific. There are 53,000 nectarine trees in the State.

The quince is hardy and prolife, but it is not so much prized as in the Eastern States, because the supply of fresh fruit is abundant and varied for nine months in the year, and quince jelly is not so necessary upon our tables as it is in clines where snow lies for three or forur months every winter. There are 42,000 quince trees in California.

The plum bears abundantly, and has never been troubled by the curculio. There are 235,000 plum trees in the State, Santa Clara having 64,000.

The German prune also does well, and the drying of the fruit has commenced as a regular business. Some of the Californian dried prunes are little inferior in quality to the best European. There are 3,000 prune trees in the State.

California has 28,000 almond trees, of the hard-shell and the paper-shell varieties. The almonds are sold at 50 cents or more per pound, being, on account of their freshness, decidedly superior to any brought from abroad. The tree is similar to the peach in appearance, is equally subject to the curl, and is more frequently injured by frost.

The English valuat bears abundantly, and sells at from 12 to 15 cents per pound at wholesale. The nuts fall from the tree mention of the several months without danger. There are 17,000 trees in the State, including 3,000 in Los Angeles 3,000 in Sonoma, 2,400 in Santa Barbara, 1,700 in Sacramento, and 1,300 in Solano.

Silk.

(From "The Resources of California.")

The production of silk promises to be one of the chief industries of California. but as yet it has hardly taken a start. This year large and clegant flags, made in California of our own silk, have been hoisted over the Capitols in Sacramento and Washington; but they nearly exhausted the stock, so they are not samples, but may be regarded as our entire work in the matter of silk. The flags really cost far more than they are worth; we have not yet advanced far enough to weave silk with a profit, and it is questionable whether we can even reel it. Heretofore our silk men have been ongaged mainly in securing the State subsidies, and in selling eggs, which are in great demand in Europe where the worms are sickly and need renewing from fresh stock. About \$5,000,000 or more are sent to Japan annually for eggs. and it is supposed we could supply that demand at a fine profit. Hitherto, however, we have scarcely had enough eggs for the wants of our own State.

The annual production of cocoons increased from 500 in 1860 to 3,000,000 in 1869, and the yield for 1870 is estimated at 20,000,000, of which one-third are the French annuals, which make large, palevellow cocoons, and two-thirds are Japanese trivoltines, which make small and white encours The Evench cocoons ore valuable either for eggs or silk, the Japanese for silk alone. The eggs are worth at present about \$3 per ounce, but there is no steady market-price for the cocoons. and it is not yet determined whether they shall be shipped to Europe or reeled here. Some of the English silk manufacturers want to import cocoons, so we shall probably find a market there if the eggs do not pay.

There are thirty occoneries in the State, such, of course, established alongside of a mulberry plantation, and nearly all those engaged in the business are preparing to set out more trees and calarge their buildings. The largest mulberry plantation in California is at Davisville, and has a hundred acres in trees. The number of occomos to be produced there this year is estimated at 10,000,000 or 12,000,000.

Mineral Products.

The gold production of California is assertained approximately from the amounts conveyed by the Express Companies to San Francisco, and from the amounts exported. The exportation was \$37,287,117 in 1809; and the receipts by express for the same period were \$51,226, 769. The last figure included \$4,132,055 received from foreign countries; \$5,043, 540 from American ports on the Pacificg. \$12,000,000 from the State of Novada;

\$17.905.449 bullion from northern Californian mines through Sacramento; \$2, 567 402 bullion from southern Californian mines through Stockton, and \$11, 552,565 coin from the interior of the State. The coin should not be counted in calculating the production, for the coin is sent from San Francisco originally. If we add together the \$17,905,449 Californian bullion that arrives by way of Sacramento, \$2,567,402 by way of Stockton, and \$1,000,000 from Californian seaports (most of the coastwise receipts are from Oregon, Washington and Idaho), we have a total of \$21,472,851 as the amount of bullion sent by express from the mines of California to San Francisco. If we subtract from the total exports the bullion of Nevada, Oregon, Idaho, Washington, and foreign countries, we have a remainder of \$19.111.522, which may be regarded as the manifested sum of Californian bullion exported. Some bullion is brought to San Francisco from the interior, and carried away by car and railway in the pockets of individuals, and of that no account is taken in the above statement; and some is kept every year to add to the currency and to supply material for tableware and jewelry. We estimate the total present annual production of the precious metals in California at \$23,000,000. Our coal production amounts to \$1,000,000 annually; our quicksilver to \$1,500,000; our silver (exclusive of that taken from gold mines and counted as part of their yield), \$1,000,000; miscellaneous minerals, \$500,000. Adding these to the gold, we have a total mining production of \$27,000,000. The total assessed value of the taxable property in the mining counties, not including Sac-

ramento, Yuba, Stanislaus, Freeno or Los Angeles, all of which contain some mines, was \$30,368,108 in 1869; and there is an annual decline of about five per cent. in the production of gold and in the value of the property in the miuing districts

Gold Mining Review.

There was no important change of general character in the gold mining industry of California in 1869, except a slight decline in placer productions, the precise amount of which is not ascertainable; and a slight increase in the yield of the quartz mines. The treasure exports were §37, 237, 117, and the receipts were §51, 226, 769, including about \$12,00,000 from Nevada, \$4,132,055 imports, and \$3,042,500 brought by coast steamers, mostly from Oregon and Idaho.

One of the chief events of the year has been the resumption of profitable work on the Mariposa estate, which had not produced enough to pay expenses for the last five years. The Princeton Mine, which yielded a great revenue under the management of Park, is neglected, but the Pine Tree, the Josephine, and the Mariposa, which paid him very little, are now yielding finely. The Mariposa Mill has 25 stamps running by wet process. and 25 more are to be added in the spring. The quartz ranges in yield from \$13 to \$18 per ton. A large body of ore is in sight. The Benton Mills have 61 stamps (including 25 started lately,) running on ore that averages \$18 per ton mostly from two large pay chutes, each 500 feet long horizontally and five feet wide on the Pine Tree Mine. The expense at the Benton Mill is \$4 for extraction, 90 cents for transportation, and \$1.25 for pulverization and

amalgamation by the wet process, making \$8.15 as the total expense per ton. The expense of pulverization and amalgamation is \$8.25 more per ton by the dry process; but the gain in juidal is considered to be enough to justify the preference of that mode of working the rock containing the gold in very fine particles. We have no statistics of the total yield, but the \$6 stamps must creath about 70 tons per day, or at the rate of \$378,000 in 300 working days.

The Eureka Mine, at Grass Valley, produced \$573,000 gross, and \$309,000 for the year ending on the 30th of last September. The number of tons crashed was 20,638; the gross yield per ton, \$27.-80; the cost of mining and milling, \$9.65 per ton. In the last three months the clean-ups have been as follows; October 20th, \$20,293; November 5th, \$19,153; November 20th, \$17,916; November 30th, \$23,459; December 18th, \$23,590.41; December 31st, \$20,000; suphyners, \$5,220. Total, \$134,895. The dividends have been \$0,0000 for each of the last three months.

The following figures show the gross yield, the number of tons worked and the dividends monthly of the Amador,

dividends monthly	or the minador,
Months. Gross Yield.	Tons Worked. Dividends.
January \$47,861 53	2,345 \$22,200
February 65,670 98	2.897 37.000
March 61,720 65	2,932 37,000
April 65,346 42	2,973 37,010
May 61,576 70	3 496 37,000
June 45,094 94	2 930 27 000
July 46,905 29	2.416 39.600
August 36,269 26	1,566 22,219
September 49,549 65	2.518 22.200
October 54,603 45	2,685 23,010
November 58,381 73	2,989 29,600
December 64,721 92	3,163 44,400
Total \$658,702 52	32,510 \$379,400
The gross yield v	vas \$20.06 per ton; the

net, \$11.36.

The product of the Sierra Buttes Mine for the last year har been \$217,000 and the dividends \$123,000. The average yield of the quartz is about \$12.50 per ton. There are 40,000 tons of good ore in sight, enough to keep the present mills running for three years. The Alaska Mine is producing \$4.000 per month gross, and the Brush Creek Mine is credited with a yield of \$105,000 in the twelve months ending September 18th.

The Idaho Mine, in the year ending October last, crushed 9,488 tons and extracted \$308.745, or \$32.50 gross per ton. The cost of mining and milling was \$11.67 per ton. The dividends were about \$15 .-000 per month, and the rock is now better than ever before. The Allison Mine has crushed some rich rock from the dump and from the old levels, but is not yet fairly reopened. We have no late figures from the Confidence Mine of Tuolumne County, which, according to report, is producing about \$20,000 per month. The Soulsby Mine, which long occupied a leading place in that county, is now producing little or nothing.

The Keystone, of Amador, is being enlarged to double its capacity so as to run 40 stamps. It has been producing, with 20 stamps, until within a few weeks, when it shut down, \$25,000 cross and \$15,000 net per month. The Keystone, of Sierra, which turned out \$20,000 per month for a short time last summer, was stopped by the water, and production will not be resumed until a drain tunnel now in progress is finished, and that may require six months or more. The Crescent, of Plumas County, after having passed through some strange vicissitudes of prosperity and adversity, resumed work in June, running only 16 of its 32 stamps. Two months were spent in repairing, and in the four months of work \$58,000 were oxtracted. The yield per ton was from \$12 to \$15, and the total expense of mining and milling is reported to have been \$3 per ton.

The Oaks and Reese Mill crushed 9,059 tons, and extracted \$130,229. 10 in 1889, an average of \$14.37 per ton. The mill has 23 stamps, of which 12 first commenced work a month since. The Union Hill Mine, which has lately been sold to ma English Company, cleaned up for December \$16,000, of which 40 per cent. is profit. The monthly production seldom exceeded \$12,000 before. The Empire, North Star and Banner Mines are at work, but we have no figures from the Gyres from t

The Smartsville Consolidated Hydraulie Mining Company have opened their claim, and for nearly three months have taken out about \$500 per day. The Blue Gravel (from which we have no figures for 1869) and the Blue Point, adjoining elaims, are running outlet tunnels, which will require about a year for completion. Several largo companies have been formed near Smartsville and Timbuetoo by the consolidation of smaller ones. It is reported that the Blue Lead has been found north of Forest City, where it was thought to exist, though numerous previous searchings for it through a period of fifteen years, some of them very expensive, were in vain. It is supposed that the same lead has been found on the northern border of El Dorado County, but as yet these supposed discoveries have not led to any important results.

The consumption of dynam, or giant powder, and the employment of singlehand drills have been gaining ground steadily; and in some kinds of rock they have enabled the mine-owners to make important reductions in the expense of extraction. In May there was an excitement at Grass Valley in consequence of the formation of a league among the miners to prevent others from working for less than \$3.50 per day, and from using dynamite. The leaguers repeatedly used violence against those who refused to obey their rules, but they found public opinion against them, and they disavowed a resort to force. Quiet has been restored, and in most of the mines there is no opposition to dynam. There is fair prospect that the gold production of 1870 will be larger than that of 1869. We will quote from the same source an

article on the Manufactures of California.

The factories of California are few and

small, relatively. High wages make it impossible to compete successfully with the cheaper labor of the Eastern States and Europe except in a few articles, most of which are bulky in proportion to cost, or inflammable.

We make blankets, flannels and cheap cloths, because we have an abundance of fine wool, on which we can save freights to and from New York, three or four commissions, and ten months' time by working up here. Yet we export more than three-fourths of our wool, and import all our fine cloths, delaines and worsteds, On the same principle we tan hides and make coarse boots; but we export hides and sole leather and import fine boots, calf-skin and morocco. Furniture, tubs and coarse baskets are made here. Hemn rope is made here because the material comes from Manila, and can be got here cheaper than in New York, and the freight is high as compared with the cost.

Printing paper we make because we have rags to export. Straw-paper is very bulky and chean and is made here Turnentine is inflammable and costly to freight. so we produce it from the pitch of our forests. Rosin is made because its production costs very little when turnentine is distilled. We have an abundance of broom-corn and can make brooms cheaner and much finer on account of the great growth attained by the corn, than they can be imported. The refuse of our slaughter-houses furnishes cheap material for coarse soan and glue which we make in abundance. Coarse pottery and tin and conner-ware can be made for less than the freight from New York. Common matches, acids, blasting-powder and giant powder or dynamite are so dangerons to the ship that the high freights protect production on our coast. Shot and lead pipe are made from lead obtained in Nevada and Arizona. The old wrought iron, which was formerly exported, is now sent to our rolling mill, which obtains its material cheaper than do similar establishments in the Eastern States. salt obtained on our coast is ground, and the rice imported for our Chinamen is cleansed in San Francisco mills The snoar from the Hawaiian Islands is refined here for the consumption of the coast. The coarse bottles are made at home, but the fine ones are imported. The wire rope which is made to the order of the miners is twisted here. One cotton mill makes coarse muslin. A silk weaver has commenced work in San Francisco, and he will probably thrive by confining his operations to a small scale for several years. We make 100 billiard tables and 150 pianos annually. The

tables cannot be transported entire, and it is cheaper to make them here than to import them. Planing mills and sash factories, of course, we have, and the Chinese have gone extensively into the making of cigars.

maxing or egars.

The facts stated show that there is room for a great development of manufactures on the coast, and those persons who establish themselves here so as to take advantage of the turn of events as soon as it comes, will be in a fair way to make fortunes. The building up of extensive mechanical industry is inevitable. The great distance of California from the North Atlantic will make continued importation of many manufactured articles impossible, and the high tairing, which, on account of the immess debt, must be maintained many years, will be an additional protection.

The manufactories of California are now nearly all in San Francisco and are driven by steam; but there is an abundance of water-power along the base of the Sierra Newala, and there are many unoccupied sites for steam factories better than any now in use.

According to the United States Census Report of 1869, California had, in that year, 3,605 manufacturing establishments, with a capital of \$23,682,593, employing 24,966 persons, consuming raw material worth \$16,553,636, and producing manufactured articles worth \$59,500,000. The additional value given to the raw

The additional value given to the raw material by the manufacturers was \$42, 912,000. Flour and lumber are the two largest items, and, together, make up more than \$3,500,000 of manufactured product, and malt and distilled liquors make \$4,500,000 more. Since 1880, there

has been a great increase of manufacturing industry, and many articles then imported are now made here, including tallow, boots, shoes, woodenware, candles many varieties of furniture cas metres, glass, hose, belts, glue, lasts, linseed oil, matches, saws, sashes and doors, tools, type, vinegar, wire goods. Santa Cruz has a number of tannerics Santa Cruz and Marin counties have each a powder mill and a paper mill; Oakland has a cotton mill; Sacramento a beet-sugar mill; Sacramento, Marysville and Merced Falls have each a woolen mill: every large-town has its planing mill. foundry and brewery; and distilleries and flour, saw and quartz mills are scattered through the respective grape, grain lumber and mining districts; but with these exceptions nearly all the manufacturing establishments are in San Francisco. The following is a list of them, as reported in 1869, by the Assessor of the City and County, with the number of men employed; Axle-grease factory, 1 man employed; bellows, 1; billiard tables. 22 men employed; boxes, 69; brass foundrics, 85; boots, 122; breweries, 153; woodenware, 66; candles, 11; acid, 15; cigars, 1,232; cordage, 50; flour, 134; furniture, 138; gas metre, 4; glass blowing, 86; glass cutting, 6; gold and silver refining, 5; hats and caps, 26; hose and belts, 17; foundries and boiler shops, 1,093; windows, 84; glue, 20; lasts, 4; lead pipe and shot, 18; linseed oil, 8; malt, 18; matches, 43; mirror silvering, 5; piano fortes, 19; fireworks, 4; rolling mill, 58; salt grinding, 35; saw making, 35; sash and doors, 261; saw and planing mills, 380; soap, 54; staves, 22; marble sawing 28; sugar refineries, 264; tanncries, 122; tools, 5; trunks, 30; type, 35; tubs, 20; vinegar, 6; wine, 12; woolen mills, 750; total men employed, 5.786.

The value of the articles manufactured are reported thus in a few branches: Bellows, \$10,000; boxes, \$200,000; branches; \$200,000; branches; \$200,000; branches; \$200,000; branches; \$200,000; furniture, \$170,000; gas meters, \$4,000; glass, \$70,000; mirrors, \$200,000; fireworks, \$7,000; saws, \$70,000; saws,

Among the quantities of certain articles manufactured the following are reported:
Billiard tables, 97; malt liquors, 3,600,000
gallons; candles, 15,000 boxes; cigars, 38,-000,000; cordage, 1,600 tons; fiour, 529,-000,000; cordage, 1,600 tons; fiour, 629,-100,000 conces; foundries and boiler shops, 11,600 tons iron; iron doors, 1,100 tons; fiours, 11,000 tons; financed oil, 25,000 gallons; matches, 95,-000 gross; pianes, 152; salt, 7,300 tons ground; lumber, 24,000,000 feet sawn; asop, 4,000,000 pounds; leather, 16,000 hides; vincers, 86 floor vallons.

Without examining all the items, it is safe to say that the manufacturing industry of California represents a yearly production of at least \$75,000,000.

Total Products and Business.

We thus have \$192,000,000 as the total annual value of the industrial products of California, comprising \$89,000,000 or 45 per cent, for agriculture; \$75,000,000, or 30 per cent, for manufactures, and \$27,000,000, or 15 per cent, for mining. The two former branches are increasing, while the last is decreasing in absolute and relative importance.

The total exports of the State in 1869 were \$58,000,000, or more than \$100 to the inhabitant; whereas the exports of Great Britain are only \$20, and of the United States as a whole only \$10 to the inhabitant.

The stock of money in the States on the Eastern slope is equivalent in value to \$800.000.000 gold, or about \$23 to the person. The stock of coin in California is about \$45,000,000, or \$76 to the person, more than three times as much. There are \$29,000,000 belonging to the Savings Banks of the State, \$12,000,000 to other banks, and \$7,000,000 to the insurance companies, and \$10,000,000 in the State county and city treasuries, and \$5,000,-000 in the possession of Federal officersmaking a total of \$63,000,000. As, however, the money belonging to the banks and insurance companies is loaned and much of it may appear in several companies, we strike off \$18,000,000 and get \$45,-000,000 to represent the currency of the State. In 1869, \$21,000,000 of coin were sent to the interior from San Francisco by express, and although much of it may have been sent over and over again, still the amount implies a good stock.

California has one and one-half per cent, of the population of the nation or I in 65; and in the number of her inhabitants she is the twenty-fourth State; but in the amount paid as income tax she ranks fourth; and one in twenty-one of all the persons who pay income tax are Californians. Illinois and Ohio have each four times as many inhabitants as this State, and are large and prosperous States, full of railcode and setting the united alone, and yet neither pays as much income tax as this State. San Francisco pays \$4,100,000 annually to the Gift Government (including \$1,500,000 for street work paid to the contractors, but assessed by the city], \$870,000 for duties on imports, all gold, and \$4,000,000 green-backs [internal revenue], making a total of \$16,070,000 annually, or about \$100 for every persion in the city.

The foregoing statements will have given our readers some idea of the accomplishments of California. For so small a community scattered over so large an area, and situated so remote and isolated from the great marts of the East, its procress in every way is truly wonderful.

Railroads.

With so large a quantity of grain, fruits and other produce to be moved from the agricultural districts to the markets, railroads became a necessity. Railroads have done much for other lands, but in none will their good effects be felt more than in California.

Gen. Sedgwick, when speaking of rallroads on a late occasion, made the following pertinent remarks:

"In England, in 1823, when the first locomotives were allowed, the population was 12,236,000, and is now 21,650,000—an increase of 80 per cent. in forty-cight years. At that time the roads and canals of Great Britain were working up to their full capacity, but in 1864 and 1885 the amounts of passengers and goods carried were six times greater than before the introduction of railways. Railroads cannot be dispensed with, and they are of themselves, in level districts, the surest means of improvement and settlement. The grant of public lands to the Illinois

Central Railroad was made in 1850; population, 460,000; and now, with 3,225 miles of road she has a population of 2.500,000-six times as much-and has 150,000 farms. Railroads can never be of less value in the future than they are to-day. The past is the surety of the future; and there can be no better investment than in railroads properly managed. They increase the tax-duplicate beyond precedent, bring capital and industry to dig your metals and plough your lands. Good roads are operated for 60 to 75 per cent, of their earnings, and should pay besides the interest on their debt. In England it is estimated that farms are enhanced in renting value from 5 to 20 per cent, by railroads. Suppose a farmer. living 25 miles from a market, has wheat to send to sale-say 50 bushels-it will cost him \$20 to get one load to the coast. or 40 cents per bushel; but if there were a railroad at his door it would carry his wheat at 41% cents per bushel, a saving of 351/4 cents per bushel, or \$355 on each thousand bushels-nearly \$700 on each 40 acres. These reasons are based on actual facts and daily occurrences, and must be taken as the best evidences of the wisdom of railroads In 1842 France had but a poor system of railways, and in 1851 she had but 200 miles. The Emperor, understanding the benefits to be derived from railroads, imposed tyrannical expansion of the system to 4,500 miles in 1857, and the exports and imports had increased more than 100 per cent, in seven years. In 1865, France had 8,000 miles of railroads. M. Flacet estimates that the railroad system saves \$200,000,000 annually to the national commerce. In 1840, the exports and imports were \$50 .-

000 per mile of roads open, and in 1865 they were \$92,500 per mile of roads-an entire increase of \$1,000,000,000, caused almost entirely by the introduction of the railroad system. Railroads are fast gaining ground in Germany, Russia and dependencies. Even Spain has 4,000 miles of railways; cost. \$305,000,000, or \$75,-000 per mile. Italy has 3,000 miles of railway, and is building at the rate of 225 miles per annum; and the receipts per annum am about \$15,000,000. In India. the railroad system was begun in 1850. and was opened in 1855, and there are now 5,600 miles in operation. Two of the lines are each over 1,260 miles long. and the average of ten is 320 miles each. The English Government has granted \$440,000,000 in aid of the cotton districts' railways. Even China is the subject of railroad enterprise, and may soon have to give way to its march. But in this Republic of ours. the increase of railroad communication and the prodigious growth and development of the agricultural resources of the public domain are wonderful-wonderful as Aladdin's Lamp. In 1830, when the first locomotive was run in the United States, the population of the States west of the Alleghanies and north of the Ohio. with the States west of the Mississippi-Ohio, Indiana, Illinois, Missouri, Michigan, Wisconsin, Iowa, Minnesota, Kansas. and Nebraska-was 1,600,500, and in 1870, 11,480,000, In 1847 there were 5,600 miles of railroads in operation, increasing the population by 350 per cent in the Western States. From 1847 to 1857, ten years, 18,000 miles of railroads were constructed; and in the same ten years the population of the Western States was nearly doubled. In 1840, there was

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FROM LIVERPOOL TO NEW YORK. FROM NEW YORK TO LIVERPOOL. First Class \$130 00, Gold First Class

" " to Paris. ... 145 00, " 18 Second Class Second Class

Return Tickets, First Class, \$250 00, Gold.

BY STEAMERS CARRYING STEERAGE.

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Or to CHAS, G. FRANCKLYN, Agent, 4 Bowling Green, and 111 Broadway, New York.

1 mile of railroad to each 7.415; in 1850. 1 to 3,300; in 1860, 1 to 1,080, and now, 1 to 800-giving 45,000 miles of railroad to about 37,000,000 inhabitants. The most important item of statistics is as to the cost of this immense system, which cannot, however, be definitely determined. In the New England States the average is \$40,000 per mile: in the Middle States. \$33,000: in the Southern States, \$30,000; general average, \$40,000. The means to build the roads have generally been raised by the sale of bonds and stock. The leading railroads in the West earn from \$10,000 to \$16,000 per mile; Massachusetts, \$13,000; New York, \$15,000; and Pennsylvania, \$12,600; and it is safe to say that the Railroads of the United States earn \$10,000 per mile, or \$450,000 -000. In general the railroads of the United States earn about twenty-five per cent, of their cost per annum, and would pay for themselves in four years. But the earnings are rapidly increased without increasing the cost of road; and every mile added increases the income of commerce in an astonishing ratio."

The Railreads of California.

The natironds of California are all made with a single track, and with rails of such a size that 100 or 120 tons of from are required to the mile. The ties are of redwood, which is very durable. In the valleys the routes are nearly level, and the grading is chespo. The average cost per mile is about \$20,000. The Central Pacific, Western Pacific, California and Orsegon, California Pacific, Southern Pacific, Nana Valley, and Los Angeles Railroads, have all received aid from the public treasury, either Federal or local, and nearly all the roads now projected are soliciting Government assistance.

The Central Pacific Railroad extends from Sacramento to Promontory, a distance of 690 miles or to Ocden, 743 miles -the terminus is not legally fixed], of which 105 miles ore in this State This road connects at Promontory with the Union Pacific Road, which extends 1,085 miles For 1.032 from Orden I to Omaha. where it connects with other roads leading to all the principal towns of the Eastern States. Sacramento is united to Oakland by the Western Pacific Railroad 138 miles long. These three roads, with a total length of 1.913 miles, form the Pacific Railroad proper. The western terminus is at present Oakland, though the cars can come by way of San Jose into San Francisco, which last point is 170 miles from Sacramento. New York is 1,393 miles from Omaha, so the total distance from the metropolis of the East to that of the West, by rail, is 3,338 miles. Between Oakland and San Francisco, a distance of 4 miles, there is a ferry-boat. Some persons, instead of taking the Western Pacific Road between Sacramento and San Francisco, 138 miles, take the California Pacific, by way of Valleio, 83 miles, including 23 miles of water mute.

The charges for freight from San Francison to New York range from 584 to \$100 per ton, according to the character of the material. Wine is \$110; fruit to Chicago, \$00 per ton [by the car load]. Fragile, light, costly, explosive, and perishable stilled, such as mirrors, sewing machines, silk goods, percussion caps, tinware, and green fruit in quantity less than a car load, are charged the highest prices; while lead, iron, quicksilver, copper, zine, ordage, brick, and similar articles, pay the lowest rates. Every adult passenger can take 100 bs. of baggage, and the excess is charged at the rate of \$15 [currency] per 100 bs. from San Francisco to Omaha.

The Oregon division of the C.P.R.R. branches off from the Central Pacific at Junction, 18 miles from Sacramento, and is completed about 92 miles, to Soto, through which the road runs. It is to be extended to Portland, Oregon, and the work will advance rapidly this year.

The railroad from Sacramento to Shinglo Springs, running castward from Sacramento, belongs to two companies, but may be regarded as the property of one company. The road is 45 miles long.

The Visalia division of the C.P.R.R. branches off from the Western Pacific ten miles south of Stockton, and is to be extended to Visalia. Eleven miles are finished.

The Southern Pacific Railroad is 80 miles long, connecting San Francisco with Gilroy by way of San Jose.

Gilroy by way of San Jose.

The Los Angeles Railroad is 20 miles long, and connects the town of Los Ange-

les with Wilmington.

The California Pacific Railroad, 60 miles long from Vallejo to Sacramento, runs through a fertile, and nearly level district, and has a large traffic. It has a branch 42 miles long from Davisville to Marysville, and another from Adelanto to Marysville, and another from Adelanto to Galistoga, through Napa valley, 36 miles long. Another branch is projected to run 50 miles from Adelanto to Headsburg. A steamboat connects Vallejo with San Princisco, and the shortest and quickest routs from that city to Sacramento or Marysville is the California Pacific.

Marysville is connected with Oroville, 26 miles distant, by the Northern California Railroad. The receipts, expenditures, and tons of freight in 1869, of the Central and Western Companies are thus reported:

Receipts. Expenditures. Tons. Central Pacific ... \$5,670,822 Western Pacific ... 323,045 Other Railroads are projected but not vet under way. The most important of these is the Southern Pacific Railroad. then which no work within the boundprice of the State could be more conducive to the growth and prosperity of California. This road will open up a vast area of valuable lands capable of sending annually to the markets of the world immenso quantities of varied products. and which, for want of proper means of transportation, now lic useless and almost valueless for all practical purposes. Two routes are talked of for the projected Railroad; one, on the 32nd parallel, whose western terminus will be at San Diego, a fast-rising town with a good harbor, 456 miles south of San Francisco; the other, along the 35th parallel, connecting at Visalia with the Visalia division of the Central Pacific Railroad

Having now glanced briefly at a few of the various industries and enterprises of California, we will leave the others to be noticed hereafter. Let us now propose our reader on board some of the splendid steamers coming from Australia, New Zealand, China, or Japan, and approaching for the first time the western shores of "The Great Republe."

We know from experience with what eager interest travelers at the end of a voyage gaze upon the new, and to them comparatively unknown land before them; and also how anxious they are to know all about it. We will therefore hasten to gratify their thirst for information and (hypothetically) step on board their ship along with the Pilot. While he takes command of the vessel, we shall introduce ourselves as your "Grups"

We hope to give you entire satisfaction in that capacity; and, with your permission, we shall at once enter upon our duties.

The long range of mountains stretching away north and south along the coast, is known as "The Coast Range." Many peaks of this range not visible from the steamer's deck, attain a very respectable altitude. Several of them are over 6,000 feet, and one of them— Mount San Bernardino—is 8,500 feet.

On the left of the Golden Gate but straight before us as we are heading for the entrance of the harbor, is seen Mount Tamalpais, 2,597 feet high. On our right. built on the top of rugged cliffs, stands the "Cliff House," with "Seal Rock" in front of it, and the telegraph station on an eminence behind. We now glide serenely through the "Golden Gate"-a channel three miles long, one mile wide, and sixty feet deep, leading into the Bay of San Francisco, which is the largest, safest, deepest and best harbor on the west coast of North Anerica. On our way in we pass between Fort Point on our right, and Lime Point on our left. The former is the northern portal of the Gate and the latter the southern. The brick fort standing on Fort Point has not yet been named but is one of the heaviest fortresses in America. It has been built on the same plan as Fort Sumter. On the northeast corner of the fortress is a light house of the fifth order. The light is fixed, of a natural color, and fifty-two feet above the sea level. Pilots entering the harbor at night get this light in range with that on Alcatraz island, and then cross the bar and enter the harbor safely. Two and a half miles straight shead of us with gang commanding the Golden Gate by which we have just entered the bay, is Alcatraz island. It is about 600 yards long, 176 broad, and rises about fifty vards above low water. It is very irregular in shape, contains about thirty acres, and is composed mainly of solid rock. Heavily fortified on all sides as well as on the top, it is the key to the fortifications of the harbor, and has mounted on its betteries some of the heaviest guns over cast in America. Unfortunately Alcatraz island has no water. All the water used there is either caught in tanks during the rainy season or brought thither from the mainland. On the highest point on the island a light house has been erected. Its light is of the third order, and visible on a clear night twelve miles at sea. Sailing up the bay, we pass on our right, the Presidio, a Military Post garrisoned by a detachment of U.S. troops, North Beach, North Point. Telegraph Hill, the bonded warehouses. and the shipping. Stretching away before us to the southward is the magnificent hav of San Francisco, fifty miles long, cight miles wide, fifty feet deep and sheltered by the surrounding hills from every wind that blows. On our left is seen Mount Diablo. 3.856 feet high, with the low Contra Losta hills receding in the distance.



SAN FRANCISCO.

The "Queen City" and Metropolia of the Pacific Coast is situated on the western shore of the bay from which she takes her name, in Lat. 37 47 73 °N. and Lor 122° 26° 15° W. According to the census returns of 1870 she has a population of 10,961, composed of 137,460 Whites; 11,-817 Chinese, 1,094 Colored, and 49 Indians. The two sexes are about equally divided among the children under 15 years of age, but over that age there are 52,102 males to 38,310 females.

"The city and county of San Francisco embrace one municipality, the act of consolidation having taken effect July 1st 1856. The county comprises the northern end of a peninsula, about twenty-five miles long, formed by the bay of San Francisco on the east and the Pacific ocean on the west, its entire area covering a space of 26,861 acres, including the Presidio reservation of 1,500 acres, belonging to the general government." The city stands on the eastern side of this peninsula. Its site was originally a mass of high hills and sandy knolls, some of which still remain and mar the beauty of the city. Others have been leveled and their debris used to fill in swamps and extend the city towards the southward and eastward.

Where some of the wharves and warehouses now stand, there was at one time, sufficient water to float the largest vessels.

To protect the land made, and the city front generally, the Harbor Commissioners were authorized to construct a see-well extending from the north line of Harrison street to the south line of Chestnut street -a distance of eight thousand three hundred and thirty-six feet. About one third of this work has been done "A channel to the depth of twenty feet below mean low tide and one hundred feet wide at the bottom, extending twenty-five feet east of the water front, and westward seventyfive feet, or to the limit of the jurisdiction of the Harbor Commissioners, was dredged out. In this channel a rock embankment was deposited and allowed to settle to a firm foundation. The top of this embankment is level with the city grade. The outer or sea-side has a slope of a little more than one to one and is protected by large rock. At the water front there is a depth of twenty feet of water at low tide; and the top of the embankment is thirty-seven feet from the front line. Wharves are constructed, extending from the bulkhead to the water front, and the top of the embankment is covered with three inch plank."

According to Cronies in his "Early History of California," the bay of San Franciaco was discovered by a party of Jesuit Missionaries on the 25th of October 1769, but it was not till sir years later that a mission was founded on its shores. The city was slow and its influence small until California was annexed to the United States in 1846. In 1848, the discovery of gold at Coloma gave the growth of the city a new impetus, and in a few years raised her to be the wonder of the world. She grew with estonishing rapidity, and at one time had more large ships at her anchorage than were ever seen together in any other harbor!

At different stages of her history she has passed through many vicissitudes. She has suffered severely from conflagrations. Six times within twenty-one months the greater portion of the city was burned, involving a loss to her citizens of twenty-two and one-half millions of dollars! Her commerce was depressed and her growth retarded for a period of four years, from 1854 to 1858. This caused attention to be turned to the development of her agricultural resources. These surpassed the most sanguine expectations and enabled her to export large quantities of wheat. The valuable discoveries of silver have more recently added to her wealth and importance; and it is confidently believed that her greatness in the past is but a faint foreshadowing of her future glory.

Streets

Market street is the longest and widest street in the city. It begins at the water front, about half a mile east of the City Hall, and runs in a south-westry direction on a nearly level grade beyond the city mins. His destined to be the "Broadway" of San Francisco. North of Market the streets run at right angles to each other. The most level running in straight lines a little west of north and east of south, have their numbers begin at Market. The principal of these in regular order receding from the city front, are

Front, Battery, Sansome, Montgomery, Kearny, and many others parallel to them. At right angles to these, and on the hillsides, are Geary, Post, Sutter, Bush Pine. California Sacramento and others whose numbers begin at the street forming the city front. South of Market, the streets running parallel to and south of it are called in receding order Mission, Howard. Folsom, Harrison, &c. The streets running at right angles to these are numbered from First street upwards, to the westward. East of First street, in order, are Fremont, Beale, Main &c. On the Potrero, at South San Francisco, the streets running east and west are named after the towns in the State, and those at right angles to them, after the States in the Union.

On all streets, the numbers on the northerly or northeasterly sides thereof are even numbers, and on the southerly or southwesterly sides, odd numbers.

One hundred numbers are allotted to each block bounded by principal streets, so that the initial figure of the number placed on a building atany street, crossing shall indicate the number of main streets such street-crossing is from the starting point. The names of the streets are also painted on the lamps at the street crossings.

Squares.

Of these there are but few in San Francisco, and they are much too small and insignificant for the wants of a great city. To the new arrival from Austmila or New Zealand, accustomed to the splendid gardens of the former, or the domains of the latter, they will appear particularly so. The smallness of the blocks of the city prevent their being larger. The most noted are Portsmouth Square, corner Kearny and Washington streets, (commonly called the "Plaza" which is the Spanish name for a squares); Union Square, corner Stockton and Post streets, now occupied by the Mechanies Pavillon; Washington Square, corner of Stockton and Union streets; and South Park on and Union streets; and South Park on Scoond, between Bryant and Brannan streets. There are several others in other parts of the city.

Buildings.

San Francisco has many fine buildings. The principal of these are the Grand Hotel, corner Market and New Montgomery streets.

MERCANTILE LIBRARY BUILDING, north side of Bush, between Montgomery and Sansome.

Young Men's Christian Association Rooms, north side of Sutter street, between Kearny and Dupont.

BANCROFT'S BUILDING, south side of Market street, between Third and Fourth.

gomery street, corner of Post.

Merchants' Exchange, south side of
California street, between Sansome and

Montgomery.

Post Office, occupying block bounded

by Jackson, Washington, Sansome and Battery streets.

ALTA CALIFORNIA BUILDING, South sido

ALTA CALIFORNIA BUILDING, south side of California between Montgomery and Kcarny streets, and many others that would require more space to enumerate than can be spared for that purpose.

Matale.

THE GRAND HOTEL, quite new; south side of Market street, from second to New Montgomery. Lick House, southwest corner Montgomery and Sutter.

Cosmopolitan; southwest-corner Bush and Sansome.

OCCIDENTAL; east side of Montgomery from Bush to Sutter. Besides these there are the Russ House, Brooklyn, International, American Exchange, and a host of others.

The Grand Hotel, of San Francisco, California.

One-half of our Eastern papers come to us lamenting in chorus that their cities are insufficiently supplied with accommodation for visitors. This is deficient either in extent or in quality. The public importance of such accommodation is usually underrated.

Most of the Northern American cities are now well supplied with hotels and it is a pleasure to sojourn in them. Leaving the range of the cities of Philadelphia, Clincinnati and St. Louis, and going south, the absence of fit hotels renders travel a misory and a horror. New Orleans possesses one hotel of tolerable quality; but Mobile, Savannah, Charleston, Baltimore, Richmond, Memphis, Nashville, and cities of lesser note, are provided only with a class of tavers which were dit companions to, as they are relies of, the age of stage coaches.

No other American city of its population is better supplied than San Francisco with first-class hotels, nor in any other is the cost of living at these equally low, notwithstanding that they are compelled to pay higher wages than Eastern hotels. From what we have already said, the real importance to San Francisco, which is likely to become a place of summer resort



to an extent by no means inconsiderable, of a hotel of the character of the "Grand," may be justly appreciated.

Of its external appearance, an accurate ities is given by the illustration on the next page, which is drawn from a photograph of the building. The point of vitw is one diagonally opposite the corner of Market and New Montgomery streets, giving a view of the two principal frontages of the other upon the two main theroughtaires of the city. The style of decoration is, as will be remarked, clabration of the city. The Market street front, which, as we look at the picture, streeting away to the left, is 205 feet in length, extending from the corner aforcamend to the corner of Market and Second streets.

The Montgomery front, which is the principal one, stretching to the right in our illustration, is 335 feet long.

The hotel is three full stories in hight. and a fourth in the mansard roof. The rooms of the latter are, to our mind, actually the pleasantest in the building, Those, in especial, which front to the eastward facing towards the bay, are sufficiently clevated to overlook the buildings on the opposite side of the street and command a sweeping view of the bay itself and of the hills, domineered by Mount Diablo, which rise above the Contra Costa shore This view is one of the lovelicst in all Christendom. The rooms upon the lower stories are of course the finer and more expensive. Some of them are furnished with a luxury and costliness which subdue the soul of the beholder to an attitude of apologetic respectfulness.

A preliminary fact of primary importance must be stated. There is not a room in the house upon which the direct rays of the sun do not fall during the day. The hygienic significance of this fact need not be enlarged upon. The plan of the hotel is the usual one of a structure surrounding a central court. But this court is large—so large that the sun's rays, as they fall upon its sides successively, reach the windows of its lowest story.

The outside rooms are arranged in suites, being parlor with one, two, or taree bed-rooms, bath-room, and water-closet.

The dining-room is a magnificent apartment of great size, lighted upon two sides by windows, and by night by a series of superb chandeliers and abundant side lights. Adjoining the dining-room are breakfast rooms, where also will be served the meals of the children, with their nurses and other servants.

Markets.

CALIFORNIA MARKET, between Kearny and Montgomery runs through from California to Pine, and will well repay a visit. It always has a splendid display of meat, fruit, and vegetables.

UNION MARKET, from Howard to Tehama between Third and Fourth streets, is devoted to the retail of provisions.

At the Tralian Fish Marker, southwest cor. of Sansome and Washington streets, a collection of California salmon can be seen at their proper season. Besides these, there are several others of less importance in various parts of the city.

Schools.

There is no city in the Union has a better educational system or finer educational institutions than San Francisco. During the year ending June 30th, 1869 according to the Report of Superintendent Denman, the cost of conducting the Public Schools was \$400,213.13; an increase over the previous year of \$23,821.-12.

Whole number of youth in the city, between the ages of six and fifteen years, entitled to the benefit of the school fund, 24,879; under fifteen years of age, 45,017, whole number of pupils enrolled during the year in all the public schools, 22,152; average daily attendance, 13,394.

Whole number of schools of all grades in the city, 55; the attendance at which were as follows: Whole number in attendance at Doys' High School during the year, 135; average daily attendance, 113 7-10. Of this number, 13 were instructed in Latin and Greek; and twenty graduated and received diplorms. Whole number of pupils enrolled in Girls' High School, 163; average daily attendance, 127; number of graduates, eighteen.

Whole number of pupils enrolled in the Grammar Schools, 4,541; average daily attendance, 3,740. Whole number of pupils enrolled in primary schools during the year, 16,528 average daily attendance, 10,769. Whole number of teachers, 326.

General school tax for 1869-70, upon every hundred dollars valuation, 45 cents; total amount raised for school purposes for 1869-70,\$473,764.65; increase for the year, \$12,010.95.

Churches.

There are about sixty churches in San Francisco—some of them being very costly edifices.

New Calvary Preserverian Church, corner of Geary and Powell streets, was completed in 1869, and cost \$150,000.

The Jewish Synagogue, is also a fine building.

Among the others may be mentioned the following:

St. Mary's Cathedral, southwest corner of Dupont and California streets.

STARR KING'S CHURCH, (Unitarian), Geary near Stockton street.

St. Ignatius,' Market near Fifth street.
First Baptist, Washington, near Stock-

Howard Presbyterian, Mission, near Third street.

First Methodist, Howard, between

Halls.

There are altogether about thirty-five halls in San Francisco, some of them the property of Benevolent, Masonic, Temperance and Old Fellows societies.

THE YOUNG MEN'S CHRISTIAN ASSOCIA-

MERCANTILE LIBRARY HALL, in basement of Mercantile Library Building. Unton Hall, above Union Market, How-

ard street, the largest in the State.
PLATE'S HALL, on Montgomery, near

Bush street.
PACIFIC HALL, Bush, between Kcarny

and Dupont streets, and
MECHANICS' HALL, Mechanics' Insti-

tute Building.

These may be mentioned as the principal ones.

Hospitals, etc.

There are thirteen hospitals in San Francisco. There of these are National, being the property of the German, French, and Italian citizens. Three are religious, viz: The Magdalen Asylum, under the charge of the Sisters of Mercy; the San Francisco Proteinath Orphan Asylum, and the Catholie Orphan Asylum. There are also the San Prancisco Woman's Hospital;

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the Foundling and Lying-in Asylum: the City and County Hospital; the Marine Hospital; the Small Pox Hospital; and a large Almshouse. Upwards of a thousand orphan children are cared for in the orphan asylums.

Benevolent and other Societies.

That the citizens of San Francisco are eminently sociable is fully apparent from the fact that there are over a hundred different societies in the city. Of these twelve are literary and historical; fourteen total abstinence; and seventy-five benefit and benevolent societies. There are also thirty-two military companies.

The Fire Department.

The Paid Fire Department of San Francisco is not surpassed by any in the world. It possesses 59 water cisterns capable in the aggregate of holding nearly 2,308,-697 gallons of water; 759 hydrants; and a fire alarm telegraph with fifty miles of wire running through the city.

Theatres.

San Francisco has four theatres properly so-called. They are, in order of excellence:

California Theatre, on Bush, between Kearny and Dupont streets.

Maguire's Opera House, Washington.

between Kearny and Montgomery streets.

Metropolitan Theatre, Montgomery,
between Washington and Jackson streets.

Alhambra Theatre, on Bush, between
Kearny and Montgomery streets.

Assury and Mongomery streets.

The California Theatre is by far the most elegant, and is devoted to tragedy and thelegitimate drama; Maguire's Opera House, opera and burlesque; the Metropolitan Theatre, opera and burlesque, and the Alhambra, to burlesque and Nerro

minstrelsy. In addition to these there are two Carriszs theatres, in which every evening amid the braying of trumpets, the clashing of cymbals and the beating of drums, the opposouly attired performers go through a drama that none but the Chinese can understand, and that occupies three months between the rising of the curtain in first act and the grand denouement in the last!

Melodeons and other kindred places of

Libraries.

San Francisco has quite a large number of libraries, some of which will compare favorably with the libraries of much older cities

The Mercantile Library Association has 25,000 volumes. It is the largest and best assorted library in the State, and has a large number of works of great intrinsic value and abiding interest.

The Odd Fellows' Library has 17,600 volumes, among which are many rare works not possessed by any other library in the city.

The Mechanics' Institute Library has 17,-000 volumes. Its collection is largely composed of scientific works.

The Public School Library has 6,000 volumes; California Pioneers 3,000, and The Young Men's Christian Association 3,-000. The literary, scientific, and law associations of the city have also libraries of considerable size.

Conveyances.

HORSE BAILBOADS.

The streets of the city are well supplied with horse railroads. Seven different railroad companies, having in the aggregate fifty miles of rails laid down in the streets of the city, attend to this business. Passengers are transferred from one company's line to another without extra charge, until they arrive at their destination.

FARE.

Tickets having four coupons, each of which will entitle the holder to ride from one end of the city to the other, are sold for twenty-five cents each, equal to six cents and a quarter for each fare.

Besides the horse cars, hacks and cabs afford facilities for visiting every part of the city and subarbs. These private conveyances are very numerous and generally to be found at the principal holes, around the plaze, and at the steamboat landings. For the benefit of our readers who may have occasion to use these vehicles we quote the rates of fare legally chargeable for their use.

ORDER, No. 718, OF THE BOARD OF SUPERVISORS OF THE CITY AND COUNTY OF SAN FRANCISCO.

Section 7. "For a hackney carriage drawn by more than one horse, for one person, not exceeding one mile, \$1.50; and for more than one person, not exceeding one mile, \$2.50; for each additional mile, for each passenger, \$0.50; for four or less persons, when engaged by the hour, to be computed for the time occupied in going and returning, including detention, \$3 for the first hour, and \$2 for each subsequent hour. For a hackney carriage drawn by one horse, for one person, not exceeding one mile, \$1; for more than one person, not exceeding one mile, \$1.50; for each passenger, for each additional mile, \$0.25; for two persons, when engaged by the hour, to be computed for the time occupied in going and returning, including detention, \$1.50 for the first hour, and \$1 for each subsequent hour; and no extra charge to any passenger shall be made for the ordinary amount of baccase."

SEC. 8. "From any landing of any steamboat to any point east of the west line of Larkin street and north of the south line of Brannan street and cast of Third street, shall, in all cases, be estimated not to exceed one mile."

The penalty for the violation of any of the provisions of the above order shall not be less than five dollars nor more than twenty dollars, or be imprisonment not less than two days nor more than ten days.

Gardens.

Woodward's Gardens, north side of Howard between Thirteenth and Fourteenth; The City Gardens south side of Folsom between Twelfth and Thirteenth; Hayes Park corner Laguna and Hayes, and the Oakland and Alameda Parks on the east side of the bay, are all favorite places of report.

The Cliff House,

The reader will remember, is built on the edge of the cliffs at the southern side of the entrance to the "Golden Gate." By land it is seven miles from the city. It is a favorite resort for pleasureseokers. Every kind of refreshment can be obtained there. Inhaling the fresh balmy breeze of the Pacific, and secing the seals gamboling in the surf and on the rocks, will amply repay the trouble a visit to it will total.

Places of Note.

THE DRY DOCK.

This important enterprise is situated at Hunter's Point, about four miles southeast of the city, and is easily accessible by the Potrero horse-cars. The work was commenced in September 1866 and completed in 1869. Two docks are now in complete working order, one of stone, and the other of timber. The stone dock is four hundred and twenty-one feet long, one hundred and twenty-one feet long, one hundred and twenty-feet wide on the top, and sirtly feet wide at the bottom. It has a depth of twenty-two feet of water at mean high tido. The whole of this great at mean high tido. The whole of this great excavation was cut out of the solid rock, is perfectly water-tight, and capable of receiving the largest vessels.

The floating dry dock is constructed of the best Oregon pine. It is eight hundred and twenty-one feet wide, and two hundred and ten feet long, and will takeup vessels of 1.800 tons or under.

The cost of these docks amounted to nearly two millions of dollars.

At the Potrero Point, on the way to Hunter's Point, will be seen the

PACIFIC BOLLING MILLS.

These mills have every requisite for the manufacture of iron rods and bars of every shape or form, from a quarter of an inch to thirty-six inches in diameter. The mills and machinery cost \$1,000,000.

Close by, and to the south of the rolling mills, are the

POTRERO SHIP YARDS,
where a variety of small craft for-coast

THE BRANCH MINT

service are built.

on Commercial between Montgomery and Kearny, should certainly be visited. Here the visitor will see the various processes of purifying and refining the crude bullion; and of "rolling," "drawing," "punching," "adjusting," "milling," and "coining"—all technical terms deand "coining"—all technical terms denoting the *modus operandi* by which the crude bullion is transformed into glittering coin.

The coinage at the Mint in the six mouths ending June 30, 1870, as compared with the same period last year, in gold, was as follows:

		969		1870-
	Deposi	ts,	Depo	sits,
	Ozs.	Coinage.	Ozs.	Coinage.
January .	. 9,096	\$405,000	54,260,00	21,078,282 36
February	. 16.923	185,000	76.874.00	1,526,717.84
March	. 46.371	680.000	80.752.76	2,160,000,00
April	136,136	1.565,000	83,547,30	1.620,000,00
May	. 61,657	940,000	110.426.83	2.043.000.00
June	. 81,825	1.340,000	79,803.94	1,800,000,000
Total	.332,068	25,115 000	(85,769,83	\$10,239,000,20

The deposits exceed those of last year by 153,761 ozs., and the coinage is nearly double.

THE MECHANICS' PAVILION,

fronting on Stockton street, occupies Union Square. It is owned by the Mechanics' Institute and was erected for the Mchanics' fair. Some of the grandest conects ever given in San Francisco have been held init. Sanitary fairs for the benfit of the wounded in the Franco-Prussian war have recently been held there. They were grand successes. That under the suspices of the German ladies realized \$32,000, and that conducted by the French ladies \$55,000.

FORT ALCATRAZ,

on Alcatraz island, which has already been described, will well repay a visit. So will ANGEL ISLAND.

which is the largest and most valuable island in the bay. It is a mile and a helf in length, three quarters of a mile in width, and seven hundred and seventy-one feet high. It is picturesquely situated near the northern end of the bay, three miles north of San Francisco, and has many natural springs. Its valuable quarries supply large quantities of blue and brown

sandstone for building purposes. Both kinds are much used for public and pristebuildings in San Francisco. A detechment of U.S. troops are located on the island, where commodious barracks have been erected for their accommodation. Large batteries mounted with heavy guns have also been constructed upon it.

GOAT ISLAND,

lies about two miles east of San Francisco. It is a nearly mile in length and half a mile in breadth. Its highest point is three hundred and forty feet above low water. It contains an area of about three hundred and fifty acres partly covered with chapparal, but principally by a tangled vine called "Yerba Buena" which, in Spanish means good herb, and was the original name of the island. In the first settlement of California, many vessels bound hither from southern ports, where goats were cheap, brought large numbers of these animals with them for fresh-meat on the voyage. The goats not required, were, of course, much in need of "fresh fields and pastures new" when they arrived in California, and no more convenient pasturage could be found for them than "Yerba Buena" island. Here therefore they were turned adrift. In a short time their number increased so rapidly that the term Goat Island was applied to it. The island is garrisoned by a detachment of U.S. troops, for whom snitable barrack accommodation has been erected.

An effort has been made to obtain a part of the island for a terminus for the trans-continental railroad, but the geneal government would not sanction it, lest the bridge that would be necessary to run the trains on to the island would intercept the current and cause a sediment to be precipitated which would ultimately fill up the bay to such an extent as would impede navigation.

Besides these, there are many more places of interest in and around the city which visitors will easily find out themselves.

Among these, the chinese quarter of the city will doubtless attract a good deal of attention. Parties coming from Victoria, where so many celestials are engaged in mining, gardening, and mercantillo pursuits, will not be so much astonished at the number of our celestial residents, as visitors who come from a locality not blessed with so many.

We are sure the following article, which we quote from the Overland Monthly, will be read with interest.

CHINESE IN CALIFORNIA.

Hop Wo, Wo Ki, Hop Yik, Tin Yuk, Shun Wo, Hang Ki, Chung Sun, Yan On, Cheung-Kwong, Shan Tong, Wing On Tsiang. These signs, to-day so familiar in the

These signs, to-day so laminar in the streets of San Francisco, are not always the names of the parties composing the firm, not always the appeals of the parties composing the trained and the same street and the same the trained and sy out to be seated when you enter their places of business; nor do these sign-boards always indicate the trade which is pursued, or the kind of goods to be found within.

To one who can only read the signs in English the sounds are not euphonicus, but the same signs in the original language are suggester, and in themselvespoticial. Some, by reason of the spelling adopted, suggest a michievous comment on the innocent shopkeeper or his wares. When the circumstant many signs of the sign

proclaims that his establishment is the scat of "Faith and Charity." Hang Ki, the laundryman, also suffers in the cyes of the outside barbarian. A Chinaman reads in his sign only "The sign of pros-

perity.'

In the olden times, more than now, the traveler in old England and through the country towns of our own Eastern States, would be attracted by mottoes and devices painted upon sign-boards; these Chinese hieroglyphies, which we see over their doors, are of the same nature, and they are full of poetry to those who understand their meaning.

Let us give a few examples.

Wung Wo Shang-everlasting harmony, producing weath. Kwong On Cheang-extensive peace and affluence. Hip Wo-mutua help and concord. Tung Cheung-unitedly prospering. Tin Yuk-hexenly jowel. Tak Tsung-write and felicity. Yan On Cheung-benevolence, peace and affluence. Wa Yun-the lowery fountain. Chung Sun-sincerity and faith. Men Li-ten thousand profits.

These are some of the signs which adorn the entrance of wholesale houses in our city; they are not, however, exclusively used by wholesale dealers, for over the meenest shops we often find the most

negnest snops we noctic inscriptions.

These vertical signs standing or swinging near the doors of retail dealers in mixed merchandise read like this: "Dried fruit, sugar, oil, rice. All sorts of goods from north and south to furnish customers."

Each store has its particular sign, a motto which it has adopted, and adopted, perhaps, after consulting some selolar, or other person who may be supposed to know what sort of characters and sentiment may bring the most good luck. These signs, like every other part of the establishment, no blessed, when put in their places, by religious ceremonies. Some of these insertiplions, when interfaces in the property of the property of

ing plenteousness. All things complete. Glorious abundance. Eternal affluence. The spring of increase. Superabundant harmony. The sign of the best. The

sign of the seasons.

Anotherary shops show a vertical signboard in a style like this; "The half of the style shows a style show a style show and of every land," "Fresh and perfect medicines decotted." The particular signs or non de boulings are characteristic of the profession, such as Hall of the Hill and the style show a style show a style and the style show a style show a see; (take our medicines, and we insure added years); Enevolence and longwith of the style shows a style show a forcest; Hall of promoting transullity;

Hall of everlasting spring; Hall for mul-

tiplying years; Hall of all peace; Vastage hall; Hall of joyful relief; Hall for pro-

Clothing stores swing a board whose inscriptions tell of "Now clothes, shoes, stockings and caps," and "Now goods for family use, to furnish enstomers." The name of the shop may be: Union and harmony. Elegant and ornamental. Union and peace. Rich and luminous. But the composition of these characters is suggestive of the characteristics of the trade, such as switching twisting silk.

embroidery, weaving, etc.

moting harmony.

Restaurants announce their business in such terms as these: "Manchau and Chinese, animal and vegetablo (food) by the meal, with wine, diversions and enter-tainments." Each restaurant has its particular style or title. We have the almost flower chamber. Fargrant almond chambers, and the state of the stat

A butcher's sign reads after this manner: "Wo receive the golden hoga-that is, wo take whole hogs to roast." (as we see them roasted whole for the serifices in their golden colored ekins). Greasy and prosy as their business may seem to be, still we find them quite up to the other trades in the choice of sentiments for their shops. Great concord, Virtue and harmony, Brotherly union, Constant faith, Everything complete, Virtue abounding, are some of the sentences which grace the meat-markets.

We have Pawn-brokers, whose shops are known by such proclamations as these: Great and glorious pawn-brokers, Mutual benefit pawn-brokers, Honest profit pawn-brokers, Let-cach-have-hisdue pawn-brokers, Peaceful affluence pawn-brokers.

The workers in gold and silver announce their business thus: Gold and silver ornaments—convenient exchange: that is, deposit your gold are silver to be made up as ordered. Like the tailors, they have selected characters for their signs, which not only express a beautiful sentiment, but which also indicate the house of their works of the silver which are indicated to the silver which are indicated to the silver which are indicated to the silver which are the silver which is silver which is the silver which is silver which

We have slipper manufacturers, who besides the sign-boards announcing their business, are not behind their neighbors in the laudable strife to adorn the street with those sacred characters which awaken poetic choughts in the minds of Chinese scholars, and often serve to call up some passage of their venerated classics.

The same is true of the tinners. There are also Intelligence offices. On their signs we read: Flowing out and coming in (turnishing screams and taking in the fees). Sam Li, (profit for three—for the three partners, or for the man whose name is "Number Three.") Righteousness as an overflowing fountain.

We have a Chinese store of foreign goods. The sign is Chai Lung Shing, and it means "abundant relici." San Franciscans have noticed that, notwithstanding the people in this store have changed occasionally, still the sign remains the same. So of many other Chinese stores.

San Francisco furnishes engravers in wood, and men who cut the wooden blocks for printing. One of these hangs over

his stand the characters signifying "pearl strokes."

The manufacturers, not of silver shrines for Diana, but of paper shrines for gods and goddesses, paper images and paper clothing and furniture for offerings to the gods, display their signs.

The sign-boards of the eigar-makers would suffice for a short chapter, but we give only these five specimens: Fountain of Righteousness; Harmony and profit, Abounding happiness; Excellent thoughts; Fountain of the "Most Excellent;" Constant increase of wealth.

The "white dove card depositories," or lottery establishments, have their peculiar signs: Lucky and Happy, Following profit, (profit follows you) the Killing hall, or the Winning hall. The above are selected from the signs of ten establishments where the lotteries are drawn.

The "Fan Tan "saloons-saloons where is played the came originally learned from foreigners—have their insignia and street advertisements, which read: Get rich, please come in. This evening the skin is spread, (the skin is spread out, around which theplayers seat themselves) Straight enter the winning doors, Great perfection, The Twin Happinesses, Lucky and Happy, The Fir-tree path, Stony Brook, Overrunning abundance, Happy thoughts, Justice and harmony, Riches ever flowing, Heavenly felicity, As you wish, Forest We have a list of forty-one such inscriptions, which meet the eyes of Chinamen whichever way they turn, as they go up or down their streets in the city of San Francisco.

Our Chinese barbers have their signs: though, like our own knights of the razor and shears, they seem also to have an emblem of their trade, which, in their case, is the washstand and basin placed outside the door.

Chinese doctors are not scarce. One hangs out a board, on which we read, Yeang Tsz Ying feels the pulse, and writes prescriptions for internal and external diseases; Dr. Ma U Yuk feels the pulse and heals thoroughly the most difficult and unheard-of-diseases; Dr. Tseang Ling cures wounds caused by falling or by

being struck, also broken bones, so much for the job. Another advertises to cure small-pox. Another proclaims the diseases of children as his specialty. Others announce to those suffering on account of their rices that they will take them in hand, and turn them out in a sound condition for a specified consideration, advice and medicine included.

We have clairvoyant physicians —men who profess to be the mediums of one Wong Fat Tong, a herdman's boy, who went to his account nobody pretends to

say how long ago.
We have fortune-tellers also, of whom

one, Mr. U Tin, (or Rain Field) proclaims himself a scion of the family of the renowned Shiu Hong Chit, and a divine man's destiny, But Mr. U Tin does not tell all the fortunes; other men have had distinguished necessors, and hold intercourse with the spirit world, and out deters forming a person's name, and read the lines in the palm of the hand as well as the descendants of Shiu Hong Chit.

It is not common for wholesalč dealers in opium to put up a special announcement of this branch of their business, but the red cards of the petty vendors of the drug, which are pasted on the glass winth the condition of the control of the control

The smoking dens are known by their red cards, which read: Pipes and lamps always convenient.

Boarding-houses also give employment to sign-board makers, and so do lodginghouses.

One theatre calls itself the Ascending Luminous Dragon. Another claims to be the Newest Phonix.

Within the stores and shops we find scrolls hanging on the walls, and sentences written upon red paper and pasted on the

ralls, over the doors, over the sholres and the momp chests. On the serolla are quotations from the classies and original sentiments. On the red papers are what seem very much like prayers to the gods. Some of them read in this manner: New year Great good fortmao, In all things may our desires be mot, Let the four seasons abound in prosperity, Merchandise revolving like the wheels, Goods flowing out and coming in, Let the cest like the bubbling spring, Profit coming in like trushing waters, Customers coming like clouds.

There are inscriptions of this sort for the assurance of outsomers: Goods homest, the price true, Neither young or old will deceive, (housest derks) Once seeing and once speaking fixes it. Not two prices. The customers, however, are advised that the market value of goods may change during the day by such an inscription as this: The price in the morning may not be the price in the ceronics.

On the weighing scales we sometimes see the inscriptions: Scales be busy and prosperous, Daily weigh your thousands of gold. On the safe wo read: Heap up gold. Amass precious stones.

Over, or at the side of the door, are written these or similar sentiments: Tcu thousand customers constantly arriving,

Let rich customers continually come.
The sitting-room has these decorations:
Sit with honorable men, Point to the day
of returning, (that is, may we be able to
speak of our time of returning home as
near at hand) All things as you desire,
(may your wishes all be gratified) What

the heart desires may the hand perform.

On or over the doors of dwellings we read: Let the Five Blessings come to this door.

Within the dwelling will read: May good fortune fill the house, Men and things all flourishing, Old and young in health and peace.

At the stairway is the inscription: Ascending and descending safety and peace. On the red eards pasted on the walls of

school-rooms are these and similar sentiments: Become famous in poetry and

See 18: 18: 18: 18: 18: 18: 18:

books, Thorough study, final success. What have we Americans in our signboard literature to compare with this of

our Chinese neighbors?

We see sometimes on saloon windows the beer-mug and beer-bottle, with the foaming liquid bursting forth; a pair of crossed cues and the billiard balls adorn other windows; a carved Indian offers us wooden cigars: the shoemaker shows us pictures of boots and slippers; the blacksmith some symbol of his craft, and our shop windows are crowded with specimens of the articles to be found within. These strike us as designed especially to draw customers, and are suggestive only of traffic.

In the old countries, and on the oldest tavern sign-boards, may still be found such devices as the Stag's Head, Golden Eagle, Red Lion, etc. These may be somewhat suggestive of poetic thoughts, but, as must be acknowledged, the sentiment is not very inspiring.

It may be asked. Do the Chinese appreciate the sentiments of their signs and mottoes, and does the frequent reading of them exert a favorable influence upon their character? An affirmative answer may undoubtedly be given to these questions.

When Chinese gentlemen meet on business they do not usually (especially in their own country) plunge at once into conversation about merchandise, prices, exchange, and the standing of other commercial houses; but time is taken for pipes, for tea, and for compliments, and nothing is more common than for the guest to read, dissect, and remark upon the scrolls on the walls, and on the meaning of the sign, by which all present have their memories refreshed with whatever moral lesson or poetic sentiment the inscription is designed to convey. There can be no doubt that the moral

maxims of the Chinese are in advance of the conduct and general character of the mass of the people; still we cannot but believe that the frequent reading and hearing of elevating thoughts, of moral aphorisms and proverbs, has exerted a powerful influence in preserving the peo-

ple of the "Central Flowery Kingdom" from sinking to the depths of poverty. degradation and vice to which many other once civilized nations have fallen.

Fall of Rain in San Francisco.

The following table of the yearly fall of rain in San Francisco, from 1849 to 1870, is furnished to us by Mr. Thomas Tennent, Nautical Instrument Maker, of this city, from records kept by him during that period. The table is arranged in seasons, from July 1st of each year to the same date of the succeeding year.

Seasons.	Inches.	Seasons.	Inches.
1849-50	33.10	1860-61	19.72
1850-51	7.18	1861-62	49.27
1851-52	19.25	1862-63	13.62
1852-53	33.20	1863-61	
1852-54	23.87	1864-65	24.73
1854-55	22.68	1865-66	22.93
1855-56	21.66	1806-67	31.92
1856-57	19.88	1867-68	3v.83
1857-58		1868-69	21,35
18\8-59	22.22	1869-70	19.31
1859-60	92 27		

Average yearly rain-fall 23.94,

Commercial and Financial Statistics of the Port of San Francisco. For the Nine Months ending Sept. 30, 1870.

GROSS MERCHANDISE EXPORTS. The merchandise exports of the port.

foreign and domestic inclusive, for the nine months ending September 30, 1870, were as follows :

To Australia and New South Wales	\$150,650
Central America.	361,961
Chile	80.532
China	859,286
East Indies	28,241
Great Britain	4.476.904
Islands in Pacific	5.343
Japan	294.811
Moxico	611 779
Now Zealand	25,419
Pern	212 322
Pacific Russia.	106 852
Sandwich Islands	488,200
Society Islands.	127,356
Vancouver Island and British Columbia.	373.965
New York	2.952.593
11011 2012	010000
Total	11 499 967

ACCREGATE EXPORTS.

The exports of treasure and merchandise aggregated, for the nine months ending September 30 1870:

Domestic produce m	erohandise \$10,269,777
Foreign and Eastern	morchandise. 1,152,530 27,537,165
m. e. t	Am no 400

J. BAUER & CO'S

CELEBRATED AND

IMPROVED PIANOS



Acknowledged by the Musical Public and Profession Generally to be the Best Piano now offered to the Public.

Every Instrument Fully Warranted for Five Years.

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SITKA, VICTORIA, PORTLAND, GARDNER CITY. EUREKA, TRINIDAD, CRESCENT CITY. AND ALL PORTS ON PUBER SOUND.

SOUTHERN ROUTE.

SANTA CRUZ, MONTEREY, SAN LOUIS OBISPO, SANTA BARBARA, LOS ANGELES, AND SAN DIEGO

MEXICAN ROUTE.

Steamer every 35 Days.

SAN BLAS, GUAYMAS, MAZATLAN AND LA PAZ.

Honolulu and Australian Route.

HONOLULU, S. I., AUCKLAND, N. Z., SYDNEY, N. S. W., and MELBOURNE, V.

Office, 217 Sansome Street, HOLLADAY & BRENHAM, Agents, Destination and Value of Cortain Articles of Domestic Produce Experted during the Nine Months ending 30th September, 1870.

ARTICLE.	Australia	Value,	Central America.	Value.	China,	Vaine,	Enst Indies,	Value.
Bbls. Flour	. 14,6	25 \$69,4	11 23,23	0 \$63.2	97 99.8	41 \$466,1	63 5.0	
100-1b. Sacks Whea	t 6	1,0	50		19,2		-70	00 \$27,188
100-1b. Sacks Barley	6	30 61	13	1 1	01	. 20,0		
100-1b. Sacks Oats	1,58	8 2,42	24 35	0 5	73 9:	31 1.5	17	
No. of Hides								***************************************
Flasks Quicksilver Tons Capper and	20	9,00	0		4,05	1 128,50	00	
Copper Ore								
Pkgs of Wine			306	1,14	10 20	0 78	i4	
Pounds of Wool								
	Total	\$82,56	Total	\$65,11	4 Tota	1 \$624,88	2 Total	\$27,188
ARTICLE.	Great Britain.	Value,	Japan,	Value.	Mexico.	Value.	New York.	Value.
Bbls. Flour			12,097	\$78,000	3,640	\$58,39		
100-1b. Sacks Wheat	2,423,926	\$2,285,768	11,807	19,65		4.00,000	49,573	0101200
100-1b. Sacks Barley			11,647	14,305	122	305		
100-1b. Sacks Oats			1,814	2,900	20	30		50
No. of Hides							88,285	855,693
Flasks Quicksilver Tons Copper and)		•••••	14	585	5,133	157,205	1,000	30,000
Copper Ore	1,543	51,406					492	19,749
Pounds of Wool	13	186	208	1,781	435	1,943	8,676	421,065
Toulds of Wool	Tetal						13 381.180	2,662,774
-	Total.	32,340,360	rotal	\$117,234	Tota!	\$217,876	Total	\$3,679,664

Domestic Produce Experted. (Continued.)

ARTICLE.	New Zealand.	Value.	Pacific Russia.	Value.	Peru	Value.	Liverpool,	Value.
Bbls, Flour	2,870	\$13,375	1,915	\$9,854	40	\$ 200		
100-lb. Sacks Wheat	3,080	5,560						
100-lb. Sacks Barley			11	13	97,472	115,572		
100-1b. Sacks Oats							·	
No. of Hides								
Flasks Quicksilver					500	20,000		
Tons Copper and Cop-								
Pkgs. of Wine			- 111	638				
Pounds of Wool							6,883	1,208
1	Total	\$18,935	Total	\$10,505	Total	\$185,772	Total	\$1,208
ARTICLE.	Sandwich Islands.	Value.	Society Islands.	Value.	Vancouver Island and Br. Columbia.	Value.	Burrard's Inlet.	Value,
Bbls, Flour	6,317	\$34,860	3,009	\$16,859	570	\$3,359		
100-1b. Sacks Wheat	789	1,315	142	230	105	180		
100-lb, Sacks Barley	79	108	549	746	2,029	2,340	220	275
100-1b; Sacks Oats	1,810	3,716	68	91				
No. of Hides								
Flasks of Quicksilver					7	330		
Tons Copper and Cop- per Orc}								
Pkgs. of Wine	27	81	20	126	113	613		
Pounds of Wool								
2	Total	\$40.080	Total	\$18,052	Total	\$3,858	Total	\$275

Port Statistics.

The following is a statement of the number of vessels which have arrived at the Port of San Francisco from Atlantic, domestic and foreign ports during the six months ending June 30, 1870, showing their aggregate tonnage and the amount of freight charqeable on merchandise:

Tonnage.

Inward and outward, for the six months ending June 30, 1870.

From-		Vessels.	Ton
Australia ar	d New South Wales		27.45
			15
Chili		. 8	40,76
China		. 9	4,80
Fact Indian		. 9	5,09
Enance.		. 4	2,80
Camee		. 10	4.93
Germany		. 6	3.13
Great Butta	n	. 18	17.54
			26.05
			11.21
			301.52
			4.36
			8.99
Society Islan	ads	. 16	2.25
Spain	V	,	
Vancourer I	sland and Br. Columbia	1 12	271
United Sta	stand and Dr. Columbia	12	7,04
Alexandria	Va	. 4	
Dalaimania,	V &	. 1	597
Darcimore		. 5	3,396
DOSCOH		12	9,739
			36,242
Philadelphia		. 1	985
			004
	Totals		

To	OUTWARD.	Vessels.	Tons
Australia and	New South Wales		1.76
			35.20
Chili		11	
China		7	2,18
Cast Indian		17	12,183
Acase Indies		2	1.30
			42.191
			570
			36.110
			18,237
Pacific Russia	******	9	
Porn		3	1,386
Daniel D	tic Ports	18	17,250
Lactio Domesi	uc Ports	1,328	304,544
Sandwich Ista	nds	19	31.97/
Society Island	5	17	1.507
			12 A59
			1.99
			3,293
Now York		4	
		4	4,755
	Totals	1.576	500 2 45

	Totals.		1,576	509.340
	Reca	pitula	tion	
From-				
Brazil				
Central Amer				
East Indies				
				35,200
France				. 87.377
Germany				
				44,500
Japan				61,100
Sandwich Isla				
				. 33,518
Society Island				23.552
				9.660
Yancouver Isla				31.858
Alexandria, V				
				9.915
Baltimore			**********	. 65.500
Philadelphia .				. 141,356
				. 20.553

Total \$2,690,486

Export of Treasure from San Francisco during the Seventeen Years ending 1870,

YEARS.	To Eastern Ports.	To England.	To China.	To other Countries.	Total.
1854 1855 1856 1856 1857 1858 1830 1860 1861 1862 1893 1894 1895 1894 1895	38,730,564 39,895,294 35,531,778 35,891,938	\$ 3,781,080 5,182,156 8,066,289 9,247,743 9,225,79 3,910,029 2,672,936 4,061,779 12,350,140 23,467,256 29,410 921 16,252,786 6,565,510 5,633,507 611,421	\$ 965,887 839,675 1,336,852 2,993,264 1,916,007 3,119,763 3,574,680 3,541,279 2,680,754 4,206,370 7,522,865 6,943,082 6,533,084 9,427,588	\$ 755,500 319,338 827,000 1,103,907 1,103,907 4432,339 559,004 441,689 756,832 3,0°8,933 942,518 1,292,743 1,777,548 3,272,532	\$52,045,683 45,161,731 50,697,434 48,976,697 47,548,028 47,640,462 41,676,738 41,661,761 45,671,782 55,102,423 56,140,777 40,053,788
1869 1870 (9 mos.)	12,459,813 11,164,665	11,843,627 8,923,818	3,693,037 6,487,445 4,911,914	1,203,990 6,496,193 2,436,714	34,870,056 37 287,078 27,437,111
TOTAL.	\$496,188,631	\$167,597,638	\$70,206,199	\$26,195,817	\$760,188,315

Statistics of Transactions in Real Estate for Year ending 30th September, 1870.

per, 10.00							
	DEEDS.		MOF	RTGAGES.	RELEASES.		
MONTHS.	No.	Value.	No.	Value.	No.	Value.	
October	482 293 290 479	\$1,631,269 1,214,324 2,037,863 1,103,266 1,073,956 1,732,675 1,353,806 1,732,675 1,939,193 1,451,749 1,002,756 1,335,826 1,345,4406	179 152 177 199 218 296 316 349 272 255 276 243	\$ 706,574 711,913 1,139,898 779,917 1,085,697 1,316,659 1,439,554 1,811,963 1,196,162 1,557,072 1,201,136 1,111,414	111 77 105 121 129 158 225 211 194 177 187 127	\$ 302,200 255,881 332,280 588,675 405,025 685,452 1,043,464 919,934 803,791 1,080,239 699,932 408,053	
TOTAL.	4,689	\$17,210,580	2,932	\$13,557,947	1,822	\$7,614,500	

The following quotation from an article in the London Telegraph of May 19th, 1870, is a fitting sequel to the foregoing statistics:

The Future of San Francisco.

"One hundred years, almost to a day, have passed since the time when a Mexican priest, wandering along the desclate and uninhabited coast of that magnificent golden State which takes its modern name of California from the Spanish caliente fornalla, or "hot furnace," chanced to pitch his tent at night upon the edge of a spacious and land-locked bay. Struck by a prophetic presentiment, that the very spot upon which he then stood would one day be the site of a mighty and flourishing city, he knelt down upon his knees, before closing his eyes in sleep, and dedicated the harbor, of which he foresaw the existence in the dim future, and the circumjacent country, to the patron saint of his order, St. Francis. Before him lay that narrow gorge which opens into the bay of San Francis-

co from the sea, and which is now well known to the skippers of every maritime nation under its modern appellation of the Golden Gate.

"Nearly two hundred years before the day when the Franciscan Brother knelt down upon the edge of that matchless bay, one of the most famous sailors England ever produced had navigated its virgin waters for the first time. We are told by Mr. Froude, in one of the latest volumes of his "History of England," that Sir Francis Drake, having captured several Spanish galleons, or treasure ships, in the Lower Pacific Ocean, and having struck terror into the hearts of the "Dons" off the coast of Chili and Peru. went northwards, in the expectation of finding a water-way across the North American continent, somewhere about the latitude in which San Francisco and Vancouver's Island now lie. Disappointed in his hopes, he boldly put out to sea, and, pointing westward, made his way back to England by China and the Cape of Good Hope. Upon his return to Plymouth, after circumavigating the globe, Queen Elizabeth, displaying the mingled avarice and duplicity which were her characteristic traits, pocked the Spanish treasure brought home with him, while hypocritically pretending to Philip the Second of Spain that she would punish the bold printe, over whose successful andacity she secretty chuckled.

"The waters of that boundless Pacific ocean into which Drake was the first to carry an English keel are now about to be furrowed by the ships of every maritime nation. The dream which nearly four centuries ago, haunted Christopher Columbus, when, hoping against hope, he persistently steered his caraval westward. is about to assume shape and consistency in the latest quarter of the nineteenth century. His expectation was, that he should open up a new line of communication to connect Europe with China, and when we read that the first steamship of a new line between Australia and the west coast of North America reached San Francisco from Sydney and Auckland, it needs but little imagination to suggest that the dream of Columbus is not far from being realized.

"There is no more favorite subject of speculation among our trans-4 thantic kinsmen than the discussion as to which of their own mighty cities is to be the commercial mistress of the New World. Although, by ignoring their claims and premaism, and we compelled to hurt the feelings of such aspirants to future greatment of the commercial mistress and St. Louis, we are but expressing the universal opinion of studious and keenishted men, when we say that New York

and San Francisco will divide between them the commercial supremacy of the North American Continent, Of New York, which ranks already as the third city of civilization, it is not necessary to say more. But marvellone as the growth of American towns has been within the last thirty years, the record of San Francisco compels all her other sisters to pale their ineffectual fires. In a recent book about California, entitled, "Four Years within the Golden Gate." Miss Isabella Saxon tells us that San Francisco grew from a single house in 1836 to a city of 100,000 inhabitants in 1866. So sudden and magnificent an uprise can be exhibited by no other city upon the earth. And this, be it remembered, is the record of a decade anterior to the opening of the railroad which now connects San Francisco with New York. What, it may well be asked, will be the nonulation of San Francisco when the teas of China, the cotton of Polynesian Islands, the wool of Australia, and the breadstuffs and wine of California, are transmitted to Europe by half a dozen railroads traversing the broad American continent from sea to sea? It is the confident boast of Americans, that before half a dozen years have passed, there will be three trunk lines of railway open between the Atlantic and the Pacific. Already the Chinese are pouring into California in such overpowering numbers, that a recent writer in "Blackwood's Magazine" anticipates the arrival of an early day when the domestic servants or "helps" of North America will be neither white nor black, but vellow, Thrifty John Chinaman, it is predicted, will supercede the Irish, and oust the negro. When, in addition to the line of Anstralian steamships now plying between Sydney and San Francisco, there shall be an English and an American line intercommunicating between Australasia, Polynesia, Japan, the Philippine Islanda and China, on the one hand, and the Pacific alope of North America on the other, the tracke attracted by San Francisco may be unprecedented in its vastness."

Means of Communication.
Having glanced at a few of the main features of San Francisco, we will now turn our attention to her means of communication with the other eities and countries of the world.

Until very lately, San Francisco ocenpied an isolated position. Shut out by those great natural barriers, the Sierra Nevada and Rocky Mountains, from intercourse with the Atlantic States by land. her only means of communicating with them was by steamer round the Horn. The time required to make an average passage by this route by propeller, was 1141/4 days, and by side-wheeler 82 days. Then the Panama route was opened. By it a saving in time of 59 days was effected. The Pacific Mail Steam Ship Co. next opened up communication with China and Japan. This was followed by the opening of the great Trans-Continental Railroad. When this was accomplished San Francisco was isolated no longer. The Atlantic and the Pacific were bound together by an iron band. The Pioneer from California met the down-easter from Maine in the centre of the continent and amid the shricking of engines, and shouts of congratulation, the East and West shook hands. And then, the connecting link, the new line of steamers between San Francisco and Australia, was laid on.

Communication with Anstralia was all that was wanted to unite the great English speaking peoples of the world. This has been accomplished, and congratulations interchanged between them. Who shall limit the vast results of this union, or say where its benefits will end? We dare not. We believe it will cause the whole eivilized world to be linked together by the meshes of a common and all-prevailing trade. And this commercial intercourse will make different nationalities better acquainted with each other—will soften as-perities and toon down prejudices till

"Man to man the world ower, ShalliBrithers be an' a' that."

Travel Round the World.

There is continuous steam communication round the world. From San Francisco westward to Süez there is only one route, passing through Yokohama, Hongkong, Singapore, and Point do Galle. Going castward from San Francisco the Tavaeler can go by rail or by steamer to New York, or from Panama he can go direct to England or France; and from New York, Liverpool or St. Nazaire there are a number of routes to Sues.

The time for making the circumterraneous trip by the shortest ronte, without stoppages, is 80 days, thus divided, commeneing at San Francisco: To Now York, 7 days; to Liverpool, 9; to Suez, 10; to Galle (Ceylon), 16; to Singapore, 6; to Hongkong, 8; to Yokohama, 5; to San Francisco, 19; total, 80.

From Singapore there is steam to Australia; from Panaina and Aspinwall to all the ports of South America, and from New York to all the principal towns of the United States, and from Boulogne to most of the cities of Europe.

Among the attractive points in or near the line are the valleys and cities of Italy. Southern France and Spain, Athens, Constantinonle Cairo, the Pyramids the great centres of manufactures, commerce, fashion and power in Northern and Western Europe, the Alps and Pyrenees, the American lakes and prairies, Niagara, the Mammoth Cave and the Mississippi, the Rocky Mountains and the Sierra Nevada, Salt Lake City and Virginia City, the Sacramento, the Columbia and Puget Sound. the valleys, the plains and the mines of California: the Hawaiian Islands and the great cities of Japan and China, the Yangtze and the Hoangho, Calcutta, Benares and the Ganges. The objects of interest and wonder are not confined to any part of the route: the chief attractions cannot be exhausted without making the complete round

As traveling has become one of the chief methods of plasure-seeking, and as the facilities for enjoyment of travel are rapidly increasing, it is to be expected that the number of those who make the circumterraneous steam trip will rapidly increase, —that their traffic will be soon appreciable, and yield considerable profit to the main points on the line. San Francisco is such a point, and many years will elapse before anybody can go round the world without passing through our city and paying tribute to it.

Lines of Travel.

The different lines of street cars running in overy direction through the city and leading to its different parts, offer cheap and rapid communication with all parts of the city and suburbs; and from the city, as a centre, every port of the world can be reached with great facility. Daily connection is had with the following towns,

BY BAILBOAD.

The Southern Pacific Railroad, expected soon to be open as far as Visalia, leads to Redwood City, Santa Clara, San Jose, Gilroy and other small stations on its line. In connection with the Western Pacific and Oakland Railways, steam ferries leave San Francisco several times every day. That connecting with the Great Trans-Continental Railroad leaves every morning at 8 o'clock.

BY STEAMER.

Lines of steamers ply between San Francisco and Santa Cruz, Monterey, San Luis Obispo, Santa Barbam, San Pedro and I San Diego. Mazatlan, Guaymas, and La Paz are also connected with the city by steamer. In a northerly direction steamers ply to Portland, Oregon, Victoria, Vancouver Island, and Sitki in Alaska.

China and Japan are connected with the city by a first class line of steamers. So are the Hawaiian Islands, New Zealand and Australia. Sailing vessels leave San Francisco for all ports.

The California Steam Navigation Company dispatch steamers to all accessible points on the San Joaquin and Sacramento Rivers; also to Benicia and Suisun. The steamer New World runs to Valleio

where it connects with the California Pacific Railroad, which, by a short route conveys travelers to Sacramento Marysville, and intermediate points.

FERRIES.

From the city to Saucelito, a beautiful little town at the north end of the bay, three times a day. It is from the hills behind this little town that the best view

THE UNION

CENTRAL PACIFIC R. R. LINE.

THE ONLY ALL RAIL ROUTE

Across the American Continent avoiding dangers by sea.

This Route is Safest for Travelers, MOST ATTRACTIVE FOR TOURISTS,

MOST DIRECT FOR EMIGRANTS,
TO THE GREAT AGRICULTURAL SECTIONS OF

NEBRASKA, COLORADO, WYOMING, UTAH AND IDAIIO,

RICH MINING DISTRICTS OF MONTANA, NEVADA AND CALIFORNIA.

By this Route the Traveler Witnesses the Beauties of the

GREAT VALLEY OF THE PLATTE
Which grows every kind of Crop by easy culture.

THE GREAT NATURAL PASTURES OF LARAMIE PLAINS,
Where sheep and Cattle are fatted, and finest butter produced without the labor of
feeding or housing stock.

THE GREAT IRON AND COAL FIELDS

Between Carbon and Evanston, over 300 miles in length.

MAGNIFICENT PANORAMA OF THE ROCKY MOUNTAINS.
At Sherman, 8,242 feet above the see, the Line Passes the Highest Point in the World
Crossed by Hollman, At Circion in food passes the HIGK RONN FORDE.

THE UNION PACIFIC RAILROAD

Passing between the great Natural Walls of Echo and Weber Canyons,

THE CENTRAL PACIFIC RAILROAD
Which runs through the Mountain Passess and elevated Valleys of the Sterra
vocadas, and over the rich Platus of California to the Golden Gate,

THE UNION AND CENTRAL PACIFIC RAILROAD LINE
Is a wonderful achievement of Engineering skill and perfection in Railroad
construction. The numerous connections by Rail, Steamers and
Stages enable the Traveler to reach any point in

CALIFORNIA, OREGON, BRITISH AMERICA

AUSTRALIA, NEW ZEALAND, HAWAII, JAPAN, CHINA AND INDIA.

BAY OF SAN FRANCISCO,



TWELVE-MILE FARM.

Here we catch the first glimpse of the bay of San Francisco, which runs almost parallel with us for the next thirty miles. South of this point, the valley opens up, and the country becomes more beautiful.

SAN BEUNO,

Fourteen and a half miles from San Francisco, is the next station we arrive at. There is nothing to detain us here, so we hurry on, admiring the hills on our right with their ravines filled up with clumps of beautiful green trees, and wondering if the salt marsh lands on our left will ever be covered by large bonded warehouses.

a few fine houses in its vicinity-MILL-BRAE DAIRY, and OAR GROVE, we come to

SAN MATEO,

A beautiful little town 20 miles from San Francisco. It has many fine residences literally embowered among oak groves. Many of its residents are San Francisco merchants.

BELMONT,

Five miles beyond San Mateo, is but a small station. Up the gorge west of the station there is one of the most beautiful residences in California. South of Belmont, the hills, now covered with cakes and redwood, are more distant from the road. The intervening fields are studded with oak trees. Farms become more numerous and almost before we know it we are at

REDWOOD CITY,

The county seat of San Mateo County.

The city is built on a slough connecting with the bay of San Francisco. The slough is navigable at high water for small

coasting craft, who load lumber here for the city market. The city derives its name and support from the red-wood business. It has one weekly newspaper, the Gaztte. Distance from San Francisco 28 miles

Leaving Redwood city we ride on through a beautiful grove of oak trees past a small station appropriately called."Fair Oaks," till we come to

MENLO PARE,

A favorite summer resort, four miles south of Redwood City, and famous for the beauty of its oak trees. It has a few fine residences and a good hotel.

Continuing our journey through grounds that seem to have been intended by nature for a "happy hunting ground," we arrive at

ALALA KULDI

Mayfield is a quiet little town on the right of the road, having three hotels, several stores, and about 800 inhobitants. Considerable attention is being devoted to silk culture in this neighborhood, and with very satisfactory results. One weekly paper—the Enterprise—is published here.

MOUNTAIN VIEW STATION,

A small village, which draws its only importance from the fact that the original village of that name lies about a mile west of the station. It was originally called "Bay View," because of the excellent view of the bay which can be obtained here.

In the next eight miles we pass

MURPHY'S AND LAWRENCE'S,

Two small stations named after the people living near them. They are of

small importance, so we will turn our attention to

SANTA CLARA VALLEY.

South of Mountain View the country assumes a different aspect. The valley becomes broader and more beautiful. The land is more generally farmed, and orchards become more numerous. In the foreground are substantial and elegant farm-houses, surrounded by orchards and gardens; and the Santa Clara Mountains, with their brown sides and mist-capped summits, supply an appropriate background, and make up a most bcautiful picture. Santa Clara Valley is acknowledged to be the fairest valley in California. Snow never falls here, nor is there ever extreme heat. Although but twenty miles from the open sca. yet a range of coast mountains keeps off strong winds and sudden changes of temperature; while a higher ridge on the land side excludes the hot breezes from the east. Mineral springs abound. The waters of Almaden are bottled under the name of "California Vichy," so closely do they resemble the French original. At Warm Springs, on the east side, and at Saratoga, on the west, hotels of fashionable resort have been established. From the north a narrow bay projects for inland and six miles from its extreme noint stands

SANTA CLARA.

A pleasant little town, forty-six and a half miles from San Francisco and two and a half miles from San Jose, to which it is connected by a horse railroad. It has several churches and schools, and an excellent hotel-the "Cameron House." Population, 3,470. Two weekly papers, the Index and News, are published here. Santa Clara owes its name and origin to a mission established there on the 18th of January, 1777. The mission no longer exists in its primitive state: but the old Mission Church is still standing and in use, and forms part of the

SANTA CLARA COLLEGE.

This college is the nucleus round which the town of Santa Clara has grown. It was founded in 1851, while California was yet in her infancy, by a few gentlemen whose lives were devoted gratuitously to the work of educating youth. So rapid was the success of the undertaking, that in 1855 the Legislature of the State gave the institution a charter. Since that period the career of Santa Clara College has been one of success. Her sons are to-day of honor and use to their State, in law, in medicine, in music and in business. Five of her graduates have held seats in the House of Assembly. Her position to-day is that of the first educational establishment on the Pacific Coast. Her staff of professors and tutors numbers twenty-five. Sho has two professors of chemistry, who daily use a completely furnished laboratory; a professor of physics, who has at his command the largest cabinet of apparatus possessed by any college in the United States: telegraphy is taught with the aid of four instruments at different stations in the different houses, which stand upon ten acres of ground. Photography is taught in a building erected exclusively for the purpose, and fully supplied with apparatus. Five professors of music give opportunity of making acquaintance with every musical instrument of the day. Mathematics are taught, from arithmetic to calculus. A professor of English literature lectures five times a week. Greek and Latin classics employ five teachers; and the modern languages are taught each by a native of the tongue in which he instructs. The College is managed by the Fathers of the Society of Jesus. The religious ceremonies are the Catholic but students of any denomination are received, and trouble has never been experienced from the usage. Students are not allowed to board without the college precincts. An excellent table is set at refectory commons, and there are two common dormitories besides the chambers for the seniors. The scholastic year fills ten months. For this period the pension (charge) is \$350, about £70, which includes almost every necessary expense but that for clothing. A full specification of terms &c., may be found in the prospectus of the college, which will be sent free to any person addressing the President of Santa Clara College

Two and a half miles from Santa Clara, and almost connected with it by suburban residences, is San Jose.

SAN JOSE

Is the most beautiful inland city of California. Picturesquely situated in one of the most fertile valleys in the State, and having a climate alike free from the harsh winds and thick fogs of the coast, and the intense heat of some of the small, close valleys of the interior, she is a favorite place of resort for visitors and those afflicted with pulmonary diseases.

Her population, which is rapidly increasing, amounts to ten thousand. She has a number of very fine buildings, among which may be mentioned the Court House, which is one of the finest of its class in the State, and cost \$200,000. The academy of Notro Dame—a female college—is also a fine building. So is Brohaska's onera house.

The view from the dome of the Court House is both comprehensive and beautiful, and should be seen by every visitor to San Jose. From this clevated point the tourist will see beneath him the "Covote" and "Guadalune," two small streams with willow covered banks, which flow through the city in a northerly direction and empty themselves into the bay of San Francisco, cight miles distant. To the eastward will be seen the Caleversa Mountains and more to the northward the town of "Alviso;" and beyond the bay Alameda. To the south, Gilrov Valley opens up; and to the south-west New Almaden and the Santa Cruz Mountains. San Jose is the largest town in Santa

Clara Valley, and the distributing point for Warm Springs, 12 miles north; Congress Springs, 10 miles west; Gilroy 30 miles south; and New Almaden 16 miles south-west.

The growth of San Jose has been rapid and standy, and now it is no of the most prosperous towns in the state. The State Normal School is located here, and will open as soon as the buildings are oppleted. Gas works, water works, a foundry, a lumber and a flouring mill attest the energy of the citizens of San Jose; while the spires of nearly a doore churches bear witness to the fact that the pursuit of results alone does not engross their attention. San Jose has four newspapers their dependent, daily, the Pariot, daily

and weekly, and the Argus and Mercury, weekly only.

The city has several hotels, but the principal is the "Auzerais" House.

Before pursuing our journey down the Gilroy Valley we may go out of our way a little to notice one of the special industries of California.

Quicksilver.

California is now the principal producer of quicksilver, the annual yield amounting to about 3,000,000 pounds, while the production of the remainder of the civilized world is about 3,500,000 pounds. Almaden, in Spain, turns out 2,000,000, and Idria, in Tyrol, 1,000,000. In this State about half the vicld comes from New Almaden, and nearly a fourth each from New Idria and The Redington. The Pope Valley Mine has not been opened sufficiently to prove its value. The Enriqueta Mine, near the New Almaden, produced 500,000 pounds in 1858; but nothing since; and the Guadalupe, near it, and the Josephine, in San Luis Obispo County, which may have made some quicksilver, are now idle. The consumption of the coast is from 800,000 to 900,-000 pounds annually.

Near the New Almaden Quicksilver Mines is the bottling establishment of the New Almaden Vichy Water Company, another special industry of California which has already been alluded to.

Leaving San Jose, by railroad, we continue our journey down through

GILBOY VALLEY.

This valley, though not so broad as the Santa Clara Valley, is quite as fertile and beautiful. The railroad and the county road run parallel to each other down through the centre of the valley. Houses that, in carly days, were read-side inna on the latter are now stations on the former. Thus we have "Seven-Mile House;" "Iffene-Mile House;" "High-tern-Mile House;" and "Twenty-one Mile House;"—all stations on the way to Gilroy. After we pass 12-mile house the valley opens up, the oak trees are more numerous, the orchards are not so far spart; the farm-houses are embowered in oak groves, and the landscape is more lovely thus hofore.

Just before reaching Gilroy the valley becomes considerably broader, the oak trees are less numerous, and more wheat in raised

Wheat growing in California is so different to what it is anywhere else that we here quote for the benefit of our readers part of an article in the "Overland Monthly" on

Wheat in California.

It is hard for a stranger to our climate to conceive the trials and the advantages of the farmer whose ground is never moistened by rain from May to October, where men can work with impunity under a scorching sun, with a thermometer ranging near or oven above one hundred degroes Fahrenheit, and yet where the nights are always cool; where the land bakes so hard no plough can penetrate it until it is softened by the annual rains; where the hills turn green in November, and the grain sprouts in December and January; where the vale is clothed with the beauty of flowers in March; where the streams rise before the rain comes, and nature scems to set all old customs at defiance. Yet such are the anomalies of a farmer's life hero

He commences ploughing as soon in the Fall as the rain softens the ground enough to admit the plough, rarely before the middle of December. Then he hastens to improve every fair day, and soon the widening squares of black on the plains and hills attest his steady industry. The breadth of ground he can turn with his plough depends on the amount of rain that falls, and its method of coming. Perhaps, coming all at once, it drives him in doors, making his ground so wet that he cannot cross it with his teams; perhang it floods his lowlands so that he cannot sow his seed. Fortunate then is the man who can transfer his labor to uplands. and improve every precious day.

The furrows are generally shallow, varying from four to six inches in depth. and farmers will generally tell you that deeper ploughing, though it may be good for the soil, tends to evaporate the moisture from the land, and is hazardous to the crop. Ploughing begins in November, the bulk of it is accomplished in January and February, and by April it is over.

After the ground is once turned up it arrests the rain, no longer shedding it off into the water-courses, thus giving the grain a double chance in ease of a dry season. If the ground is heavy and lumpy it is harrowed before sowing, but usually the seed is thrown directly on the ploughed ground by machine. Then it is harrowed once, twice or sometimes thrice, in different directions. In light soils it is customary to sow about forty pounds of seed: in heavy soils as much as sixty. After harrowing in the seed, some eareful farmers roll the land with heavy rollers. serving to crush the lumps, and give it a smooth, even surface, which will retain the moisture in the dry season.

The system of rotation of erops is hardly considered here as yet, and the farmer trusts to the strength of a virgin soil, exhausting it by erops of the same grain year after year. The system of "summer fallowing" prevails to a small extent. By this plan the farmer divides his ranch in two parts, which he sows on alternate years. The part not down in wheat this year he ploughs after he gets his seed in, and lets it lie fallow through the summer In the fall he harrows it, and "sows in the dust." as it is called, breaking it up with his harrows to a dry powdery dust in which he sows his grain. It seems a

thankless task to scatter wheat in such a field, dry and barren, which has seen no rain for six months, but when the season of moisture comes, the ground is ready to absorb it all, and this grain starting early is firmly rooted, and if the rains be light. every drop is economized, while if the season be wet, the grain is firm and strong enough to stand a flood. Besides this, the "summer fallowing" gives the ground a rest on alternate years. But so far it has not gained much favor with the farmers.

The enemies of the farmer are ready to spring into life with the awakening grain. Our winter is so mild that every grain of foul seed or weeds sprouts as thriftily as what is sown, and as most of them ripen before the wheat, they reproduce themselves constantly to its great injury. Chief among these are barley, mustard, wild oats and wild elover. Many farmers weed their wheat, but the only remedy on a large seale is a change of crops or summer fallowing the land. In wet spots the wheat will be full of cheat or chess, a curious weed, supposed by many to be a degenerate form of wheat. The cheat of California weighs over fifty pounds to the bushel, and is an intolerable nuisance.

Smut is a parasite which seizes on a berry of wheat and devours it, turning it to a ball of black dust, to the great injury of flour, unless it be carefully removed. It was very prevalent as late as 1860, but is now nearly eradicated. The usual cure is to wash the seed in a solution of "blue stone," or sulphate of copper, which seems

to kill the germs of the smut-plant.

Rust is a parasite also, developed only under peculiar circumstances. Its origin is somewhat mysterious, but it never appears unless after some night when the wheat is past flowering and is "in the milk;" then comes a dense, wet fog, or a shower, which suddenly clears away, exposing the field to the fierce rays of the The change is too sudden, and the growth of the kernel is arrested. It shrivels away, and the head is covered with a red dust. This is rust; and not unfrequently fields, or portions of them, are so badly blasted as not to be worth cutting.

Lowlands and late-sown grain are most liable to its rayages; but very little is known of its nature or causes more than is stated above

The great terror of the farmer on the plains is drought. Rain must come before he can plough, and rain must soften the seed in the ground before it will sprout. If the spring rains fail him, the heads do not fill, and his grain is pinehed, and his

erop short.

Rain is the staple of conversation in the country, next to the Livernool market. One terrible drought in 1864, when thousands of aeres of grain never formed a head, and thousands upon thousands of eattle perished for lack of sustenance, has been a standing warning of what may happen. But the farmer goes on with his work with as cheery a faith as if droughts were never known-plants his sandy soils with equal confidence; rarely "summer fallowing;" never irrigating, or using any safeguards against a recurrence of the calamity. He "takes the chances." But whatever be the luck of the individual farmer, the State can never suffer as before. The region covered with wheat is so much wider spread, and over such different kinds of soil, that it is not probable any such overwhelming ealamity ean occur again. We could hardly fail to raise double our own consumption.

Harvesting begins in the interior in June and usually September is well advanced before it is completed on the hills next the sea. Wheat varies but little in its time of ripening, whether sown in October, "in the dust," or in February, after the wet season is nearly over. I have seen wheat, which I was assured was harvested in seventy days from the date of sowing. It was sown on a tule island. by burning off the tules after they were dry, and brushing the seed in the ashes. The moisture so near the surface of the swampy ground sustained the marvelous growth, and the hot sun of July and August hurried nature's operations with unwonted speed. The seed was sown on June 22d, and the crop was harvested September 1st.

Whenever it is possible, harvesting is

done by machinery. Our wheat lands lying mainly in the level plains, give us every possible advantage in this respect. every chance to avail ourselves of Ameri-

ean ingenuity.

The wheat is gathered either by "respers" or "headers." The header gathers only the head of grain, leaving nearly all the straw standing, while the reaper cuts off the straw as near the ground as possible.

There is a machine called a harvester. which reaps, threshes and sacks the grain all at one operation, but it is not com-

mon. The grain when cut by a header often

is hauled to a central spot in the field where stands a threshing machine, and as fast as it is gathered it is separated from the straw and sacked up ready for the market. Alas for the romanco of the harvest; the sickle, the eradle, and the flail, the reapers and the gleaners-Boaz and Ruth-all are gone! The picture now is a broad, hazy plain, bounded by brown hills, which flicker and climmer in the mirage; no trees, no running brooks, no green grass, but miles on miles of grain. Far away you descry clouds of yellow dust, and as you come nearer, you see the wagons drawn by horses coming in loaded with piles of grain and returning empty, and in the centre stands the huge machine, driven perhaps by steam, perhaps by a seore of horses travelling in an endless eircle, and fed by men dark as mulattoes with the sun and dust, perhaps with mouths and nostrils swathed to proteet the lungs from the dust. There is no romanee in this.

When wheat is reaped it is usually bound in sheaves; and Chinamen are often put to this work. This avoids waste. Then it usually lies in the sheaf till it is convenient to thresh it: perhaps it lies thus scattered about the field for weeks, for labor is searce and it is not every farmer that owns a threshing machine. In the dry valleys, in very hot weather the binding must be done while the straw is pliable, before the dew evaporates, as the straw when dry is too brittle to bind with. So binders often begin work long before

daylight. Threshing on the contrary cannot go on till the dew is dried off the ground, as the grain when damp sticks to

to the straw. To gather all this wheat, even with machinery, takes a great deal of labor. Everywhere in the harvest season, farm hands are very scarce, and tho best of anti-coolie men are glad to avail themselves of John Chinaman's help as a binder and often as a cook. So poor John spreads a dirty tent in some corner of the field near water, sleeps on the ground, works by star-light, lives on rice of his own cooking, and will soon be indispensable to our wheat-growers. We must have the labor from some source; and if China can give us the men the fields will never be idle. Nor does the cight-hour law fare any better in the country. The work begins before sunrise; and the laborers go to rest with the sun. Of course, the farmers have no house-room for all these men; and so, secure against rain, they camp out in tents, or under the trees, if there be any; or sleep on the straw by the light of the stars.

Many farmers using "headers" do not thresh their grain at once, but stack it in the straw in large stacks. It then goes through a sweat; and in a week after stacking, the pile becomes damp and warm. It must now lie for three or four weeks more, when it will become dry gain, and is then ready for threshing. Wheat fresh from the field is, in the interior valley, very hard and brittle, and machine. This is obvisited by stacking, while the fouring quality of the grain is improved, and undoubtedly it gains some in weight.

So great is the disposition of the new grain to sweat, that even when threshed as it is cut, it will often sweat in the sack.

Wheat after being sacked may and often does lie weeks and even months in the open field. The farmer, secure from any fear of rain, finishes his harvesting before he puts a pound of grain under cover. When ready, he hauls it to the embercater, and stores it or sends it to market.

One more trouble of the Eastern farmer we are free from. Our new grain is so hard, the weevil will not touch it. I have known instances where grain was kept two years and more in a bin on the field, without being handled, and was untouched

by any insect.

Everybody who has traveled in California at the beginning of the rainy season remembers the magnificent spectacles he has witnessed of whole fields of stubble on fire, and huge piles of straw burning in every direction. Everywhere else the farmer husbands his straw, and uses it to cnrich his land; but here, he burns it, The excuse for this wasteful practice is that if he turns in the stubble or ploughs in the straw, there is not moisture chough in the gound to rot it, under two or three years, and meantimes it so loosens the ground as to allow unusual evaporation and injure the crops. But remember that in 1864 thrifty farmers got sixteen dollars a ton for straw; and I observe, today, that careful men stack it and preserve it. Even the wealth of a virgin soil cannot stand year after year of steady crops. without manure, without fallowing of any kind, and without any rotation of crops.

There are many varieties of wheat raised in this State; but the favorite seed, to-day, is very decidedly the "White Australia. The wheat of the days of the Padres, or at least that found here at the American occupation, was the "California Club." a variety found mixed with other wheat, all over the State, but nowhere cultivated by itself that I know of. It is a poor yielder, but a hardy grain, with short-bearded head, and a plump, dark berry, producing a yellowish flour, with little body. It is a curious fact, that wherever a farmer neglects to change his seed and lets it "run out." it approximates in appearance this "California Club;" and moreover, it is singular that it is found scattered in almost every field in the State-certainly, every one in this portion. Like the Spanish horses and the "Mission Grape," this variety is so completely naturalized as to disguise its origin. The first variety introduced by the Americans was tho Chili wheat, white and red. The red has disappeared; but the "White Chili" is still very popular, especially in the Sacramento and San Joaquin valleys. It is a beardless wheat with a strong straw, a fair yielder, producing a short, plump berry, which gives a very white flour with little body. The tendency of Chili wheat, in this climate, is to become shorter and smaller than the original seed.

At about 1854, white and red Australia seed was introduced. The red has entirely disspeared, being probably bleached out. It is a good riskler, and a rour and millens, expecially near the sea-shore. Test was is alm, which is an objection to it; the head is beardless, long, and full of not and an entirely search of the sea-shore. The search is alm, which is an objection to it; the head is beardless, long, and full of not an entirely of the search of the search

In 1858, Sonora scod appeared, extended rapidly over the State, and rapidly disappeared. It came from Sonora in Mexico: is a poor yielder, but has a strong straw, and holds its grain firmly in the head This, and the fact that it can be sown very late in the season, constitute its main advantages. It produces a beautiful, bright, plump wheat, but the kernel is small and flinty. The flour from it is yellow and short. Another variety of wheat, and a vory excellent one, called "Chili Club," is largely raised north of San Pablo and Suisun bays-but I do not know its origin. It yields well, and is a stout grain, proof against high winds. Morcover, being white plump and handsome, it is a great favorite with exporters; but it does not produce as fine a flour as some other varieties. There are many other kinds of seed sown here, but none worthy of note. Before leaving this part of our subject, it may be well to note the different qualities of wheat resulting from geographical or local causes.

All the wheat raised on the sea is soft, damp and dark, with a very thick skin, while that raised inside the Coast Range, protected from fogs, is bright, and very hard and dry, with a thin skin. Between

these extremes is every hande of difference Again, certain sections (such as Santa Again, certain sections (such as Santa Clara) are noted for the strong, glutinous "atrength," so highly prized for bakers' "atrength," so highly prized for bakers' bible especially in dry sessons, and on gravelly soils—particularly on now land. This gives "body" to flourly but what produces it in the wheat, I do not know. crepts can readily pronounce within a

few miles of where any sample is raised. The wield to the acre in California is wonderful. considering our slovenly methods of farming. We averaged about twenty bushels to the acre in 1866; but it is nothing uncommon to see sixty and seventy bushels harvested to the acre. on large fields: and instances are well authenticated of land producing as high as eightythree and eighty-four. Cases are on record of even more: but the readers of the Over-LAND may rest with this for the present, The average yield is undoubtedly decreasing, as the soil becomes exhausted, in the older sections of the State, by constant cropping with wheat year after year. The quality too, degenerates under this bad system. One singular feature of our wheatraising is the "volunteer" crop. Land sown this harvest year will "volunteer" a half-crop next year, without any further care than to protect it from eattle; and even the third year will produce a crop worth harvesting. The "volunteer" grain will be foul; but it usually ripens early, and partially makes up for its quality by coming into market before the main crop. The mildness of our winter protects the seed, sown by naturo in the cracks of the ground, from destruction; and the first "volunteer" crop sometimes averages twenty-five or thirty bushels to the acre.

California wheat, as a whole, is peculiar for its whiteness and hardness. It is not remarkable for its "strength" or glutinous quality. Its whiteness gives an especial value in New York and Liverpool. It is so hard that the mills of the interior are compelled to we't if reely before grinding. This quality protects it from insects, renders it peculiarly safe for a sea-covage. and makes it doubly valuable for mixing with the softer varieties in England and the Atlantic States. The contrast between our fine white wheat and the small dark grain of the East, is wonderful to a stranger; and in both the Liverpool and New York grain-markets, we bear away the palm of the highest prices, and our wheat is reserved for their choicest brands of flour. We can say, without qualification, that to-day the people of California eat better bread, and for less cost, than any people on the face of the globe.

In considering the table of exports previously given, we must add to those figures what is consumed for bread, for seed, for feed, and for distilling, in order to get the amount of the crop. The crops of the last three years are thus estimated in round

numbers.

Harvest of 1966...... 14,000,000 bushels, Or, in 1868, about one-tenth of the yield

of the whole United States. If the prices so far prevailing this crop-year are maintained, our wheat alone, without our other agricultural products, will yield us \$20,000-000-very nearly as much as our entire

yield of precious metals.

The history of wheat culture is one of the most wonderful chapters in the annals of California. In 1848, we raised nothing; but abandoned all agriculture in the search for gold. In 1858, we barely supported our own population. In 1868, we shall have a larger surplus than any other State in the Union. What shall we look forward to? As our railroads are extended, and new sections brought into market, will our supply of tonnage become too small for us? Already this question looms up before us. Shall we build large elevators like to those of Chicago, at Panama and Aspinwall, and ship our grain in bulk by way of the Isthmus to our Sister States and to the Old World? Or will the shores of the Pacific swarm with a population, in time to come, ample to consume our bountiful crops? Perhaps China may depart from the rigid customs of her ancestors. and some part of her population become wheat-consumers. Such questions crowd upon us and bewilder us, as we survey the progress of our State, and wonder what we are to do in the time to come. Whatever be our future, it is full of hope; and we bless the Providence that has cast our lives in a land of such peace and plenty."

GIT.ROY

This busy little city derives its name from the first permanent settler in California-John Gilroy-a Scotchman who was landed from a vessel belonging to the Hudson Bay Company, which put in to Monterev for supplies in 1814. Gilroy was then a lad of eighteen. During his lifetime he was instrumental in building up the town which henceforth shall perpetuate his name. It was only a few months ago that he died.

Until the 12th of March, 1870, Gilroy was only a town. On that date the act. incorporating it into a city was passed. At present it is the terminus of the S. P. R.R. This adds to its business considerably. All the produce grown in the vicinity to be shipped to San Francisco has to be hauled to Gilroy by team; and all the passengers going by stage to the lower country start from this point.

Gilroy has 5 churches, 2 schools, several hotels, a flour mill, two planing mills, a tobacco manufactory, a brewery, and a population of about 2,000. The Gilron Advocate, a weekly newspaper, is published here.

From Gilroy, we have the option of coming back by the way we went or going westward to the coast, which we can follow up to San Francisco, our starting point. As it is our object to enable our readers to see as much of the country as possible, we shall adopt the latter route. Before doing so, however, we shall just glance at a few of the towns south of this point. Of these we shall first notice

HOLLISTER

A small town of about 1,000 inhabitants, situated in a very fertile valley on the eastern bank of the San Benito river. It has daily communication by stage with Gilroy. The Central Californian, a weekly newspaper, is published in Hollister.

SAN JUAN

But little can be said about this quaint old rown. It is famous only for its antiquity, and its laudable efforts to Christianize the Indians. The Mission which gives the town its name, was founded in the latter part of the last century. It is still standing, and is a substantial monument of those fathers who built it. Quite labely a spirit of enterprise has animated its present occupants and they are having a belify built upon it. San Juan supports one weekly nextspaper—the Eelo-San Juan is 12 miles from Gilvoy, to which it is connected by stage.

SALINAS CITY

Is a fast growing little town of about 1,000 inhabitants. It was established in 1868, and though called a City, has not yet been incorporated. Being principally dependent on agriculture, its advancement has been considerably retarded by the drought from which the whole of the lower country has suffered during the last season. Thanks, however, to the fine river which flows through the Salinas plain, and from which the city gets its name, no cattle anffered from a scarcity of water. Even with this dry year the fown and district have made considerable advancement. Several new buildings have been added to the town, not the least important of which is a school house, now nearly completed. No church spires yet grace the town, but divine service is frequently held in it by different denominations. The Salinas Standard, a weekly newspaper, is published here. Salinas City has a fine hotel, several very fine stores, a flouring mill, two wagon shops, blacksmiths, saddlers, and all the other establishments and people that go to make up a thriving country town.

It has daily communication by stage with San Juan and Gilroy on the northeast, Montercy on the southwest, and Watsonville on the northwest.

CASTROVILLE

Is situated near the mouth of the Salinas River, and having navigable communication with Montercy Bay, through a large slough caused by the junction of the Salinas River and Pajaro Creek, has shipping advantages of considerable importance. It is 12 miles from Salinas City, and has daily stage communication with that city and Watsouville. Population about 500. Castroville has one weekly paper, the Argus.

WATSONVILLE.

This thriving town is in Santa Cruz County, and draws its wealth from the rich farms of the Pajaro Valley. Strangely enough, when other parts of the State suffer from drought, the Pajaro Valley, as a rule, exults in an abundant harvest. Lying very low, it retains enough moistare in dry years, to ensure a good cropp, and when the season is favorable for other parts of the State, then the Pajaro Valley langishes because of too much water. Publishes a weckly paper—The Pajaronian. Population about 2,000. Daily stage communication with Gilroy and Santa Cruz.

SANTA CRUZ.

Without exception, Santa Cruz is the most charming little town in the State. For languid ladies, dving with ennui, or overworked business men, ground down to the same degree in which the proverbial camel was before the straw which broke his back was laid on this is the place to come to. Here the balmiest of sea-breezes can be inhaled. The most pleasant rambles by clear mountain streams, whose deep pools are here and there shaded by the umbrageous foliage of overhanging trees. can be taken with but little fatione; and last and best of all, the invigorating luxurv of sea-bathing, can be enjoyed without let or hindrance.

Santa Cruz publishes two papers, the Sentinet and Trens, both weekly, and has a population of 3,500 inhabitants, almost entirely dependent on manufactures. Large quantities of humber, leather, line, paper and powder are exported from it. The exports in the three former slone amounted, last year, to five millions of dollars.

Arrived at the coast we will now set out on our coast journey back to San Francisco.

THE COAST JOURNEY FROM SANTA CEUZ TO SAN FRANCISCO.

With good roads, running through a beautiful country, the smooth blue waters of the Pacific almost constantly in view, and a balmy northern breeze constantly fanning the traveler's cheek and blowing the dust away behind him, this ride is one of unalloyed delight from beginning to end.

end.

Leaving Santa Cruz and the many snug
cottages which adorn its northern suburb
a mile behind us, we come to

THE NEW BACK COURSE.

Which is not yet quite finished, but is being completed rapidly. It is one mile in circumference, and graded on the most approved principles. It has two course, —the inner for training, the outer for tretting purposes. It will be a credit to Santa Cruz, and we believe will not cost the city a cent. Eleven enterprising gentlenen, citizens of Santa Cruz, and interested in racing matters, bought, conjointly, a very fine ranch. A portion of this they set apart for a race course, and the balance, they sold at such prices as reimbursed them and paid for the race course besides.

is already good, it is being steadily improved by the erection of bridges over dry gulches and streams. For many miles it runs parallel to the coast range of mountains. The land on the coast is best adapted for pastoral purposes, and is principally devoted to dairy farming. Eight miles north of Santa Cruz we pass

Beyond this point, although the road

LAGUNA CREEK, A noted camping-place for picnic parties.

and much frequented by pleasure seekers from San Francisco. The creek affords good fishing; and excellent shooting can be found in its neighborhood. Two and a half miles further, we arrive at

WILLIAM'S LANDING,

An open roadstead, where the local produce, consisting of lime, lumber, tan-bark, firewood, and a small quantity of grain, are shipped on board small schooners by means of a "hawser" stretched from bluff to bluff. The produce to be shipped is "slung" on a pulley attached to the hawser, and run out over the deck of the vessel, where it is lowered easily and safely. It is an ingenious contrivance. and reflects credit on the enterprise of the men who thus create for themselves an artificial shipping port.

Three and a half miles further, in which dictance we arece the San Incinto Creek -a noted trout stream-over which a new bridge is being erected, we come to

DAVENPORT'S LANDING.

Another open roadstead, larger than the last, and famous for having the longest wharf running out into the open sea of any place on the Pacific Coast. Produce, similar to that shipped at William's Landing, is shipped here to the amount of 100 tons per week. To facilitate shipment a tramway has been constructed, and provided with trucks, in which produce can be run down to the end of the wharf. A hotel and a store, built near the beach, supply the wants of the men engaged in this business. Seventcen miles from Santa Cruz, and three from Davenport's Landing, we come to

SCOTT'S CREEK.

A beautiful, clear stream, possessing more attractions to people in general than perhaps any other on the Coast. Other streams have special attractions for anglers only, but this affords amusement to all. On its banks there is a magnificent laurel crove, which, like the famous "Banyan" tree of India, is capable of affording shelter to a large number of persons. During the summer months large numbers of both ladies and gentlemen come here to rusticate. Provided with a few cooking utensils, some blankets and straw, they enjoy themselves amazingly. In the daytime the ladies go fishing, and the gentlemen climb the adjacent mountains in quest of came, which here. is both large and numerous. Deer, in particular, are abundant. No less than about one hundred and fifty have been killed in this neighborhood this season. one of which was so large and fat that after it was cleaned it weighed 207 ກດກຸກຄ້ອ

Four miles beyond this, and just at the foot of a high hill, from which a most beautiful view is obtained of "Now Year's Point," a long peninsula, jutting far out into the sea, and whose sharp point is protected from the fury of the breakers by an island which bears its name, is

"PROG TOWN."

Consisting of a hotel and stable, which, together, furnish "Refreshments for Man and Beast." This is the half-way house kept by "David Post," who has almost immortalized himself by giving "a good square meal " to all travelers who patronize him. Frog Town derives its name from the fact that a lagoon, covering an acre and a quarter of ground, close by, contained so many frogs that it afforded employment to a party of Frenchmen for an entire wet season catching them. They made this place their camp-ground while engaged in the free catching business.

One mile from Frog Town we cross

WADDELL'S CREEK,

At the head of which is a lumber mill. which gives it its name. The stage road runs along Waddell's Beach for three miles, and a more pleasant ride can nowhere be found. The sand, near to the edge of the sea, is perfectly smooth and firm, and the stage glides over it as smoothly as it would over a bowling green. On the right are high brown bluffs, proudly defying both wind and tide, while on the left is the broad Pacific, with its majestic breakers of transparent emerald-green curling proudly over, and, with thundering roar, dashing themselves upon the beach.

During the breeding season of the sealions, many of them congregate on New Year's Island. An opportunity of seeing them lends interest to the journey. Some persons have made a business of killing them and sending certain parts of them to China, where they are used to make soup for the mandarins.

One mile south of New Year's Point the road diverges from the beach and leads through a splendid dairy country, having many large ranches and particularly rich soil. Conspicuous among them may be mentioned that of Mr. Steele and that of Mr. Ramsay—both extensive and valuable.

While passing these extensive dairies, it may be interesting to our readers to know something about

Dairies and Dairying in California. (From the Overland Monthly.)

"Within the limits of the above counties, (the coast counties-Ed.) there are kept at least 25,000 milch cows, subdivided into numerous dairies of variable magnitude. The larger of these are engaged in making butter and cheese; many of the smaller, carried on near the city, furnishing the inhabitants of San Francisco with their daily supply of milk. The disposition, so characteristic of Californians, to conduct every thing in which they engage upon a large scale, is well exemplified in this branch of businesssome single dairymen in the State owning over three thousand milch cows, while there are many who own from five hundred to fifteen hundred head each. The

largest owners of this kind of stock in the State are the firm of Shafter & Howard. who have not less than 3,600 head upon their extensive rancho in Marin County. California has also produced the largest cheese ever, perhaps, manufactured in any country; being that made, some five years ago, by the Steele Brothers, at Pescadero, the weight of which, when first made, reached four thousand pounds. Having first exhibited this monster cheese in San Francisco, they afterward disposed of the same, donating the entire proceeds in aid of the Sanitary Fund-they themselves defraving the cost of freight and exhibition, as well as all expense attending the sale. Having been auctioned off at the rate of fifty cents per pound, a handsome sum was realized for the noble charity sought to be benefited. The tackle required for turning, and the hoop used for pressing this cheese, alone cost over \$400. A cheeso weighing 1,600 pounds was made several years since, by George P. Laird. of Tomales, which, like the "Sanitary Cheese," having been of an excellent quality, sold at a very high price. Indeed, all large cheeses are apt to possess a superior flavor, not parting with their moisture so readily as those of smaller size.

"Sonoma County contains about double the number of cows kept in Lake, butter being chiefly made. In size, the dairies of Schoma range from forty to one hundred and fifty cows each, being somewhat smaller than the average dairies in Lake and Marin counties, the latter containing the largest single herd of cows in the State. Concerning this dairy, or, rather, group of dairies, we quote the following from the Commercial Herald and Market Review: 'In point of magnitude,' says that journal, 'some of our California dairies probably surpass those in any other part of the world. The largest in the State-that of Shafter & Howard, in Marin County-contains 3,600 milch cows, not including a large number of cattle, kept on another portion of their ranch, which latter embraces a tract of 66,000 acres, upon which they have constructed eighty miles of post and board fence. Upon this truct are twenty separate dairies, each having from 150 to 170 cows. These cows are mostly of the Devon and Durham breeds, the best milkers, however, being produced by a cross of the Devon and the common Amer-

ican cow. The proprietors will, the coming summer, add to their present number six or seven other dairies; that is, as the leases of that number of parties now supplying their own cows expire, the proprietors will stock these dairies themselves. On this place about 150 hands are employed, mostly Whites-the Chinamen not proving, on trial, satisfactory milkers. Only butter is made here, each eow yielding from 150 to 175 pounds for the season of eight months. They neither receive housing nor cultivated food. The Messrs, Shafter tried raising beets and carrots for their eows, but found the experiment too eostly, on account of the high prices of labor. The wages paid milkers and butter-makers are from \$25 to \$30 per month, and found. The quantity of butter made here last year was 400,000 pounds, for which forty-five cents per pound was realized. When the wholesale price for fresh butter falls below forty cents per pound, it is packed, and sent to market when the prices have improved. About five hundred heifer calves are raised every year, the balance being disposed of to other stock-raisers, or sent to market. Two thousand hors are fattened on the skimmed milk and the buttermilk, and from 250 to 300 head of cows and beef-steers are sold off every year; these and some hundred or more head of horses being pastured on a portion of the ranch, consisting of about 30,000 acres, fenced off for that purposc. This entire property, including stock and improvements, has cost the owners about half a million of dollars. Its present value would exceed a million and a half, and, in the estimation of many, two millions of dollars."

"The Steele Brothers are the next largest owners of milch cows in the State, having two herds of 700 each: one kept at Pescadero, San Mateo County, the other in

San Lats Obispo County, near the town of that name. At the former place, they own a tract of fifteen thousand; at the latter, one of forty-five thousand acres of land-all held under a patent from the United States Government, issued upon confirmed Spanish grants, this being the title under which most of our large dairymen hold their lands. The cost of this entire property, including cattle, fence, and other improvements, has been nearly \$500,000-the present value being at least double that amount, as the land is of superior quality. For the single item of fencing, of which they have built over fifty miles, nearly \$30,000 has been expended; and they have also been forced to pay large sums in defending their title against trespassers. This firm make only cheese, the product of their dairies enjoying a high reputation in the San Francisco market.

"The season of milking in California usually begins in December, and lasts cight or nine months. The milk, though apt to be rich, is not so abundant here. taking the season through, as in countries where the grass is kept growing throughout the summer and autumn. In the spring and early summer the cows vield large quantities, but gradually dry up as the scason advances. The product averages about 175 pounds of butter and 275 pounds of checse to each cow, per season. The wholesale prices of butter in the San Francisco market have, until the present spring, ranged nearly as follows: Beginning at seventy cents, during the latter part of November they have gradually dropped to forty-five cents by the end of February; ruling, through March, April, and May, at from thirty to thirty-five cents. On the approach of the dry scason, in June, they begin again to advance, going steadily up to seventy or seventy-five cents, until the end of November. When the price falls below forty cents, the large dairymen pack down most of their butter, reserving it for a better market. It is roughly estimated that six million pounds of butter and five million pounds of cheese were made in

California during the year 1860, there have been, according to the Commercial Herald. imported into the State, meantime, from the East, by steamer, 25,389 firkins; by railroad, 5,098 firkins and 3,154 kegs, besides a considerable quantity in other packages. From Oregon were received 1,200 packages, about the same number of packages of cheese having arrived from foreign and Eastern ports: by which it will be seen that the consumption of those commodities upon this coast is large considering its limited population. A portion of the above, it should be stated, however, was sent hence to Japan, China, and the Islands—all of which derive their chief supply of these articles from this port; and in our comparative proximity to these countries lies one of the greatest advantages secured to the California dairyman, as this must always give him the call of those markets."

PIGEON POINT,

The next noteworthy place we come to on the road, is thirty-two and a half miles from Santa Cruz. It is a whaling station. and the shipping point for Pescadero vallev. A colony of seventeen Portuguese whalers have settled down here with their families. They are co-partners, and elect their officers every year. They go out whaling in large open boats built for the purpose-six men to a boat. They shoot the harpoon into the whale, and, when fast to him, get into the stern of the boat, in order to lighten her bow and prevent her from running under water when drawn after the wounded whale. who, as a rule, makes things "lively" until he dies. When dead, he sinks: In a few days he floats, and is towed ashore and "tried out," i. e. stripped of his blubber. The carcase is then towed out to sea and sunk. Last year eighty-seven whales were caught at this station, and this year, twenty, which yielded 800 barrels of oil have already been caught.

Although Pigeon Point has no harbor, properly so-called, and no better method of shipping produce than that afforded by the "thuwser" system, it is astorishing what a quantity of produce is shipped here. In 1869, there were shipped at Pigeon Point, §4,000,000 shingles, 30,000 sacks of oats, 7,000 cheeses, and 700 barrels of ofil.

A light-house is to be built at Pigeon Point shortly, the necessary surveys having been made by the proper authorities quite recently.

Six miles from Pigeon Point, and thirtyeight and a half from Santa Cruz—erroneously supposed to be forty—in a rich little valley, snugly ensounced among the hills, lies the beautiful little village of

PESCADEBO,

Numbering but few houses, but wearing an air of quiet beauty that is very pleasing. It was designated Pescadero by the Mexicans, because of the number of fish obtainable in its creeks and sloughs—"Pesca" in Spanish, meaning fish, and "dero," place—fish-place. Its name is mostappropriate, astrout, perch, salmon, rock-fish, rock-cod and baracouta, are all easily obtainable here.

PESCADEBO VALLEY.

Pessadero Valley is only two miles long by half a mile broad. There are several small valleys in the vicinity, but this is very rich and deep. Potatoes are the principal valley crop; they are celebrated for their quality, and fetch the highest price of any in the market. On the adjoining hills a considerable quantity of outs are raised.

Pescadero is famous for its hunting as

well as for its fishing advantages. It has deer, rabbit, and quail, but its principal attraction is quail. These last are obtained here in great numbers. The quail season begins on the 15th of September.

To accommodate the people who go there for recreation and amusement, there are three hotels—the "Swanton," the "Lincoln," and the "Exchange."

From Pescadero to Half Moon Bay the road leads over a hilly country, and is, in most places, remarkably good. A noticeable fact in passing over this portion of the country is, the astonishing depth of the soil on the hill-tops. Even on the summits of these hills, the majority of which are cultivated, the soil is eight or ten feet deep.

Half Moon Bay.

The town of Half Moon Bay was laid out in 1863, but from bad communication, and other causes, its growth has been slow.

About 17,000 acres are in cultivation in and around Half Moon Bay, the estimated yield of which may be classed as follows: -312,000 sacks of oats, 45,000 of Barley, 30,000 of Potatoes, and 15,000 of Wheat.

Two and a half miles north of the town there is a large warehouse and landing called "Aymes Port," where five-sixths of this produce is shipped; the remaining sixth is hauled over to San Mateo. Aymes Port, although considered safe in summer, is valueless for shipping purposes during the winter.

Railroad communication is wanted to develop the resources of this district.

The stage road from Half Moon Bay leads up the Palisitas Creek, and over the Coast Range of mountains, which it crosses at an elevation of 800 feet above the level of the sea.

From the summit—the water-shed of the Peninsula—a most magnificent view of the Pecific Ocean can be had to the westward; while spread out to the castward, is the Caniero E Mondo valley in the foreground, and in the background; the splendid Bay of San Francisco, with Alameda and the other towns on the East side of the Bay, standing out in relief against the Contra Costa mountains.

The ride from the summit is a particularly pleasant one. Groves of trees flank the road, and in some places overshadow it for a considerable distance. Shortly after leaving the summit we pass San Mateo reservoir. It is intended to hold two million gallons of water which will be supplied by a spring close by, and will have a fall of 11 fect to the town.

Several wayside hotels are met at short intervals along the road, but its principal attraction will be found in the San Mateo Creek which, shaded by overhanging trees, runs parallel to it for several miles.

Arrived at San Mateo, the cars of the San Jose Railroad bring us back to San Francisco.

Besides the cities passed through, and those not visited but alluded to, there are several other cities farther down the coast which are descring of notice. We shall glance at them briefly.

Montercy.

Exactly opposite Santa Cruz on the south side of the bay of Monterey, and occupying one of the most beautiful sites, is the quaint old Spanish city of Monterey.

It was the first capital of the State, and in a political point of view, of no small importance. It was here that Commodore Sloat, on the 7th of June 1846, took possession of California in the name of the United States. Since that time the town has improved but little. The majority of the houses are built of "adobe"—Le. sun-dried bricks—and are roofed with tiles. No order whatever has been observed in laying out the streets which run pretty much as they please. The Monterey Republican and Democrat, both weekly papers, are published here.

Although but little business is at present done at Monterey, it may materially increase in a few years. A wharf has been carried out to deep water, and a railroad projected and surveyed from Monterey to Salinas City in the Salinas plains. When this road is built, vessels will ship grain in bulk at Monterey wharves. Monterey is 92 miles south of San Francisco. Her bay is 30 miles wide. and circular in form. Point New Year forms its northern headland, and Point Pinos its southern. The latter has an excellent light-house, and derives its name from the number of pine trees growing on it. Carmelo bay indents the coast south of Point Pinos. The mission of San Carlos de Monterey was located here. Its ruins are still visible. Monterey is connected with San Francisco daily, by stage, to Gilroy, thence by railroad; and by steamer, tri-weekly.

San Luis Obispo,

The county seat of the county of the same name, is situated near the coast on the southern stage-road, 117 miles south of Monterey, and 200 from San Francisco. It les in an excellent grazing country. Many large daries are carried on in this county. One of these grazes 45,000 acres

of land, and milks 700 cows. Twenty miles north of the town are the famous Paso Robles but springs, said to possess valuable medicinal properties. The Democratic Standard and Tribune, both weeklies, are published at San Luis Obispo. Reached daily by stage from Gilroy and by steamer from San Francisco.

For statistics of San Luis Obispo county see tables at end of Guide.

Santa Barbara

Is a pleasant little town of about 1,700 inhabitants, situated on the coast, 280 miles south of San Francisco in Santa Barbara County Both the town and county derive their name from the old Santa Barbara mission founded here on the 4th of December 1786. The town is built on a narrow plain lying between the beach and the Coast Range of mountains which here rise 3.000 feet high and are destitute of timber. It maintains a steady growth and has added to the number of its buildings within the past year, a college, several churches, a hotel and several stores. Santa Barbara has two weekly newspapers, the Press and Times.

Santa Barbara is celebrated for two things—for its pretentious mission and for having the largest grape vine in the world. The mission building is 200 feet long and 40 wide. At each corner there is a tower thirty-five feet high, surmounted by double belfries, each of which has the symbolical cross planted above it.

The mission has a very imposing appearance. The ruins of a large fountain and the signs of walks and parterns in the grounds in front of it bear evidence of its ancient grandeur.

The grape vine was planted in 1822 and

ages about 1500 oranges to each tree, although some trees will produce nearly double this number, reaching as high occasionally as 4000. Another orchard contains upwards of 1600 trees planted entities ago, and just coming into each or the second of the contained of the bearing orchards, although more extensive ones, we believe have been planted, and the older ones are continually enlarged.

One authority sets down the number of oranges received from Los Angeles, and sold in the market of San Francisco during the past year, at 724,450; lemons, 91,500; limes, 2,540,000. But during the same time there were imported from Mexico. the Society and Hawaiian Islands, and from other foreign territory, 2,000,000 oranges; 1.000,000 limes; 20,000 pine apples; 30,000 bunches of bananas and plantains, and 350,000 cocoa-nuts; the aggregate value of which was but little short of a quarter of a million of dollars. And not only might every dollar's worth of this fruit have been grown in this State. but as much more for the export trade. There is no danger that tropical fruitgrowing will ever be overdone in California. The market demand at home and in the neighboring States, will always be greater than the supply.

"Is orange-growing a profitable pursuit?" is a common form of enquiry. According to our data, the annual product of each full bearing tree will net about \$50. The number of trees upon an acre ranges from sixty to eighty. Taking the smallest number, you find the total value of fruit from a single agre, to be \$3,000. An orange orchard of thirty agres in full bearing, with an average yield, would turn out a crop worth \$90,000. Is there any other kind of fruit culture more promising than this? There are many thousands of aercs of land which can be had at prices ranging from two to ten dollars an aere. which are probably just as well adapted to orange culture as that now covered by the most promising orehards.

A few experiments have been made

with the pine apple and the banana, but hardly enough to determine whether these fruits can be cultivated here at a profit, although it is pretty certain that each will come to perfect maturity in the warmest valleys of southern California. The pomegranate flourishes well, and the fruit in its season may often be seen in the San Francisco market. The seeds are of considerable value for medicinal purposes. The almond tree grows vigorously, and fruits to perfection in all the southern counties, and in most of the valleys throughout the State. Wherever the olive will live there the almond is at home. The "soft-shell" almond and the citron are very prolific, and large quantities eould be reared for export. The date palm has also a vigorous life.

We have chosen rather to indicate, than to set forth with minuteness of detail, the tropical and semi-tropical resources of Cahlornia. What a future awaits a State with such a limitless expectly to temperate zones! There are millions of acres over which will yet run the ripple of the rippening harvest, and other millions where wheat will blend with the olive, and the never-fading verdure of omage groves will eneiried the home and drop diction."

San Bernardine County.

This is the largest eounty in the State. It has an area of about 10,00,000 acres. Three-fourths of this area consists of dry desert valleys, voleanie ranges and inaccessible mountains. The county was organized in 1854, and takes its name from a mission founded by an early Spanish settler. The mission stands about 10 miles southeast of San Bernarilion.

The northern section of the county is barren and uninviting. Much of it is unfit for human habitation. This portion has however given evidence of being rich in mineral wealth. The Slate Range, Washington, Argus, Telescope, Armagosa, Potosi and many other mining districts, have all attracted a good deal of attention from time to time, but because of the absence of wood and water in this inhospitable region, they have not been developed.

The southwest corner of the county presents a more inviting aspect. San Bernardino Valley is located here. It is about 50 miles long by 20 wide. It is watered by the Santa Anna and its tributaries, and is encircled by an amphitheater of high, timbered mountains. For statistics of the agricultural and vinical-tural wealth of San Bernardino county, see tables at end of Germe.

Recently an important impetus has been given to the development of its mineral wealth, and several rich discoveries have been made. Among the most important of these are in the mining districts, known as

The Clarke and Yellow Pine.

A brief statement of what is being done in these districts will be interesting to our readers.

THE CLARKE DISTRICT.

The geographical position of this district is between the 34th and 35th parallels of north latitude, 40 miles west of the Colorado river, and 155 miles cent of Walker's Passin the Sierra Nevada Monntains. The region within this area is nearly level, about 3000 feet above the level of the sea, and 35 miles square. To contains four mining centres—the "Pechoon," "I van pash," "Alaska, "and "Mineral Hill." In these mining centres there are about sixty claims, all developed more or less.

THE YELLOW PINE DISTRICT.

This district adjoins Clarke District on the north. It is bisected obliquely by the northeast boundary line of the State, and is partly in California and partly in Nevada. The greatest portion of it is in the latter State.

The district as laid out, has an area of 25 by 60 miles. Like Clarke District, it has its mining centres and their aggregate of claims. The principal mines in both of these districts are the property of The Piute Company of California and Nevada. This company was organized on the 13th of April 1869, and incorporated on the 30th ofJune 1870. The purposes of its organization embrace the location. purchase and sale of mines, ores, timber and pastoral lands, the erection of mills. smelting works, etc., etc. Since its organization, this company has made many small shipments of ores from the mines in these districts. The assays show some of these ores to be the richest of the kind ever found on this coast. Some specimens of copper ore show from 60 to 80 per cent. of red oxide of copper.

The following assays will give an idea of the ores found in these districts, and also, a reasonable criterion by which to judge of their future. The figures given are not fancy prices, but the rates at which the ores were actually sold in San Francisco on the dates given:

SEPTEMBER 6th, 1870.

SEPTEMBER 20th, 1870.

Lizzie Bullock. . \$1,078.48 and \$565.63 per ton. Chief of Sinners . . . \$2,034.43 and \$62.34 " "

Hamburg and Bremen \$1,374.43	nor	ton
Silver Harvest 8548.67	Por	**
Winnemuces\$2,875,32	9.0	86
Centime	64	66
William IV\$968.10	44	86
Arabella	66	48
OCTOBER 12th.	1876	2.

San Diego.

San Diego is the most southern, and also the oldest town in California. It was first established as a mission in 1709. A few adobe buildings ranged round the "Plaza" was the sum of all its greatness after the lapse of a hundred years. It is situated about a nile north of San Diego harbor. The old Padres never thought of turning this harbor to account, but modern enterprise has undertaken the task.

San Diego harbor is perfectly landlocked. It is twelve miles long and two broad. Some parts of it are shallow, but for about six miles from the entrance there is a channel three quarters of a mile wide, in which there is never less than thirty feet of water. It has an excellent anchorage, on a sandy clay bottom. The capacities of this harbor in connection with the fact that it lies 456 miles south of San Francisco, suggested the construction of a trans-continental railroad having its western terminus at San Diego, These prospects led to the formation of a new town three miles south of the old one. The site chosen for the new town is unsurpassed by any in the world. Rising from the water's edge at a slope of two in a hundred it requires neither grading nor drainage. Within two years from the inception of the idea the new town had 3000 inhabitants and two wharves running out to deep water. A third wharf has been constructed recently at La Playa-

a small town at the north end of the harbor. It is the largest structure of the kind on the coast outside of San Fran-

Many excellent buildings adorn the town already. Among these a hotel with 120 rooms, a town hall, a bank and other publie buildings may be mentioned. San Diego has two weekly newspapers—the Buildin and Union

A telegraph line has been built connecting at Los Angeles with the coast telegraph line. The recent gold discoveries in the Julian District, sixty miles from the town, have given its growth an additional impetus. The reports from the mines continue favorable; and fresh discoveries are reported from time to time. The growth of tropical fruits and the breeding of silk worms are engaging the attention of the inhabitants, who are meeting with most encouraging success; indeed the latter has surpassed their most sancuine expectations. Efforts are being made to make San Diego a Military Post for Southern California and Arizona. The climate of San Diego is just

THE CLIMATE FOR CONSUMPTIVES.

Many thousands of invalids, especially consumptives, go to the shores of the Mcdierranean every year from Northern Europe and the Atlantic States to find a dry atmosphere and a warm and equable temperature. Mentone, Niceand Cannes, in France, near the Italian line, at the base of the maritime Alps, are the preferred resorts for those afflicted with palmonary diseases, and land there suitable for country seats has risengreatly in value within the last ten years. Corsica, Algeria and the Madeirn Islands are also much

praised, but they do not command much patronage.

We have not been able to find any work explaining in a satisfactory manner the climatic peculiarities best adapted to the cure or relief of consumption, but we presume they are a very dry atmosphere. and a temperature that comes as near as possible to seventy degrees. The degrees of comfort in the open air range from fifty-five to seventy-five decrees: the former being adapted to woolen clothing and vigorous persons engaged in active evercise, and the latter to wealthy or idle nersons clothed in linen. Extreme heat and severe cold are both very injurious to consumptives, but neither is so bad as cold fogs, which seem to have an irritating effect on the throat and lungs, whenever diseased. Moisture in a warm atmosphere is less injurious, but still unwholesome. Consumptives in the Mississippi Valley frequently derive great benefit from journeys across the "plains," where they find a dry air; and many, when declared hopeless by their physicians, have recovered while crossing the continent in the long trips required before there was a Pacific Railroad

So far as we are able to learn, San Diego is equal, ifnot superior, to Mentone for invalids in nearly every particular, and we know of no reason why the southern coast of California should not be preferred by consumptives to the famous Rivien or shore of the Meditermanean, at the western border of the Gulf of Genoa. The following figures offer a basis for comparison.

Temper	Temperature.			
Jan.	July.			
Mentone	73 deg.	23 inches		
Genos46 "	77 **	24 **		
Algiers	75 "	19 "		
San Diego51 '	73 "	10 "		
San Luis Rev52 "	70 44	70 "		
Los Angeles59 " New York31 "	75 "	15 "		
London 27 "	62 "	21 44		

We perceive here that the coast of Southern California has less rain warmer winters and cooler summers than the northern shore of the Mediterranean We infer that the amount of moisture in the atmosphere is generally proportionate to the amount of rain in the two districts: but this proportion is not invariable, for we know that at Los Angeles the air is damner than at San Diego, and consumntives have a decided preference for the latter place. Funchal is superior in temperature to any place in the list, but it is decidedly objectionable on the ground of moisture. Marseilles and Genoa are inserted in the list because they are near the Riviera on both sides, in the same latitude, and subject to similar climatic influences. Jarupa is 1,000 feet above the sea, in San Bernardino County, San Diego and San Luis Rev are within five miles of the ocean; Los Angeles is fifteen miles distant, and near the sea level. The figures are given for New York and London winter temperature, as compared with that of the sub-tropical climes. In both these last-named cities, the air is very humid, especially in London, which is noted for its fogs.

Names and addresses of Foreign Consuls residing in San Francisco.

As it is probable that some of our readers will desire to pay their respects to the representative of their country residing in this city, we furnish the names and addresses of the Foreign Consuls.

Argontine Republic... Chas. Baum, 510 Battery st. Austro-Hungarian Empire... G. Muecko 183 Cal. st. Bavaria... C.F. Meblus: E. Meckelssen (Acting), 421 Battery st.

Belgium ... Salvador Morhange, Grand Hotel, Con-sul-General. Chile .. H. Barroilhet, (Belloc Freres), 524 Mont's at. Denmark G. O'Hara Taaffe, 472 California st. France B. Breuil, 434 Jackson st.
Gustsmals J. Urruels, 498 Eattery st.
Greece Geo. Fisher, N. W. car. Jackson and Mont-

Laly. G. B. Cerruti, 1415 Powell st. Japan. O. W. Brooker (Absent) Morico. Japan. O. W. Brooker (Absent) st. Morico. M

United States or Colonia Nicaragua and Bolivia Wurtemburg....I. Wormser, cor. California and

Having scen something of the southern portion of the State, and its principal towns, we will now do ourselves the pleasure of taking a sail across the bay.

and a run up one of our northern valleys. A Sail Across the Bay.

Leaving San Francisco at 7 A. M., by the steamer New World, commanded by Captain Gedge, a most courteous gentlemen and efficient captain, we set out on our brief voyage. On board the steamer, an excellent table is set by Mr. Peters, who has made quite a name for himself by studying the comfort of his guests, so no one need make themselves uncomfortable for the day by taking a too-early breakfast. As we get fairly out from the wharf we pass to the westward of Goat Island. leaving Oakland on our right. Passing northward up the beautiful and capacious bay of San Francisco, between the Contra Costa hills on the east, and those of Marin County on the west, we see an abruptly rising rock of a reddish color standing up before us in the middle of the bay. It is called "Red Rock" because of its color, but was once known as "Molate Island," It is quite barren, but derives some importance from the fact that it contains a vein of manganese from which several shiploads have been made to England, On the west side of the bay twelve miles from San Francisco we pass

San Quentin.

It derives its notoriety from the State Prison being located here. The number of the prisoners varies from 700 to 1000. and their terms of confinement from a life time down to six months. The Lieut. Governor of the State is also Governor of the Prison, and assisted by a numerous staff of subordinates and a company of soldiers exercises personal supervision here San Quentin is said to have about 1.700 inhabitants. It is connected by ferry with San Francisco. Passing on our left

The Two Brothers.

Two low round-topped islands, we see the land on each side of us converging as if to bar our further progress, but as we get up to the seeming barrier, we see another magnificent bay opening up before us. This is

San Pablo Bay.

It is properly a part of the bay of San Francisco, of which it forms the northern portion, and with which it is connected by a strait not yet named between Point San Pedro on the north and Point San Pable on the south. This bay is roughly oval in outline, and is about ten miles long by seven miles wide. It is surrounded by Marin, Sonoma, Solano and

SAS PRANCISCO, VALLELIO, SACRAMENTO, MARYSVILLE, MARA AND CALISTOGA,

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Secret of the Entern Educations Back Room, and Court and Addition Co. P. Prince

THERE ARE ALSO WATH ROOMS ON EVERY PLOCH.

The first of the second second

Contro Costa counties On our left as we pass through the strait into the bay, is

San Rafael.

San Rafael is the county seat of Marin county. It occupies, as we see, a most beautiful and sheltered position. This last attraction, added to its immunity from dust and foes, has caused several San Franciscans to build suburban residences here. San Rafael has two weekly newspapers-the News and Journal. For statistical information about Marin County see tables at end of Groups.

That beautiful crescent-like bay on our right, bounded by gently sloping hills which are dotted over by thriving farms. is San Pablo.

On the north-west side of the bay, almost exactly opposite, is Petaluma creek. At the head of navigation on this creek stands

Petaluma.

Petaluma is the principal town in Sonoma county. It was incorporated in 1858. Since that time it has increased steadily in wealth, population and import-It is the natural outlet for portions of Sonoma, Lake, Marin and Mendocino counties.

Three steamers ply between Petaluma and San Francisco-two of them daily. and the other every alternate day.

A Railroad running from Saucelito, via San Rafael and Petaluma, to Humboldt Bay, (about 180 miles), has been projected but not yet constructed. The portion of this line between Petaluma and Santa Ross was completed on the 22nd of Octoher 1870. At three o'clock on the offernoon of that day the first passenger car from Petaluma arrived at Santa Rosa.

Having given this brief glance at Petaluma let us recall our attention to the objects before us. Straight ahead we see what appears to be the city of Valleio. but what is really a conbined view of Valleio and Mare Island. As we approach closer we see the two are distinct.

Straight ahead of us on the edge of a bay, is

Benicia.

Benicia is in Solano county, and is noted chiefly for the number and excellence of its private schools, among which are one of the best young ladies' semina-

ries and the only law school in the State. The narrow strait leading up to it is the strait of Carquinez. Its eastern end opens into

Suisun Bay. This bay is about 10 miles long and

from 2 to 3 wide. It receives the Sacramento river and its confluents, and is nearly surrounded by Contra Costa and Solano counties

But while we have been looking at it we find ourselves carried up an arm of the bay behind Mare Island to

Vallejo.

Vallejo is a place of considerable importance-by far the most important in Solano county, though not the county-It has an excellent harbor three miles long by half a mile wide, and does a large shipping business exporting grain. It has the only grain-elevator in California. All the grain exported from Napa, Solano, and Yolo counties, is shipped Since the opening of the present harvest year, up to the time of publication, twenty-two vessels have loaded wheat at Vallejo. Their aggregate cargoes are said to amount to 553,647 centals,

representing a cash value of \$1,156,500. Vallejo has a population of 6,439, and supports three newspapers—the Chronick, daily and weekly; the Roce-der, daily; and the Democrat, weekly. Besides the benefits Vallejo receives from its shipping business it has also the double advantage of being the western terminas of the California Pacific Railroad, and of being within half a mile of Marc Island—the Navy Yard and rendervons of the Pacific fleet of the U. S. Navy. About \$200,000 a month, the solary of the force employed on the island, is expended in Vallejo.

The California Pacific Railroad is an important adjunct to Vallejo. It is the shortest route between San Francisco, Sacramento, Marywille and Calistoga, and runs morning and evening trains daily each way, except Sunday, when one train only is run.

Running time from San Francisco to Sacramento, 4 hours; to Marysville, 5½, hours; to Caliscop, 3 hours. 83 miles in distance and 3 hours in time saved between San Francisco and Marysville; 55 miles in distance and two hours in time saved between San Francisco and Sacramento.

We shall now glance at Mare Island and then go on a flying visit through Napa Valley to Calistoga.

Maro Island.

Is half a mile west of Vallejo, from which it is separated by an arm of the bay. The island is about three miles long and one broad. It has very good soil, but, unfortunately, no water.

Mare Island is the Navy Yard and rendezvous of the Pacific fleet of the U. S.

Navy. It will ultimately be one of the largest navy yards in the United States. At present, not one-third of the improvements projected have been carried out. Still, it has some very large buildings, and can boast of the finest section-dock on the Pacific coast.

There are many large and well arranged workshops on the island appropriately set apart for all the different branches necessary for the construction and repair of the largest naval vessels.

There are also an arsenal, commodious marine barracks, and a large naval hospital. In the centre of the island there is a beautiful terrace, of about a mile in length, composed of the officers residences. These are of a uniform pattern, and have neatly-kept gardens in front of them.

A large force of men, varying from a thousand to two thousand are employed in the different workshops on the island. Monitors and vessels belonging to the U. S. Navy, while awaiting orders or repairs rendezvous here.

The artisans, sailors, and marines employed or stationed on the island are paid every month. About \$200,000, are thus put into circulation monthly, to the great advantage of Vallejo, which gets the greator part of that sum.

We shall now set out on our promised visit to Napa Valley and Calistoga. Two trains leave Vallejo about the same time, one for Sacramento and the other for Napa; our readers will therefore be careful to go on board the right train.

Provided with our tickets and scated comfortably on the shady side of the car—the shady side mind—with the window thrown up and Heaven's pure air fanning our temples, we are in a position to enjoy the beauties that are spread so lavishly around.

Just after leaving Vallejo station we see the Good Templars Orphan Asylum perched on a hill on our right. At this point, the valley is narrow, but after we pass Napa Junction it opens out.

Napa Junction,

Otherwise known as "Adelante," is the place where the Napa Valley branch joins on to the main line of the railroad Roth the Sacramento and the Napa Valley trains come this far on the same line but the Calistona train is switched off here on to the branch line running up the Napa Valley. We are on board the Napa train so we branch off at Adelante Laid out before us is the splendid Napa Valley, with its chequered coloring. Here we have the large expanse of golden stubble, made joyous by the presence of threshing machines and their attendant workmen There we have the rich dark green of the orchard adorned with golden fruit, and its dark foliage relieved by the lighter green of the adjoining vineyards; while further off, the gradually rising hills, with their brown covering of grass, bedecked with clumps of trees, lead our delighted eyes up to the clear blue vault of Heaven itself. They who do not enjoy such scenery as this have neither poetry nor music in their souls. Four and a half miles from Adelante we reach

Suscel.

A small place deriving its name from a celebrated ranch of that name in the vicinity.

Nava Valley.

Napa Valley is about 45 miles long. It is very irregular in breadth being narrow at some places and broad at others It contains about 450,000 acres which is nearly equally divided between valley and upland. The soil is of the richest description and produces large crops. In 1869 Napa county had 99,665 acres of land enclosed, and 41,260 under cultivation. Of these 36, 115 acres were in wheat. and yielded 601,250 bushels; and 2,605 acres were in barley, and vielded 52,150 bushels. The returns showing the number of grape-vines in the county in 1869 have not been received, but in 1868, Napa county had 1.590,225 grape-vines. In that year, there were made in Napa county 103,365 gallons of wine, and 46,143 gallons of brandy. For further statistical information see tables at end of Gurne.

Napa City.

Napa City is a bustling little place of about 3,500 inhabitants. Its business is confined pretty much to the principal street. It has a fine court house, a flouring mill, and several hotels. Two weekly newpapers, the Register and Reporter, are published here. Stages leave Napa City twice a day for Sonoma.

East of the city, and pleasantly situated on the western slope of the mountain are

The Seda Springs.

These give out a constant supply of natural soda water. No change is made for what is used by visitors. At one time there was a hotel at these Springs, but it was destroyed by fire. The erection of another is contemplated by the proprietors. The greatest attraction the Springs possess is the magnificent view they atford. Napa Valley, Vallejo, San Pablo Bay, even San Francisco itself, are all spread out below. But the waters themselves cannot be ignored. And the fact that 140 dozen bottles are exported daily is proof that they are not.

Returning to Napa and taking our seats in the cars we are hurried on through the beautiful valley. Passing on our way Yountville, Oakville, and some other small places, we arrive at

St. Helena,

A small village pleasantly situated on the left of the road.

Not far from this village, located in a beautiful gorge in the mountains are

The White Sulphur Springs.

At this resort they have a fine hotel, with a large platform for dancing purpoess. They have also suites of rooms, cotages, and sulphur baths, for the use of their patrons.

Having glanced around, we will again go on board the cars and proceed to

Calistoga

Calistoga is the most charming place we have yet seen. The grounds around this favorito retreat have been laid out very tasterfully, and possess considerable beauty. Rows of reat and well-ventilated cottages have been creeted, in well chosen positions on the grounds, for the accomatomation of visitors. A racing park has been made; extensive livery stables and a commodious hotel have also been creeted, and a large staff of attendants await the arrival of visitors, who receive every attention.

Not the least interesting of the many attractions at Calistoga is the visitors themselves. On the day of our visit it appeared as if "the lame, the halt, and the blind," from all quarters, had congregated there. Pale, feeble-looking ladies, with bottles of medicine in than hands, and speaking to each other in subdued under-tones, flitted noiselessly about, and tall, sallow looking men, weak as children, had also come there to benefit by the medicinal qualities of the baths. All derive benefit from going three, and especially those who are unfortunate enough to suffer from pulmonary diseases. The air is so light that they can enjoy the luxury of inflating their lungs to their tunnet canactiv.

Very charming acquaintances do some of these fair invalids make. With eyes beaming with intelligence, minds stored with information, and souls vibrating with music, they are just the parties to show you round the Springs and "make you take an interest in them"—i.e., in the springs. They will make for you, from the sulphur water with a dash of pepper in it, a "chicken broth" which is not at all unpalatable, and which, when taken frequently, in conjunction with their bright smiles, will be found to have considerable cuntive properties.

The Baths.

These are of various kinds—including sulphur, iron and magnesis, but the most support and the "swimming" bath. The vapor used in the former comes from a natural boiling spring, and is beneficial in endicating shemantic affections. The swimming bath is a luxury that can be better imagined than described. It is large enough to afford room for a good swim, and deep enough to be pleasant. At certain hours of the day it is open for ladics.

CALISTOGA SPRINGS!

Every form of Chronic, Nervous and Cutaneous Disorders, including

RHEUMATISM, GOUT, NEURALGIA,

INFLAMMATIONS,

SCROFULA, AND PARALYSIS

Yield Readily to the Marvelous Curative Properties of these Waters.

Patients arriving in a helpless condition have been restored to health and activity by a few days' bathing and drinking at the Springs, which are classed as follows:

HOT SULPHUR AND CHEMICAL BATHS.

MEDICATED STEAM BATHS,

(BY INHALATION.)

HOT IRON AND MAGNESIA BATHS.

HOT MUD BATHS.

(ITALIAN STYLE: AN INFALIBLE CURE FOR RHEUMATISM.)

WARM SULPHUR SWIMMING BATHS.

(A GREAT LUXURY, AND ON AN EXTENSIVE SCALE.)
RUSSIAN AND TURKISH BATHS.

THE SCENERY AND CLIMATE

At Calistoga are unsurpassed; the table at the Hotel is bountifully supplied with the best the market affords; and facilities are always ready for DRIVES AND HORSEBLACK EXPERCISE over the most

Picturesque and Romantic Roads to the Geysers, Clear Lake

And the surrounding country; and no pains are spared by the lessee, E. B. BADLAM, to insure the comfort of guests, and to maintain the reputation of Calistora as the

FAVORITE PLACE OF RURAL RESORT IN CALIFORNIA.

Trips by steamboat and railroad are made twice a day from San Francisco, via Valejo and Napa Valley; the time from the City to the Springs being three hours; and from iour to five hours from Sacramento, Marysville and Stockton.

BET The Holei will be open during the Myrsville and Stockton.

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At San Francisco.

Mount St. Helena.

Close by the Springs is Mount St. Helearn the highest peak in the neighborhood, having an altitude of 4,343 feet. From its summit a magnificent view can be obtained of the coast range lying beneath, and the placid bosom of the broad Pacific stretching away into the distance. Pack horses can be obtained at the Calistogs stables, and a good bridle path has been cut to the summit in order to afford every facility to tourists.

"The Petrified Forest," "The Geyssers," "Clear Lake" and a best of thought sessions are easily accessible from Calistoga, and each has a special interest of its own. It is unnecessary to detail minutely their several attractions, as there will be no lack of persons at the Springs who have "done" them all, and who will be unlessed to give all particulars. For statistics of Napa County, see tables at end of Grunz.

Stages leave Calistoga daily for Healdsburg and Clear Lake. The stages are driven by the celebrated Foss,-"Barnum's" driver. The scenery from Calisoga to Healdsburg is truly beautiful. The road is fringed by gigantic Oak trees, and leads over hills, through valleys, and across clear running streams. Knight's Valley, a tract of 11,000 acres flanking the road has just been bought by a company for the purpose of being cut up and sold in small farms. It has been named "Peace Valley"-a most appropriate name. Further on is "Alexander Valley" and then "Russian River Valley," which is called after the river which flows through its centre.

Much of beauty and interest will be found along this road, and no one will travel over it once without desiring to go back again.

At Healdsburg, which is in Sonoma county, there is but little of interest. The country is both rich and beautiful, and good shooting is obtained near by, Grizzly bears are said to be had within a few miles of the town. For statistics of Sonoma county, see tables at end of Gernz.

Whether our readers will return from Healdsburg by the way they went, or descend through the fruitful vales of Sonoma, matters little. They will have been benefited by their trip. They will have seen new scenery and new faces, and made new friends. On ordinary occasions onr readers will have the option of either returning to San Francisco via Vallejo. or descending through Sonoma to Petalums and thence by steamer back to the city, but on this occasion we will request them to come along with us back to Adelante, in order that we may show them something of the country between that station and Sacramento.

Adelante Is the name of the station where we left

the main line of the California Pacific railroad to go up through Napa Valley, and it is here that we must get on board the train bound for Sacramento.

Leaving Napa Junction we pass through a beautiful country with along in hills crowned with clumps of trees. Corn are recoping out of the headows; bondlers are cropping out of the hill sides; stone dybes divide the falds; and anug farms, surrounded by orchards and gardens, gladden the eye over side. Fifteen miles from Vallejo and eight from Napa

Junction we pass Bridgeport, a small waystation. Five miles further on, we come to Fairfield, which is the county seat of Solano county. The county buildings are located here. Fairfield is on the left of the railroad. Down to the right is Suisun, a town whose star is on the wane since the railroad has been carried through but which did a large shipping business before. It is built on an island in the slough and has still a steamer plying between it and San Francisco. The Solano Republican, a weekly newspaper, is published here. Ten miles further on through the same beautiful valley we ston at

Vaca Junction,

A place of but little importance in itself, save that here there is a branch railroad, about four miles long, leading to Vacaville from which it takes its name.

Vacaville.

This town is located in the middle of a beautiful valley originally granted to a Spaniard of the name of "Vaca." The valley is unsurpassed in salubrity of climate or fertility of soil. It is principally devoted to the production of fruit and vegetables; and is famous for yielding the earliest fruit and vegetables that come into the San Francisco market. Four and a half miles from Vaca we reach

Betavia.

Batavia is one of several small towns created by the railroad, and located, of course, in close proximity thereto. Though neither large in size, nor imposing in appearance, Batavia exports more wheat than any other town on the California Pacific Railroad.

Diron

Is two and a half miles from Batavia. What we have said of the latter is also true of Dixon in every particular. Eight miles from Dixon we come to

Davis Junction,

Where the Marysville branch joins on to the trunk line. Passengers change cars here for Woodland, 9½ miles; Knight's Landing, 19 miles; Sutter, 30 miles; and Marysville, 42 miles. At Davis Junction there is a nice little town called

Davisville.

Davisville is situated in the midst of a fine wheat growing region, in the south-ern portion of Yolo county. It has about 900 inhabitants, and since the advent of 901 inhabitants, and since the advent of the Ealiway, has had several fine hotels exceted in it. Near the town there is a plantation of mulberry trees covering one hundred seres. It is the largest in California and is expected to produce this great year, (1870), from ten to twelve millions of occoons.

Davisville derives its name from Judge

Davis ville derives its name from Judge Davis, a gentleman living near the town, who has an orchard covering an area of 50 acres. From Napa Junction we have trayelled

in a north-easterly direction. From Davis Junction, we diverge to the eastward, and after a fourteen mile run, the last few miles of which is through "tule" lands, we arrive at

Washington City,

On the west bank of the Sacramento river, exactly opposite the city of that name. Washington City is but a small place and is not likely to be much benefited or enlarged by the California Pacific Railroad, seeing the latter crosses the river on a strong Howe Truss Bridge, and makes its terminus in Sacramento. This bridge is the finest on the Pacific coast. It has two abutments and five piers. Its entire length is 800 feet, composed of four spans each 150 feet long, and, in the centre a draw 200 feet long. It has a railroad truck and earrings way, was built by W. H. Martin & C., of San Francisco, and cost \$75,000.

For the present, we will leave Sacramento to be "done at our leisure as we pass through it or our way East. We shall therefore return to San Francisco. Having come by he California Pacific route we have seen something of Sonoma, Napa, Solano and 'olo counties. On our way goot from Sn Francisco to Secremento we shall nos through Alameda, San Josquin and Scramento counties. In order. therefore o avoid going over the same route twie, we shall indulge in a sail down the Sacramento River in one of the Californa Steam Navigation Co's steamers. In our voyage down the Sacramento River our first inquiry naturally will about the river itself-where does it rie?-how long is it? &c. The Sacrameto rises in Shasta County, on the watern slopes of the Sierra Nevada Mountals. It flows in a southerly direction ad pours its waters into Suisun Bay. 's length, according to Colton's Atlas, is .50 miles. Prior to the discovery of gold in '48, the Sacramento was much deeper than it is now. Men in their search for gold, washed down whole mountains. Vast quantities of mud, and tailings, were carried down by the mountain streams into the bed of the Sacramento, where they settled, and filled up the bed of the

river to such an extent that, in the winter of '51-2, it overflowed its banks, and swept every street in the city of Sacramento with the fury of a hurricano. Ten years later the catastropher-occurred and the city was again inundated. Since the levees have been constructed, and the site of the city raised. We shall have more to say of the city bye and bye, so we shall turn our attention to the country through which we are gliding and curving so pleasantly.

The country around us is made up of farms and gardens and long stretches of "tutle" lands. The view of the mountains in the distance is grand in the extreme. It is one sublime panorama ever changing—ever new. We cannot for five consecutive minutes view the scene from the same point. As we follow the curves of the river, we are constantly changing our position, and the scene we are admiring is constantly changing its aspect.

But here we are at

Freeport,

A small village on the bank of the river, 12 miles from Sacramento. There is nothing here to detain us so we go down with the stream. We pass Mississppi Bend, the little village of Richland—an exact counterpart of Freeport—and

The Hog's Back. This is a long sand-bar which runs ob-

liquely across the river, and which at low water sometimes impedes the passage of the staemers. A wing dam has been constructed here for the purpose of throwing the water into a narrow channel, and washing away the sand on the bar, so as to deepen it. Below Hog's Back we pass the Rio Vista hills which come close down to the river bank. Further on is

Rio Vista.

Rio Vista is a small town situated on an elevated plateau, a short distance west of the river bank, and possessing some tolerably good stores, and about 300 inhabitants. Back of the town there is a large tract of splendid agricultural land, which, but for the cold north wind which dries it up too carly in the season, would be equal to any in the State. Prior to the flood of '62. Rio Vista stood on the low land on the west bank of the river. The great flood of that year swept away the then existing town, which contained about 40 houses, and compelled the inhabitants to flee to the hills for safety. Prompt assistance was rendered them by the river steamers, and in a few days they were all saved from the waste of waters by which they were surrounded. Some of the present residents of Rio Vista, have still a vivid recollection of that terrible inundation.

On the east bank of the river, about four miles below Rio Vista, we pass the mouth of the San Joaquin river, which here joins its waters to those of the Sacramento. The San Joaquin rises in Fresno County and flows in a northerly direction to this point. It is about 350 miles long. From the Junction of the San Joaquin with the Sacramento, until we approach Collinsville, an island is formed by a branch of the San Joaquin flowing parallel to the Sacramento and uniting with it about four miles above Collinsville. The Stockton steamers pass on the south of this island and go up the San Joaquin river.

Collinsville.

Collinsville is 75 miles from San Francisco and derives any importance it may have from the fact that the grain grown in the neighborhood is shipped here. It has a long wharf and a low buildings. On the opposite side of the river, but touched at by Stockton steimers only, is

Antioch.

Antioch is a fast-rising twn in Contra Costa County. It is most avorably situated and will ultimately troome of considerable importance. It is within three miles of Mount Diablo coal miles, from which it ships about 1,000 toniper month, vessels of large tonnage canload at its whard, where, at high tide, thee is adepth of 30 feet of water. It has afour mill, distillery, lumber-yard, potteies, brick-yards etc. Two churches, schools Masonie lodge, and a weekly newspaper-the Ledger, add to its importance. Fre miles below Antioth in

New York Landing,

A small place doing business in shoping coal from the Mount Diable mines. Fifteen miles below New York Landing we come to Benicia, which we have alredy described. Opposite Benicia and connetctly to it by steam ferry is

Martines.

The county seat of Contra Costa county. It is most beautifully situated, and, though small, has some good residences. The county Court House and Jail are here.

Quite a large quantity of fruit is grown in the vicinity of Martinez. The celebrated Alhambra ranch owned by Dr. Strenzel, to whom several medals for the Favorite All Rail Route East!

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The centre of the Mineral, Agricultural, and Stock-growing Territory of COLORADO: IRON BRIDGE AT KANSAS CITY

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FROM NEW YORK TO ASPINWALL, Distance 1,980 Miles.
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"OCEAN QUEEN," and "IRISING STARE," 2006 Into 600th

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From SAN FRANCISCO to HONGKONG, via Yokohama and Japa:
Distance to Yokohama, 4,800 Miles; to Hongkong, 6,400 Miles,
Distance to Yokohama, 4,800 Miles, The Market North Colored to Miles and Market North Colored to Miles and Mil

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Japan, to Shanghae, China,
Four Times a Month. Distance, L200 Miles.
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and "AREE," 3,00 fors each.

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Steamer of 4th calls at Acapuleo and Manzanllio.

Steamer of 20th calls at Acapulco, San Jose de Guatemala, and Punta Arens LEAVE SAN FRANCISCO for PANAMA—3d and 18th of each Month.

CHINA LINE.

OUTWARD. HOMEWARD.

LEAVE	nue at	DUE AT	LEAVE	DUE AT	Sul Fi n'ch
San Francio.	Yokohama,	Hougkong.	Hongkong.	Yokohama.	
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LDRIDGE & IRWIN, Agents. S. K. HOLMAN, Ass't Agen

best cultivated farm, the best fruits, and the best native wine in the State have been awarded, is but a short distance from the town. It is well worthy of a visit.

We shall now pass through the Straist of Carquinez into San Pable Bay and back to San Francisco. Those of our readers not intending to settle in California will no doubt be eager to resume their journey eastward. They do not leave California because they do not leave California because they do not leave way home. They are on their way home. We appeciate their feelings, and will not detain them longer.

Hints to Travelers.

Before our readers purchase their tickets for the trans-continental journey, or any other, a few practical hints will be of service to them.

How are you going to travel? Let us help you to answer the question. There are three classes of railroad travel, viz: first, second and third. To everyone who can afford it, we say travel first class. To those who cannot, we say, do not scarine you money to your pride. Second class cars are attached to every express train, and go through as quick as first class cars do, but third class cars are attached to every express seventeen to wenty days from San Francisco to New York. Pay the difference and avoid this tedious ride if you cannot be a seventeen to twenty days from San Francisco to New York. Pay the difference and avoid this tedious ride if you cannot be a seventeen to two sides if you want to the seventeen to two seventeens to two seventeens to two days from a seventeen to two seventeens to two days from a seventeen to two seventeens to two days and the second and the second side if you cannot be a seventeen to two seventeens to seventeens to seventeens to seventeens the seventeens to seventeens to seventeens to seventeens to seventeens to seventeens to seventeens the seventeens to seventeens to

Food on the Way.

There are excellent hotels at convenient distances along the road. At these, good meals can be obtained for 75 cents in coin, or a dollar in currency.

Emigrants with large families, and

others, who cannot afford to pay these prices, reasonable though they be, carry a basket of provisions with them. This can be replenished at any of the principal stations along the fine. At these stations milk, and hot tes and coffee can also be obtained. It is unnecessary for us to specify what articles of food the basket should contain, but we would suggest that a corner of the basket be reserved for comb, brash, towel, soap, tin cup, small basin, sponge, hand-mirror, toothbrush, soft paper, etc., etc.

Sleeping Accommodations. Only first class passengers can engage

Only lirst class passengers can engage berths in the sleeping cars. The second class cars are seldom full, and passengers taking a blanket or plaid can generally make themselves comfortable in the cars at night.

Railroad Ticket Office.

Having made up your mind as to how you are going to travel, go to the Railroad Ticket Office, 422 California street, corner of Liedsdorff, a little east of Montgomery, and procure your ticket. East of Omaha there are three lines

leading to Chicago. You have to choose by which of these you will go. Representatives of these roads are in attendance at the Raiload office, to give every information about their several roads to travellers. You will have plenty of time to obtain your sleeping car ticket at Sacramento, but if you prefer to secure it here first see our remarks about sleeping cars in a subsequent page.

The Great Overland Journey. Being already provided with our tick-

ets, and having our baggage all on board of our conveyance we are driven down to-

the wharf of the Central Pacific R. R. Co., where we find the steamer El Capitan in waiting for us.

Look After Your Baggage.

Our first, and most important, business at this stage of the journey, is to hand over our baggage to the baggage-master. Just at the moment we want to sneak with this gentleman however there are a number more equally anxious to do the same thing. The result is he is very busy. and very likely much annoyed by parties who have not their tickets ready for his inspection or who have forgotten to what point they want their baggage checked. All this creates confusion, irritation, and delay. No baggage-master will check baggage unless he sees the passenger's ticket. It is therefore necessary in order to prevent confusion and annovance to themselves and others, that our readers, when handing over their baggage to the baggage-master, should observe the following mlog.

1st. Have your ticket ready in your hand.

2nd. Be prepared to state where you want your baggage checked to.

3rd. Have such packages as you want checked, close at hand.

4th. Keep such packages as you intend

to take with you distinct from the others, so that the one may not be mistaken for the other.

5th. Carefully preserve the checks you receive. On arrival at your destination, present them to the local baggage-master, and you will receive your baggage all right. If you intend staying anywhere on the way for a day or two, have your baggage checked to that place.

Having complied with the foregoing simple rules, you may divest your mind of all anxiety about your baggage, and take your seat on board the steamer, fully prepared to enjoy your trin.

OFF FOR THE EAST.

Punctual to the moment, the El Capitan moves off from the wharf and we find ourselves being carried over to the eastern side of the bay. Midway, we pass Goat Island, onour left, and on our right, a long pile-supported bridge, that seems to be stretching out to meet us. This bridge is the property of the Central Pacific R.R. Co. They originally intended to carry it over to Goat Island, but the general government have stopped the project, lest so long a bridge might injure the harbor. They have therefore constructed wharves at the end off if for the reception of vessels.

We have now passed the end of the wharf and are sailing along close to its northern side. We see that rails have been laid upon it, and that the cars are already coming down to meet us. A moment more and we step ashore to find a train in readiness to feerly us. Close connections are the rule with the C.P.R.R. Co., and so we have no time to look around us but must go on board the cars at once.

Choose the Shady Side

Of the car; it is always the most agreeable and permits you to look at the country through which you are passing—a treat you cannot comfortably enjoy with a hot sun striking upon your face.

Off for Oakland,

As soon as all are safely on board the cars, the bell rings, and we are carried up the wharf to the city of Oakland—a moment's delay occurs here while more passengers are being taken on the train. Let us employ the short time we have to remain in taking a rapid glance at

The City of Oakland.

Oakland is in Alameda county. It is situated on the east side of the bay. 6 miles from San Francisco, to which it stands in the same relative position as Brooklyn'does to New York. The name of the city is significant; and we see at once it is derived from the large number of evergreen oaks that lend the city such a charm. It has a population of 11.000. several churches, schools, academies and three newspapers-the "News," "Transcript" and "Termini." About five miles from the city is located the University of California, and also the State Asylum for the Deaf, Dumb and Blind. On the beach, five miles north of the city, a new city, to be called Berkeley is to be laid out. The site chosen for it is exactly opposite the Golden Gate.

Our train is again in motion, and as we glide slowly out of the city, we are impressed with the beauty of its residences and the grounds which surround them. Beautiful smooth lawns, with parterres of gayly-colored flowers, are the rule. The further we go, the more beautiful does the scene become, and we imagine the people who live here must all be wealthy. Our guess is nearly correct for most of them are merchant princes, from San Francisco, who, when the noise and bustle of the day are over, find in their well kent gardens, and elegant homes, the comforts which their success in life enables them to enjoy.

Brooklyn.

This place is made up of the villages of San Antonio and Cinton, which lie close to each other, about a mile and a half southeast of Oakland. The town contains from fifteen hundred to two thousand inhabitants, and has recently been reconstructed under the favoritie name of Brooklyn. It is a thriving and go-ahead place. About a couple of miles further up the road is the junction of the San Francisco and Alameda Railroad with the Central Pacific.

The East Side of the Bay.

The country lying between the Contra Costa hills and the Bay of San Francisco is one of surpassing loveliness. Especially is this the case in summer, when the golden yellow of the ripening grain contrasts so strongly, yet so beautifully, with the dark green of the orchard, or the lighter green of the grane-vine. As we get farther from the suburbs, to where the well-cultivated farms stretch away on either side of the railroad, we are struck with the beauty of the farm houses which seem to repose in quiet contentment, and we are tempted to wish that we had been farmers. "If a kind Providence had cast our lot here, our cup of joy would have been full!" Thus we muse as we are carried along. But while we have been musing, the more matter-of-fact "Iron Horse," which we are riding, has brought ne to

Alamada.

Alameda is a pleasant little town of about 1,100 inhabitants. It is situated on the east side of the bay, six and a quarter miles from San Francisco, as the crow files, but eight miles by the detour we have made. It is connected with San Francisco by ferry, and is the western terminus of the San Francisco and Alameda R.R. It has a beautiful grove of oak trees; and also a beautiful park—the "Encinal" which is much frequented by picnic parties from San Francisco. Alameda has a weekly paper—the Encival.

Ten miles and a half from Alameda, but off our line of travel is

Hayward's.

This town, which has about one thousand inhabitants, is the terminus of the San Francisco and Alameda Railroad, and shows many evidences of rapid growth and prosperity. For several years much of the grain grown in this neighborhood has been shipped from here.

Fourteen miles from Alameda we arrive

San Leandro.

This small but thriving town is the county seat of Alameia County. Is derives its name from San Leandro Creek, on which it is built. The town contains a court house, jail, several stores and hotels, and an agricultural implement manufactory. This a population of about 1,000, and supports one weekly newspaper—the Gazette.

San Lorenzo.

This town is similar to San Leandro except that it is smaller and has fewer inhabitants

LeavingSan Lorenzo we are bornealong among hills that are interspersed with picturesque little nooks and clear running streams. When last we passed over the road, these streams gurgled over their pebbly bottoms so invitingly that some young laties, who were in our car, wished the train would stop till they could enjoy "a paddle in the born!"

Niles.

Niles station is a romantic little spot among the hills. It is 29 miles from San Francisco, and 11 from San Lorenzo. It is also the junction of the San Jose branch of the C.P.R.R. Passengers bound for San Jose change cars here. San Jose is 13 miles from Niles station.

Leaving Niles we again resume our journey through a beautiful tract of country. Twelve miles of winding among the hills and canons brings us to

Pleasanton,

A thriving little village which derives its name from its pleasant location, and will yet be a stirring town. Its population is said to consist of 800, but we imagine the census returns will show a smaller number.

Six miles from Pleasanton we reach

Livermore,

a fast growing little village situated in the valley of the same name, 47 miles from San Francisco. This village at present consists of a freight station, a hotel, and a few stores.

Leaving Livermore we begin to climb the Alamach Hills. On the summit under which we pass they attain an allitude of 800 feet. Following the windings of the hills we pass through a country used most for grazing purposes, and which seems to bentirely given up to the "squirrels." Squirrels are very numerous in California. They burrow in the hillidides and, in seed-time, do much damage by cating the seed sown in the fields.

Continuing our course, we pass Altamont—a small signal station—and plunge into a tunnel where, for a moment we are enveloped in darkness. Emanating from this tunnel we are in Sau Josquin County. As we career down the hillsides we feel quite elated. And when the broad San Josquin Valley opens out before us with its immense fields of "(golden grain" besking in the sunshine, we are led involuntarily to exclaim, "what a country is California!"

For statistics of Alameda County see tables at end of Guide.

Midway.

The name of this small freight station would lead us to suppose it is equidistant between San Francisco and Sacramento. It is 16 miles from Livermore, and but 63 from San Francisco, 6 miles less than half the distance

Six miles further brings us to

Ellis,

A small village on the left of the railroad, having several saloons and restaurants. Continuing our journey through a good agricultural country for five miles more, we arrive at

Bantas.

This is a freight and passenger station. It is 74 miles from San Francisco. Stages connect here for Point Timber, 23 miles; Mahoneys, 34 miles; Antioch, 36 miles; and Hills Ferry, 40 miles. As we leave Bantas we pass on to a long wooden trestle work leading over the "tule" lands on to the

San Joaquin River Bridge.

This bridge, together with the trestle work east and west of it, is several miles long. Both the bridge and the trestle work are built on piles driven into the "tule" land. Much of the trestle work is filled in with ballast. The banks of the San Joaquin are submerged at certain seasons of the year to such a depth as would stop railroad traffic were it not for this bridge.

The Tule Lands

Along the banks of the San Joaquin river, which we are now approaching, and also along those of the Sacramento, and on the borders of the bay of San Francis co and its tributary bays, are large areas of marsh which derive their name—"tule" from a peculiar reed which grows upon them. In many places they are well adapted for reclamation, and in time they will become valuable. In some places, portions of "tule" land have already been reclaimed, and proved very valuable in dry seasons.

The San Joaquin River.

Five miles from Banfas, and about 80 miles from San Francisco, we cross the San Joaquin river. It rises in the Sierras, in Fresno county, and flows in a norther-pt direction till it empties itself into the Sacramento a few miles west of Rio Vista. It is about 350 miles long, and during some seasons of the year, is navigable for light-draught steamers. At these seasons it overdrows its banks for a breadth of six miles, submerging the tule lands sometimes as much as three few.

When not submerged, the tule lands are much frequented by pigs, locally called "tule cloicerss!" The proprietory right in these "chickens" is generally vested in the person who can first capture and mark them.

Lathrop.

Lathrop station is seven miles from Bantas, 81 miles from San Francisco, and 10 miles west of Stockton. It is the junction of the Visalia division of the Central Pacific R. R. which is now open to Modesto, on the Toolume river, (21 to Modesto, on the Toolume river, (21 miles), and building to Visalis and other points farther count. Lathropis destined to be a place of considerable importance. It is the initial point of the new route to Mariposa, Big Trees, and Yosemitevalley. It It is expected the road will be in running order from Lathrop to the crossing of the the Mercel and Bear rivers, in 1871. From these points stages can be taken via Mariposa and Carko's.

As this is the point of departure for Yosemite and the Big Tree Grove, we shall give our readers an opportunity of forming some idea of the beauty of the one and the magnitude of the other, by quoting from the able work of John S. Hittell, Eso., the following descriptions:

Yosemite Valley.

"Yosemite valley is a dell of matchless cliffs and cascades, with more scenes of grandeur and beauty that can be found within an equal space in any other part of the world. Shutin closely by walls of rock almost perpendicular, from two thousand to four thousand five hundred feet high, it has within a radius of five miles five cascades, one of which is two thousand feet high, another uine hundred and fortry, another seven hundred, and another three hundred and fifty, and their waters flow through a natural meadow ornamented by beautiful trees and brilliant verdure.

"The valley is a chasm in the Sierra Nevada, four thousand feet above the level of the sea, and distant about one hundred and twenty miles in a direct line from San Francisco, and in a nearly due eastward direction. It is watered by the main branch of the Merced River, which shove and below makes its way through the mountains in deep and dark gorges. the bottom of which is rarely seen by the sunlight. The valley is ten miles long and nearly three wide in the middle, from which it decreases each way. It is bounded on all sides by walls of vellowish granite, from two thousand to four thousand feet high, in some places perpendicular, and everywhere precipitous. It is only at the ends of the valley that it is possible for travellers to get in or out of it, and even there the entrance and exit are difficult for horses and impassable for wagons.

Points of Interest.

"The general course of the valley is east and west. The main entrance is at the western end, where a steep path leads down a descent of two thousand five hundred feet. The view from the ridge overlooking the valley is splendid. The chasm is seen winding away amidst the cliffs; a cascade is in sight, and numerous mountain-peaks rise in various directions. At the bottom of the dell are seen the meandering river, the green grass, and lofty trees dimished to the appearance of shrubs. The waterfall seen on the right several miles distant, is a mere white streak on the face of the rock, and does not appear grand in the least, but it is nine hundred and forty feet high, and becomes imposing as the traveler approaches it. The body of water is about seventy feet wide on the first of June. The fall is called the Cascade of the Rainbow, from the beautiful colors which always, in sunlight, adorn the mist floating about it.

Rocks and Cascades.

"Nearly opposite this cascade, on the northern side of the valley, and about three-quarters of a mile distant, but apparently much nearer when the tourist looks up at it, is the Capitan (or Captain). a rock which projects into the valley and rises up perpendicularly from the level green-sward three thousand and ninety feet. Continuing our course un the valley, we come soon to another high peak on the same side of the valley, known as the Signal Rock, two thousand nine hundred and twenty-eight feet high. Four miles above the Rainbow cascada wa come to the great falls of the Yosemite. where the stream of that name, eighty feet wide, leaps down two thousand and sixty-three feet in three falls, of which the first is one thousand three hundred feet high, the next two hundred and fifty, and the third four hundred and fifty. About three hundred feet from the top of the upper fall there is a projecting ledge on which the stream breaks when the water is low, but up to the middle of June. while the current is large and swift with melted snow, the great body of the water leaps clear of the ledge, and pitches sheer down into the hill of rocks below. The Yosemite Fall, sometimes called by the Indian name of "Cholook," is, in so far as height is concerned, the greatest cataract in the world: but it does not impress the observer like Niagara. The body of water, never large, is almost lost in spray before reaching the bottom; and in the late summer, the stream dries up entirely. Niagara is sublime, overwhelming the soul with the idea of power; Yosemite is beautiful and romantic-that is all. The tremendous precipices here,

as throughout the valley, are greater and more impressive than the cascades, which have not enough water to confound. Besides, the falls cannot be approached from those points whence they might be seen to the greatest advantage; and looking from a distance, the Yosemite somewhat resembles a great sheet of white satin hanging over the cliff. But inferior as this one cascade is to Niagara, the valley. taking all its scenery together, is far superior in variety and romantic beauty, and equal in grandeur. A day or two at Niagara is enough: while a lover of nature may stay at Yosemite for months and continually find new delights in the study of the scenery. I have given the total height of the three falls of the Yosemite, all of which are very near together, at two thousand and sixty-three feet, which is the figure given by the official surveyor of that county; but others have estimated the beight at two thousand three hundred and two thousand five hundred feet.

Pyramid Rock.

"Across from the Yosemite Falls, on the southern side of the valley, is the Pyramid Rock, so named from the shape which it bears when seen from some points of view. It is three thousand two hundred feet high. Three miles further up and at the head of the valley is "Mirror or Tocoya Lake," a beautiful body of water covering about eight acres. The northern side of this lake washes the foot of the North Dome, a huge mountain of rock crowned with a dome-like knob. three thousand six hundred and thirty feet high; and near the southern edge of the lake is the perpendicular face of the South Dome, a still higher mountain, which rises up four thousand four hundred and eighty-one feet, towering above all the peaks in the vicinity. This peak is a sublime sight, with its perpendicular wall, which, as you look up at it, seems as if it would keep going up forever.

The Vernal Falls.

"Winding back now along the southern side of the valley, we soon come to the southern fork of the Merced River, which rushes down through a gorge. We ascend this gorge on foot, climbing with great labor over rocks and through the brushwood, and at the distance of a mile and a half come to the Vernal or Canopah Falls, where the stream, about one hundred feet wide, falls three hundred and fifty feet into a basin surmounted by large evergreen trees. This cascade possesses one great advantage over all the others of the Vosemite valley, and that is, it can be approached from above, where we look down upon it from the top of the granite cliff, leaning over a natural parapet of rock, as convenient as though made expressly for the accommodation of picturesque tourists.

Awance Falls.

"About half a mile above the Vernal Fall the river takes a another leap, called the Nevada or Awanee Falls, but it costs a mile and a half of roundabout clambering to get to it. The fall is seven hundred feet high, half of which the water shoots plumb down through the air, and atrikes the projecting rock, breaking into spray.

Tusayao Cascade.

"About two miles west of Nevada Falls is the cascade of Tusayac, about six hundred feet high, but it is very difficult of access.

Lake Tesahae.

"A few hundred yards above Lake Tocoya is Lake Tesahae, which has an area of about six acres, and is forty feet deep.

Variety of Scenery.

"No description can convey a clear idea of the great variety of scenery in the valley. There are a thousand nooks and corners and woody dells, full of enchanting picturesqueness. The rocky cliffs take all manner of queer forms, resembing pyramids, eastles, and domes, chimneys and spires. In one place there is a narrow cleft one hundred feet deep in one of the rocks, as though some giant had commenced to split off part of the mountain and had left his work unfinished.

"The river, as it meanders through the valley, is a great addition to its beauty; and its waters, as well as those of the lakes, are clear as crystal in the summer, though turbid in the spring. Mountain trout are found in all these streams.

Climate.

"The climate of the valley is cool. The numerous cascades agitate the air, and near the fall there are often gusty winds.

Vegetation.

"There is much difference between the vegetation and temperature of the two sides of the valley; the northern side, where the snashine is felt throughout the day, being much warmer than the shadows of the southern child. Shrubs and Jlouch are in the full glory of foliage, and flower along the northern wall in May and June, while the sames species are still bare or badding a mile or two to the southward; but the more delicate annual shrubs are usually more healthy on the southern than on the northern side of the stream,

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THE MINES.

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because those in the warmer spots are stimulated to come out so early as to be badly nipped by the frosts, which prevail here all through the spring and into the summer. The valley is almost inaccessible, on account of snow, before the middle of May, and the best time for a visit is in June. In the late summer and fall the quantity of water in these streams decreases greatly, and the Yosemite cascade becomes a first rickling brooklet.

Accommodation Houses, etc.

"There are a couple of houses for the accommodation of travelers, but the fashionable way with those who visit the valley is to go in parties on horseback, provided with pack animals, carrying along tent, bedding, provisions, and cooking utensils Ladies dress in the Bloomer style. Wagons do not come within forty miles of the valley. There are some quail and hare, but no larger game. The dell was inhabited by a warlike tribe of red men eight years ago, but they undertook to fight with the whites and have all been cut off, and scarcely a sign of their evistence remains, save here and there the dim vestige of a trail.

Discovery.

"The valley was first entered by white men in 1948, if rumor be true, and afterward in 1850 and 1852, but its wonders attracted no notice from the press, and were unknown to the public until 1854, and did not attract many visitors until 1856."

Mammoth Tree Groves.

"The next great natural wonder of California is the big-tree grove in Mariposa county. It is a grove of four hundred and twenty-seven mammoth trees, the largest of which are thirty feet in diameter and three hundred feet in height. This is the largest species of tree in the world, and this is the largest grove of them. The grove is about twenty miles from the Yosemite valley, and thirty miles southeast of the town of Mariposa, and about four thousand five hundred feet high on the western slope of the Sierra Nevada. When the traveller enters the grove he sees on all sides of him numerous giants of the forest, varying from twenty to thirty-four feet in diameter, and from two hundred and seventy-five to three hundred and twenty-five feet in height. Sublime sight! Each tree fills him with wonder as he looks at it. A glance at one of these immense trunks conveys a new idea of the magnificence of nature; 'glorious as the universe on creation's morn' is this grove. The Titans and the gods fought with such tree-trunks as these for clubs, when the attempt was made to carry heaven by storm, as recorded in Grecian mythology. The trees are so high that you must look twice before you can see their tops, and then you must keep on looking before you can comprehend their height. The best way to see them is to lie down and look up, and remember that the spire of the New York Trinity Church, which is the highest artificial structure in the United States, towering far above all the rest of the American metropolis, though two hundred and eighty-four feet high, would be entirely lost to distant view if set down among these trees.

"The grove covers a space half a mile wide and three-quarters of a mile long. Classifying its trees according to their size, we find that there is one tree thirtyfour feet in diameter; two trees of thirtythree feet; thirteen between twenty-five and thirty-three; thirty-six between twenty and twenty-five; eighty-two between fifteen and twenty; making a total of one hundred and thirty-four trees between fifteen and thirty-four feet in diameter; and then there are two hundred and ninetythree between one and fifteen feet through.

"One very large tree has fallen, and a considerable portion of it has been burned; but appearances indicate that it was nearly forty feet in diameter, and four hundred feet high.

Botanical Genus.

"The Mammoth Tree is a cone-bearing evergreen, belonging to the botanical genus named Copressors (cypress) by Lineaus. After the time of that naturalist, his genus of the Copresser was divided, so that the Mammoth Tree would have come under the head of the Tazadium, which, about the year 1850, was again which, about the year 1850, was again which and the relavool-tree was declared to belong to a new genus, called Sepsoin.

Botanical Facts.

"In 1853, the mammoth trees first came to the notice of the public. The botanists in San Francisco, engaged in the turnoil of business, looked at the specimens, but had not time to examine them, and supposed them to be of the same species with the redwood, to which the mammoth tree certainty does bear a very close resemblance. Thinking the tree, however, to be very restarkable on account of tisgrant size, they sent some of its comes, leaves, and wood, to botanists in New York, but they were unfortunately lost on the way. A few months later, an English collector sent some specimens to

Professor Lindley, who not only found the tree to be of a new species, but determined to make a new genus of it, and he affixed to it the name Wellingtonia gigantea. When the news of the selection of this name arrived in California a foolish and pretentious fellow, who meddled with matters of science of which he knew nothing, wrote a ranting article against Lindlev, for trying to confer the honor of the great tree of America poon a Briton like Wellington, and declaring that the only proper title for the tree would be Washingtonia gigantea. If there had been any had taste in conferring the name of a Tory and a man of blood upon such a magnificent tree, still the rules of botanical nomenclature are well established and the matter of the name is left entirely to the discretion of the man who first gives a technical description of the plant and determines its genus. American botanists therefore never recognized the name Washingtonia, because Lindley's name was of undoubted priority; and to acknowledge the priority, and yet recognize the Washingtonia, would be equivalent to proving their own stupidity. And vet English botanists have, in scientific records, accused American botanists and "Americans" of making an agitation to establish the name as Washingtonia. These facts are part of the history of botany, and facts of interest relating to the big trees.

Opinion among Botanists.

"The general opinion among botanists is, that Lindley was wrong in declaring the mammoth tree to be of a new genus: it is a Sequoia, related in the closest manper to the redwood. When the redwood and the mammeth tree come to be held as of a distinct genera, then nearly every difference herefore considered merely specific may be made the basis for establishing new genera. Dr. Seeman called the mammeth tree the Sequoia gigantes, and it bears that name with botanists generally.

Peculiarities of the Sequoia Gigantea.

"The Sequoias are found only in California; the Sequoia gigantea only on the western slope of the Sierra Nevada, between latitudes 34° and 41°. The tree has the great peculiarity that it bears two kinds of leaves: those on the young trees, and on the lower branches of larger ones, are about five-eighths of an inch long and an eighth wide, and are set in pairs opposite each other, on little stems; the other kinds of leaves, growing on the branches which have borne flowers, are triangular, about an eighth of an inch long, and they lie close down to the stem. The cones are not much larger than a hen's egg. whereas the cones of many smaller conifers of the coast are larger than pine-apples. The seeds of the Sequoia gigantee are not more than a quarter of an inch long, a sixth wide, and almost as thin as writing-paper. The bark is reddishbrown in color, of a coarse, dry, stringy, elastic substance, and very thick-on the largest trees not less than eighteen inches. The wood is soft, elastic, straight-grained, free-splitting, light when dry, and red in color. It bears a close resemblance to red cedar, but the grain is not quite so even. The wood is very durable.

Grove Scenery.

"The mammoth tree grows in a fertile soil, and is always surrounded by a dense growth of other evergreens, such as various species of pine, fir, spruce, and Californian cedar. The scenery in these forests is beautiful. The trees grow very close together; and the trunks, usually from a foot to two feet in diameter, rise in perfect perpendicularity, and with little or no diminution of size, more than a hundred feet without a limb; and while all is perfect stillness and rest and shadow on the ground, the traveler, looking to where the sunbeams are perceptible here and there on the thick foliage, can see the flexible tops swinging from side to side in the roaring mountain-breeze. The soil. being never visited by the sun, is always moist, and produces a luxuriant and beautiful little undergrowth of mosses. flowers, and berries. When in such forests. I have at times compared myself to a merman, who, while at the bottom of the ocean, amid a large growth of queer sea-weed, and surrounded by beautiful shells and the treasures of a thousand wrecks, should look from his shode of peace, and see the surface of the water. far above him, raging in a terrific storm.

"Many young trees of the Sequoia gigantea produced from the seed, are growing in gardens in California, in the Eastern States, and in Europe.

"The mammoth tree is found only in a few small groves, of which six or seven are known, though probably there are many in unexplored parts of the Sierra Nevada. Three of these groves are in Mariposa county, one in Calaveras, one in Tuolumne, and one in Tulare.

The Mariposa Grove.

"The three Mariposa groves are withint wo miles of each other. The second one in size contains eighty-six trees; the third thirty-five. The Tuolumne grove contains ten trees, one or two of which are said to be thirty-five feet in diameter.

The Calaveras Grove.

"The Colaveran mammoth grove was the first discovered, and attracts the greatest number of visitors. There are in this grove ten trees thirty feet in diameter, and eighty-two between fifteen and thirty, making ninety-two over fifteen feet through. One of the trees, which is down, must have been four hundred and fifty feet high and forty feet in diameter. The "Horseback ride," one of the notabilities of the place, is a hollow trunk, which a man can ride upright through on horseback, seventy-fere feet.

"In 1854, one of the largest trees, ninety-two feet in circumfrence and three hundred feet high, was cut down. Five men worked twenty-two days in cutting through it with large angers. On the stump, which has been smoothed off, there have been daneing-parties and theatrical performances; and for a time a newspaper, called the Big Tree Bulktin, was printed there.

"At the same time that this tree was cut down, another was stripped of its bark for a distance of one hundred and sixteen feet from the ground. This tree contined green and flourishing two and a half years atter being thus denuded, and didyears atter being thus denuded, and didnot begin to show signs of dying until a very hard frost came in the winter of 1856—37. Although seven years have passed since its bark was stripped off, some of its barnelses are yet green.

Age, etc.

"A section of bark and part of the wood of the felled tree are now in the English Crystal Palace. The rings of this tree were counted; and its age was variously estimated, according to the different methods of counting, at from nineteen hundred to three thousand years. Probably its age was about two thousand years. It spronted while Rome was in her glory. It is older than any kingdom. language, or creed, of Europe or America. It was a large tree before the foundation of the Christian Church, and was fifteen hundred years old before the period of modern civilization began. Twenty centuries look down upon the tourist from the tops of the larger trees; and some of the little ones will still flourish for a thonsand years from now, when all our present kingdoms and republies shall have disappeared, and our political and social systems shall have been swept away as full of evil, and replaced by other and better systems, under which men will live in civilized society withouteach being forced to rob his brother by means more or less legal and respectable.

Uncle Tom's Cabin.

"In many of the trees in all the groves, hollows are burned at the foot, and some of them have been burned so as to stand on three legs. One of these, in the Callonversa grove, called "Uncle Tom's Gabin," has an open space under it of more than a dozen feet sognare. The largest trees seem to end abruptly at the top, having been broken of by the snow, which often falls to a great depth so high up on the Sierra Nevada. The trees, in some places, grow very near together; in others, they are comparatively far part; and occasionally two or three will be seen which are united at the ground, although they may have been twenty or thirty feet apart

when they sprouted.

"It is said that the big-tree grove of Tulare county is eight miles long, and contains larger trees than either Calaveras or Mariposa, the largest measuring one hundred and twenty-three feet in circumference twelve feet above the ground. We have, however, no detailed description of this grove."

THE GIANT TREES OF CALIFORNIA.

BY HEARIET C. DORB.

Upwared within the aurus sky.
Lake temple leaf-revenued, rate and high,
Lake temple leaf-revenued, rate and high,
No beares are swap their master steenath,
Or shake their mightsy breads and length,
Their first of life when times shall beare
Their first of life when times shall beare
Their first of life when times shall beare
Their first of life when times shall bear
Their first of life when times shall bear
Their first of life when times the life of the limits,
or stronger first outwards the shall be a sealed and their life of their life.
Yet then, amid their lought on high,
That of highpoons weapt them by.

In age some, these olden trees,
Perchance general of great inlans casa,
Bore on Whose rippling wares
Bore on Whose rippling wares
Whose rippling wares
Who had their season, time and place,
Vet etill, Now in their prace;
Yet etill, Now in their prace;
Yet etill, Now in their prace;
Who ware the season ware of the case who ware
Kinns of the fercet, lords of eld,
Eve yet by our white race bushed.
Where great Nevida is peake arise,
You say were upward thrown;
As if ousersechted in upper air.
As if ousersechted in upper air.

As if outstreached in upper air,
Your waving hands were apread in peny
Mothinks as from some eagle's nest
I soar above their mighty crest
I soar above their mighty crest
I had tool and their soleme thyme,
I had a chain in soleme thyme,
Of our great God;
From wood or plain or mountain peak,
From wood or plain or mountain peak,
I had a chain of their soleme thyme,
I would be the soarI was the soleme the soleme their s

Are thy great mysteries of the past—
What do we here?
Like falling flakes of melting snow
We fleeting come and fleeting go,
To disappearth's wide page
Thy cyheres of some hygone age.

Ten miles east of Lathrop we arrive at Stockton where trains stop 10 minutes for refreshments.

Stockton.

The city of Stockton is the county seat of San Joaquin county. It is located in the midst of the most extensive and productive wheat growing lands in the State. on a deep and wide slough, navigable throughout the year, and connected with the San Joaquin river, which flows past the city, about three miles to the westward. Stockton is 91 miles from San Francisco by railroad, and 120 by steamer. It was laid out about the time gold was discovered in California, and was called Stockton in compliment to Commodore Stockton, whose name is prominently connected with the conquest of California. The growth of the city has been gradual. perfectly healthy, and free from excitement. Its limits have recently been enlarged, and its taxable property greatly increased. Its population, according to the census returns for 1870, is 10,033, The streets of Stockton are wide, well improved, and at right angles to each other. Many fine buildings, gardens, and shade trees, adorn the city. Stockton is supplied with gas and water. The latter is obtained from an artesian well 1002 feet deep which ejects its water eleven feet above the surface of the ground, and gives out 360,000 gallons daily.

The State Insane Asylum is located here. The grounds of this institution are kept in excellent order and will well repay a visit.

Stockton has five newspapers, viz: the Independent, Republican, Herald, Pacific Oberver, and Gazette.

It does an immense grain trade, amounting annually to \$3,000,000. Its fleet of barges, and light-draft steamers, sail up the San Joaquin river far into the interior, for cargoes of grain, which are transhipped at Stockton for San Francisco. It is also the point of departure for many places in the interior, and does quite an extensive stage business. Stage lines leave Stockton for Campo Seco. 34 miles: Copperopolis, 40; Murphy's, 61; Big Tree Grove, 74; San Andreas, 42; Mokelumne Hill, 44; Hornitos, 76; Mariposa, 100; Paradise City, 32; Sonora, 63; and Columbia, 69. Steamers also ply to Paradise City, 79 miles; Watson's Ferry, 250; Antioch, 70; Benicia, 80, and San Francisco. 120.

Leaving Stockton we pass on through the San Joaquin Valley. Here we cannot help noticing the

Increasing Heat as we go Inland.

As we go inland, the ocean breezes are not so strongly felt, and the winter and the summer are more strongly marked. In the valleys near the sea level there is a difference of not more than five decrees of temperature in January in any latitude; but in the temperature of July there is a difference varying from sixteen to thirty degrees. Thus, Fort Miller has a July of 90°, or 32° warmer than Mouterey, from which it is 130 miles distant in the same latitude. We leave San Francisco, on an average July noon, in a temperature of 65°, in the ferryboat for Oakland, five miles distant, where the thermometer stands at 67°; at Livermore Pass 35 miles to the eastward, it is 75°; at Stockton, down in the valley and 25 miles further east, it is 80'; and there is no change till we have risen to a height of 3,000 feet on the Sierra Nevada, and then the thermometer slowly falls till we reach about 70 'degrees on the summit, at an elevation of 7,017 feet. These are middly temperatures. The nights are cool in nearly all parts of the State, but they are much cooler relatively than the days in the more elevated warts of the mountains.

In the Californian Alps, between parallels 35 and 38 of north latitude, at an elevation of 10,000 feet, the days are cold in midsummer, and frosts are frequent in July.

In the Klamath Valley, which extends across the northern end of the State, the temperature frequently falls in midsummer nights to the freezing point.

In the Colorado desert, in the southeastern corner of the State, the summers are distressingly hot, and even the winter is warm.

Meteorological Table.

The following table furnishes material for comparison:

				_			_	_	_	_	-	_	_
Districts.	January	February	March	April	May		July		September	October	November	December !	Average
Los Angeles	50	55	44			73	75	73	75	69	59	m	
San Diego	51	53	56	ŝi.	62	5	72	73	20	65	42	31	69
Jurupa		53 54	46	60	63	EW	73	73	Βä	67	33		69
Monterey	52	59	51	53	56	571	58	49	59	38		1	55
San Francisco	139	51	50	55		50	57	50	39	57	70	55	54
Humboldt Bay		43											
Fort Yuma	152	58	GS.	E3	76	87		Sil	86	76	Gi	83	79
Fort Miller	17	.53	56	62	68	K3	90	81	76	67		48	66
Vallejo,	4	52	53	53		65	67	66	SI	62	51	м	548
Sacramento	188	43	51	59	67	70	73	73	IBS	61		45	500
Fort Reading	34	19	34	59			82		71	62	59.	44	62
Fort Jones	135	37	43	49	51	61	n	68	62	51	m		51
Grass Valley		37	38	44	49	52	63	58	53		43	36	46
Sononia	45	47	51	53	62	65	66	66	bî	66	18	46	58
Meadow Valley	34	32	41		61	68		68	57	52	44		
Cincinnati	35	34	43	57	61		74		63	35	41	34	53
Dijon		36	48	51	60)	66	70		62		43		52
Bordeaux	41	45		56	60	66	73	73	67	58	48	m	57
Marsoides	13	45	48	56		77			68	58		17	58
Madeira	[GP	60	62	63	61	67.	70		71	67	64	62	65
Vienna		33	40	51		67	70	70)	Gl	51	40		51
New York	131	30	38	17		6;	13		66	55	45	34	51
London		40	42	46	53	:8	62	62	57	50	14	40	49

We see here that San Francisco, Sacramento and Vallejo, which represent the region where the bulk of the population is collected, have a winter about as warm as that of Naples, and considerably warmer than that of Bordeaux and Dijon, which are the centres of the chief wine districts of France. Meadow Valley and. Grass Valley, which are at a considerable clevation above the level of the sea, have winters about as cold as New York, and the mean of their summers is cool, but their July days at noon are very hot.

The temperature of the Sacramento basin, in midsummer, is about the same as that of New York on the average, and it is even hotter at midday, but it is cooler at night, when every bed must have its blant of

Mokelumne.

Twelve miles east of Stockton we arrive at Mokelumne, a small town created by the railroad. Stages leave Mokelumne for Lockford, 7 miles; Camanche, 18; Campo Seco, 23; and San Andreas, 35. Beyond the station we cross the Mokelumne River, and 9 miles from Mokelumne we come to

Galt.

Galt is a freight and passenger station. It has two hotels and is the point of departure, by stage, for Ione City, 24 miles; Jackson, 34; Sutter Creek, 34; Amador, 37; Mokelumne Hill, 41 miles; and Calaveras Bir Trees, 71 miles.

McConnell's.

This is a small station 7 miles beyond Galt. Like many of the other young towns just sprung into existence along the line of the railroad, it has not yet attained any great size, but its future is full of hope.

After leaving McConnell's we pass out of San Joaquin county into that of Sacramento.

San Joaquin county derives its name from its principal river. It contains no timber fit for lumber, and very little suitable for even fencing purposes. For statistical information about San Joaquin county, see tables at end of Grupe.

Elk Grove.

Elk Grove is the pretty and appropriate name of a small station four miles from McConnel's. It is the first station we meet in Sacramento county, which we have just entered. What was said of Mc-Connell's is also true of Elk Grove.

Brighton.

Brighten is ten miles east of Elk Grove. It is the last station we meet on the western division of the Central Pacific R.R. before we enter Sacramento. Situated only five miles west of Sacramento, it is not to be expected that Brighton can offer any objects of sufficient interest to detain us, so we shall much on to.

Sacramento Station. Trains stop here 20 minutes.

Here we will get off the cars, as we tined to stay a day or two in Sacramento, to look around us. As we alight from the cars a heat of hotel runners and hackmen gather around us and improvise a modern Babel by shouting "Who wants a carriage? "Railroad Hotel!" Pacific Hotel coach!" "Garry your beggage sit?" and a host of other yells that almost deprive us of our sense of hearine.

Strangers placed in this perplexing position, without any one to advise them, are much to be pitied. To save our readers from all doubt and annoyance, we recommend them to go to either the Golden Pagie Hotel or to the Orleans Hotel. Both have coaches in attendance at the railroad station for conveying guests to their hotel free of charge. The former hotel is near the Capitol, and is the renderyous of the legislator; the latter is near the railway station and is much frequented by the railroad officials. We can assure our readers from personal observation and experience, that these two hotels are the best in the city, and with this assurance we leave them to make their own choice.

Having refreshed ourselves, and fortified the inner man, let us sally forth to look at the city.

Sacramento.

Sacramento, the capital of the State, and its second city in population, wealth, and commercial importance, is situated on the east bank of the Sacramento River, three miles south of the point where the American River unites with the Sacramento.

Gen. John Sutter, while in New Mexico. in 1834, heard, from a party of Californian trappers, of the great beauty of the valley of the Sacramento. Five years later, in the month of August, he settled there. In the following year he obtained from the Mexican Government a grant of the land on which he had located. Here he built a fort, thereafter known as "Sutter's Fort," and applied himself earnestly to the acquisition of wealth by stock-raising, trading, and agriculture. In the month of July 1845. Gen. Sutter engaged the services of JAMES W. MARSHALL the man who on the 19th of January 1848, discovered the golden wealth of California, and by that single act, did more to develop the

resources of this State than the single act of any other man has ever done since. After the discovery became known, adventurers came pouring in from all quarters, and all made for "Sutter's Fort." Here they were welcomed: here they camped under the oaks and sycamores: and thus they formed the nucleus around which has grown the city of Sacramento. In 1851-2 great floods ravaged the city, causing much damage. The people then living there, however, had created interests which they would not give up without making an effort to protect them, so they built a levee along the banks of the American River. For a time, this saved the city, but in 1861-2 it gave way, and a flood again swept the city as with the besom of destruction. These repeated inundations demonstrated the necessity of raising the site of the city to a higher grade. This has been carried out, in a great measure, and the business part of the city now stands about ten feet above its natural level. In addition to disasters by floods, the city has also suffered much by fires, but Phoenix like, she has risen from her ashes more beautiful than ever. Having been made the permanent capital of the State in 1854, in 1860 the legislature authorized the construction of a State Capitol. The work was then begun and has since that time been steadily carried on. It is not yet completed. Last year however, it was so far advanced that on the 7th of December, the legislature met in it. The Capitol stands on four blocks of land, donated to the State by the city of Sacramento. Its grounds are bounded by L street on the north, by N street on the south, by Twelfth street on the east. and by Tenth street on the west.

The Capital.

The Capitol stands in the centre of the block just described. It is in the Roman-Corinthian style of architecture, and when completed, will cost nearly two millions of dollars. It is 80 feet high and consists of three stories. The first story is of white granite, and the second and third of brick. The main walls are five feet thick, and the inner, or partition walls, from two to four feet in thickness. The front of the building is on Tenth street and measures 320 feet. On L and N streets the two wings of the building have respectively a frontage of 164 feet. The main entrance. a portico supported by ten columns, is approached by a flight of granite steps 80 feet wide and 25 feet high.

The Interior of the Capitol.

After passing the main entrance, the visitor finds himself in a hall 20 feet deep and seventy-three feet wide. To his right and left are the broad stairs leading to the second story. Passing on through an arched door-way, we enter the rotunda. which is 72 feet in diameter. In the wall of the rotunds there are four niches which are intended to con'ain statues of Washington, Lincoln, a California miner, and a California hunter. These statues will be one half more than life size. Above these there will be eight panels, each six by thirteen feet, with stucco frames for fresco paintings. These will be surmounted by eight circular panels for similar purposes. Still higher up are thirteen sunken panels each 8 feet by 3 feet 6 inches. These will be filled with pictures. Above these again are sixteen frames, each ten by sixteen feet, also intended for pictures. These last panels extend to the skylight, and are to be painted red, white, and blue alternately presenting from below the onpearance of a sixteen pointed star.

The First Story.

The first story is twenty-one feet six inches in height. From the rotunda we turn to the right and enter a hall sixteen feet wide extending through the centre of the south wing. First on the right are two rooms, 23 by 29 and 24 by 29, occupied by the Secretary of State. Below the Secretary's quarters are the Governor's rooms, three in number. The reception room, in the southwest corner of the wing, is 27 by 30 feet, the others being 16 by 16 and 23 by 27. Across the hall is the Chief Justice's room, 21 by 26 feet. Two rooms below, each 16 by 26 feet, and two others across the hall, south, each 15 by 27 feet are assigned to the Judges of the Supreme Court.

A similar division of rooms is made in the north wing. Here the State Treasurer is assigned two rooms: the Controller. two: Attorney General, two: Board of Education, one: Supreme Court Reporter. one, and two still remain unappropriated.

Supreme Court Room.

Again starting from the rotunda and passing directly through from the main entrance, we come to the Supreme Court room. It is in a circular projection, built out on the east side of the main building, between the two extending wings. The room is 46 by 58 feet and is lighted by seven windows. The bench is on the west side of the room. Through a hall and door to the southwest is the Supreme Court Library. It is 28 by 33 feet

The Second Floor.

Here, as in fact in the third story, we find halls similar to those on the first part of the city, profusely adorned with shade trees. These trees are so numerous, and attain such a luxuriance of foliage, as to cause the traveler to imagine that he is in the streets of some oriental city. The business part of the city is high, dry, and level. The streets here are well kept and very handsome.

Manufactures.

The city has four flour mills, the Capital woolen mills, the Sacramento beet sugar company, two foundries, and a machine shop which turns out machinery and engines of the best quality.

The gas supply of Sacramento is excellent, but her water supply is defective and unsatisfactory. The water now used is raised from the river by two pounds whose aggregate capacity amounts to 90,-000 gallons per day only, while the wants of the city for the same time are said to be, at least a million of gallons. When the river is modernely full, but ittle inconvenience is felt, but when it is low, the water is bad, and a large amount of sickness obtains.

Six newspapers are published in Sacramento; of these four are dailies. Nearly all the dailies issue weekly editions, and one of them issues a tri-weekly.

The growth of the city has been healthy and persistent, more especially since she became the great railroad centre of the State. Her population according to the census returns of 1870, is 16,288. There are in the city, about 20 school, 16 churches, 12 Masonic lodges, 10 Odd Fellows hologes, and 7 temperance societies. The Fire Department has six engine companies, one hose and one hook and ladder company. The State Library has 25,464

volumes, the Public Library, 5,000 volmes, and the Odd Fellow's Library, 1,200

Railroad Buildings.

The Central Pacific Railtood Co. have very extensive workshop shere; they are built of brick and designated as follows: the machine shop, the carshop, the paint shop, the blacksmith shop, a brick round house of 29 stalls, and the engine house. They have also a store-house and a hospital. These workshops are located on made ground on the east bank of the old slough. They are two stories high, 250 feet long by feet wide, and cover, with tracks, about 20 acres in all. About 1,000 men, exclusive of laborers and track hands, are employed by the company in these workshops.

Business.

The amount collected for harbor dues in 1869, as shown by the harbor statistics, was \$15,869; and the registered tonnage of sailing vessels nearly 47,000 tons.

Quite a large business is done in Sacramento in the wood and lumber trade. A fleet of nearly 30 barges are employed in it; and, it is estimated that, during the past year, they must have brought into the city about 50,000 cords of wood. The grain business is also very considerable. A very large portion of the grain grown in Colusa, Tehama, and other northern counties is shipped at different points along the river on barges. These are towed down the river by light draft steamers. At Sacramento, the greater part of this grain is transhipped on board large steamers, which convey it down to San Francisco.

Lines of Travel. The Central Pacific, the Sacramento

Valley, and the California Pacific Railroads all enter the city and convey passengers to all points on their several lines.

Springs.

The Sacramento Valley Railroad Co., rundaily trains Drighton, Smiles, Junetion, 7½; Pattersons, 9½; Salshury, 16½; Alder Creek, 19½; and Folsom, 22½. Here the Placerville and Sacramento Valley Railroad connects and runs trains to White Rock, 29½; Latrobe, 37½; Dugans, 43; and Shingle Springs, 45½ miles.

Stage Commention.

Stage Connections.

Folsom, stage for Coloma, 24 miles; Latrobe, ditto for Michigan Bar, Jackson, and Mokelumne Hill. Shingle Springs, People's stage line for Placerville, 12 miles.

Sacramento and Marysville.

The Oregon branch of the Central Pacific Railroad, which is being built towards Oregon State line, runs daily trains via Junction to Lincoln, Sheridan, Douglas, Wheatland, Marysville, Chico, and intermediate points.

Stages connect at Marysville for Downieville and intermediate points. Marysville can also be reached by the California Pacific Railroad, via Davis Junction—Sacramento to Davis Junction, 14 miles; Davis Junction to Marysville, 42.

At Oroville, stages connect for Chico, Red Bluffs, Northern California, and Portland, Oregon.

Sacramento and Vallejo.

The California Pacific Railroad runs daily trains to Vallejo and intermediate stations, connecting at Davisville with cars for Woodland and Marysville; at Napa Junction with Napa Valley Railroad. Daily trains from Vallejo via Napa Junction, Suscol, Napa City, and St. Helena, to Calistoga. At Vallejo, connects with steamer for San Francisco.

Sacramento and San Francisco.

The western division of the C.P.R.R., runs trains twice a day to Oakland, Alameda, San Francisco and intermediate stations, connecting at San Jose Junction with cars to Santa Clara, San Jose, and Gilroy; at Gilroy by stage with all southern towns.

Steamboat Travel.

The California Steam Navigation Company dispatch steamers every week-day for Russian Crossing, 10 miles; Fremont, 25; Nicolaus, 40; Hock Farm, 55; Plumas, 57; Eliza, 62; and Marysville, 65. Also to Colusa, 125 miles; Chico, 199; Red Bluff,270; and all intermediate points.

The steamers Yosemite and Chrysopolis alternately leave Sacramento every weekday, for San Francisco and intermediate points.

The Trans-Continental Railroad.

A GLANCE AT THE HISTORY OF THE ENTER-PRISE.

A railroad across the continent, to unite the Atlantic and Pacific coast, to open more rapid means of communication, to enable our immigrants to reach their distant lands in the far west more easily and rapidly, and to obviate the danger of their dying of thirst or being murdered by the Indians, has for many years been felt to be a necessity. The construction of such a line was so vast an undertaking, and the difficulties connected with it so great, that even the most sanguine hardly expected it would be completed in their day. As the mineral wealth of the Pacific coast was being more_rapidly developed, the necessity of such a road became more and more apparent.

The question began to occupy attention in California. It was discussed, freely and earnestly, in public meetings, and by private individuals. The people of Sacramento took the matter earnestly in hand, and a faw of the most energetic of them personally cryptored the passes of the Sicras, and demonstrated the feasibility of the undertaking. Some of them even went to Washington, taking with them maps, charts, and estimates of the cost of the road. The representatives of California earnestly advocated the measure, and Eastern men stood manfully by it in the Senste.

Notwinstanding all this earnest advocacy of the scheme, it is not improbable it would have been frustrated, but for the fact that at this critical juncture the nation was plunged in a civil war—a war unparalleled in magnitude and severity. Foreign and domestic complications threatened to dismember the Union. California, which had hithert continued loyal, was now supposed to be in danger from invasion or internal discussions.

Under the joint pressure of the advocates of the scheme from within, and the impending danger from without, a charter was finally granted. Still, the west was a vast unknown country, popularly supposed to be a howling wilderness a vast aggregate of rugged snow-clad mountains and barren deserts, rendered unagé by banjo of ruthless savases, and intersected by impassable ravinos. After much argument and explanation the public mind was gradually disabused regarding the impracticability of the scheme. Its vast importance, and absolute necessity, were fully demonstrated and realized. All opposition was withdrawn. An act was passed by Congress, and approved by President Lincoln on the 1st day of July 1862, sanctioning the undertaking, and promising the use of the nation's credit to aid in its completion. The act empowered certain parties designated therein by the name of the Union Pacific Bailroad Co., and the Central Pacific Railroad Co., of California, to have full powers to plead, and be impleaded etc., and confirmed certain rights of way and such other powers as are usually granted to such cornorations.

Government Grants.

So great was the undertaking, that private capitalists were reluctant to enter upon it, and doubtful that it could be constructed by their means. The Govern, now fairly entered into the spirit of the enterprise, and although it was engaged in a war of unparalleled expense, agreed to lend the National credit to aid the undertaking.

Land Grants.

Government granted to the Union Pacific and the Central Pacific Ballroad Companies every alternate section of land for twenty miles on each side of the road amounting to 12,800 acres of land for each mile of road built. The entire length of the road from Sacramento to Companies received 22,730,000 acres. The Central Pacific Co. constructed the road from Sacramento to Promontory, a distance of 690 miles, and received a grant of 8,832,000 acres; the Union Pacific Co. obtained a grant of 13,880,000, acres on account of the 1,085 miles of road which they constructed from Omaha to Promontory.

It is proper to state here that since the completion of the road, the two Companies have entered into a private arrangement by virtue of which the Union Pacific Co., have ceded to the Central Pacific Co., the fifty-three miles of road between Promontory and Oglein. Ogden is, therefore, the present junction of the two roads.

Bonds.

To the foregoing liberal grant of land, Government added a grant of thirty-year six per cent bonds, arranged as follows: —\$16,000 per mile for the most easily constructed portion of the road, \$32,000 per mile for the more difficult portion, and \$48,000 per mile for the most difficult.

Having given our readers the foregoing brief resumè of the history of the great Trans-Continental Railroad, and shown that it was constructed by two distinct companies, we shall now treat of these companies separately, and in the order in which they occur to us on our journey east.

The Central Pacific Railread.

The Central Pacific Company was organized in July 1861, but the work of construction did not actually commence till the 8th of January 1863, when ground was first broken at Sacramento.

The building of the gigantic thoroughfare originated in California, and that portion of the immense work was in pro-

gress before the East had thoroughly awakened to the vastness and magnificence of the enterprise. We will not attempt to fix the date when the idea of constructing a Pacific Railroad, stretching its iron arms from the Atlantic to the Pacific taking in its strong embrace an expanse of country richer, greater, and more prosperous than the sun ever before shone upon was first mooted. The claimants have been many, and the real workers few, being comprised and numbered in a small circle, whose local habitation was in the city of Sacramento, the Capital of the State of California, and the resting-spot of the earliest of those who. foot-sore and weary, after a struggle of months under the scorching rays of a burning sun and over the treacherous depths of winter's snow, made the journey across the Plains to the El Dorado of their hopes. Did Sacramento present no other claim for the favorable consideration of the people of the State, the fact that she furnished a quartette of energy. perseverance, indomitable will and courage, in the persons of Leland Stanford Charles Crocker, Mark Hopkins, and C.P. Huntington, would be sufficient to entitle her to a place in the front rank of the cities of the world. Stanford was the leading spirit in the enterprise; possessed of a clear intellect and remarkable executive abilities, he captained the small party of venturesome spirits. Hopkins, careful. painstaking and correct, imbued with the strictest principles of honor and probity. looked after the finances; Crocker, industrious, active, thoroughly energetic, and fully comprehending the situation, was placed in command of the practical work. and Huntington, whose honesty was proverbial and whose word passed as current as an obligation of the country, went East to interest the moneyed men of the nation.

The work was undertaken in the face of the greatest topographical obstacles that any similar enterprise had to contend against. The main difficulty was that formidable barrier, the Sierra Nevada Mountains. It took two years careful exploration to determine the most favorable route through them. The Donner Lake Pass was finally selected. Another difficulty was the rapid ascent the road would require to make in so short a distance-6 639 feet in 81 miles! Nothing daunted by these apparently insuperable obstacles, the Central Pacific Co., prosecuted vigorously the work they had undertaken. By the end of December '63, besides having built a wooden bridge 5,750 feet long across the American River, they had four miles of track laid, and one locomotive and some flat cars transporting iron etc., to the end of the track. In the spring of 1865, they added two more locomotives -one called "T. A. Judah" in compliment to a gentleman who did much to forward the enterprise-and the other named "C. P. Huntington." Their track was now, 18 miles long, and they had begun to run a passenger train to "Junction." Prior to January 1st '67, but 69 miles had been completed. In that year 36 miles more were constructed. Every effort was now made to complete the work rapidly. From 8,000 to 10,000 laborers, principally Chinamen, were employed on the road at one time. In 1868, 372 miles were constructed, and by the 10th of May following, 213 miles more had been added, making an aggregate of 690 miles of railroad, which had been constructed by the Central Pacific Co., in the face of opposing interests, and almost insurmountable obstacles. As we travel over the road our readers will have an opportunity of seeing for themselves what these obstacles were.

The Central Pacific Railroad, to ensure its perfect management, has been divided into five grand divisions, viz:

The Western Division, from San Pamcisco to Sacramento, 123 miles; the Sacramento Division, from Sacramento for Truckee, 120 miles; the Truckee Division, from Trackee to Winnemucea, 304 miles; the Humboldt Division, from Winnemucea to Toano, 237 miles; and the Salt Lake Division, from Teano to Ogden, 132 miles.

Each of these Divisions is sub-divided into two sections. Each section is a freight division, and two freight divisions are equal to one passenger division. These sections vary in length according to the country through which they pass. To state them now would cause them to be mnotieed, or forgotten, or to trouble the reader to refer to them; we will therefore mention them as we go along; thus the information will be appropriate to the place and more readily remembered.

Foresecing our readers would be interested in knowing the amount of rolling stock the C. P. Company require for working the road, we have obtained the following official list which we submit for their information.

Relling Stock of C. P. R. R. Co.

Locomotiv	e Eng	ŧ	n	ıε	8								-	180	
Passenger	Cars													81	
Sleeping	4.6													21	
Emigrant	6.6													51	
Directors	4.6													1	
Sunt's	4.6													-1	

Mail and Express Cars	9
Baggage Cars	17
Water Cars	2
Powder Cars	2
Caboose Cars	4
Box Stock Cars	50
Open Stock Cars	26
Oil Cars	1
Fruit Cars	20
Box Freight Cars	720
Open Water Cars	52
Platform Cars	215
Hand Cars	170
Section Cars	130
Iron Cars	50
_	
Total Cars 2,	803

Among all the cars in this long list there is none which will excite more interest, and be productive of better results, than the "Fruit" Car. While is will have a general interest for all, it has a special interest for Californians. The thousands of bushels of fruit that hitherto have been allowed to rot on the ground for want of a profulible market, can now be sent to the Eastern Markets, at paying prices.

Here is a description of one of these cars, taken from the Sacramento Bee:

Fruit Cars.

"The cars are provided with non-conducting walls, nine inches in thickness, three and one-half inches of which is composed of hair, the non-conducting qualities of which are understood by most persons. Inside the car are ice chambers extending from the floor to the roof on each side, and about four inches in thickness. These are not allowed to touch either the top, bottom or sides of the car, being held by braces several inches from them. This produces a current of air below the fruit—which is mised from the bottom of the car—and

this current is constantly ascending toward the roof, the moisture being collected on the ice-chamber and condensed into frost instead of being distributed throughout the car as by most refrigerators. When we examined the car vesterday, while it was being loaded, and the temperature inside was only sixty degrees. there was an eighth of an inch of white frost all along the ice-chests reminding one of window-names in the East on a winter's morning. For fruit the temperature is kept at about forty decrees, while for meats, fish, etc., thirty-four degrees is the standard. In one of these cars. strange and incredible as the statement may seem, fresh meats, fruit, etc., will keep for sixty days in the hottest part of Summer! Unlike other refrigerators, the Davis car preserves fruits and such like . and when exposed suddenly to the warmer temperature of the open air, the fruit does not at once decay, as is the case with that kept over a week in other refrigerators. Indeed, a portion of the cargo of grapes which left here to-day will be transferred to a building in Chicago, constructed on the same principle as the cars, and will be not on the table frosh and sound at Christmas time." This is the commencement of an experiment which may be of the first importance to our fruit growers.

First Class Core.

On the journey from Oakland to Sacramento, our readers will have noticed the many comforts, and elegancies, of the ordinary first class cars. The doors in the ends of the cars allowing passengers to go out of one car into all the others; the passage-way up the centre, instead of on a plank outside; the splendidly uphol-

stared costs with reversible backs the cietarne of icad-water in the ends of the cars; the silver drinking mugs; and the elegant separate saloons for the use of each sex. All these will have been noticed and appreciated. From Sacramento, however, we travel in an entirely different and much more handsome car.

If our readers have not already secured berths in the sleeping car, they ought to do so at once. The charge, which is payable in currency, is only three dollars from San Francisco, or Sacramento, to Ogden. It is eight dollars to Omaha.

Hints about taking berths in Sleeping Cars.

Believing our readers have a moderate regard for the good things of this world, we give them credit for possessing a love of the beautiful also. We desire to impart to them such information as shall enable them to gratify it. Objects are best seen from a certain point of view. Much of the most beautiful scenery on the Central Pacific Railroad lies on the south side of the road. Passengers going East, will therefore, choose a berth on the south, or right side of the car. Those coming West, the opposite side. Then again, always choose the lower berth in preference to the upper one. We advise you to do so for three reasons;-First, because it is more easy to get into it; second, because the air is purer and less heated; and third, and most important of all, because the occupant can see out of the window, whatever there is to be seen on the ionrney. This last consideration is more important than may, at first sight, appear. It sometimes occurs that at a late hour at night after we have retired, we may be traversing some beautiful landscape made ten times more lovely by the silvery moonlight. If we are in an upper berth, we cannot see it; if in a lower one. we can. Or, it may be, that this hannens in the early morning when the rising sun is just tipping the hills with gold. How nice then to be able to rest on your elbow and see all this without getting out of bed.

Trusting you will act upon this advice. and that you have not forgotten the rules we formerly laid down for your guidance about your baggage, we shall now step on board

The Silver Palace Sleeping Car.

We always make it a point to be on board in plenty of time. This gives us an opportunity to get everything snug and ourselves settled in our places. On look. ing around we find the Silver Palace Sleeping Car a much more magnificent institution than the ordinary first class car. It is constructed of black walnut and maple. polished to the highest extent, and clamped with silver-hence its name "Silver Palace Car." At each end of it, small "State Rooms" of different sizes are fitted up, to suit the wants of travelers. A lady traveling alone can have the use of a state room just large enough for herself. A married couple can have a larger one: and there are some large enough to contain a whole family. In each case the most perfect privacy is secured; and if there is a Hotel car attached to the train, meals can be served to passengers in their state rooms while the train is in motion.

In the Palace Cars the interior fittings are of the richest description; carpets cover the floor; and the state room windows are of cut glass, ornamented with different designs. The windows are all double, an outer and an inner window with a vacuum between. This keeps out both the heat and the dust.

During the day the car is an elegant drawing room, with splendid lounges and every applicance for comfort. Each palace car has a Porter attached who as night draws on at the wish of the traveler transforms the elegant lounge into an equally elegant bed, with downy pillows, damask curtains, etc. For those who wish to read, a lamp, fitted in the side of the cor behind a mirror which he can slide up, is lighted, and a small table is attached by hooks to sockets fitted in the side of the car to receive them. The one end is supported by these hooks and the other by two legs, which fold up underneath when the table is not required. On this table the traveler can rest his book or paper, and enjoy all the comfort and ease of a parlor library, at the same time that he is crossing the snow-clad summit of the Sierra Nevadas, the alkali plains of the Desert, or the elevated table-lands of the Rocky Mountains. Everything is so complete and neatly adjusted, that the luxurious bed-room or the comfortable library can be improvised at a moment's notice.

Just as we have satisfied our curiosity by glancing at all these new and novel features in railway traveling, the bell rings and we

Leave Sacramento.

Leaving Sacramento, we enter upon the first section of the Sacramento division, which extends from Sacramento to Rockkin, a distance of 22 miles. As we emerge from the station we pass on our right the Company's workshops. These we have already described. A little far-

ther on, on the same side, is the hospital of the C.P.R.R.Co. Each officer and employed of the Company contributes fifty cents a month to the support of this institution. When sick, or maimed, the hospital is his home. Here he is cared for, and receives medical attendance, free of further charge.

Just on the outside of the city, on the right of the road, is the Sacramento Race Track. It is one mile in circumference, has grand stand etc., and is completely fenced in. The State Fairs are held here annually.

After passing the race track we approach the American River bridge. It is 5.750 feet long, and 31 high-3 feet higher than the river has ever been known to rise. The present bridge is new. The first one was destroyed by incendiaries on the night of the 23rd March 1870. A temporary bridge was erected within four days of the fire. Indeed, while the old bridge was burning, Mr Towne, the General Superintendent of the road, was engageing men to take out timber to replace it. The new bridge was opened on the 13th of September. It is a very substantial structure. It is not the usual breadth of the river which requires so long a bridge, but the distance to which it overflows its banks during the floods. East of the bridge we ride through a level grassy country dotted over here and there with stunted oak trees. It is used for grazing purposes, and continues the same in nature and appearance for several miles.

About 12 miles from Sacramento we leave Sacramento county and pass into Placer county. This is one of several counties which, collectively, are known

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The Main Belt of Mining Counties.

They extend along the western slope of the Siern Navada Mountains from 1st. 37 to 40° 30°, and consist of Mariposa, Tuolumine, Calaveras, Amador, Eldorado, Placer, Nevada, Sierra, Butte, and Plumas counties. Sierra and Plumas counties are very mountainous in their character, nearly all their surface being over 4,500 feet above the sea. All these counties have large forests of pine and fir between the altitudes of 3,000 and 6,000 feet; the gold mines range generally from 1,000 to 3,000 feet.

For statistics of Sacramento county, see tables at end of Guide.

One hundred and fifty-four miles from San Francisco and just one and a half before we come to Junction, we cross Dry Creek on a wooden bridge 210 feet long and 28 feet above the bed of the creek.

Junction.

This is the first regular eating station cast of Sacramento. Here a stay of 25 minutes is made for meals. To the right is the little town of Roseville, and on the left is the junction of the Oregon branch of the C.P.R.R. This leads to Marysville, Chico, and intermediate points. Junction is 18 miles from Sacramento, and 156 from San Francisco. Elevation 189 feet.

Junction Station, being the initial point for Oregon travel, it will be appropriate to give our readers some idea of the resources of that State, and Washington Territory beyond. Our readers can peruse these accounts at their leisure, while riding between stations that have not much interest in themselves.



OREGON.

"Alis volat Propriis."—She flies with her warn wings. Such is the motto of Oregon, implying, we presume, that her resources are so great that they can, unaided, secure her rapid settlement and steady progress.

Oregon, is bounded on the south by California and Nevada, on the north by Washington Territory, on the east by Idaho, and on the west by the Pacific Ocean

It embraces the territory lying between the 42nd and 46th degrees of north latitude, and west of the 117th meridian. It has an area of 95,274 square miles, equal to 60,975,360 acres.

The Resources of Oregon.

The Board of Statistics, Immigration and Labor Exchange, of Portland, Oregon, an organization designed for affording information to the immigrant, settler, and laborer, has recently published a pamphlet on "Oregon and its Resources, Climate and Productions." From this valuable little work we excise the following information:

"The principal agricultural districts of Oregon, are the valleys of the Willamette. the Umpaua and Rogue River, all in the western part of the State. The soil of these valleys is remarkably fertile, producing abundantly every variety of grain. grass fruits and vegetables known to a temperate climate. The best wheat lands vield an average of thirty bushels per acre, one year with another. Frequently a vield of forty or fifty bushels per acre is obtained. There are farms in the Willamette Valley which have been cultivated in wheat fifteen years in succession, without manure of any kind, and without any apparent diminution of the yield. It is not the custom of the farmers to manure their wheat fields: they do not need it. Oats yield a crop of from fifty to eighty bushels per acre. Three tons of timothy hav per acre is the ordinary vield of the rich meadow bottoms. Apple, pear, and other fruit trees, come to full bearing in three years from transplanting. Volunteer crops of wheat and barley are frequently raised : that is, a field is seeded with nothing but the grains scattered during the process of harvesting, and is suffered to lie over without any further cultivation until the succeeding harvest, producing a fair crop. Oregon wheat ranks as first quality in all the markets of the world, and Oregon flour is quoted in the New York market reports at the highnot rotee

Eastern Oregon.

"The eastern part of Oregon, consisting of high rolling prairies and table lands, is especially adapted to grazing purposes. The most nutritious varieties of wild grass grow everywhere in abundance. Cattle, sheep and horses may be grazed

the year round. It was the custom of the Indians of this section, in former years, to raise large herds of horses without providing any feed for them for the winter. The settlers in the same region rarely feed their cattle during the winter. Timber and water of good quality is found in plenty in most localities. Several large bodies of agricultural land of the best quality are still unoccupied. So far as the soil has been tested in this section, it has been found to produce abundantly grain of all kinds, fruits and vegetables. Many of the rich valleys of this section appear to be better adapted to the production of some kinds of vegetables and fruits than even the hest localities of the western portion of the State, while the high prairies lying at the foot of the mountain ranges have been found to be unsurpassed for the production of wheat.

Western Oregon.

"Western Oregon is well timbered. This particularly the case with his particularly the case with the mountain and hilly region by which the three great valleys of this section are enclosed. Timbered lands in places convenient to towns or to navigation, have frequently been made to bring a return of \$250 per acre, realized from the timber alone—not only sufficient to put the land under cultivation, but paying a handsome profit besides. This kind of land, when brought under cultivation, yields excellent crops, and is lasting in productive-

The Climate of Oregon.

"Oregon has an equability of climate unknown in like latitudes on the Atlantic seaboard. Situated in the latitude of Canada and Vermoat, it has a summer cooler than that of Quebec, and a winter as warm as that of Norfolk, with neither the bitter frosts of the one place nor the burning heat of the other. The ocean winds temper the climate to a remarkable salubrity. Cattle live and fatten in the open fields and prairies during the whole winter. At Portland, on the forty-sixth parallel of north latitude, flowers bloomed and flourished in the open air during every month of the past wear.

"The Casede range of mountains divides the State into eastern and western divisions, each division having its own distinct climatic peculiarities. The western part, Iping between the mountains and the sea, is supplied with abundant rains. But little snow falls, except on the summits of the mountain ranges. Winter is short, mild and wet. Farm operations receive but little interruption from cold or freezing weather. Summer is mild and pleasant, with generally about two months day weather in July and August. Excessive heat or severe and protracted drought is nucleoner.

"Eastern Oregon has a dry climate, with a winter quite cold, but short and dry. The snow-fall is light, except on the highest ranges of hills; in the valleys there is frequently none at all. Stockraisers usually graze their stock on the open prairies the year round. Abundant rains fall in spring and autumn. Summer is warm and dry, without the excessive summer heat incident to most dry climates. A fresh mountain air circulates with freedom over the table land and prairies, and not only neutralizes the effect of the summer heat, but dispels every tendency toward malarious diseases.

"The healthfulness of the climate of all parts of the State is a fact attested by all persons familiar with the subject. On this point there has never been any difference of opinion. Violent tormados, hail storms, earthquakes, and like phenomena, so common in some parts of the world, are unknown in the history of the country.

Temperature.

"The following table, compiled from the reports of the Smithsonian Institute, shows the mean temperature, for a series of years, of three important points in the State: Astoria, at the mouth of the Columbia River, Corvallis, in the centre of the Willamette Valley, and Dalles City, at the eastern base of the Cascade range of mountains:

Rain-Fall.

"From McCormick's Almanac for 1870, published at Portland, it is ascertained that during the year ending August 31, 1869, there were, in the Willamette Valley, 42 rainy days, 73 showery days, 250 days clear, dry weather, 103 rainy michts, and 262 dry nichts.

Public Lands.

"Public lands are to be obtained in nearly all parts of the State A citizen of the United States, or foreigner declaring his intention to become such, can locate them under the homestead laws, and, by occupation and cultivation for five years, acquire a title free of cost. Public lands can also be obtained by purchase at \$1.25 per acre. Eastern Oregon has millions of acres of land subject to settlement—a great deal of it public land of the best quality. In the western part of the State also, are several large tracts still vacant. One valley lying in Clatsop and Tillamook counties would afford homes for five hundred familiae.

Improved Farms.

"Improved farms may be bought at from five to twenty dollars per acre. Immigrants short of means rarely have any trouble in renting farms, with stock, seed and implements furnished, giving a share of their product for their use.

"The highly productive nature of the soil renders the country capable of sustaining a population vastly in excess of the present number of inhabitants. The Willamette Valley alone has the capacity to support a million inhabitants. Its present population does not exceed 80,000.

Means of Communication.

"Oregon has two large navigable rivers. The Columbia forms the northern boundary of the State, and is navigable at all seasons of the year for sea-going vessels, one hundred miles from its mouth Regularly established lines of river steamers ply its upper waters to points 350 miles distant from the ocean, affording facilities for travel and traffic to Eastern Oregon and the Territories of Washington, Idaho and Montana. The Willamette River, flowing through the centre of the valley of that name, is the chief artery of trade and travel for that region. It empties into the Columbia River about 100 miles from the sea, and is navigable for ocean steamships and sailing vessels to Portland, twelve miles from its mouth. Above Portland, the Willamette is navigable to the head of the valley, a distance

of 150 miles, affording a safe and quick mode of transportation for the products of the largest agricultural district in the State The State is traversed from north to south by a great public highway, connecting Portland with the Sacramento Valley, in California, and passing through the Willamette, Umpana and Roone River Valleys their entire length. A line of stages carrying the United States mails passes over the road twice every day in the year. A daily line of mail coaches connects Umatilla, on the upper Columbia, with the Pacific Railroad at Kelton. in Utah, passing through Northeastern Oregon and Southwestern Idaho."

The Oregon branch of the Central Pacific Railroad is already completed to Soto, 35 miles from Junction, or 45 miles beyond Marysville. The connecting road at the Oregon end is completed from Portland to Salem, a distance of 50 miles, and both ends are being pushed rapidly. The lands on the course of the railroad will become most valuable, and the completion of the road will lead to the rapid settling up of both Northern California and Oregon.

Minerals.

Extensive beds of Iron ore, and Coal have been discovered and worked in various parts of the State.

"Placer mines are being worked for gold in Jackson, Josephine and Douglas counties, in the southern part of the State, and Grant and Baker counties, in Eastern Oregon. Those of Southern Oregon were opened as early as 1850, and have not only afforded employment to a great many men, but have yielded immense sums of the precious metals. They are still being regularly and profitably worked. The placers of Eastern Oregon have been worked continuously since 1861, and are still yielding rich returns to the industrious miner. They are sufficiently extensive to afford employment to a large

tensive to afford employment to a large number of people for many years to come. "The annual product of the gold placers of the State is estimated at \$2,000-000 by those whose business enables them

to form a correct opinion on the subject. Manufactures.

Oregon has barely began to manufacture as yet. Her abundance of iron, coal and water, and vast timber resources, almost preclude any limit to her manufacturing capacity.

She has six woolen mills, an oil mill, flouring mills, saw mills, foundries, machine shops, etc., and doubtless will soon have many more.

Portland.

"Portland, the commercial capital of Oregon, is also the commercial depot whence the people of a region larger than New England and the Middle States combined, derive their supplies. The city is situated on the west bank of the Willantet River, twelve miles from its mouth. It contains a population of about 10,000 inhabitants, is substantially built, has well graded and well improved streets, good wharves and warehouses, and is well supplied with water and gas.

Trade, Etc.

"Among the natural resources of the State awaiting development, the salmon fisheries of the Columbia River assume an important part. Until recently, they claimed but little attention from capitalists and business men. Within the last three or four years, however, the business has grown into importance. It now employs a capital of several hundred thousand dollars, and, during the fishing season, affords employment to a large number of men. The business of cooking and canning the salmon ready for use has grown to be a large and profitable one. The cans of cooked fish, containing one and two pounds each, are packed in cases for shipment, and find a market in San Francisco, New York and other large markets. Three of the canning companies, in the prosecution of their business used revenue stamps to the amount of \$10,000 during the past year. 'The Statistics of Oregon,' a pamphlet published by the State Acricultural Society, upon the authority of a gentleman largely interested in the fisheries, estimates, the total value of the catch for the current year at \$276,000. "For the year 1868 the shipments of

"For the year 1868 the shipments of salmon from Portland aggregated 2,380 barrels, 4,433 halfbarrels, 4,991 cases and 1,554 packages. During the first nine months of 1869 there were shipped 15,000 cases.

The lumber shipped from the Columbia River alone, in 1868, amounted to \$900,000. The shipments from other points on the coast, south of the Columbia would probably amount to as much more.

Lines of Travel.

"The Willamette River is navigable to Portland at all seasons for sea-going vessels. A line of first-class ocean steamahips runs regularly between Portland and San Francisco, making three trips per month; and another line communicates regularly with Victoria, on Vancouver Island, and the different towns on Puget Sound. Portland, by means of sailing vessels, enjoys direct trade with New York, Liverpool, the Sandwich Islands and China, affording advantages for the importation of foreign merchandise and for the exportation to distant markets of Oregon produce.

Exports.

"According to the Portland Directory for 1869, the total value of produce shipped from Portland during the year 1868, amounted to \$2,780,000. The amount of bullion shipped to San Francisco for the same period was \$3,677,580."

WASHINGTON TERRITORY.

Washington Territory adjoins Oregon on the north. It lies between the 46th and 49th degrees of north latitude and extends from the 117th meridian to the Pacific Ocean It is bounded on the south by Oregon, on the north by the British Possessions, on the east by Idaho. and on the west by the Pacific Ocean. It has an area of 69,994 square miles. equal to 44.796.160 acres. The Territory was organized on the 2nd March. 1853. Its motto-" Al-Ki"-is an Indian phrase, and signifies" By and by." This motto has doubtless been selected to foreshadow the future greatness of the Territory.

The Cascade Mountains, running north and south, divide the Territory into two rather unequal divisions.

The Western Division.

The portion lying west of the mountains is the largest, and embraces one third of the entire area of the Territory. It is heavily timbered in most parts, but contains several prairies of great fertility and considerable size.

The Eastern Division.

The portion lying east of the Coscade Mountains, is more of a prairie country and has less timber. It is better adapted for grazing, than for agricultural purposes. Its proximity to the mining districts in Upper Columbia and Idaho, afford an excellent market for live stock and farm produces.

Climate.

The climate of the Western Division is mild. The seasons are divided into wet and dry, and correspond to the seasons on the Atlantic coast. All grains fruits, and vegetables adapted to temperate climates thrive here.

In the Eastern Division the summer has fewer showers, a dryer atmosphere, and more windy weather. The winter has more snow and less rain. It is more severe than that of the Western Division.

Puget Sound. Puget Sound is approached through the

strait of San Juan de Puen. In conjunction with Admiralty Inlet and Hood's Canal, with both of which it is frequently confounded, it is "equal in extent and shore line to the Mediterranean—infinitely surpassing the Mediterranean in the safety of the asvigation, in the number, capacity, and security of its harbors, and, equally with the Mediterranean, being unobstructed either by ice or dense and daneerous fogs."

Trade, Etc.

Puget Sound is essentially a lumbering district. Enormous quantities of lumber, and a great number of laths, shingles, piles and spars, are annually shipped from it. Its fisheries are also quite extensive.

The waters of the Sound abound in salmon cod herring and helibut.

Routes to Washington Territory.

The main routes to Washington Territory and points on the Columbia River, are by steamship from San Francisco. Persous coming from the Eastern States, or Europe, can travel by stage from Kelton, on the C. P. R. R., to the Columbia River, thence by steamer, to their destination.

Three and one half miles beyond Junction we cross Antelope Creek on a wooden bridge 51 feet long and 25 feet above the bed of the creek. The country still continues the same till we reach

Rocklin.

Here it becomes more picturesque. Trees become more numerous, and large granite boulders crop up out of the ground. The place derives its name from the number of rocks found in this neighborhood. The Railroad Co. have excellent quarries here, from which they have taken a great deal of stone for building purposes. Their workshops—a machine shop, and a round house of 29 stalls, are both built of granite, from the Rocklin quarries. Rockin is 160 miles from San Francisco, and has an elevation of 249 feet.

Here we change engines. We are now on the second section of the Sacramento Division of the railroad. It extends to Truckee—a distance of 98 miles. Before we reach Truckee, we shall have to second very steep grades, and cross the summit of the Sicrm Nevada Mountains. For that reason, the heaviest and most powerful engines the company have are attached to the eastern trains at this point.

Two miles beyond Rocklin, we come to

Pino.

A small unimportant station which derives its name from the pine trees that surround it. Elevation 403 feet. Beyond Pino, the country becomes more uneven, rising at some places into small hills. The oak trees have given place to the piues, and, the farther we go, the landscane becomes the more beautiful.

Nomonetla

This little town is somewhat similar to the last, though a little larger. It is seven miles from Pino, and has an elevation of 970 feet. At the gap, we cross a wooden bridge 258 feet long and 60 feet above the bottom of the chasm. At Newcastle, we meet the first evidences of mining. Here we see large piles of gravel which the miners have washed over and over again for gold. And these ditches which we see coiling round the hillides were constructed to bring water to the sluices and crulles in this locality.

Mining Ditches.

The business of gold mining in California would sink almost into insignificant entire if the ditches with a supply water in the mountains were destroyed. Ditching is a very important branch of the industry of the State. It supplies all the water of the bydraulic claims, and nearly all that used for tunnel, cement, sluice and quartanines, for gardens, vineyards and domestic purposes in the Sierra Nevada. The streams are in deep cañons, and the perpendicular termination of the slates permits the rain water to sink down to

the lowest level without making springs. On the ridges where most of the mining is now done, the only way to get water is by a ditch. Fortunately the main divide of the Sierra rises so high that the snow is not all me'ted till late in the fall. and the moisture remains throughout the Vest.

Leaving Newcastle we wind pleasantly among low hills, topped with pine trees, till we come to

Auhurn.

Auburn is the county seat of Placer county. It is 174 miles from San Francisco, and has an elevation of 1,363 feet. The town stands on the left of the road. and has many fine buildings, orchards and vinevards. At Auburn, stages connect for the following places: Cave Vallev. Pilot Hill, Coloma, Gold Hill, Cold Springs, Placerville, Greenwood, Georgetown, and Michigan Bluffs. Near the town there is a pleasant resort

called

Alabaster Cave.

It derives its name from the white alsbaster-like crust which is found upon its sides and ceiling.

In the vicinity of Auburn there are some charming spots-little sunny dells among the nine trees, which unvoluntarily call back the recollection of childish romps in just such places. Six miles from Auburn we come to

Clipper Gap.

Clipper Gap was, at one time, a busy mining camp, but now, it is only a freight denot. It is 180 miles from San Francisco, and has an elevation of 1,759 feet.

Two miles beyond Clipper Gap, we cross Clipper Ravine on a strong wooden

bridge 320 feet long and 90 feet above the bottom of the ravine.

Four miles east of the bridge, we pass "New England Mills"-a small way-

station no longer shown on the time table. Beyond this point we travel through a more hilly country. Underwood is more plentiful, and the country has a more bush-covered aspect.

Colfor

This town is named in compliment to Schuyler Colfax, Vice President of the United States. It has about 1,000 inhabitants, and is the point of departure for Grass Valley, Nevada and North Son Juan. It is 192 miles from San Francisco and has an elevation of 2 421 feet Passengers coming west have breakfast at Colfor

Grass Valley.

Grass Valley being the most productive quartz mining region in the State, it will have a great interest for those of our readers who have given some attention to quartz mining in other countries. As we do not intend to lose any opportunity of interesting those who confide themselves to our guidance, we will here give a short account of Grass Valley and its quartz mines. Grass Valley is the largest town in Nevada county, and the leading mining town in California. It is romantically situated among the mountains, 13 miles from Colfax. The town has several substantial buildings; and its streets are particularly well kept. Its population, according to census of 1870, is 7,066. It supports one daily newspaper, the Grass Valley "Union." The climate of Grass Valley is all that could 'be desired, as is fully evidenced by the number of fine cardons that surround the residences of the inhebitants

The Enreka Mine.

This mine, which is now the most valnable in California, is situated about a mile north east of the town of Grass Valley. It is under the able superintendence of Mr. William Watt, who employs about 160 men in working it. The mine, which is now opened to a depth of 730 feet. produces about 396 tons of quartz weekly, and vields from \$40,000 to \$60,000 per month. The Eureka mill has 30 stamps. 10 weighing 700 pounds each, and falling 68 times a minute, and 20 weighing 850 pounds each and falling 60 times per minute. Experience has shown the relation between the light and the heavy stamps, to be as 1, 6 to 2, in favor of the latter. According to the Eureka Gold Mining Co.'s report for the year ending 30th September 1870, 20,562 tons of quartz were crushed during the year. The cost of mining the ore taken out was \$8.32 per ton, and the average cost of milling the ore reduced was \$1.84, equal to \$10.16 per ton, actual cost of mining and milling. The net profits for the year amounted to \$434,950, of which \$400,000 were paid to the stockholders as dividends. The total dividends for the three last fiscal years have been as follows: 1867-'68, \$290,000; 1868-'69, \$260,000; (this year's dividend would have been \$300,000 but \$40,000 were paid for an adjoining claim bought by the company.) 1869-'70, \$400,000. The mill has been idle only 41/4 working days during the year, and then, for want of water. The superintendent, Mr. Watt, states in his report that, during the year, he has driven

747 feet of drifts, and sunk 89 feet of winze and 86 feet of main shafting. He estimates that the quantity of quartz broken in the mine and ready for hoisting, is sufficient to keep the mill going for three years without further sinking.

Besides the Eureka, there is the Empire, the Idaho, and several other mines, all worthy of a description, could we afford space for it. Those interested in mining matters will do well to visit this locality. They will certainly see much that will interest them, and perhaps be able to obtain a "wrinkle" in the treatment and chlorination of sulphurets.

Nevada.

Nevada, the county seat of Nevada county, lies four miles northcast of Grass Valley. The town is irregularly laid out on a plateau on the north side of Deer Creek, and has an elevation of 2,500 feet above the level of the sea. For many years Nevada was the leading town in the county. At present, she is second only to Grass Valley. Nearly all the buildings in the town are built of brick. Some of them are very fine. The court house. cost \$75,000. Two of the hotels cost \$30,000 each, and the school house cost \$20,000. The population is said to be about 4 000. Two newspapers are published here, the Transcript, a daily, and the National Gazette, daily and weekly.

Deer Creek basin, from which the wealth that has built up the town has been obtained, has contained some of the richest placer mines ever found in California. Although the greater part of the basin has been" washed" away, it is confidently believed there are still to be found there, many channels of deep gravel which will pay handsomely.

The names of the small mining towns in Nevada county indicate the phrasealogy in vogue among the early miners. "Red Dog," "You Bet," "Rough and Ready," "Bhar Tent" etc., will serve as specimens. The mining carried on in the vicinity of these towns was of that description known in Australia and New Zealand as "Alluvial," but in California as Placer mining.

The Placer Deposits.

The gold is found in two main classes of deposit, rock or quartz, and placer or

alluvial.

The placer deposits are alluvial in their origin, and consist mainly of gravel. mixed with some sand and clay. They are the bed of streams, to which the gold has been brought down from the hillsides. Some of these streams are still in existence: others ceased to flow long ago. The streams are of various sizes from little brooks, a few yards long, to immense rivers. Most of the live streams as those channels are designated in which the water flows now on the surface every year, though they may dry up in the summer, have been mined out so far as they have been accessible or would pay. The depth of the soil in a live stream varies from a few inches to twenty feet; and while it is being mined the water must be diverted by a dam and carried alongside its natural channel in a ditch or flume.

Besides the quartz mines in Nevada county, which we have seen, there are many others in the State. The following is a list of the principal ones:

Leading Quartz Mines.

The Mariposa Mine, at the town of Mariposa, has produced a large quantity of gold, probably a quarter of a million dollars, and it is now turning out about \$10,000 per month. It is said that there is enough ore in sight in the mine to yield \$300,000.

The Pine Tree and Josephine Mines, on the banks of the Merced River, and within the limits of the Mariposa estate, are side by side on branches of the Mother Lode, and have produced more than half a million. The present yield is about \$10,000 monthly, but a considerable increase is expected, as the mills recently erected are not yet in full opentions.

The Amador Mine, at Sutter Creek, Amador county, produced \$956, 285 gross, and paid \$394,800 dividends in 1869. The rock yielded \$20.18 per ton, and the total expenses of extraction, hauling and milling were \$6.39 per ton. A free occurred in the mine in April, 1870, and some months will probably pass before production can be resumed.

The Confidence Mine, Tuolumne county, turns out about \$18,000 per month.

In 1869 the Keystone Mine, in Amador county, produced \$25,000 gross, and \$15,000 net per month.

The Idaho Mine, at Grass Valley, in the twelve months preceding the 1st December, 1869, turned out \$306,038 gross, and \$174,783 net. The average gross yield of the week was \$32.50 per ton; the net \$20.83.

The Sierra Buttes Mine, in Sierra county, produced \$217,000 gross, and \$123,000 net, in 1869. It has been worked

with a large and steady profit for eighteen years.

Other notable quartz mines are the Princeton (total yield \$4,000,000), Oaks and Reese, Soulsby, Oneids, The Morgan (total yield \$2,800,000), Boree, Hill, Pacific, Danes, Green Emigrant, Woodside, Allison (total yield \$2,300,000), Banner, Enprire, Union Hill, Independence, Keystone of Sierra, Alaska, Brush Creek, Monumental, Primrose, Eureka of Plumas, Gresent and Mammoth; but they are either idle now or no late returns from them are at hand.

Having made this detour we will return to Colfax. Here the company have a large depot for storing the freight for Grass Valley and Newda. But better and more interesting to us is the splendid "observation car," which has here been attached to our train. While covered on the top, it is open all round so that every passenger in it can obtain a full view of the grand scenery through which the train passes, after leaving Colfax.

It is beyond this point that we shall discover the full advantage of having chosen a seat on the right side of the car.

Cape Horn.

Leaving Colfax, we begin after having gone but a short distance, to wind round the hillside. On our right, there is a vide deep chasm; and, as we turn sharp off to the left, we see between us and the opposite hill, which somehow or other we must reach, a yawning always half a mile wind, and so deep, that we deem the idea of crossing it on a bridge abund. The nearer we approach the high "headland" before us, the better do we understand why it was called Cape Horn. That celebrated headland is associated in our mind with all that is wild and cold and bleak, and forbidding. Here is its facsimile before us. Look across that wide coulf that lies between ne and the "Horn" and measure, if you can, the distance from the smiling valley beneath to the summit of that perpendicular precipice around whose brink we see the railroad wind! But no: you had better wait-wait till you occupy the eyrie of the eagle-the place where safely perched upon the rugged rocks beyond the reach of even the sure-footed red-man, he scanned the vale below. Before you can do so, we must cross the long ravine along which we have been curving since Cape Horn came in view. Now we slacken our speed and there is the bridge before us. It is a wooden structure and is exactly two miles from Colfax. We cross it slowly. It is 878 feet long and stands 113 feet above the bottom of the ravine. After crossing it we turn to the right, and increase our speed. We have gone round the apex of a triangle and now we are going along its eastern side. The ravine is still on our right, and, on the other side of it, we see the road we have just passed over. As we climb the mountain side, the ravine becomes wider, until, at last, we forget all about it and become enraptured with the grandeur of the scene before us. Here we are, on the verge of the precipice, looking down upon the valley 2.000 feet below. " Yo, who leve the haunts of nature,

Love the sunshine of the meadow, Love the sunshine of the forests. Love the wind among the branches, And the rain-shower and the snowsterm. And the rasiling of great rivers Through their palisades of pino trees, And the thunder in the meuntains" Come here and look down upon this Valley. Do you see that element silver thread winding round the foot of the mountain? That is the American River. And that black streak that crosses it small though it may seem from this altitude—is a tubular bridge, large enough and strong enough to bear many a heavy team.

Were there a longer time given to Overland passengers to view the grand picture spread out beneath Cape Horn, there are none so dead to the grand and the sublime in nature, but they would carry along with them a life-long recollection of its imposing magnificence. It is quite impossible to do it justice by any description. Excursionists who, through the kindness of the officers of the Company, have been permitted to view its grandeur at their leisure, have almost invariably been constrained to give vent to their feelings in singing the doxology. Much as we would like time to view leisurely the beauties before us, we cannot forget that we are on the Express train, for we are hurried along, and Cape Horn is left behind ne

Still, we have small cause for complaint, for our road runs through scenery that is at once grand and beautiful.

Although any particular portion of the road may not run due East, still we shall speak of the several places which we come to on the road as being east of those we leave behind us. The necessity for this explanation will be sufficient apology for the digression.

Four miles and one-half east of Cape Horn, we cross "Secret Town Gap," on a beautifully curved wooden bridge. This bridge is 968 feet long, and 90 feet high. It is the longest bridge on the road, save that across the American River.

Gold Run.

Gold Ran, is six miles from Cape Horn, and has an elevation of 3,206 feet. It is a small mining town, and bears a strong impress of the miner's presence. Ditches and fumes carry streams of water down the spurs. Several Hydraulic Mines can also be seen from the cars. We shall allude to the Hydraulic Mines hereafter. From Gold Ran to Dutte Plat (three.

From World Aum to Dutch Fish (three miles), much heavy cutting has had to be done in making the road over which we can now ride so smoothly. The speet of the country becomes "Alpine" from this point upwards, and when covered with snow, as it sometimes is, it closely resembles some of the higher regions of the Alps.

Dutch Flat.

Dutch Flat lies in a hollow off to the left of the railroad. It derives its name from the nationality of the miners who first discovered its mineral wealth. Many fine orchards and gardens adorn this pretty little town Dutch Flat Station has an elevation

Outch Flat Station has an elevation of 3,403 feet.

In the vicinity of Dutch Flat, Hydraulic Mining is energetically carried on. As this method of mining may be new to some of our readers, we will notice it in passing.

Hydraulie Washing.

Most of the placer gold of the State is obtained by hydraulic washing, or washing by throwing a large stream of water through a hose and nozzle, under powerful momentum, against a bank of auriteous dirt. This power is obtained by the pressure of a column of water from 40 to 200 feet high. The ditch brings the fluid to the top of a hill near the claim and there it leads into a pipe of sheet-iron. which runs down steeply to the place where the washing is to be done. The amount of work to be done by hydraulic washing depends to a great extent on the "softness" of the ground: that is, upon the tenacity of the matter surrounding the gravel. Usually, the ground is soft near the surface and hard in the deeper places. The banks are also softer when they are soaked with water than when they are dry, and the drier the harder. The water must be managed according to the hardness. In very soft ground, the water might be used so as to carry down too much dirt, and then the gold would be carried off. In such case, only part of the stream is thrown through the pipe. and the remainder runs over the bank and is first made serviceable when it reaches the sluice. If the ground is hard. much care should be taken to have as much dirt down as the water can wash away. It is not expected that the stream will ever strike the top of the bank, nor should it. It is thrown against the bottom so as to undermine the earth, and then a large slice falls down, crumbling to pieces as it falls, thus preparing itself to be carried away as soon as the water touches it. If, in tolerably soft gravel, all the water is thrown on the ground that is down, too much dirt is carried away; if the stream is all directed against the bank the water will not carry enough dirt into the sluice.

Alta.

Alta, which in Spanish means "upper," is the name of the next station we come to after leaving Dutch Flat. It has an elevation of 3,612 feet, and is distant from Dutch Flat two miles. Passenger trains going East stop at Alta twenty minutes for supper.

After leaving Alta, the scenery on the right of the road going East, is very grand and imposing. At some places the traveler can see almost straight down into the American River Valley. The river itself is also plainly visible. Five miles cast of Alta we pass "Shady Run,"—a small station not shown on the time tables—with an elevation of 4,125 feet. Three miles further, and just one mile before we come to Blue Cañon, we pass through the first tunnel met with on the road going East. It is cut through "Griz-yt Hill." and is 500 feet long.

Blue Conon.

Blue Canon is so-called because of the large volume of blue smoke which generally fills it, and which arises from the fires of the men employed here in the lumber business. Large quantities of lumber are shipped here from the mills in the vicinity and sent down to the plains.

Blue Cañon Station has an elevation of 4,678 feet. The pine trees growing at this altitude are very large.

Emigrant Gap.

This station has an elevation of 5,230 feet, and derives its name from the fact that the Old Emigrant Road passed over a gap in the mountains just above the station. From this point Eastward we





From a Photograph by SAVAGE & OTTINGER, Salt Lake City



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shall frequently pass over the same road
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Leaving this station we pass through

Six and one-half miles East of Emigrant Gap, we cross "Butte Cañon Bridge." It spans the cañon whose name it bears, and is 500 feet long, and 75 feet above the bottom of the cañon. One and one-half miles beyond the bridge we arrive at

Cisco.

Cisco was at one time a regular eating station, and may again become one. It is 239 miles from San Francisco, and has an elevation of 5,939 feet. Because of its altitude there is frequently a good thickness of snow here, and the houses are all built with sharp sloping roofs to throw it off. The town contains about 200 inhabitants.

Leaving Cisco, we continue our journey through grand alpine scenery. Beyond this point, however, but little of its grandeur or beauty can be seen, as the tunnels and snow-sheds are so long and so close together, that we can only catch occasional glimpses of the country through which we are passing.

Snow Sheds.

The illustration on the opposite page will give our readers an accurate idea of these wonderful structures. They are constructed of massive timbers, strongly bolted together, and covered with planking so as to roof in the railroad completely, as far as they extend. They are of different lengths being only built of those places where there is danger of the road getting obstructed by avalanches. These places vary in length with the

irregularities of the ground passed over. and are met with all along the summit of the Sierra Nevada Mountains. The longest of them, which is on the "Summit," is covered in by a snow shed 1,700 feet long. Snow sheds are necessary to keep the road open during the winter months as well on the open ground as on the mountain sides. When the shed is built on the "divide." or onen della between the mountains, and is intended merely to protect the line from "drifts," it is built with a roof like a house-sloping off on both sides: but when built on the side of a mountain and intended to ward off the rushing avalenche, it is so constructed that the unner edge of the roof comes under and conforms to the slone of the mountain. By this ingenious arrangement no weight rests upon the shed at all. and the avalanche, meeting no resistance in its downward course, glides harmlessly over into the ravine below

Snow Fall.

The snow fall on the summit of the Sierra Nevada Mountains varies in depth in different years from 16 to 18 feet. In some winters it amounts to 20 feet and upwards. It is obvious that, but for these very ingeniously constructed snow sheds. the railroad would be blocked up with snow during the entire winter, and all the advantages we derive from safe and rapid communication with the Eastern States and Europe, would be entirely cut off. A moment's reflection will show how great a calamity this would be. First of all our letters, instead of coming to us from the Atlantic States in a week would then occupy nearly a month. The mails from New Zealand and Australia could not be forwarded, and the travel to and from the Australian colonies would cease. Freight would need to come round the Horn, and, in brief, we would occupy the same isolated position which we did before the Trans-Continental Railroad was opened. Happilly, we need not dreadany of the misfortunes alluded to. The ingenuity and enterprise of the officers of the C.P. Railroad have rendered all such contingencies impossible. Seeing then that these snow sheds secure us such advantages, let us not bewait that they obstruct our view.

In the construction of these snow-shots our desire to view the scenery has been considerately anticipated and provided for; and open spaces like windows have been left, wherever it was possible, to afford us an opportunity of doing so. Glimpaes of some of the loveliest little lakelets, perfect gems of beauty, are sometimes obtained in this way.

A quarter of a mile East of Cisco we pass through tunnel No. 3. It is 280 feet long.

We are hardly out of No. 3, when we enter No. 4. The spur through which No. 4 is cut must have been very narrow as the entire length of this tunnel is only 85 feet.

Five miles East of Cisco we pass

Tamarack.

A small station which has an elevation of 6,212 feet, but is no longer shown on the time tables. Here we pass through tunnel No. 5. It is 130 feet long. Six and one-half miles East of Cisco we cross "Lower Cascade Bridge." As the name implies, the "lower" cascade is second in importance to a larger one higher up.

The bridge is 364½ feet long and is 90 feet from the water. Half a mile farther on we come to

Cascade.

Elevation 6,520 feet. Here we pass over the "Upper Cascade Bridge." It is 244 feet long and 90 feet above the bottom of the charm.

This station derives its name from one of the branches of the Yuba river passing under the road here, and, during the Summer months, dashing down the rocks in a shower of spray. During the Win, iter, this cascade is frozen into icicles which gleam and glitter in the sunshine, and display a beauty scarcely less enchanting than the little "Minnehaha" of the Summer.

We now pass out of Placer County into that of Nevada. For statistics of Placer County see Tables at end of Guide.

The Railroad, though having a general eastern tendency, here turns off sharp to the eastward and runs due East for some distance.

While on this "course," as a nautical man would say, we get a glimpse of

Summit Valley.

This beautiful little valley (See Frontispices), lies North of the road and runsparallel with it. Though not extensive, it is famous for its beauty, and noted for the hospitality of its settlers. These are generally engaged in dairy-farming and stock-raising. Latterly, they have given some attention to the curing of pork, hams, etc. In this they are eminently successful, the low temperature consequent upon their great altitude enabling them to cure meats without the most remote chance of failure. In the low val-





SUMMIT OF THE SIERRA NEVADA MOUNTAINS. Drawn by NAHI BROS., San Francisco.

leys of California, it is rather too warm for curing purposes, and thus the business can never be followed there to any great extent, as the risk of failure is too oreat

Leaving Cascade and continuing our journey for three miles, principally corered with snow-sheds, we cross "South Yuba Bridge,"—84 feet long and 20 feet above the stream. Half a mle farther, we cross another bridge called "Drives Creek Bridge." It is only 50 feet long and 20 feet above the bottom of the stream. Two and-a-half miles farther, through more snow-sheds, we reach

The Summit.

Elevation 7,017 feet. Distance from San Francisco 243 miles. Our readers must not infer that this is the summit of the Sierra Nevada Mountains; it is only the summit of the "pass" over which the railroad is constructed. The mountains themselves attain a height of 15,086 feet, and may be seen towering far above the station where we now are. (See Illustration.)

Summit House.

Just outside of the Summi Snow-Shed is an excellent hotel, kept by Mr. Cardwell, a careful and painstaing host, who has provided every thing for the comfort of his guests. Those able to spare time to visit this locality, will be amply rewarded in doing so. Just in this vicinity there is some of the grandest scenery to be seen in the Sierras. Both before and behind the house, tall peaks rise with gentle slopes far up into the pure blue sky, and invite the traveler to ascend them, and gaze from their summits upon the magnificent landscape spread out be-

neath his feet. Here lovely little lakelets surrounded by Pine trees, and sparkling like gems of purest ray, encased in emerald setting, reflect the snow-clad mountain peaks, and glisteu in the sunshine, Farther off is Lake Tahoe; and on the other side, shinning like a sea of glass. and vastly beautiful withal, is Donner Lake. Farther on still is Truckee, with its saw-mills and its sharp-roofed houses. And stretching away to the Eastward is Truckee river, gurgling and snarkling over its rocky bed. Oh! if the human heart can rise from Nature un to Nature's God, surely these mountain peaks are points of inspiration.

The Summit Tunnel,

This tunnel is the longest on the road. It is 1,659 feet long, and cut through the solid rock. It has a vent hole near the centre which admits both light and air. The distance on each side of this aperture is so great, however, that the tunnel is quite dark, and cannot be inspected without the aid of a lantern. We recently walked through it in company with an excursion party. When we emanated from its eastern end, the scene which burst upon our view was almost overpowering. Standing out on the mountain tops, and looking down, there was Donner Lake spread out before us. We were for a moment, lost in silent admiration of the charming landscape reposing in serene beauty beneath. But, however aweinspiring the scene, and sublime the spectacle of so large a number of persons thus quietly doing homage to the great Creator, it could not long continue. Our pent up feelings must have vent, and so with one accord we sang "Praise God

from whom all blessings flow." The chests of strong-voiced men heaved with enthusiasm, the faces of the ladies glowed with ardor, and the mountains reverberated with the noble chorus till all felt it was good to be there.

Donner Lake.

"A thing of beauty, is a joy forever," and so Donner Lake ought to be a joy forever, for veritably it is a thing of beauty. And it is a joy, a real, health-inspiring joy, to all who visit it. But still there is a sad story connected with it, which tones down the exuberance of our joy, and makes us look upon it with subdued tenderness.

The Donner Lake Tragedy.

We had intended to tell the story of the Donner Party, and their sad fate, ourselves, but feel constrained to give way to the following excellent article on the subject, which we quote from the Overland Monthly:

The Donner Party.

"Of all the waters gathered in the lofty basins of the Sierra Nevada, Donner Lake is, perhaps, the most beautiful in itself, as well as the most picturesque in its surroundings. Girdled with a narrow margin of pebbly beach, encircled by dark and stately forests, and overshadowed by towering mountains-from which the glittering snow-fields look eternally down into its crystal chambers-this lake wears a charm almost as weird as that which rests over the awe-inspiring vale of the Yoscmite! But there are reminisonces connected with the history of this secluded water calculated to awaken a deeper interest than the scenery that sur-

rounds it. In the glades that skirt its shores, and along the mountain trails that overlook it, there once transpired events so tragic that we would fain discredit the story of their existence; and so dire, that the common woes of life soften into mercies, compared with them.

"At the foot of this lake, near the banks of the stream that form its outlet. is a grassy bottom, pleasantly shaded with spruce and pine. Until a few years ago, there were standing here, two rude cobing the remains of which are still to be seen. At an earlier period, the bones of animals, mingled with those of human beings, lay scattered over the ground. The stumps of many trees, cut off at a great height, are still standing here, indicating the depth of the snow at the time they were felled. Hundreds of persons now pass this spot daily-for it is close by the railroad-without knowing that it is the site of "Starvation Camp," where the Donner party suffered so fearfully, and where so many of them perished from hunger, in the fall and winter of 1846.

" About the period we are speaking of, certain portions of the Western States were extremely subject to malarious and other endemic diseases, causing many settlers to leave and seek homes elsewhere. Hearing that there was, on the shores of the Pacific, a region remarkable for the salubrity of its climate, as well as for the ease with which a subsistence could be obtained there, a number of families-taking with them their teams and herds-set out, in the spring of 1846, for the purpose of emigrating to and setthing in a country that promised them exemption from the maladies, as well as the long, cold winters, to which they had before been exposed.

"The more advanced of this emigration, having come through on the most direct route, and meeting with no unusual detentions, arrived at their destination in good season. A portion, however, attempting a new route, met with unexpected difficulties and delays, in consequence of which they failed to reach the foot of the Sierra Nevada Mountains until the last of October, instead of arriving there by the first of that month, as had been their intention.

"Usually, but little snow falls upon these mountains before the middle of November, but this year seems to have formed an exception to the general rule. and their summits were already white when these desert-worn pilgrims came in sight of them. Finding the trail of those who had preceded them covered up with snow, they engaged the service of an aged Indian, named Truckee, to pilot them overthe mountains. Arriving one evening at the foot of a lake, where they found the three great essentials of a good camping-ground-wood, grass, and water -the party halted for the night. Thus far they had encountered but little snow, and did not feel particularly alarmed at their situation. As usual, the cattle were suffered to run at large, and each family camped in or about their own wagons.

"Their faithful guide, better acquainted with the weather-signs of this treacherous climate, detecting the indications of an approaching storm, urged them to keep up their stock, to gather their wagons close together, and to collect as much dry wood as possible. But the immigrants, either not exactly understanding all that was said to them, or failing to comprehend the full extent of their dam-

ger, neglected those timely precautions. "During the night, a heavy storm set in, and by morning the snow was over a foot deen. In the meantime, the cattle had wandered off in various directions. and but few of them were to be found Concerned now for their safety, these poor people began to build cabins and take other measures for protecting themselves against the severity of the weather. But the snow still continued falling, and in a few days had attained a depth of six or eight feet. For nearly half of the time during the mosth of November the weether was stormy, the snow on the mountains ultimately reaching a depth of more than twenty feet.

"The company thus snow-bound consisted of eighty-two persons, thirty-two of whom were females, a large proportion of the whole being children. Their director was George Donner, a man of some wealth and much worth, who had with him his wife-a woman of education and refinement-together with a number of small children. The men of the party. composed mostly of husbands and fathers, in their anxiety to rescue themselves and those dependent upon them from their perilons situation made desnerate efforts first to cross the mounts ains, and, having failed in this, to afterward retrace their steps and make their way back to the plains at their base. But all these endeavors were alike fruitless, ending, after the most persistent attempts, only in the exhaustion, and, in many cases, the complete prostration of those making them. In these efforts and their results we are furnished an explanation of the anomaly observable here. as well as on many other similar occasions, of the men having been the first to give out and succumb to the hardships to which all seemed equally exposed.

"In a short time, every thing in the shape of wholesome food was consumed; and the party having devoured their dogs. the hides of the few eattle they had sayed. and even their own shoes and such other leathern articles as they happened to have with them, the idea of dispatching some of their number for food began to take possession of all minds. At this juneture a death fortunately occurred. obviating the necessity for recourse to violence. Ciher deaths soon after followed, a few preferring to die of starvation, rather than secept the alternative of sustaining life by feeding on the flesh of their companions. Others, on the contrary, readily overeame their natural repugnance to this species of food, some partaking of it from the first with an avidity amounting to an apparent relish.

"After the lapse of six weeks, the storms having subsided and the weather having the appearance of being settled, a company of eight men and five women, guided by two Indians, set out to cross the mountains into California, that they might apprise the inhabitants of the eoudition of their friends and procure assistance. The passage of the mountains, now deeply covered with snow, was not only a laborious, but a dangerous undertaking. No one knew the width of the snow-belt, or the distance to the settlements beyond. There might be difficult streams to cross, and hostile tribes of Indians to pass through. The journey, in any event, must be attended with great hardship and peril; but their situation was desperate, and, without speedy specor, all must inevitably perish. It must, therefore, be undertaken by some one; and as there was now left to the women a greater amount of courage and strength than to the men, this forlorn hope was in good part made up of them

part made up of them. "Starting, then, with the hopes of all dependent on their success, this party. traveling on snow-shoes, were able to make only about six or eight miles per day. A week was, therefore consumed before they had passed the Divide. By this time, the stock of provisions they had taken with them was all gone, and, being overtaken by a severe storm, they were literally covered up with snow for the space of two days, during which time three of the party perished. Weak and dejected, the balance dragged themselves forward through the snow for several days longer, when three more of their number, overcome-with hunger, fatigue, and cold, gave out and died. Having now been without a morsel to eat for four days, these wretched people ent the flesh from the bodies of the dead, and having refreshed themselves upon a portion of it and dried the balance for future use. again pushed on. This was their New Year's feast, it now being the first day of January, 1817. Five days later their food was again all gone, and they had only the strings of their snow-shoes left to eat. It may seem strange that after having brought themselves to feed upon the remains of their fellows, these sufferers should, with the means at hand for renewing their stock, so soon have found themselves again without food. But it must be remembered that those who perished were already reduced almost to skeletons before death, having but little fish left on their bones; and that the living, in their enervated condition, were unwilling to burden themselves any further than seemed necessary, each one counting on the probabilities that he might be the next one to yield up his life, when no more food would be needed, or that, if such should be the fate of some one else, then fresh supplies would be furnished as soon as required by the survivors. Thus reasoning, they cut from the bodies of their decessed companions only what seemed the more before and tender parts, leaving behind the more bulky and masover.

"Being again reduced to extremities, the Whites came to the conclusion that they would sacrifice their Indian guides to appease their now unbearable pangs of hunger. The latter, perceiving their intention, and becoming alarmed, hastily took to flight, and retreating over the hills, were seen no more.

"Death again intervened to save the living from absolute starvation-another of the miserables died and thus one after another vielding to the effects of famine and exposure, perished all but three, and two of these, entirely overcome, had lain down to die, when, on the 17th of January, the last of the party, still able to walk, having fallen in with a friendly Indian, was by him conducted to a settlement on Bear River, from whence succor was, the next day, dispatched to the two left behind. Of the thirteen who set out from the immigrants' camp, all but three perished on the way. Had this one who first reached Bear River also given out, or had he failed to fall in with the Indian who piloted him to the habitation of the Whites, every one of them must have perished, as they would, in that event, never have obtained any assistance from California.

"Immediately, the news of their terrible situation was sent to New Helvetia. (Sutter's Fort) from whence it was, with all haste, forwarded to San Francisco. From both of these places expeditions were at once fitted out and under the direction of experienced mountaineers. sent to their aid. As the rescuing party was obliged to travel on snow-shoes for more than sixty miles across the mountains, passing over a steep and rocky country, without any beaten track or sign of a trail, they were, of course, unable to carry with them more than a very limited quantity of provisions. Every step they took they sank deeply into the snow. rendering their progress slow and wearisome: and it was not until the 19th day of February that the first relief-party reached the camp of the sufferers. The latter had now been snowed-in for more than three and a half months, during the most of which time they had been compelled to subsist upon the flesh of their dead companions.

"No language can adequately describe the spectacle that presented itself to the eyes of the burea and humane men who had gone to the deliverance of these pitcous beings. On every side the scene was heart-sickening and worful in the extreme; while the living, with their hollow eyes and shrunken forms, appeared more like spectres than human beings. Ghastly skeletons, stripped of flesh, and bodies half devoured, lay strevn around the dismal esbins, from which issued a stifting fetor. Not only were their bodies enfeebled and ementated to the last dogree, but with many the very soul had become a desolation. While some welcomed their deliverers with eestasies of joy, others, gloomy and cadaverous, regarded them with a coldness amounting almost to indifference, they having become not only reconciled to their cannibalistic diet, but preferring it to wholesome food when set before them. Monstrous as it may seem, to such an extent had the natural tastes of some of these people become perverted that they pushed aside the flour and bacon tendered them. choosing rather to partake of the horrid feast to which they had so long been accustomed. Parents were seen feeding on the remains of their children, and children on those of their parents. Here a wife was broiling on the coals the flesh of her husband, and elsewhere a company were making a repast upon the roasted limb of a dead companion. All filial and parental affection seemed dead, the one instinct of self-preservation reigning supreme. Rapidly some of those most wretched creatures were being transformed into ghouls and demons, having already lost many of the diviner traits of humanity. Haggard and attenuated, they spoke but little, while their looks and demeanor were wild and unearthly.

"Too incredible for belief are the stories told of the rawnons greed exhibited by some of these starving wretches, one of whom is said to have eaton the entire body of a child during the course of a single night; while another insisted on appropriating to his own use the hearts and other viscers of his dead companions. On the other hand, many refused to touch the flesh of those who had perladed until the very last, and then parished until the very last, and then par-

took of it sparingly, and with evident feelings of horror. The different phases which the sufferings of these people exhibited and the manner in which they met their doom, were peculiar to each, Some, bowing in meek resignation, passed camly away. Some, their countenances radiant with divine aspirations. died singing sones of triumph and praise. Some bewailed their hard lot with loud lamentations and tears of anenish; while others, shrinking from notice, perished in stolid and gloomy silence. A few raved wildly, reproaching themselves, upbraiding others, or impiously cursing God for their fate. Some, arousing from a dreamy stupor, would talk incoherently of the bountiful tables and the green fields they had seen; or, perhaps, address absent friends as present in the most tender and affectionate language. In some cases, just before death, the mental faculties would appear to expand and attain to a wonderful exaltation. things of earth faded softly away, and in their place delectable visions arose in unclouded splendor. All that had perplexed them in years gone by was miraculously explained, and the things of the long-forgotten past brought vividly before them. The pangs of hunger seemed already allayed—the soul having become so nearly disembodied as to no longer recognize the wants of its earthly tabernacle.

nize the wants of its cartily tabermacle.

"Unable to take all with them, the rescuing party selected such as were most desirous of going, or as seemed to have the strongest claims on their sympathy, and stated on their return over the mountains, leaving twenty-nin behind; all of whom, or at least as many as west still found alive, were afterward taken

out by other parties sent in for the puspose, and the first of whom reached the snow-beleaguered camp of the sufferers on the 1st day of March. This party, taking with them seventeen of the immigrants, selecting them as had been done before, hastende back with all expedition. A snow-storm coming on, they were compelled to leave all but three children on the road, these having been nacked out on their shoulders.

"As soon as the weather would permit, the company left behind was sent for. Three of their number were dead when the relief-party reached them, and the remainder were found sustaining their lives on the flesh of those who had periabed. These, together with the remnant before left in camp—excepting three of their number—were now properly fed and cared for; after which they were safely conducted over the mountains, into California.

"The three persons left behind consisted of George Donner, Captain of the emigration party; his wife, Mary, and Louis Keisburgh—the two men being too weak to travel over the mountains.

"Of all the incidents connected with these terrife sufferings, the parting of Mrs. Donner with her children is described as having been the most deeply affecting. The last rescuing party had arrived at the camp where she, her busband, and their children were stopping. Mrs. Donner, naturally vigorous, and in the bloom of life, was still strong, and well able to travel, as were also her children. But the husband and father, owing to the exercisons he had made to save others, was now so completely prestrated as to be unable to stand, or even sit up; and his deliverers had no means for carrying him. He must therefore, necessarily
be left behind. And now the wife and
mother had to choose between remaining
and perishing with him, or accompanying her children to a place of sately and
abundance. It was represented to her
that but little food could be left for the use
sent in from California. To stay there
was to die; while to go, was to abundon
one to whom she was bound by the
strongest ties of duty and affection, in
the hour of his direct extremit

"There was no time to be lost-none for dalliance or delay. The provisions of the relief-party were scanty, and the days were short. Already the noon was passed, and the shadows of the great Sierra were beginning to fall over them. The winter climate, in these elevated regions, was fickle, and, even then, the old mountaineer who headed the party discovered in the atmosphere the signs of a gathering storm. They must, therefore, un and away The children must be mounted on the backs of the men, and the adults hurried off. It was necessary that this poor woman should make up her mind quickly. Her children clung to her: and her husband counseled her to go. If she remained, it would only be to sacrifice her own life, without being able to save his: and their children would need her care and her presence. She was almost persuaded that it was her duty to go with them. But how could she turn her back on one whom she loved so well, and leave him to die in this gloomy wilderness, helpless and alone! Was ever human heart tried like this: or any mere mortal forced to undergo an ordeal so severe?

"Her wifely instincts triumphed-her decision was made; and now the hour for the final separation with her children had come. Looking tenderly into the eyes of each, she addressed them with the deepest emotion Embracing them in turn, and bathing them with tears, she kissed them again and again. And then, when she had turned forever away, she could not refrain, in her wild agony, from seizing them again, gazing fondly into their eyes, and kissing them once more, Then she retired to the cheerless cahin where she was so soon to and her earthly labors and her life. The two men, and her now sole remaining companions, had been forced to undergo a similar trial with herself, as Keisburgh had parted with his wife and children under circumstances almost equally distressing.

"In a few days after the departure of the rescuing party. Captain Donare died —his heroic wife remaining by his side, soothing and sustaining him to the last When dead, she removed his body to another cabin, and there dressed and haid it out with as much care as if it were destined to receive the usual rites of sepulture. How long this noble women survived her husband is not exactly known, though probably not more than a week at the most, as it is not believed that she partools of any food after his death.

"Toward the later part of April, another small party was sent over from California to see if any of those left behind night perchauce still be living. To their surprise they found Keisburgh not only alive, bu in a good measure recovered from the offects of the sufferings he had endured. The body of the husband was found in the condition left by his wife. The body of Mrs. Donner had been preserved in the snow by the sole survivor, who had for several weeks been forced to subsist upon portions of it. Affeeting to be shocked at the conduct of Keishurch in this particular, and questioning his right to retain possession of a small sum of money which the Donners had intrusted to his charge for the benefit of their children, should be happen to survive them, this party, instead of being moved with compassion at his misfortunes, proceeded to treat him in a very cruel and unjust manner. On arriving in California, Keisburgh and his friends insisted on the matter being legally investigated, which was accordingly done-resulting in the entire vindication of his motives and conduct. "Of this company of immigrants-

"Of this company of immigrants numbering eighty-two—thirty-six perished; twenty-six of this number being males, and ten females. They, of course, lost all their property, excepting their money, all of which was carried out by the owners on their persons, or afterward recovered."

We feel saddened by the tale of suffering and wee which we have read, and we shall long remember Donner Lake and its sad associations. Our thoughts find relief however in contemplating the snowsheds. Before, we looked upon their as long, black, smoky, ugly things that marred our enjoyment and prevented us from seeing the beauties so lavishly spread around us. Now, we regard them almost as angels of mercy. Thanks to their protection such disasters are no longer possible.

We will now resume our journey. Immediately on leaving Summit Station we lose the light of day, but we do not grumble at that. We plunge into the darkness with a feeling of satisfaction arising from the assurance that with so substantial a roof over our head we can never he snowed in Almost as soon as we pass out of tunnel No. 6, (which we have already described), we pass into No. 7, length 100 feet. A quarter of a mile beyond No. 7, we enter No. 8, length 375 feet. Half a mile farther, we enter No. 9, length 223 feet. Another quarter of a mile, and we are in No. 10, length 525 feet. Then comes No. 11, length 570 feet, now we catch a glimpse of nature for a moment, and the next we are carreering through No. 12, length 342 feet. No, 13 is the last of the series, and finishes them up with the respectable length of 863 feet

We are now on the down grade, and ride pleasantly through scenery of romantic beauty. Our course is serpentine, and the curves we make are so short as to astonish us. Still all is smooth, pleasant and secure.

Thirteen miles from the Summit, and just two miles before we come to Truckee, we cross "Donner Creek Bridge"—a strong Howe truss structure 422 feet long, and 70 feet above the creek. Keeping on winding downwards and downwards past saw mills, and piles of lumber, we finally arrive at

Truckee.

This is the end of the Sacramento, and the beginning of the Truckee division of the Central Pacific Railroad. The former, from Sacramento to this point, is 120 miles long, the latter extends from Truckee to Winnemucca, in Nevada, and has a length of 204 miles. The Railroad Company, have a round house of 16 stalls here, and trains change their engines and officers. This involves a stay of 30 minutes. We shall avail ourselves of the opportunity thus afforded to look round this city. We find that Truckee is 258 miles from San Francisco, and has an elevation of 5.846 feet. It is the highest town of any importance in California, and is situated near the centre of the great pine forests that surround Donner and Tahoe lakes. It is entirely dependent on the lumber business, and has upwards of 20 saw mills in its vicinity. When the Railroad was being constructed, there was a great demand for timber of various kinds. The construction of the snowsheds at a later date, also added to this demand. Under this exceptional state of things, the town grew rapidly and had at one time about 4,000 inhabitants. Things were very lively in these halcvon days, and nearly every store was a saloon.

But this did not last. The extraordinary demand for lumber ceased, and the population fell off to 1,200. In the days of her prosperity, Truckee rejoiced in a semi-weekly journal, called the Truckee Tribune, but hard times and an inappreciative public, have starved it out of existence! The town, which is rather a straggling affair, is on the north side of Truckee river. Originally, it was built west of its present location, but it was destroyed by fire. Since then it is extending to the eastward. With the exception of a few stores and the Truckee Hotel, kept by Mr. Campbell, it has no buildings worthy of mention.

Stage Lines.

Stages leave Truckee daily for Donner Lake, two miles; Lake Tahoe, 14 miles; and for Sierraville, 30 miles. And every alternate day for Loyalton, 38 miles.

Freight and Business.

Truckee is the shipping point for reight intended for the settlers who live in the adjoining valleys, all freight is taken from Truckee to its destination by team. Quite a large business is also done in lumber, sashes and doors. Nearly all the lumber used in Nevada is shipped from Truckee. A large lumber, sash and door trade is also done with Sacramento and the northern mining towns.

Places of Interest.

First among these comes Donner Lake, with its sad recollections. Few who go sight-seeing around Truckee, will fail to visit this interesting spot. For some time there were two hotels on the margin of this lake, one at the west end, or head of the lake, and the other at the eastern end, or foot of the lake, as it is called. The former, which was known as the Lake House, was kept by Mr. Pollard and has lately been destroyed by fire.

The latter, called the

Grant House,

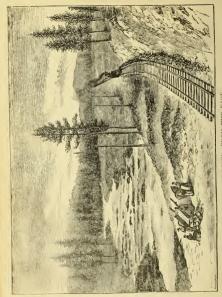
Still exists, and is a favorite resort for travelers and tourists. Here, in addition to the good cheer always provided by the proprietors, will be found boats, fishing tackle and every other requisite for an excursion on the lake or pic-nic on its banks.

Lake Tahee.

Tahoe is one of the most attractive features of the mountain scenery of California and Nevada. High up among the neaks of the Sierras, 6,700 feet above the ocean, and about 150 miles from San Francisco it nestles under the snowclad peaks which are its never-failing sources. It is of immense depth-the average being 1,500 feet; and it forms a little inland sea thirty-five miles long by fifteen wide-ice-cold and of crystalline purity. Nature seems to have located this spacious reservoir in a convenient position, overlooking the agricultural vallevs and rich mining regions of Californis, and from which the necessities of the lower country may be supplied by tapping, with a tunnel, the thin mountain crest that separates the lake from the Pacific slope.

To the tourist, Lake Tahoe offers a surprising variety of charming scenery. in which the grassy slopes along its shores present a pleasing contrast to the grand and rugged aspect of the mountain ranges that surround and overton it. Its circumference is indented with innumerable bays. and harbors, along whose pebbly beaches. in windy weather, the surf tumbles in flashing foam, while on its deep bosom the billows toss their crests before the mountain gales, presenting a rough and formidable expanse of stormy navigation. such as experienced boatmen alone can safely encounter. But, in its peaceful moods. Tahoe is unsurpassed in quiet, dreamy beauty and romantic attraction. Nothing can be more picturesque than the ever-changing views which open along its shores. Sylvan and fairy-like glades, sparkling in the sunlight, blend with tracts of sober woodland. Fertile vallevs, extensive pastoral districts, and a wide range of grazing and farming land,





by turns charm the eye and excite the imagination. No description can do justice to the moonlight effects on this lake. when its surface, unruffled by the faintest breeze, resembles molten silver, stretching away until lost in the shadows of the distant mountains. An idea of this remarkable body of water may be had from the fact that it has a superficial area of about 525 square miles. The Truckee River, flowing from its eastern side into the State of Nevada, runs hundreds of millions of gallons per day, which, however, does not diminish the lake, owing to the extensive water-shed of snowy mountains discharging into it.

Besides the lake itself, there are a number of minor points of interest which we have not space to describe, but which Mr. Lyon proprietor of the "Tahoe House,"will take pleasure in pointing out to visitors.

The Road to Tahoa.

This road is very beautiful and follows the bank of the Truckee River. Occasional glimpses of the snow-clad summits of the lofty Sierras are obtained between the openings in the high and fantastically shaped cliffs which flank the road on both sides.

Sleigh Riding.

During the winter, this delightful exercise, so rarely obtainable west of the Rocky Mountains, can be enjoyed to the fullest extent near Tahoe. We would advise every tourist who loves the grand and the beautiful in nature to visit Lake Tahoe and its surroundings.

The 30 minutes allowed us at Truckee have now elapsed, and the train is about to start: we will therefore take our seats ongo more

Leaving Truckee, we follow the course of Truckee River. The railroad is built on its northern bank, and passes through a country of picturesque beauty. (See Illustration.) This part of the journey is generally done at night. The effect produced here on moonlight nights is very fine. To lay in bed, and yet be able to see all its beauty as we pass along, is a luxury not easily forgotten. Six miles beyond Truckee we cross

"Prosser Creek Bridge." It is 205 feet long, and 38 feet above the creek. A mile and-a-half farther, we cross "Little Truckee River" on a Howe Truss Bridge 195 feet long, and 43 feet high. Half-a-mile more brings us to

Boca.

Boca is a small freight station eight miles east of Truckee. It has an elevation of 5.533 feet. Huge piles of fire wood, cut for the use of the engines, line the road at this station; and here the Railroad Company have an ice-house for supplying the water-cisterns of the passenger cars. There is a great abundance of timber all around. The high hills sloping gradually down to the bank of the river are all densely covered with stately pine trees. The scenery here is very beautiful, and continues so for the next 16 miles, although sometimes the vast mountains which tower upon either side of the road are not ornamented by a single tree. In many places large masses of detatched black-looking rock seem as if they were going to fall down and crush 178

Leaving Boca we ride down the canon. both sides of which are flanked by high and imposing mountains. Four miles East of Boca, we come to the first crossing of the Truckee River. The crossing is effected on a strong Howe Truss Bridge, 204 feet long, and 32 feet above the river The Truckee is one of the most beautiful rivers met with on the entire journey. It keeps us company for the next 60 miles, and in that distance we cross it no less than five times. It is always beautiful, and the leading feature in the landscape. Close to the first crossing of the Truckee we erose also " Inniper Creek"-a small stream spanned by a bridge 76 feet long and 15 feet high. One and-a-half miles down the cañon, we pass through tunnel No. 14. It is 198 feet long. At its mouth we rattle over a short bridge which spans the Alder Creek. The bridge is only 40 feet long and 10 feet high. The creek derives its name from a few Alders which grow along its banks. We now ride pleasantly down the canon, viewing with delight its magnificent scenery. It is the last we shall see on this journey of beautiful California, for four and-a-half miles from "Alder Creek Bridge" we come to

The State Line.

Here we pass out of California into Nevada. Before we have done altogether
with California, which has been to us
such a pleasant study, let us enquire for
a moment into a few of her wants, so that
we may be able to tell our friends of
them, and perhaps supply some of them.

Some of the Wants of California.

The first need of California is a large, industrious, intelligent and permanent population. It should be large because there is room for many and too much work for few. Spain, inferior in agricultural and mineral resources and commercial position, and possessing an area inst equal to that of California, has 14,000,-000 inhabitants, twenty-eight times as many as our own State, which will 'sve and must have as many. The settlers needed must be industrious, for without industry there is no prosperity or progress in the struggle of modern civilization. They must be intelligent, for intelligence is necessary to the management of the most profitable branches of industry. They must be permanent, for if they have no intention of making their homes here for life they will not live in that orderly and economical manner required for the prosperity of a country. It has been one of the chief misfortunes of California that the majority of its inhabitants in the first ten years after the discovery of gold came for the purpose of spending only a few years here; and consequently society lacked steadfastness and business lacked security. That period has passed away. The majority of Californians now are not only permanent residents, but they are proud of the State. and would be willing to sacrifice something pecuniarily rather than to move away. But there are not enough of these thorough Californians, and it seems impossible to attract enough Americans or Europeans to fill up the State and do all the work, and we must therefore depend for a time partly on Chinese and Japanese. These are objectionable on account of their inability to become citizens, and of their separate condition as an inferior caste; but they are quiet, orderly and

industrious, and the resources of the State can be developed with their assistance. The gold, the silk, the sugar, the wine and the rice obtained with their help will show no marks of the color or blood of their producers. As these men are necessary to the business of the State, it is politic and just that they should have the precision of the law and the friendly countenance of all good distress. They should be permitted to testify in our Courts, and should be phenet as to all kinds of turnion on an equality with other residents.

California has suffered much for the lack of secure land titles. All the grants made by Mexico were thrown into litigation, and most of them were kept there for ten years or more at ruinous expense. As these covered the valleys, and the mineral lands were reserved, little was left for settlers. The mineral lands, excent the quartz lodes, were long withheld from sale, and so were large tracts of railroad lands, all of which should be thrown into the market. Taxation should be reduced. The Internal Revenue Act is oppressive and unequal, taxing many branches which should be exempt and exempting many should be taxed. The burden is relatively too hard on the poorer classes. Labor and the proceeds of labor pay more than their share. The study of Congress and of the Legislature should be to make the wealth of the country support the Government. No license should be levied upon the privilege to work; no encouragement should be given to anybody to leave the country, or to live in idleness. The State needs, besides, the opening of all the Federal lands, in the mineral as well as agricultural districts to pre-emptors and homestead settlers,

the reduction of taxes, the removal of all obstacles to the production of brandy—which is the chief hope of many vineyards and orchards—the completion of a network of railroads that will give all the populous districts cheap access to the metropolis, the establishment of an extensive irrigation system, and a modification of the fance last.

We now leave California to fulfill her high destiny and pass into Nevada.



NEVADA

Sphin, down whose ragged face
The sliding centuries their furrows clear
By sun, and front, and cloud-burst; scarce to leave
Of age or sorrow;
Faint times of setterdays with no to-morrow;
My mind regards thee with a questioning eye,
To how the scerce high.

If Theban mystery,
With head of women, soaring, bird-like wings,
And serpent's tail on lion's track, were things
Puzzling in history:
And men invented

And men invented
For it an origin which represented
Chimera and a monster double-headed,
By Myths Phenician wedded-

Their issue being this—
This most chimerical and wondrous thing—
From whose dumb month not even the Gods could

wring
Trnth, nor antithesis;
Then, what I think is,

This creature—being chief among men's sphinzes— Is elequent, and overflows with Story, Beside thy eilence heary!

Mighty, and inhospitable, and stem;
Mighty, and inhospitable, and stem;
Hiding a meaning over which we years
In seager, panting headGrasping and losing,
Still being deluded ever by our choosing—
Answer us, Sphinz: What is thy meaning double,
But endless toil and trouble?

Inscrutable, men strive
To rend thy secret from thy rocky breast;
Breaking their hearts, and periling heaven's ress
For hopes that cannot thrive:

Whilst unrelenting
Upon thy mountain throne, and unrepenting.
Thou sitteet, basking in a fervid sun,

Seeing or hearing none.

The shallop moon beached on a bank of clouds— And see thy mountains wrapped in shadowy shrouds Glad that the darkness barr— The day's suggestion— The endless renetition of one question.

The endless repetition of one question Glad that thy stony face I can not ecc, Nevada—Mystery!

Nevada lies between the 35th and 42ml degrees of north latitude, and between the 114th and 120th degrees of longitude west of Greenwich. It is bounded on the west by California, on the east by Utah and Arizona, on the north by Oregon, and on the south by California, whose boundary line struckes across the southern part of Nevada in a southeast directly

of Nevada in a southeast direction.

Nevada has an area of 112,000 square
miles, equal to 71,680,000 acres.

She is comparatively a young State, having been organized in 1864. Her mineral resources are her principal wealth. Of these, however, our readers will have an opportunity of judging on our journey.

This State is an elevated plain having

This State is an elevated plain having a general attitude of about 4,000 feet above the level of the sea. "Crossing this platean are many mountain ranges, the most of which have a northerly and southerly course, being separated from each other by valleys from five to twenty miles wide, which is also about the width of the adjacent mountains, measured on a straight line from base to base. These mountains have an absolute height varying from 5,000 to 12,000 feet, being from 1000 to 8000 feet above the common level of the country."

Half a mile beyond the State Line we come to the second crossing of the Truckre, which has now assumed a considerable width, and is here spanned to siderable width, and is here spanned by a Howe Truss bridge, three hundred feet long, and forty feet above the river. Winding on through the Truckree and for another mile, we cross the Truckree a third time on a bridge similar to the last, but only two hundred and four feet long and thirty three feet above the bed of the river. Two and one half miles beyond this bridge we come to

Verdi.

Verdi is the first town we come to in Nevada, and withal does not impress us very favorably. It is sixteen miles from Boca and has an elevation of 4,927 feet.

Leaving Verdi we continue to follow the picturesque windings of the Truckee River for a mile and a half further. Here we are struck with a peculiar sound which we have long ago become accustomed to, and which informs us that we are crossing another bridge—it is the fourth crossing of the Truckee. This bridge is exactly

the same length as the last-two hundred and four feet, and thirty two feet above the river. After crossing the Truckee here, the hills on each side of us begin to dwindle down considerably. The canon opens out. Nature seems to lose her freshness, and we emerge on a broad cheerless desert, offering nothing to gladden the eve of the traveler but the Truckee meadows. These lay on his right hand hetween the railroad and the river from which they derive their name. Except this "Green Spot" all else is sand and sage brush.

Reno. Reno is in Washoe county, and is 292 miles from San Francisco, and 589 miles from Orden-elevation 4,507 feet. The position Reno occupies on the railroad is a very important one, and will ultimately cause the town to grow to a considerable size. It is the nearest point on the railroad to Virginia City, and the other mining towns which cluster round her. It was intended to connect Reno and Virginia City by railroad, but it is affirmed that a line tapping the timber districts around Truckee, and connecting with the Central Pacific near that city, is equally practicable, and more desirable. Reno has a population of about 1,200 which is steadily increasing. The Renoites are principally dependent on the forwarding business. Of this there is a good deal, as Reno is the depot for forwarding freight and passengers to Virginia City, Gold Hill, Carson and Washoe, in a southerly direction; and to Honey Lake, Susanville, and other points north. The town is pleasantly situated on the north bank of the Truckee river. It has five hotels, several stores, and two newsnaners-the Grescent and the Nevada State Journal. Of the five hotels two are very respectable in size and appointments. That of Mr. Chamberlin, at the railway station, is very good for transient travelers, while for those who intend to stay for a few days, the Lake House, on the south bank of the Truckee river, offers a quieter retreat.

Milla.

In the vicinity of Reno, there are several Mills of different kinds. There are two Flour Mills, one of which glories in being the "Pioneer." There is also a saw mill not far from the town

Quartz Mill.

There is a very large and well equipped Quartz Mill here, built by an English company, at a cost of \$200,000. It has latterly passed out of the hands of the original proprietors into those of another English company. Its motive power is water, overshot wheel. It is worked on the Steinfelt process, and saves about eighty per cent, of the mineral-principally silver. Stages.

Stages connect here for Virginia City. 21 miles; Washoe City, 17 miles; Carson City 32 miles; Camp Bidwell, and Susanville.

Steamboat Springs.

This name is applied to some springs of very hot water rising in an alkaline flat five miles south of Reno. These Springs emit jets of water, and clouds of steam, which, at a distance, look like the blowing off of a boiler. They are said to possess excellent medicinal qualities

Indiana

Quite a number of Indians live in the vicinity of Reno, and the traveler from Australia, China, or Japan, will here have, perhaps, the first opportunity of seeing "THE NOBLE RED MAN." The anticipations the traveler will have formed in his own mind will be found much better than the reality; and the verdict pronounced upon the Noble Red Man will be, to a moral certainty, that he is a very ignoble creature. The squaws will, however, be objects of interest-not from any attractiveness perceptible about themselves, but from the fact that they carry their papooses strung over their shoulders, strapped to a wicker frame having a little awning projecting over the infant's head to shield it from the sun. To us, who are so much more tenderly cared for in our infancy, it is a matter of wonder that the ministure noble red man is not strangled by the process. More than one look will need to be given before the traveler can be certain that he is not looking at a mere bundle of rags. Finally, however, he will be sure that it is a veritable "papoose," There is also another fact of which he will have no doubt, and that is, that the said "papoose" is greatly in need of having a handkerchief applied to its infantile nose. By the way, the latter is always of the "pug" species. The interest at first taken in the squaw and her "papoose," will soon be supplanted by a doubt that there is some mistakethat the noble red man himself has not been seen yet. These fellows may be mere slaves. And so the traveler looks on all sides for the realization of his ideal red man. He expects to see him gaily attired in his hereditary trappings, and is prepared to have his admiration called forth by his warlike micn and elastic step. Alas! this last hope is doomed to

a greater disappointment still. "Hiawath." already stands before him, personified by a dirty wretch with a pile of the "pale faces" cast-off garments buddled about him, and only a daub of red paint on his repulsive face to show that he is a red man at all. The war pale and the hunting ground be has now forsaken, and his only food is the refuse thrown from the local restaurants.

The "Pi-Ute" Tribe.

The Indians met with at Reno and the several stations along the Bailroad as far cast as Winnetmees, are of the Pi-Ut into They inhabit the vestern portion of the State of Nevada, about 200 square nulles. The tribe numbers shout 5,000 and can turn out about 700 warniers. It head quarters are near Pyramid Lake, about 25 miles north. Of all the western tribes of Indians, the Pi-Utes did the least harm to emigrants. Their has fight with the whites was in the southern part of Idaho, in the fall of 88, when they were beaten by the settlers. The power of the tribe is now completely broken.

The women of the tribe are famous for their chastity, the noble red man visiting any infidelity on their part with instant death. The warriors are very brave in battle; but, unlike our ideal barve man "Who raises the foe when in battle laid low, and bathes every wound with a tear," they mutilate the bodies of those they kill in the most fiendish manner. The details are unif for publication

Nevada's Mining Districts.

The mining district of which Virginia City is the centre, is the most important in the United States. We will, therefore, ask our readers to accompany us on a visit thereto.

Virginia City.

Virginia City, so famous for its vast mineral wealth, lies twenty one miles south of Reno. It is the county seat of Storey county, and is built on the eastern side of Mount Davidson, at an elevation of 6.200 feet above the level of the sea. The City which covers the celebrated Comstock Silver Lode, was established in 1859 and derives its name from "Old Virginia," a sobriquet borne by one of the lode discoverers. The streets of the City are well kept, and some of them have fine buildings. The City has five churches. two schools, several societies with anpropriate libraries, and a population of about ten thousand.

Two miles south of Virginia City, but

Gold Hill,

A thriving mining town, with about five thousand inhabitants. It is built along a ravine, and has many rich mines which have given the name of their mineral to the town.

Dayton.

Dayton lies seven and one half miles south of Gold Hill and nine from Virginia City. Like the former it is built along a ravine. It has a population of about one thousand and draws its support from mining enterprises and industries connected therewith.

The Comstock Lode.

In June, 1859, Peter O'Riely, and Patrick McLaughlin, while engaged in gold washing, on a spot now owned by the Ophir Gold Mining Co., discovered a heavy black substance which was found to contain sulphurets of Silver of the highest value. This substance was a portion of the celebrated ledge now known as the Comstock Lode which derives its name from a miner named Comstock who bought the adjoining land It is the richest silver vein ever known to exist in any part of the world. Without pretending to give the exact amount of bullion which has been extracted from it since its discovery, we may, without fear of exagceration until down at \$120,000,000.

General Characteristics of the Vein.

"The Comstock is situated in a heavy belt, consisting principally of metamorphie rocks, but trachyte occurs in many places in the immediate vicinity of the vein. It has a general north and south course and an easterly dip, and has been traced on the surface for more than 27,000 feet. Of this great length about 19,000 feet have been actually explored, and comprise the locations of the principal mines. The western boundary or footwall of the vein consists of a syenitic rock, which is divided from the vein-matter by a seam of bluishblack crystalline rock, resembling aphanite, and locally termed "black dyke." The eastern boundary, or hanging-wall, is not so well defined. For about 16,000 feet along the most developed portion of the vein, it consists of a ferruginous felspathic porphyry, in various stages of decomposition, up to that of plastic clay; but both north and south of this, it gradually gives place to diorite, and finally to a syenitic rock which can scarcely be distinguished from the footwall."

According to Baron Richthofen's extrue fissure vein i. e., "a fissure proceeding from indefinite depth and filled mainly from belon, by chemical processes, with matter differing in nature from the country rock." The same authority shows that it possesses all the peculiar features of a true fissure wise.

fissure vein.—

"1st. A true fissure vein extends indiscriminately through different tooks.

"2nd. True fissure veins extend down to indefinite depth.

"3d. True fissure veins show evidence of dynamic action. "4th. True fissure veins are ordinarily

found to be connected with the ejection of some eruptive rock.

"5th. True fissure veins are filled

"5th. True fissure veins are filled mainly from below, and essentially by chemical action."

chemical action."

The Comstock Lode has all these characteristics, and none of the characteristics of any other class of veins.

Profits in Mining.

The vast amount of bullion taken from the Comstock Lode would lead people unacquainted with the precarious nature of mining interests to suppose, that the profits to the owners have been proportionate to the yield. This has not been the case. While some companies have received profits to the amount of millions of dollars, others have realized but little. and some nothing at all. In 1865, the dividends were only \$562,020 in excess of the assessments. In the first years of operations on the Comstock Lode, the expenditures for machinery, which had to be transported across the Sierra Nevada Mountains from California, for the erection of expensive reduction works, and other permanent improvements, together with the high pinces paid for reducing ore in an imperfect manner, absorbed nearly the whole produce. Latterly, as greated depths were attained, a great deal of dead work had to be done, and additions made to the pumping and hoisting machinery, which almost counterbalanced the reduction in the cost of reducing the ore, etc. R. W. Raymond in his Report of last year (1899) on the "Mineral Resources West of the Rocky Mountains" says:—

"Nearly \$100,000,000 have been extracted from that one lode within the past nine years, yet the aggregate cost to owners has been almost as much. The reason is simple. Unnecessary labor has been employed, and vast sums of money wasted in extravagant speculations and litigations; and the root of the whole evil lies in the system of scattered, icalous individual activity, which has destroyed. by dividing, the resources of the most magnificent ore deposit in the world. Thirty-five or forty companies, each owning from 10 to 1,400 feet along the vein, and each (almost without exception) working its own ground independently; 40 superintendents, 40 presidents, 40 secretaries. 40 boards of directors, all to be supplied with salaries, or, worse vet, with perquisites, or, worst of all, with opportunities to speculate; an army of lawyers and witnesses, peripatetic experts, competing assayers, thousands of miners, uniting to keep up the rate of wages; these things explain the heavy expense of Comstock mining. Aside from this immense drain of money, amounting to 20 per cent. of the whole production, the labor actually performed has been, for want of united action, often useless."

The Sutro Tunnel.

From the foregoing description, it will be apparent that the future of the mines located on the Comstock Lode depends upon the discovery and successful extraction of new bodies of ore, and the raduction of expenses so as to permit the utilizing of the low grade ores expected by good judges to predominate in depth. To accomplish these results, Mr. Sutro has come forward with a plan for a deep adit starting near the Carson River and cutting the Lode 1,970 feet below the outcrops.

"The proposed tunnel begins 31/2 miles below Dayton, between Corral and Webber Cañons. The distance from the mouth of the tunnel to the Savage works is a little over four miles, but as the Comstock Lode dips to the east, it will be cut in 20,178 feet. It will pass through the different ledges in Silver Star and other districts nearly at right angles Allowing a grade of one inch in 100 feet. or four and four-tenths feet ner mile it will be 1,922 feet below the floor of the Savage works. The topography of the country is admirably adapted for sinking shafts, four of which are proposed to be put down. They will not only supply the tunnel with fresh air, but will greatly expedite work, as drifts can be run each way after reaching the grade of the tunnel. The distance of the first shaft from the mouth of the tunnel is 4 070 feet_ depth, 443 feet; second shaft from first, 5,150 feet-depth 980 feet; third shaft from second, 4,060 feet-depth, 1,436 feet: fourth shaft from third 4 654 feetdepth, 1,369 feet; from fourth shaft to Comstock Lode 2,244 feet—depth, 1,922 feet. These are convenient distances for working and ventilation. The mouth is about one and a half miles from Carson river, and 150 feet above high water mark. There is a gradual descent for about onethird of a mile, in which a fall of 100 feet is obtained, giving sufficient area for dumping and mill-sites.

Description of the Tunnel.

"The vertical section of the tunnel through rock not requiring any support is a circle of twelve feet diameter, with offsets 31/2 feet from the bottom, about one foot wide, which support the superstructure of the railroad track to be used for removing ore and debris from the mine The space under the superstructure is for drawing the water from the lode. Where timber supports are required to sustain the adjacent rock, the top is level, and ten feet wide, clear of the framing; height. eight feet to the bottom of the timbers supporting the railroad, where it is twelve feet wide in the clear. Below this there is a triangular space, three feet seven inches in depth, forming the water way."

Rights and Privileges.

The Sutro Tunnel Company, under a Special Act of Congress, possesses the following property, rights and privileges:

The Company owns a tract of mineral land in the State of Nevada, seven miles in length by four thousand feet in width, embracing five thousand and eighty acres, located adjacent to the Comstock Lode, and constituting the very heart and centre of the richest silver mining region in the world.

- 2. An area of land at the mouth of the tunnel containing one thousand two hundred and eighty acres, which, after the completion of the tunnel, will become the site of the most important and prosperous city in the State of Nevuda.
- The exclusive ownership of all mines discovered during the construction of the tunnel, or opened at any future period by the construction of branch tunnels.
- 4. A royalty forever of two dollars on each and every ton of ore extracted from any part of the Comstock Lode and all other lodes benefitted by the tunnel or its branches.
- The appropriation of all the water carried off through the tunnel and the right of sale thereof to the city, to mills, and for concentrating purposes.
- The Company's Stock which is "full paid," amounts to 1,200,000 shares of \$10 each.

Time Required to Complete the Tunnel.

Ground was broken on the Sutro tunnel on the 18th of October 1869. The time required for the completion of the tunnel is estimated "on the basis that four feet can be sunk per day on the shafts, and five feet made on the drifts:

- shafts, and five feet made on the drifts: "Connection from drift No. 1 in 462 working days.
- "Connection from drift No. 2 in 693 working days.
 "Connection from drift No. 3 in 708
- working days.
 "Connection from drift No. 4 in 815
- working days.
- "Since all these shafts would be progressing at the same time, the conucc-

tions from shafts Nos. 1, 2 and 3 will be made before those of No. 4, and the whole time, therefore, required to finish a preliminary tunnel to the Comstock Lode would be 815 days."

Up to this date, Nov 1st, 1870, the tunnel has been put in 1,700 feet. It is still progressing.

Prior to the outbreak of the Franco-Prussian war, the Company negotiated, in Paris, a loan of 18,000,000 francs. This has not been completed on account of the war, but as soon as peace is restored it is expected the loan will be consummated.

What the Tunnel will Effect.

When finished; the tunnel will drain all the mines on the Comstock Lode effectually. It will give them fresh wholesome air, and keen them constantly ventilated, and free from foul air. It will reduce the cost of mining and transportation so as to make available millions of tons of low grade orcs, which cannot now be worked with profit, and which, without the tunnel, would never be used, "It will also unite the miniug companies in many respects and remove the expense of separate pumping, hoisting, prospecting and general administration." It will also, in all human probability, lead to the discovery of more treasure to the east and west of the Comstock Lode than ever was discovered by any work of this kind. Moreover, one single mine opened up iu the tunnel, may furnish the means to complete it.

For further information we refer our readers to

 A pamphlet published by A. Sutro in 1866, entitled, "The Sutro Tunnel to the Comstock Lode in the State of Nev-

- A book entitled, "The mineral resources of the United States and the importance and necessity of inaugurating a rational system of mining, with special reference to the Comstock Lode and the Sutro Tunnel in the State of Nevada," by Adolph Sutro.
- The Comstock Lode, its character, etc., etc., by Ferd. Baron Richthofen, Dr. Phil., San Francisco.

Dr. Phil., San Francisco.
To all of which we acknowledge our indebtedness for facts and figures used in the foregoing remarks.

Amusements.

Besides the theatres, the people of Virginia City and vicinity, are very fond of pigeon shooting matches, and horse races. On both of these, large sums of money frequently change hands.

Peculiarities.

Storey county, of which Virginia City is the county seat, is the richest county in the State of Nevada. It contains 63 quartz mills which aggregate 665 stamps, all, with one or two exceptions, driven by steam. Their original cost was \$3,500,000.

Everything around Virginia is connected with nining, and everything depends upon mining. When shares are high, and money plentiful, no more liberal class of people than the miners of Nevada can be met with. About one fourth of the male population of Virginia City and Gold Hill, is underground eight hours of the twenty-four. In any one of the mines whose names we have already given, there is more timber than there is

in all the buildings in the city. Underneath the city there is a space as large as itself, kept lighted day and night with candles. Under this caption may be pointed out the fact that Virginia City has only one hotel, and in that there is room for improvement.

The Mines.

The mining interest in Storey county centres almost exclusively in the Constock Lode. This is the "Mother Vein." of the district. There are fourteen sets of hoisting works, encased in large and costly buildings, employed in raising ore from the Constock Lode within the City limits. The engines and machinery of these works is the finest, the best kept, and has the smoothest action of any that we have ever seen devoted to similar purposes.

The mines have been worked with various success, sometimes falling very low, and again rising to an almost febalous value. A notable instance of this kind occurred in March last (1870,) when shares in the famous "Gould and Curry" mine, could have been bought at the beginning of the month for \$60, but rose inside of a few days to \$400. Besides the mine just mentioned, there are a great many others, the principal of which are the Belcher, Savage, Yellow Jacket, Crown Point, follar, Hidden Treasure, Ophir, Hale and Norcross, Kentuck, Albha Imperial, etc.

Mills.

Besides these mines and a great many others whose names, for want of space, we cannot give, there are a large number of mills for "reducing" ores, that do not belong to any mine whatever, but work for all who employ them. They are now pretty much owned by one Company, and charge for milling, about \$13 per ton of rock. Different processes obtain in different mills, but the milling and reduction of ores has here attained the highest degree of perfection.

Newspapers.

The Territorial Enterprise, an excellent paper, is published daily and weekly in Virginia City, by J T. Goodman. The Gold Hill News is published in Gold Hill, as its name indicates; it is also a good paper though smaller than the Enterprise.

Theatres.

Virginia City is the only inland town out of Sacramento that can support a theatre. Piper's Opern House, is an old institution in the city, and has generally good companies from San Francisco. Recently a rival institution called the Alhambra, and conducted in the melodeon style, has been started.

The Virginia and Truckee Railroad.

The Virginia and Truckee Railroad, between Virginia and Carson cities, is of great benefit in reducing the cost of teaming, both in bringing fuel to the mines, and also in carrying large quantities of ore at a cheap rate, to the different mills. The length of the line is twenty-two miles. About six trains per day ply in each direction. Along side of the track, each mine has its "paddock," in which the quart is stored. The trucks are run in underneath, and by opening a trap-door they are instantly filled. Along the line of the railroad, on the Carson River, Mills are located at varyious interests. By

a similar process to that already described, the contents of the trucks are discharged into flumes which carry the rock to the place where it is wented.

Carson City.

Carson City is at the southern terminus of the railroad. It is the Capital of Nevada, and the oldest town in the State. It is picturesquely situated at the eastern hase of the Sierra Nevada Mountains on the west bank of the Carson River in Eagle Valley, Ormsby county, and occupies the centre of the best farming lands in the State. The town contains about 3.000 inhabitants, and consists of several streets, laid out at right angles to each other, and adorned with shade trees. It has several churches and schools. It has, also, one or two hotels. Its principal ornament, however, is the United States Branch Mint of Nevada-a really beautiful building, constructed of Sandstone, quarried close by, and tipped with granite. This institution is presided over by Colonel Currie, and is a very model of neatness and good arrangement. Carson has one daily newspaper-the Carson Appeal.

A good deal of staging was formerly done here, but the opening of the C. P. R. R. has almost stopped that fruitful source of business. Carson is, consequently, rather dull. We must not close this notice of Carson City without stating that close to the town lies the rase course where the Virginians try the mettle of the Nevada steeds. Much excitement obtained Johnny Fayler, for a bet of \$2,000, rode infly miles in two hours.

Stages.

Stages leave Carson every second day for Pine Grove Aurors and intermediate points. Washes

Seventeen miles south of Reno and nearly due west of Virginia City lies Washoe, a thriving town of about 800 inhabitante

Having made this detour we will come back to Beno and start out on our eastern journey.

Eastward Ho!

An eight miles ride through a broken country covered with sage brush, and surrounded by hills sometimes covered with snow, brings us to

Camp 37

Which is merely a freight station, having a side track, and an elevation of 4.404 feet. There is nothing to detain us here, so on we speed. The road follows the course of the river, on the whole, but sometimes diverges from it. Twelve miles brings ne to

Clark's.

Elevation 4,263 feet. Here also, is a side track. It is a freight station for

Truckee Meadows.

A kind of oasis in the desert, where cereals and vegetables are successfully cultivated. and where the early emigrants, fatigued by their long and tedious journey across the Desert, used to halt, in order to recruit their teams before prosecuting their journey to the "Golden Land."

Leaving this green spot-green literally, as well as in the memories of those who have occasion to remember it as the place where themselves and their exhausted cattle were refreshed and strengthened-we follow on our course, crossing the Truckee for the fifth, and last time, on a Howe truss bridge 204 feet long and 25 feet above the river

Just after we cross the bridge we arrive at Wadsworth is 327 miles from San Fran-

Wadsworth.

cisco, and has an elevation of 4 077 feet It is the end of the first section of the Truckee division, which is 69 miles long. The Railroad Co. have at this place a round house of 16 stalls, and a machine shop capable of employing 50 men. Both of these structures are of wood, as indeed, are all the buildings in the town

Wadsworth has about 800 inhabitants and does a considerable forwarding business to Fort Churchill and other points south. Several mines exist near the town. and there are some reduction works in connection with them.

Freight trains change their engines and officers here

Just before entering Wadsworth we crossed over the Truckee River for the last time. Near the town it turns sharp off to the northwest, and after flowing in that direction for about 20 miles, empties itself into

Pyramid Lake.

This lake, which is the largest body of water wholly within the State of Nevada. is situated in the southern part of Roop county, near the western boundary of the State. It is about 36 miles long and 19 wide. Its name is derived from a pyramid-like rock, which rises, near its contre, to a height of 600 feet above its surface. Pyramid Lake has a considerable depth of water, and is surrounded by

grand scenery, many of the mountains that enclose it rising 3,000 feet high. It is well stocked with salmon, trout and other well flavored fish, and yields excellent sport to the angler.

Winnemucca Lake.

Separated from Pyramid Lake by a low neck of land about two miles broad at its southern end, is a low lying hollow, which, in wet weather, is submerged by the surplus waters which flow out of Pyramid Lake. It is not a lake in the ovilinary acceptation of that term, but merely a large shallow basin which is nearly dry all the year round.

Carson Lake.

About 30 miles southeast of Wadsworth, in the southwestern prortion of Churchill county, is the lake whose name stands at the head of this article. It is circular in form, and has a diameter of about 12 miles. It has a low flat shore, and a depth of from 50 to 60 feet. It contains no fish-except swekers, and other of an inferior kind. Curson Lake is formed by the waters of the Carson River which rises in the mountains, in Douglas county. Its northwestern end is connected by a slough with Carson Sink, which we shall notice when we are nearer to it.

Walkers' Lake and River

Have been mentioned in connection with the Railroad, but they lie so far to the south, in Esmeralda county, that we deem them beyond our province.

Leaving Wadsworth we enter upon the western border of

The Great Nevada Desert.

The arca thus designated, is a scries of barren plains, covered, in some places thickly, in others, sparsely, with sage brush, having neither wood nor water, and whose broad expanse is broken only by low rolling hills as bare and forbidding as the descrt itself.

Three black, crow-like birds, were the only living things we saw in its entire length—nearly sixty miles. Its aurface is frequently perfectly white with alkali. Hot Springs, Basalt Rocks, and other indications of volcanic action, everywhere abound. This doesn't is only one of a series of deserts, greater or less in extent, which are to be found on the Pacific Coast, from Oregon to Lower California. In some places its surface is refrectly

smooth, with but little sage brush; in others, where the sage brush has got a hold, the sand swept over its surface by the wind, is stopped and deposited. This strengthens the hold the sage brush has upon the ground, and so it grows higher and stops more sand, until by and by it rises into the dignity of a mound, and lattely may become a hill.

Hurrying over this unhospitable waste as fast as we can, a ninetecn-mile ride brings us to

Hot Springs.

Elevation 4,070 feet. On our left we see the steam ascending from the Springs from which the station derives its name. Hot Springs, similar to the ones just

passed, abound in many parts of this State. "They are found at all altitudes and under such strange conditions as justly entitle them to be considered geological curiosities. They are found on the mountain sides, in the valleys, and far out on the desert—large, small, deep, shallow, cold, hot, and tepid. They vary in temperature from fifty to two hundred and four degrees. They generally have a sulphury taste, and emit a gurgling sound. They are supposed to possess medicinal properties, and are much frequented by the Indians on that account.

Our object is to get across this cheerless desert as quickly as we can, so we prosecute our journey with all allowed speed. The country we are passing over is equally uninviting, and exactly like what we have crossed already, except that the alkali becomes more 'abundant.

As we hurry along, what was before a barren, cheerless waste, is suddenly transformed into a beautiful landscape by

The Mirage,

An optical illusion frequently seen near the harders of this desert The most heart-rending stories are told about poor emigrants who, while traversing it, have seen the most beautiful landscapes, with waving trees, green meadows, and rushing streams, a little way ahead of them. and who have followed these illusions for miles, until at last they have found them only a delusion and a snare. The mistake, too often, is undiscovered until it is too late to rectify it. Heat and thirst have done their work. The exhausted travelers have succumbed to their trials. and a heap of bleached bones is the only monument that now marks the spot where feeble human nature could hold out no longer.

Fortunately this state of things obtains no longer. We are curious to see the mirage for the sake of the phenomena, but all danger of our perishing of thirst, and all the rest of the terrible et ceteras, is simply impossible. A glance at the cisterns of iced water in each end of our car, reassures our mind at once, and we look out for the next station

White Plains.

White Plains is fifteen miles from Hot Springs. It has an elevation of 8,894 feet, and derives its name from the quantity of alkali in the vicinity. Here the auriace coating is so thick, as to give the country an appearance resembling chalk. When the sun is shinting on the White Plains, the blinding light reflected from them is very painful to the eyes, and cambles us to realize how people traveling slowly over a vast desert lose their eyesight.

Twelve miles east of White Plains, we come to

Browns,

An unimportant telegraph Station, with a side track, and two houses—elevation, 3,925 feet. A few hundred yards to the right of this Station, can be seen

Humbeldt Lake.

This Lake is caused by the waters of the Humboldl River having here found a hollow sufficiently large to retain them. Itse has been variously estimated. Some writers, desirous of having everything on a stupendons scale, have set it down as thirty-five miles long, and ten wide. This is simply exaggeration. Its size depends altogether upon the season of the year in which it is computed. It is small in summer, and larger during the rains and immediately after them, but never more than fron ten to fifteen miles long, and five to te; broad.

Its waters are brackish, and slightly alkaline. They render the few fish it contains unpalatable, and unfit for culWe will now continue on our journey. To our left will be seen the bed of the Humboldt river its course clearly indicated by the willows. We are still flanked by the same ranges of mountains whose names we last gave. Here, their peaks are higher, and frequently covered with snow.

Eleven miles from Oreana we come to

Rve Patch.

Another station similar to the last—elevation 4,257 feet. Some patches of Wild Ryegrowing in the vicinity, have given this place its name. All along the course of the river there are similar patches of wild grass. For the next eleven miles of our journey we shall constantly see them on our left.

Eleven miles from Rye Patch we come

Humboldt.

Humboldt is a regular eating station. It is 422 miles from San Francisco, and 459 from Ogden—elevation, 4,234 feet.

This station is literally an easis in the desert and is by far the pleasantest station met with on the line between Sacramento and Ooden. Here it is we see the first garden and orchard we have met with in Nevada. About twenty acres of what would be termed "desert" have been enclosed by the enterprising proprietors of the hotel, and a stream of delicious clear water brought from the Star mountains. on the right of the road, for the double purpose of irrigating the garden and supplying the station with water. This water, by the way, is famous all along the line for its purity and coolness. Such delicious water is so rare in the desert that it is a good deal "fussed" over. A minia-

ture fountain has been set in the counter of the salcon. In the basin of this fountain gold fishes disport themselves; and the clear jet of cool crystal water which continually emanates from the fountain, invites the thirsty, dust-covered traveler, to drink freely of its healthful store.

The refreshments supplied here by Messrs Daniels and Meacham are, as might be expected, quite in keeping with the neat, happy appearance of their establishment and its surroundings.

Having partaken of an excellent breakfast here, we will go outside and look about us. We find the little farm surrounded by a substantial board fence and thriving admirably. The vegetables are all that could be desired, and the young fruit trees promise an abundant vield. The mountain stream does good service. for it is made available for the irrigation of every part of the enclosure. In front of the house, an excellent promenade, with ornamental railings, and a large circular fountain in its centre, has been constructed. In the north eastern end of this platform is a large ice-pit in which the Railroad Cot, keep a supply of ice for the water cisterns of the cars.

Some excellent Silver Mines exist in the Star mountains east of the road.

"All aboard" puts a stop to further investigation or inquiry. As we journey on through the same arid country we cannot deny that all that is wanting to make this wilderness to blossom like the rose is water only. Every other necessary element is here. Do our readers ask "Has no effort ever been made to fertilize these broad plains by bringing water to them"? Yes, there has; we shall show you what has been done by and by.

Twelve miles from Humboldt we stop for a moment at

Mill City.

This city has an elevation of 4.228 feet. and is composed of three or four straggling houses ; a hotel, a store, a stable, and a brewery! Why it is called Mill City, or indeed a city at all, is quite beyand the comprehension of the traveler. The only business done here, of which there is any indication, is teaming. A considerable quantity of cord wood, brought from the mountains south of the "city." is stored alongside of a side track here for the use of the engines.

Mill City Station derives it name from the fact that it is the passenger and freight station for Mill City and Unionville, the latter an important mining town of 2,000 inhabitants. It is the county-seat of Humboldt county, and lies sixteen miles south of this point, in the centre of an excellent mining district which has four mills steadily employed reducing silver ore.

Stages for Unionville leave Mill City Station, daily, on arrival of the train.

The ringing of the bell, and the snorting of the iron-horse, announce to us that we are again in motion. The desert now becomes more uneven. Sage brush. sand and alkali, reign supreme. During the construction of this part of the road the Company was badly off for wood. Sage brush had to be used to get up the steam. Scrub pine was found at Elko, and the Company advertised for "wood-choppers." By a strange freak of that law of nature which regulates the supply according to the demand, every individual that read the advertisement was suddenly transformed into a wood-

chopper. The names of more than 3000 "wood-choppers"-a class of "ne'er-doweels." locally designated bummerswere on the Company's pay roll inside of a week after the notice was given!

Rasnherry Creek.

Raspberry Creek is the name of the next station we come to. It is seven miles from Mill City and has an elevation of 4.327 feet. A creek of clear running water, such as we would expect this one to be, from its pretty name, would be a welcome sight crossing the desert. Travelers are more frequently mortified at seeing nothing but its dry bed, than they are cheered by its limpid waters. It rises in the mountains of Sierra District which are here close to the road, on the east side. Rich silver and gold mines are known to exist near its source.

At Raspberry Creek Station there is, or was, one solitary shanty dignified by the name of the "Road Side Inn." The only enstomers of the "Inn" as far as we could see, were a few dirty Pi-Ute Indians, who gazed lazily at us as we passed.

Leaving Raspberry Creek we keep on across a country of the same arid uninviting character. On our left are the Eugenie Mountains, which come closer to the road, attain a greater altitude, and have a thicker covering of snow, than any we have yet seen since we left the Sierra Nevadas.

Ten miles beyond Raspberry Creek we come to

Rose Creek.

A small station with an elevation of 4.322 feet. The station derives its name from the creek near by. Like the last creek we crossed, this is dry in the summer months. It rises in the Sonoma Mountains distinctly seen some distance off to the right of the road.

After traversing eleven miles more of the same kind of country, in which the tortuous bed of the Humboldt can be distinctly seen on our left, we arrive at

Winnemucca.

Winnemucea is a station of considerable importance 622 miles from San Francisco and 419 from Ogden—elevation 4,323 feet. It is the end of the second section of the Truckee division. It is also the end of the Truckee, and the beginning of the Humbolt divisions. The Compsup have here a round house of 16 stalls, and an ice house. Trains change officers and engines here, and a stay of 30 minutes is accordingly made. Formerly Winnemucea was a regular eating station for passengers going East, and a hotel was creeted for their accommodation. It is now used for the Rail-modation. It is now used for the Rail-modation. It is now used for the Rail-modation. It is now used for the Rail-modation.

road officers who stay here when off duty.

There are two towns here, both of the same name, but distinguished from each other by having "old" or "new" prefixed to the common name Winnermore.

The New Town.

The new town has sprung into existence since the Railroad was built, and consists of about a dozen stores and saloons, built, as railroad towns generally are, along both sides of the track.

Business.

The principal support of the new town, and indeed of both towns, consisted in forwarding freight to Idaho Territory and intermediate points. The Railroad created quite a demand for cord wood. This made things lively for a time, but latterly a good deal of coal is used instead of wood, and a relapse has taken place in this business.

The Old Town.

The old town is situated in a hollow on the south bank of the Humboldt, about 400 yards north of the new one. It is composed of one street running at right angles to the course of the river and adorned by a few houses, small, far apart, and in every stage of dilanidation.

This is one of the few towns on the Trans-Continental Route that has any record prior to the advent of the Railroad. Dilapidated and insignificant though it now may seem, it was at one time a bushing little town. Stirring seems were enacted in its streets, and stirring memories surround it still. Many a study pioneer, who has wandered far from the beaten tracks in search of fortune, still cherishes pleasant reminiscences of Old Winnemucca.

Early History of Winnemucca.

A brief sketch of the early history of Winnemucca will be generally interesting, especially as it has not been published before.

In 1859, when the discovery of the Comstock lode—the richest silver vein in the world—startled the California miners and prospectors, these nomads flocked in great numbers to the scene of the discovery. Every one admitted its unpuralleled richness and, forthwith, took possession of every available foot of land along its course. The next year brought multitudes more to swell the already great throng which had gatherdread in the

neighborhood. The ground was already taken up, and there was no ground for them. True, but this lode was only one of several equally rich, and as easily obtained. These men had too much energy to be daunted with trifles, so they would prospect, they would find other lodes that would soon reward them for all their toil. Armed with this resolve they scattered far and wide over Nevada, and discovered all the mines, and named all the districts with which that State is now covered. In the spring of 1861, two of these adventurous prospectors. Thackor and Miller discovered the Star Canon Mines. In the fall of the same year they penetrated up the valley to the site of this town in search of further discoveries. Here they were met by an Indian, who, to their astonishment, drew from his pouch a piece of rich, silver-bearing quartz, and pointed toward the mountain agross the river (now Winnemages Peak), as the place where he had found it. With joyful alacrity they crossed the river and scaled the mountain side. After a day's search they discovered the rich ledge from the outcroppings of which the Indian had obtained the specimen. They found his hut high up in the mountains-its ruins are still there. The old Indian informed them his name was "Winne-muk," i. e. chief of the Pi-Utes. Out of compliment to him his name was given to the newly discovered ledge, and also to his mountain fastness. The same motive, at a later day, bequeathed it to the town. The original pronunciation has been corrupted into Winnemucca.

The news of these and other discoveries in the Humboldt Valley, attracted a considerable number of adventurous

spirits, but the hostile attitude of the Pi-Utes prevented much being done till 1863, when, with sufficient numbers for self-protection, work was vigorously begun. Many new ledges were found, and the old mountain was bored and tunneled, and probed and tortured to discover its hidden treasures.

Indeed, these two years, 1863-4, were the gala days of silver-mining here. Since then, the ore has generally proven very refractory, although occasionally, some very rich leads have been found. But the returns from working have gradually decreased, until now but little or nothing is done in the Winnemucca mines. And but little can be expected from them, until a cheap and effective system of quartz milling is introduced. Latterly, but little silver has been produced from the mining districts in this part of the Humboldt valley, but in the period already alluded to-1863-4, this was a country of vast prospective wealth, and boundless expectations. The wildest excitement prevailed, and the most absurd enterprises were entered upon with as much ardor as if they were perfectly feasible. Some collossal monuments of these gigantic impossibilities still remain, as if to warn all future enthusiasts to sit down and count the cost before they begin to build. Among these is the Humboldt Canal, which we shall notice as we pass it.

Such is the history of Winnemucca.

About three miles south of the town is located the Harmony mining district, in which a number of silver and copper mines are said to exist.

Stages.

Stages leave daily on arrival of train for Paradise valley and Camp Scott, distance fifty-five miles.

Lakes which are not Lakes.

In a westerly direction from Winnemucea, and about fifty miles distant, there exist at certain seasons of the year large sheets of muddy, brackish water; at other seasons not a drop is to be found in the same places.

The land being low, and level, the overflowings of the rivers spread out and cover large spaces, sometimes as much as fifty miles long and nearly half as broad.

In summer, however, they completely evaporate, and the traveler going to look for them would only be disappointed in his search.

We have alluded several times on our journey thus far to the small valleys met with in different places in Nevada. Here, at Winnemucca, we are within twenty miles of the largest and best valley in the State. The description of one will apply to all the others, and so, with the reader's permission, we will glance briefly at

Paradise Valley.

This valley extends in a north-easterly direction from a point twelve miles north of Winnenmeca to another eight miles north of Camp Scott. It is claimed to be better cultivated, and susceptible of a higher degree of cultivation, than any other valley in the State. To the traveler observing the country from his car windows this may appear small praise, but many valleys fertile, well-watered, and susceptible of high cultivation, can be found in various portions of the State though not visible from the railroad.

Paradise Valley is enclosed by two ranges of mountains-the Santa Rosa, on the west, and the Hot Spring, on the east, Extending in a northerly direction, these mountains are parallel to each other for about 50 miles; beyond this, they converge, and form a crescent round the head of the valley. The Little Humboldt. Cottonwood. Martins and other streams-all abounding in excellent trout-water the mountain sides abundantly. The Agricultural lands of the valley are 30 miles in length, 20 in width, and contain 230 .-000 acres. Of this area about 50,000 acres are swamp and overflowed lands, but on either side of these, rich agricultural land extends, at a gentle slope, back to the surrounding mountains. There are some 6,000 acres cultivated. They are mainly devoted to wheat and barley. The average yield of wheat is fifty bushels to the acre, though as much as eighty-five bushels per acre have been obtained on one of the farms in this valley Irrigation is necessary, as a rule, though, occasionally, seasons occur in which the rainfall is sufficient for the crops. Still, crops are planted only in lands which can be irrigated.

Depasturing of Cattle.

The nutritions bunch-grass, and white sage, make excellent pasture for cattle; and as the climate is not severe, cattle browse and fatten among the "foot-hills" throughout the winter. At present, there are about 30,000 cattle in and around the valley, but the range is ample for treble that number.

Sheep.

Sheep have lately been introduced in this and other minor valleys of the Humboldt, but they have not proved a success. About 35,000 were this year (1870) taken to Paradise Valley. Experience has shown that the sheep cannot endure the cold as well as the cattle; and the cost of winter quarters for them would be too great. Snow occasionally falls deep enough to cover the bunch grass, and sheep do not eat the white sage, which is never covered, and always supplies fattening food for cattle. The wool is torn off by the jagged sage brush and grease wood, and the alkali dust, so prevalent in dry seasons, gets into the fleece, upon which it has a peculiar effect, impairing its market value For raising and pasturing of cattle,

however, this, and the other valleys of the Humboldt, will always bear a high reputation. An Indian Princess in the Sage

Brush. A correspondent of the Sacramento

Record, writing from Winnemucca, says: This place, like all others that were once the terminus of the railroad track.

has lost some of its stir and bustle; still as a distributing point, it is one of the most important on the line. Here, thanks to Dr. Steele, physician to the royal family, I had accorded to me the privilege of being presented at Court and interviewing a live princess-no more nor less than

Miss Sarah Winnemneco.

Arrived at the princely headquarters, and being formally introduced by the Doctor, we were invited to take a seat in the sand under the lee of a magnificent specimen of sage brush. Not being much of a "successist as an interviewist." I can only say that I found M'lle. Winnemucca to be a well-informed, wide-awake woman of about twenty-eight years of age, and I think the most handsome Piute of her sex that I ever saw. She conversed freely upon the condition of her people and their future prospects. and expressed herself as willing that her statement should go into print.

How She Likes Indian Life.

She said: "I am glad to see you, although I have not now a parlor to ask you into except the one made by nature for all. I like this Indian life tolerably well: however, my only object in staving with this people is, that I may do them good. I would rather be with my people, but not to live with them as they live. I was not raised so: excepting for the good I may do them my happiest life has been spent in Santa Clara while at school, and living among the whites.

Pinte Education.

"I am told, sir, she continued, that in California they are throwing away all the old school books, and adopting new ones. I am anxious to teach our children to read and write; do you think that I could get some of the old ones? If I can, my father, brother and myself, will form a school at Camp McDermott, and compel our people to send their children to school, so that they may learn something, as I have.

The Old Chief.

"Father is now at Stein's mountains. about one hundred and fifty miles northeast from here, and has with him, about one hundred and sixty people. He will never again raise his hands against the whites, nor permit our people to do so.

Indeed. I do not know of a Pinte who does not feel friendly toward the whites They are beginning to learn that it is hetter for them to work; and usually they will do such labor as is offered them still. I must admit that our men are terribly lazy, and won't work much. I am the Government Interpreter at Camp McDermott, where there are a large number of my people. With the exception of coffee and sugar, they are served daily with soldier's rations, and in return, they cut wood, keep the parade ground swept, and do other work about the camp. They are contented and are well used by the soldiers. At other places I have heard of bad treatment, but do not know it of my own knowledge. I think most likely the Indians were some to blame.

Their Religion.

"I don't know where they got it, but the Pintes have a religious belief Some say that it came from the Jesuits but I think not, as our old men know nothing about them; still, they all believe in a life beyond the grave; a heaven for good people: for the bad ones, not exactly a hell, but still not a desirable condition. I cannot explain it, for I hardly understand their ideas of a bad place myself. One reason why I am so auxious to teach these children to read is, that they may be able to learn more definitely what their spiritual condition is from the Bible. I think that-if from no other motivethey have enough curiosity to study it."

With this, we bade the young lady good evening, and so ended the interview-one which interested me, and one which I trust may result in some benefit to this dusky people, or at least to their children.

This question of education among the Indians is one of no small importance. especially when they ask for the means themselves

Having now seen something of Winnemucca, the country, and the Indians, and changed officers and engines, we will again resume our journey.

Leaving Winnemucca, we curve sharply off to the eastward. We are now at the centre of what is called

The Big Bend of the Humboldt.

This extends from Battle Mountain to Oreans-a distance of one hundred and twenty-two miles. It is simply a detour occasioned by the physical features of the country.

Six miles east of Winnemucea we pass, without stopping, a small Station called "Tule:" it derives its name from the nature of the adjoining lands.

Ten miles east of Winnemucca, we pass, on our left,

The Badger Ranch,

The pioneer land mark of civilization in the Humboldt Valley, and a place worthy of a more extended notice than we have space for.

The proprietor, Mr. J. C. Fairbanks. emigrated with his family from Wisconsin, and, while upon his journey down this valley, became impressed with the boundless facilities it afforded the Stock Farmer. Applying a practical test to this impression, he pre-empted the quartersection of land upon which his house now stands, and devoted himself to stock raising.

Operations upon the Humboldt canal which we have delayed to notice till we came to it, were commenced some time after his arrival, and settlers soon began to pre-empt and buy land along the proposed route. By the winter of 1883, there were fourteen families in Mr. Fairbank's immediate neighborhood, and nearly all the land in this vicinity was occupied by settlers.

But the luckless Canal speculation collapsed. Immediately the Indians made predatory incursions on the stock and dwellings of the settlers. Far removaled from military assistance, surrounded by hostile bands of the fierce Bannock, Snake, P-tuce, and Shoshone Indians, their little herds daily diminishing, and themselves awed by the bold audacity which numbers lent their savage foe, the settlers gathered together their household wrecks, and stole away, as best they could, to seek new homes having more hospitable surroundings.

The numerous crumbling adobe huts seen along this part of the road, are the ruins of the then promising settlement.

But the sturdy "settler" of Badger Ranch was not of the fleeing number. Having entered upon his hazardous experiment of Stock farming in an Indian country, he was resolved to abide the issue, and proved too tough a "Badger" to be drawn.

None but the most unyielding resolution, could have enabled him to endure the unequal fight with the Indians, and its attendant peril, and discomfort.

During the bloody outbreak of Indian hostilities, from 1865 to 1867, Mr. Fairbanks, with another intrepid companion, watched the stock, literally with cocked rifle and finger on trigger. At length this courage and indomitable persent ance was recognized by dovermor Blaisdell, through whose influence a small party of soldiers were sent to assist in the defense of the place. A fire proof house with loop-holed walls was built (it is yet standing beside the new and more comfortable dwelling-house), and everything was prepared "to fight it out on that line." This policy was snost successfully prosecuted.

A Treaty with the Indians.

we have done. After the arrival of eight or ten soldiers. Fairbanks becoming confident in the security of his little stronghold, sent a young Pi-ute boy, who had staid with him during all the trouble, to the leaders of the maranding bands telling them he would like them to come out and have a talk with him. Negotiations were entered into and a treaty was established to this effect :- For every one of his cattle they should kill or steal. he should have an Indian scalp! If the Indians remained quiet he would not molest them. This treaty was ratified and harmony restored till some of the straying warriors, in absent minded mood, appropriated two of the forbidden cattle. The loss was soon discovered. and the Fairbanks party started immediately in pursuit. They soon overtook the Indians and performed to the very letter their stipulated part of the treaty. They have never since been seriously molested.

It would be superfluous to add that Mr. Fairbanks is now reaping his deservedly rich reward. You can see his cattle, and horses browsing peacefully in the meadows near the railroad His butter and his cheese bring him substantial returns, and fully demonstrate the capabilities of the valley of the Humboldt for stock and dairy farming.

Honor to the brave say we-but here is the Humboldt Canal, and here is

Golcondo.

Golconda is 17 miles east of Winnemneca and has an elevation of 4 387 feet It derives its name from one of the richest ledges in the Gold Run district, which is situated in the mountains due south of the station. The position of Golconda is excellent, and, as this district is developed, it will become a place of considerable importance.

Leaving Golconda, we have the Humboldt Canal close on our right for five or six miles, so we will fulfill our twice made promise, and give our readers an account of it.

The Humbold+ Conel.

This enduring relic of the wild speculative mania which prevailed in this part of Nevada, after the discoveries and developments of silver at Winnemucca in 1863 -'64, is about 25 miles long. It extends in a curve nearly parallel to the railroad. from the mouth of Emigrant Canon to about five miles west of Winnemucca.

The History of the Grand Project.

Early in 1863 the Humboldt Canal Company was organized by a party of Frenchmen in San Francisco.

A prospectus of magnificent designs was prepared to engage capital. It depicted the scarcity of water at the mining towns in the valley, the facilities this canal would afford for its conveyance. and the vast amount and value of the ore lying there and only awaiting the arrival of water to set hundreds of mills in motion to reduce it

It was also to prove a great irrigating medium, and settlers were allured to the waste places of the Humboldt which were soon to be transformed to fertile grain fields, and blooming gardens,

A glowing peroration closed the prospectus with this facetious pleasantrythat the canal was to be utilized for navigation purposes, and made available for floating down timber from the pineries of the Humboldt Valley.

Surveys were made, and in May, 1863, work was commenced at the mouth of the Emigrant Canon. It was designed to extend the canal from that point to Mill City, a distance of 60 miles. At this place the water was to have a fall of 100 foot

The work was prosecuted for eighteen months at an average cost of \$10 per rod. During this time about 25 miles were completed, but, meanwhile, the impracticable features of the scheme had disclosed themselves. The ruinous cost of construction. and the porous nature of the soil, were obstacles the Company could not overcome. The former exhausted the funds. and the latter absorbed the water. Although a party having too much faith in the undertaking had erected a quartz mill at Winnemucca, water could never be conveyed even that distance. With much good faith and commendable energy the Company continued their efforts. Experiments were persisted in until the close of 1864, when the utter impracticability of the project was demonstrated, and all work ceased. For years nothing has been done to it; and now, the once famous Humboldt Canal, exists only as a sad memento of the many wild and visionary schemes of that period.

After crossing the canal a second time, we defile through Emigrant Cañon—a narrow gorge, formed by the south end of the Fremont Range of Mountains our left, and a low range of hills on our right. Going through this cañon we are in close companionship with the Humboldt River, which winds in a serpentine course on our left. Its waters are very mnddy, but the sight of even muddy water is pleasing to the eye after so long a journey over ard Plains.

The hills which form Emigrant Canon are the dividing line between the Pi-Utes on the west, and the Shoshones on the east. The latter roam over the country between this line and Salt Lake.

Iron Point.

Iron Point is 11 miles from Golconda, and has an elevation of 4,375 feet. It is a place of no importance to the general traveler. It derives its, name from the hard volennic rocks which abound here, and which were such serious obstacles to the construction of the Railroad. A water tank has recently been erected at this station.

Leaving Iron Point we curre round the hills and then cross the valley, Huge jets of steam, as we imagine, rise from the plains, and we ejaculate "oh ho! Here are more hot springs." But we are mistaken; watching them closely, we find they are clouds of sand raised by whitlyinds.

Stone House.

Thirteen miles from Iron Point, we come to Stone Hosso—an unimportant station to Stone Hosso—an unimportant station with an elevation of 4,422 feet. Close to the station there is an old stone house which was built in 1849 by Butterfield & Co. It was strongly fortified, and was used as a trading station with the Indians. There is a well of excellent water close by from which the traders used to draw water.

Whirlwind Desert.

Leaving Stone House, we enter upon a broad, dreary waste, that has been appropriately named "Whirlwind Desert." Here, as we rattle along, we shall almost certainly see pilliers of dust rising many hundreds of feet straight up into the sky. They are some of the "Peculiar Institutions" of this country, and last on an average about 20 minutes.

Old Battle Mountain.

This station which has now been superseded, is 14 miles east of Stone House. We only mention it because from it you can best see the elephant : "The Elephant!" you exclaim. Yes, the Elephant: not a live elephant, but a mountain whose outline is the exact representation of an elephant-and the largest one you ever saw. Towering above the Battle Mountain group of hills on the right of the road, will be seen a mountain whose peak resembles the crown of an elephant's head; extending down to the westward from that is a spur which is the fac simile of an elephant's trunk; and to the eastward, there is a hollow like the neck and then the mountain ridge has the very curve of the elephant's back. It

may take a little scrutiny to find it, but the likeness is unmistakable, and the impulse to laugh at it when found, irresistible.

Battle Mountain.

Battle Mountain Station is nineteen miles from Stone House, and has an elevation of 4,508 feet. It is one of the regular eating stations, and a place of importance in many ways. Here we have dinner, so we will alight and enter the Canital Hotel.

Having partaleon of the good things provided, we sunter out on the platform to look about us. Although established as late as March 1859, Battle Mountain isalready a place of considerable size. It has now about fifty houses, stores etc. The cause of its rapid growth is found in the discovery, seven miles south of the town, of rich silver, copper, and galean mines. These are known as the "Battle Mountain Mines." Sixteen miles from the Station, in the same direction, other mines similar in nature and value, have been discovered and designated the "Galean Mines."

Large quantities of ore are shipped to Swansea from this point. The principal copper mine is owned by an English Company who have a five stamp steam mill at their mine.

Because of these discoveries, the town of Argenta, formerly located twelve miles east of this point, has been removed here. Stores, hotels, and even the railroad depot itself, have been brought to this station.

Business.

This is the forwarding point for freight and passengers bound for the mines already alluded to, and other points in

Stages.

Stages connect with the train daily for Battle Mountain mines, seven miles; Galena mines, sixteen miles; and Austin, ninety miles.

The Battle Mountain.

The term "Battle Mountain" is generally applied to the mountains south of the station, but distinctively refers to one, upon which, some years ago, a very fierce fight occurred between the whites and the Indians.

A marauding party of the latter, belonging to the Shoshone tibe, had stolen from the settlers, and emigrants, a large herd of stock. Aggravated by the losses they had sustained, the settlers and emigrants united their forces, and started in pursuit of the Indians, whom they overtook on this mountain.

The Battle.

Here they fought or fierce battle, in which the Indians were driven from every position they took up. At evening they were driven from the mountain down to the Reess River, where, being surrounded, and without means of escape, they fought with great daring. At length they were vanquished, and the whites drove back their stock in triumph.

We will now leave this interesting locality and proceed on our way.

Almost immediately after leaving Bat-

tle Mountain, we cross Reese River, which in summer time is merely a dry ditch, but which, in the spring, when the mountain snows are dissolved by the sun's fervid rays, overflows its banks and occasionally submerges the surrounding country.

The track of the C. P. R. R. when first built was in danger of being swept away at this point by one of these floods, but Mr. C. E. Gillett, the superintendent of this division, has completely averted any danger from this source in future. He has raised that portion of the track about h ree feet higher, and provided ample means for the water to escape.

Reese River Mines.

These mines were discovered by Wm. H. Talcott, a rider in the Pony Express. when that then useful institution existed. While hauling wood one day from a hillside now within the city of Austin, he found a vein of silver bearing quartz. He located a claim and called it the "Pony." On the 10th of May 1862, a mining district was formed, including an area of 75 miles from east to west, and 20 miles from north to south. Being on the overland stage road, news of the discovery spread rapidly, and soon there were many people at the new mines. A site for a large city was surveyed, and Austin was built. From that time to the present the mines have been worked with various success. Chlorides of silver are the principal ores vielded by the district. Being rather refractory in their nature they require desulphurization.

Anstin.

Austin is the county seat of Lander county, and is, so our readers will remember, 90 miles from Battle Mountain. In the golden days of the Reese River mines, it grew with amazing raphity. Then, it was on the overland stage road, and commanded all the overland traffic. It had at that time a population of about 5,000. Since the opening of the railroad, and the opening up of other mining districts, its population has fallen off at least one helf

Austin may be said to be the mother of the mining towns in eastern Novada. Being the first established it was the centre from which radiated all the prospect ors who discovered the mines, organized the districts, and haid out the towns of White Pine, Eureka, Twin River, Philadelphia, Bunker Hill, Battle Mountain, and several others.

Grass Valley.

At the confinence of the Reese and Humboldt rives the valley widens out, and is covered with good grass supplying feed for a large number of stock. This valley is about five miles wide. Its length it is not easy to determine, as it continues to extend after it has become so narrow as to be undeserving of being called a valley at all.

Argenta.

Argenta, as a town, has ceased to catist. Our readers will remember that it was moved down to New Battle Mountain. The place which knew it once, knows it no more. Even the depot has been moved. Its site is just 12 miles east of Battle Mountain station, at the foot of the "Tolyabo" Mountains. Coal was discovered in these mountains two years ago near to where Argents stood. The ledge the found, being worthless, was abandoned; latterly another, and somewhat better one, has been found.

Shoshone.

This little station with so suggestive a name is 23 miles from Battle Mountain. It has an elevation of 4.635 feet, and derives its name from the cruel tribe of Indians who swarmed here in early days.

This is a fitting opportunity to give our readers an account of them.

The Shoshone Indians.

This tribe now numbers about 3,000, alt told. Its members range all over the eastern portion of the State of Nevada. They have no homes, nor head quarters, and roam about at will, sometimes not even taking the trouble to reret wijesums. Their chief, "Captain Jim," lives in Ruby Valley, but now leaves them pretty much to their own free will as to what they will do, and where they will go. Plunder, robbery and numder have been their occupation in times past. But now, the great civilizer, the Iron Horse, has rendered it impossible for them to carry on their depredations.

Emigrants no longer traverse this country in small parties, but luxuriste through in Palace Cars. And instead of cherishing resentment against the blood thirsty wretches for their past atrocties, they generously give both money and food to the very men, who, nuder other circumstances would be only too happy to scalp them. The Shoshones are brave in the field, but they are also treacherous to the last degree. As oft finding any stray whites to plunder and murder, they now live by hunting and fishing. They are Polygamists, and punish their unfaithful wives with death.

The following account of the Indian as he is, we quote from the Galaxy—a most excellent miscellany, replete with sterling articles.

The Noble Red Man. (By Mark Twain.)

"In books he is tall and tawny, muscular, straight, and of kingly presence; he has a beaked nose and an eagle eye.

"His hair is glossy and as black as the raven's wing; out of its massed richness springs a sheaf of brilliant feathers: in his ears and nose are silver ornaments: on his arms and wrists and ankles are broad silver bands and bracelets: his buckskin hunting suit is callantly fringed. and the belt and the moccasins wonderfully flowered with colored beads; and when, rainbowed with his war-paint he stands at full height, with his crimson blanket wrapped about him, his quiver at his back his how and tomahawk projecting upward from his folded arms, and his cagle eve gazing at specks against the far horizon which even the paleface's field-glass could scarcely reach, he is a being to fall down and worship.

"His language is intensely figurative. He never speaks of the moon, but always of "the cys of the night;" nor of the winds at the wind, but as "the whisper of the Great Spirit;" and so forth and so on. His power of condensation is marvellous. In some publications he seldom says any—thing but "Wangh!" and this, with a page of explanation by the author, reveals a whole world of thought and windom that before lay concealed in that one little word.

"He is noble. He is true and loyal; not even imminent death can shake his peerless faithfulness. His heart is a wellspring of truth, and of generous impulses, and of knightly magnanimity. With him, gratitude is religon; do him a kindness, and at the end of a lifetime he has not forgotten it. Eat of his bread, or offer him yours, and the bond of hospitality is sealed—a bond which is forever inviolable with him

"He loves the dark-quel daughter of the forest, the dusky maiden of faultiess form and rich attire, the pride of the tribe, the all-beautiful. He talks to her in a low voice, at twilight, of his deeds on the war-path and its the chase, and of the grand achievements of his ancestors; and she listens with downcest eyes, "while a richer hue mantles her dusky check."

"Such is the Noble Red Man in print. But out on the plains and in the mountains, not being on dress parade, not being gotten up to see company, he is under no obligation to be other than his natural self, and therefore:

"He is little, and scrawny, and black, and dirty; and judged by even the most charitable of our canons of human excellence, is throughly pitiful and contemptible. There is nothing in his eye or his nose that is attractive, and if there is anything in his hair that-however, that is a feature which will not bear too close examination. He wears no feathers in his hair, and no ornament or covering on his head. His dull-black, frowsy locks hang straight down to his neck behind and in front they hang just to his eyes, like a curtain, being cut straight across the forehead, from side to side, and never parted on top. He has no pendants in his ears, and as for his-however, let, us not waste time on unimportant particulars, but hurry along. He wears no bracelets on his arms or ankles; his hunting suit is gallantly fringed, but not intentionally: when he does not wear his disgusting rabbit-skin robe, his hunting suit

consists wholly of the half of a horse blanket brought over in the Pinta or the Mayflower, and frayed out and fringed by inveterate use. He is not rich enough to possess a helt; he never owned a moccasin or wore a shoe in his life; and truly he is nothing but a poor, filthy, naked, scurvy vagabond, whom to exterminate were a charity to the Creator's worthier insects and reptiles which he oppresses. Still. when contact with the white man has given to the Noble Son of the forest certain cloudy impressions of civilization and aspirations after a nobler life he presently appears in public with one boot on and one shoe - shirtless, and wearing ripped and patched and buttonless pants which he holds up with his left handhis execrable rabbit skin robe flowing from his shoulders-an old hoop-skirt on. outside of it-a necklace of battered sardine hores and ovster cans reposing on his hare breast-a venerable flint lock musket in his right hand-a weather-beaten stove pipe hat on, canted "gallusly" to starboard and the lid off and hanging by a thread or two; and when he thus appears, and waits patiently around a saloon till he gets a chance to strike a "swell" attitude before a looking glass. he is a good, fair, desirable subject for extermination if ever there was one

"There is nothing figurative, or moonshiny, or sentimental about his language. It is very simple and unostentatious, and consists of plain, straightforward lies. His "wisdom" conferred upon an idiot would leave that idiot helpless indeed.

"He is ignoble—base and treacherous, and hateful in every way. Not even imminent death can startle him into a spasm of virtue. The ruling trait of all savages

is a greedy and consuming selfishness, and in our Noble Red Man it is found in its amplest development. His heart is a cesspool of falsehoood, of treachery, and of low and devilish instincts. With him. gratitude is an unknown emotion; and when one does him a kindness it is safest to keep the face toward him, lest the reward he an arrow in the back To account of a favor from him is to assume a debt which you can never repay to his satisfaction, though you bankrupt yourself trying. To give him a dinner when he is starving, is to precipitate the whole hungry tribe upon your hospitality, for he will go straight and fetch them, men. women, children, and doos, and these they will huddle nationally around your door. or flatten their noses against your window. day after day, gazing beseechingly upon every monthful you take and unconsciously swallowing when you swallow! The soum of the earth!

"And the noble Son of the Plains becomes a mighty hunter in the due and proper season. That season is the summer, and the prey that a number of the tribes hunt is crickets and grasshoppers! The warriors, old men, women, and children, spread themselves abroad in the plain and drive the hopping creatures before them into a ring of fire. I could describe the feast that then follows, without missing a detail, if I thought the reader would stand it.

"All history and honest observation will have the Red Man is a skulking coward and a windy braggart, who strikes without warning—usually from an ambush or under cover of night, and nearly always bringing a force of about five or six to one against his enemy; kills help-

less women and little children, and massacres the men in their beds; and then brags about it as long as he lives, and his son and his grandson and great-grandson after him glorify it among the "heroic deeds of their ancestors." A regiment of Fenians will fill the whole world with the noise of it when they are getting ready to invade Canada; but when the Red Man declares war, the first intimation his friend the white man whom he supped with at twilight has of it, is when the warwhoop rings in his ears and the tomahawk sinks into his brain. In June. seven Indians went to a small station on the Plaine where three white men lived. and asked for food; it was given them, and also tobacco. They staved two hours, cating and smoking and talking, waiting with Indian nationce for their customary odds of seven to one to offer, and as soon as it came they seized the opportunity; that is, when two of the men went out, they killed the other the instant he turned hts back to do some solicited favor; then they canght his comrades separately, and killed one, but the other escaped.

"The Noble Red Man seldom goes printing loving foolishness to a splendaidly caparisoned blushing maid at twilight. No; he trades a crippled hone, or a damaged maket, or a deg, a gallon of grass-hoppers, and an inefficient oldimether for her, and rakes her work like an abject slave all the rest of her lifeto compensation into the country. He never works himself. She builts the habitation, whether we have the size of the rest of her lifeto compensation and a size brush band to roost underly gathers and brings home the facil; takes care of the raw-bond pony when they possess

such grandeur; she walks and carries her nursing cubs while he rides. She wears no clothing save the fragrant rabbit skin robe which her great grandmother before her wore, and all the "blushing" she does can be removed with soap and a towel, provided it is only four or five weeks old and not caked.

"Such is the genuine Noble Aborigine. I did not get him from books, but from personal observation.

"By Dr. Keim's excellent book it anpears that from June, 1868, to October, 1869, the Indians massacred nearly 200 white persons and ravished over forty women captured in peaceful outlying settlements along the border, or belonging to emigrant trains traversing the settled routes of travel. Children were burned alive in the presence of their parents. Wives were ravished before their husbands' eyes. Husbands were mutilated, tortured, and scalped, and their wives compelled to look on. These facts and figures are official, and they exhibit the migunderstood Son of the Porest in his true character-og a creature devoid of brave or generous qualities, but cruel, treacherous, and brutal. During the Pi-Ute war the Indians often due the sinews out of the backs of white men before they were dead. (The sinews are used for bow-strings.) But their favorite mutilations cannot be put into print. Yet it is this same Noble Red Man who is always greeted with a wail of humanitarian symnathy from the Atlantic seaboard whenever he gets into trouble; the maids and matrons throw up their hands in horror at the bloody vengeance wreaked upon him, and the newspapers clamor for a court of inquiry to examine into the con-

duct of the inhuman officer who inflicted the little pleasantry upon the "poor abused Indian." (They always look at the matter from the abused-Indian point of view, never from that of the bereaved white widow and orphan.) But it is a great and unspeakable comfort to know that, let them be as prompt about it as they may, the inquiry has always got to come after the good officer has administered his little admonstrior."

Beowawe.

This Indian word is the name of a small station, 10 miles east of Shoshone, and having an elevation of 4,690 ft. The meaning of the word is variously translated. One authority, and he the best (being a half reclaimed Indian) translates it:- "Friendly Gate", a second. makes it "Willow Island", a third, "Gate in the Mountains", and a fourth. "Yellow Ore." The gates have it; and so "gate" itis. The term "gate" is very appropriate, as the converging hills have here an aperture between them closely resembling an open gateway, and with al likely to suggest the name. Early emigrants called it Red Point because here the mountain range is of a reddish color.

mountain range is of a Fedulish coor. Five miles south of the station, is what is called Alkali Valley; here there are about if high Hot Springs within a circumference of half a mile. They are natural curiosites, and are locally regarded as having the best curative properties of any Springs in the State. Their aggregate waters form a little brook which meanders into the centre of the Valley, and is there absorbed by the prorous soil.

Cortez Mining District.

This district is situated about twentytwo miles south of the Be-o-wa-we Station. It was located in June, 1863. Next year a thirteen-stamp mill, having a crushing capacity of eighteen tons per day, was erected. From that time until lately, the district attracted but little attention. Latterly, however, the interest manifested is increasing, and would seem to indicate later and richer developments.

Leaving Be-o-wa-we, we come to a section of the road that has several objects of interest to the traveler. They come in quick succession; let our readers be careful not to miss them. On our right, stretchine off in a southerly direction, is

Hot Spring Valley.

This valley derives its name from the number of hot sulphur springs which it contains. Occasionally the passengers in the passing train can see them emitting jets of steam; at other times all is quiet, and there is nothing to indicate their existence, except a long whitish streak stretching laterally along the mountain side. This however, is so broadly defined as to be unmistakable. The traveler may suppose that he sees in this the workings of some gigantic mine whose debris has been dumped out at the mouth of the shoft and rolled down the mountain side. Instead of that, it is a rupture or rather ruptures, in the side of a volcanic mountain, from which a large volume of boiling-hot sulphuric water is ejected. Sometimes the jet of water and steam rises to a considerable height, at others, it only ripples over the brims of the springs. This water in its course down the hillside destroys all the vegetation with which it comes in contact, and leaves its broad

Three miles east of Be-o-wa-we, on the right of the railroad, and close to it, stands a low hill surmounted by a cross. That cross is placed over

The Maiden's Grave.

Connected with this grave there is a very beautiful and touching story which, in a condensed form, we subjoin:

A party of emigrants, and their families.

from the neighborhood of Missouri, had arrived this far on their long and perilous journey to California, without accident or misfortune. Here, on the banks of the river, they waited for a few days to recruit their weary and travel-worn stock.

During this delay a beautiful young girl of 18 summers was taken ill, and notwithstanding the anxious care and tender solicitude of her parents and friends, ultimately dici. Her sorrowing parents marked the lonely spot which is her last resting place, by such a memorial as they had the means to construct. When this last act of love was completed they pursued their journey.

Years afterwards, as the advance guard of the builders of the Railroad came along of the theorem of the Railroad came along there, they say the rude monument that she had been erected, and they inquired what it was meant to commensorate. On learning the soal story their kindly hearts were moved, and with true maulinesses where moved, and with true maulinesses they determined to construct over this size of the property of the state of the state

We honor them for their goodness of heart.

Neither the fond parents of the occupant of this lonely grave, nor the brave men-for they seere brane-who enclosed it, supposed that the virgin soil in its vicinity would ever be disturbed for a like purnose again. But it has. There is a dolorons sequel to the story. The people living at the section house which we passed at Be-o-wa-we had a bright little daughter of four years of age. She and her little brother-a twin brother we understand-were pursuing their innocent gambols one day playing at "soldiers." By accident the gun the little boy was handling went off, and the little girl fell lifeless at his feet. She is buried near the maiden's grave. A second and smaller cross now marks the grave of this little maiden.

These two graves form a cemetery in the desert and are the nucleus around which more will eventually accumulate.

Two miles further on, on the left of the road, is

Gravelly Ford.

Gravelly Ford is the name applied to this part of the river by the early emigrants, because its gravelly bottom afforded them a safe and easy passage for their teams. The grass on the banks of the ford, moreover, gave them an excellent opportunity to feed and rest their cattle. Because of these advantages its fame extended beyond the Missouri, and, even at that remote distance, it was regarded as an oasis in the desert.

By watching the north bank of the river closely, an old, and once much-beaten track, will be seen winding down over the face of the low hill to the river bank. That is the old emigrant road over which so many enterprising spirits seek-

ing homes in far off California have patiently toiled. And this ford has been to many of them the last stage in their earthly journey. Here, if not destiny, at least the red man, has said to many of them.

"Thus Far, and no Farther."

This pleasant little valley, now smiling so peacefully, has been the secon of many a sanguinary conflict. These bills, looking silently down upon us as we pass, have many a time reverberated with the Indian's war-whop; and these clear waters, gurgling so pleasantly over the river's pebbly bottom, have often been dyed with the blood of the Emigrant

Cluro.

Cluro is a side-track Station, concerning which nothing need be said, except that it is eight miles from Be-o-wa-we, and has an elevation of 4,769 feet.

Half a mile east of Cluro, an acceleration of speed will be perceptible. Having an ascent before us, the Engineer is putting on steam to make headway on the steep grade.

Two miles east of Cluro, we enter

Twelve-Mile Canon,

Where the heaviest cutting we have yet seen east of the Sierra Nevadas has been done. The caion abounds in sharp curves, and towering cliffs which raise their rugged crests on either side, as if at any moment they would fall and crush us. The river winds around among the projecting spurs, and one mile up the caions we cross it on a covered-in How trushbridge, 2055 feet long, and 32 feet high. The difficulties to be overcome in this caion were immense, and by merely see-

ing them, now that they are overcome, we are constrained to pay a just compliment to the indomitable perseverance of those men who conceived, undertook, and accomplished this yast undertaking.

Just before we come to Palisade, we see where the course of the river has been turned, and the track improved, by cutting out some difficult compound curves.

At this point, there is a gap in the mountains on our right, and through it can be seen the Pine-clad Mountains of the lately discovered Mineral Hill Mining District

From this point on the railroad, to Humboldt Wells—nearly one hundred miles—the country is less arid. There are more willows by the river, and more grass in the valleys and on the hills.

Palisade.

Palisade'is eighteen miles from Be-o-wawe, and 573 miles from San Franciscoelevation, 4,81 feet. The town is situated on the north bank of the Humboldt River, and is enclosed by high hills. Though laid out only in the summer of 1870, it already has upwards of thirty places of business, and a hotel. Goods are shipped here for the various mining district in Southern Nevada.

The Palisades.

Immodiately east of the Station we see the gigantic walls of rock which give this place its name. Rising on both sides of the river to a height of about 1,500 feet, and only 350 feet apart, their overhanging and seemingly shattered cliffs, threatening very moment to close and crush the beholder as they would a gnat, inspire the mind with awe; and when we examine their bare fronts, rent by enacles and fissures, and see huge masses of rock hauging high above us, with apparently nothing to hold them, we wonder the shaking of the ground by the passing train does not hurl them down on our defenceless heads. They seem to be gradually crumbling away; and dark brown streaks on the mountain side, show numerous pieces of decomposing rock just where they have been caught when rolling down to the rives.

The close resemblance these gigantic walls of rock bear to the famous palisades on the Hudson, entitles them to their very appropriate name.

Stages.

Stages leave Palisade daily for Mineral Hill, thirty-six miles; Eureka, eightyeight miles; Hamilton, one hundred and thirty miles; and intermediate points.

As Palisade is the point of departure for freight and passengers for the adjacent mining districts lying to the south of the station, we shall briefly notice them while here.

Mining Districts.

Railroad District is situated in Elko county, fourteen miles south of Palisade. It was discovered in September 1869. The mines found here are principally copper. The ore is shipped to San Francisco, en rout to Swanses. England.

Galena mines have also been discovered. The Galena, which is smelted at the mines, contains a large per centage of silver.

Mineral Hill.

This district, which is also in Elko county, was discovered in June, 1869. It lies thirty-six miles south of Palisade, at the western base of the Sulphur range of mountains.

PLEASANT VALLEY, NEVADA.



This is a mining district of great importance, the mines consisting of pure chloride of silver. Recently fitteen tons of one were sent to Reno reduction works to be tested, and yielded the handsome return of \$705 per ton. About 300 miners are at work in this growing camp.

Woodland.

This district is in Lander county, fifty miles south of Palisade. It was discovered in October 1869, and is similar in character to Mineral Hill

Diamond District.

Diamond District is located in White Pine county. The mines are in Diamond Valley, at the western base of Diamond Mountains, eighty miles south of Palisade, and ten miles south of Overland road. East of the range of mountains in which the mines are found, there is a higher range well covered with Nut Pine and Cedar. The ores are found in a limestone formation and are of a chloride character.

Eureka.

The Eureka mining district is in Lander county, and lies, from Paliasale, eighty eight miles a little east of south. It was discovered in 1866, but its galean could not then be profitably worked because of the cost of transportation. Since the opening of the Railmoul it is stracting a good deal of attention. Its galean ore is smelted on the spot and the crude bullion sent to Paliasale and thence shipped east. It yields in Silver from \$300 to \$500 per ton of crude bullion. Its shipments are about 300 tons per month.

Spring Valley District.

This District is in Lander county. It is about sixteen miles south west from Eureka, ninety-eight from Palisade, and is in Lander county. It was discovered in the fall of 1869; and its ore is chloride in character.

Pinto District,

Is in White Pine County, nearly south of Eureka, it is five miles up Secret Canon upon the eastern slope of the Diamond range of mountains, and was discovered in June 1869. It yields milling ore. Distance from Palisade minet miles.

Leaving Palisade, and having got through Twelve-mile casion, the bold, rugged mountains give place to low, rolling hills. We wind around their bases, having the Humbold on our right. Presently we make a sharp turn to the left, round the base of a projecting runge; after following this course for a few minutes, we see Carlin in the distance.

One mile before we come to Carlin, we cross Mary's Creek, on a small bridge fifty feet long, and twelve feet above the creek. Our readers will please remember this creek as it is connected with a sad story, which we will give by and by.

On our right, the Humboldt River, its volume now perceptibly increased, winds gracefully through a narrow tract of rich bottom land. But here we are at

Carlin

Carlin was at one time a regular Eating Station, but is not now. A stay of twenty-five minutes is still made here, however, as the trains change engines at this place.

Here there is an excellent hotel, which has always on hand the choicest brands of liquors and cigars. It is close by the platform where the cars stop, so we will just step in, and see J. M. Woodworth, its worthy host. This done, we will light a cigar, and take a look at Carlin.

Carlin is 589 miles from San Francisco, and has an elevation of 4,003 feet. It is pleasantly situated on the northern side of a stretch of rich bottom land, about eight miles long, and two broad. It is built on the south side of the railroad, on which its main street fronts. It has many stores, saloons, and restaurants, but its principal building, excepting the Railroad Co's workshops, is the Carlin Hotel, whose kindly host we have already become acquainted with. The population of Carlin numbers about 800, and will doubtless increase rapidly.

Carlin is a place of considerable importance, as it is the point of departure for freight and passengers for the Tuscorora and Bull Run mining districts. Some good shooting can be had in the neighborhood, and the Humboldt, all along this valley, abounds in large and excellent trout.

Dixie Valley.

This beautiful little valley lies eight miles coutheast of Carlin. It is twenty miles long by three wide and has an excellent stream of water running through out its entire length. It has rich agricultural land, and plenty of Nat Pine and Cedur growing on the surrounding mountains.

Pine Valley.

Pine Valley lies ten miles south of Carlin. It is forty miles long by three wide, has good land and a plentiful supply of water. A good many settlers have takeu up land there, and now several fine Rauches yielding large crops of grain are dotted over the valley. Iu the mountains between these two valleys is located the celebrated Railroad Mining District.

Diamond Valley.

Diamond Valley is sixty miles from Carlin, and ten south of Pine Valley, forty-five miles long, and fifteen wide, it has an abundant supply of water, and good grazing lands, but is not adapted for agriculture. It derives its nume fust its diamond-like shape, and gives the Diamond Mountains their name. It has no outlet—being completely surrounded by mountains. It is bounded by Diamond range on the east, and Sulphur range on the west; the latter range is covered with heavy Nut-Pine, and Cedar.

The Company's Workshops.

Carlin being the end of the First Section of the Humboldt Division, the Railroad Company have here a Round House of 16 stalls, and a unethine shop, capable of affording working space for 50 men. In connection with these there are a great number of switches and side-tracks.

The offices of the Superintendent of the Humboldt Division, C. E. Gillett, Esq. are also here.

Lines of Travel.

A new road to Idaho has recently been built by Mr. Bobier. This will benefit the town considerably, by opening up a short route to the Idaho Mines, and causing their freight to be forwarded from this place.

Messrs Fayne and Falmer have also opened up a new road from Carlin to White Pine. This road passes through the lately discovered and very important mining districts of Mineral Hill, 45 miles; Woodland, 55 miles; Diamond, 60 miles;

and Eureka, 85 miles. Dixie, Pine and Diamond Valleys, which have been already described, are all adjacent to it.

Stages.

Weekly stage to Tuscarora, 45 miles, and Bull Run, 65 miles. A stage also plied to the mining towns south of Carlin, but we understand it has been discontinued.

Having taken this rapid glance at Carin and its surroundings, we will now proceed on our eastern journey. Just as we pass away from the platform, we see on the left of the road a neat little Church and school house, which have been recently erected. It is very creditable to so small a community. We have passed larger towns with greater facilities that are not so far advanced.

Half-a-mile east of Carlin, we pass, on our left, a small valley with a creek running through it and a couple of settler's shandies on its edge. This is Maggie's Creek. A little further east there is another creek, called Susie's Creek, and about one mile west of Carlin there is Mary's Creek. The history of one of these is the history of all, so we will merely give the history of the former.

Maggie's Creek.

Among the emigrant trains crossing the plains in 1837, was a pretty large one, which, one evening, camped on the edge of this creek, about a mile above where the railroad now crosses it. The train had come all the way from Missouri, and was bound for California. It was composed of several families. One of these was Scotch, and numbered, besides the parents, three lovely daughters, severally numed Maroeic Suise, and Marv.

. Their joyful dispositions and kindly natures had endeared them to the hearts of every member of the train. Many a night had these girls cheered the campfire with the delightful songs of their native land. Long had the emigrants wanted to show their appreciation of these girls, but hitherto, they had found no opportunity. Now, however, one had occurred. These streams had no names: and they would, they thought, be paying the girls a pretty compliment by naming the streams after them. They did so, They thought that every traveler who inquired the reason why these streams had been given such names, would be made glad by hearing of the three laughing, bright-eved girls, who had so often cheered themselves. Little did they imagine that within a few days their mutilated hodies would be strewn about the camp ground, and the stream christened with their life blood.

The Camp Fire.

Around the evening camp fire, all was congratulation and rejoicing that, thus far, they had come safely on their journey. A few weeks more, and they would reach their goal. Then, the happiness and prosperity that would be theirs, would wipe out all memory of the trials and hardships of their long wearisome journey.

When the emigrants had concluded their reusing meal, a party of Shoshono Indians came into the camp and traded fish with them. They appeared very friendly, and quite misled the emigrants as to their motive in visiting them. Deceived by the assumed friendship of the Indians, the emigrants went to sleep for the night, ignd they would not be molested, and feeling now doubly sure their trials were at an end.

Indian Treachery.

Early next morning the war whoop of the treacherous red skins aroused the weary and sleeping emigrants. Although they found themselves surrounded by vastly superior numbers of their savage foes, they defended themselves most valiantly. For four long days of danger and despair, they held the Indians at hav During that time the three sisters, who were experts in the use of fire arms. fought side by side with the men, and showed the greatest determination and valor. Notwithstanding the valiant defense the emigrants made, they were borne down and finally vanguished by the red skins. Amid the general meles that followed, three men of the party escaped. the three sisters were taken prisoners the men shot like dogs, the women violated, then killed, and finally, the bodies of men women and children, horribly mutilated and hurnt!

The three sisters, because of their great bravery, were kept by the Shoshone chief for a few days. They were finally disposed of as the other women of the party had been before!

No one knowing the history of Maggie's Creek, can cross it without experiencing a mixed feeling of sadness and revenge —sadness at the fate of the whole party, but especially for the happy, innocent girls, and revenge—a revenge that makes our blood boil—against their fiendish murderers.

The fate of these girls, has been the fate of thousands more who have fallen a prey to the bloodthirsty red skins. Happily, the power of the red devils is now broken, the emigrant car has supplanted the "Prairie Schooner," and the brutal savage has no longer an opportunity of percetrating such hellish deeds.

Maggie's Valley.

The valley through which Maggie's Creek flows, also bears her name. It extends northward about 30 miles from the place where we crossed the creek. It has rich soil and is partially settled.

East of Maggie's Valley, we pass along among low hills, keeping the river on our right. The country is similar to that through which we have been passing since we left twelve-mile canon, except that the bottom land becomes broader as we near

Moleen.

Moleen is a small station of no importance. It is 11 miles east of Carlin, and has an elevation of 4,982 feet.

On our right, after we pass Moleen, some scrub codar bushes are seen on the mountains. Six miles east of Moleen we pass the confluence of the South Fork of the Humboldt with the river of that name.

The South Fork.

The South Fork of the Humboldt rises in the East Humboldt Mountains. Its course is almost due north, and its length is about 80 miles. Its waters are much cooler than those of the main stream, and abound with trout of a much finer quality.

South Fork Valley.

This valley is about 15 miles long, and, on an average, about 2 wide. It has a few good farms.

After passing South Fork, the houses become more numerous, and in a few minutes we arrive at

Elko Station.

Alongside the platform on which we alight from the cars is the Cosmonolitan Hotel-a large well ventilated house whose spacious and cleanly kept dining room is always well supplied with the best that can be obtained. It is very conveniently situated, and has a barber shop attached. In the same building are the Post Office and Wells, Fargo & Co.'s office. This being a regular eating station (for trains going both ways), we will enter the Cosmopolitan, and see what Mr. Treat (the proprietor) can treat us to. "Business first and then pleasure." is a good practical maxim. It is ours; so we will take dinner first, and then see the town

71-0

Elko is 606 miles from San Francisco, and 275 from Ogden—elevation, 5,655 feet. It is the county-seat of Elko county, contains 1,200 inhabitants, and is the most active business town we have seen since we have left Sacramento. It is also the point from which passengers and freight are shipped to the White Pine mining districts, on the south, and for Idaho, the Cope, Bull Run, and Bruno mining districts, on the north.

The town is built along both sides of the railroad, which passes through its principal business street. It has a great many stores, saloons, and restaurants; two banks, an ice depot, and "city baths." It has also a church, a handsome court house, and a fine public school. Smelting works running 13 furnaces have been established here, and ore from Utah and other points adjacent to the road both east and west of Elko, are brought here for reduction. Two semi-weekly newspapers—the Independent and Chronicle—are published here. They advocate the political tenets of their respective parties, and have a fair circulation

On the 1st of January, 1869, but four tents occupied the site of the town. Now, it has several fine brick and wooden buildings, although a few canvass roofs are still visible.

Trade.

Elko is the distributing point for freight destined for the mining districts already alluded to. It is also the depot for receiving all the produce of the Clover, Ruby, Starr, Lamoille, South Fork, Mound, and Huntington Valleys. Over 10,000 acres were under grain in these valleys in 1869.

Stages.

Stages leave Elko daily for Eureka, 90 miles, White Pine 120 miles, and other points south; and for Cope 85, Silver City 186, and Boise City 186 miles to the north.

Elko County.

Elico county has an area of 17,100 square miles. It is the best agricultural and grazing county in Nevada. It is watered by the Humboldt Birler and its tributaries, and in its northern part, by the Owyhee. The former abounds with salmon, and other fish. To the casual observer, Elico county may appear only an aggregate of sage-covered plains and mountains, while, on the contrary, experience has shown it to possess a rich soil capable of growing anything adapted to its climate. About a mile from the town on the south side of the river, are situa-

ted the famous White Sulphur Springs (both hot and cold) so favorably spoken of for their medicinal properties. Elko county is full of interest to the invalid, the tourist, the stock raiser, the agriculturist, and the mineralogist.

Ruby Valley.

Among the valleys already alluded to as lying adjacent to Elko, none is so extensive as that just named. It lies east of the Ruby mountains and about fifty miles southeast of Elko. It has good soil, a plentiful supply of water, and about twenty-five fine farms; several of the others valley possess many advantages and come within a radius of thirty miles of Elko.

White Pine.

White Pine, the most famous mining district on the Pacific coast, lies 120 miles south of Elko. In 1869, the silver mines discovered here created the most intense excitement, and in a few months attracted an immense population. The district is in White Pine county, and is composed of several mining camps lying in close proximity to each other. A very great number of claims were taken up and worked with various degrees of success. Among the most celebrated in the early days of the district were the Eberhart, Poor-man's Ledge, Hidden Treasure, California, etc., etc. Several mills were erected, but much difficulty was experionced in obtaining an adequate supply of water; and many mines had to stop work for want of it. The wild, reckless speculation of the early days produced a healthy reaction. People now are more cautious, and mining interests are in a more healthy state. At present

(October, 1870), the district has 16 mills, aggregating 205 stamps, and a crushing capacity of 250 tons per day. The average shipments from this district amount to \$400,000 per month. Although but a short time discovered, it has advanced rapidly. It has now an abundant supply of water and bids fair to be one of the richest and most enduring districts on the Pacific coats.

The Eberhart mine has passed into the hands of an English company, who are putting up a 60-stamp mill. New claims have been developed which, in some cases, have superseded the old ones. Those at present in favor are the Eberhart, Aurora, Aurora Consolidated, Ward Beecher, Hidden Treasure, Iceberg, Manmoth, and others.

Hamilton.

Hamilton is the county-seat of White Pine county, and is the principal town of that district. It is built on the northern slope of Treasure Hill, at an elevation of about 8,000 feet. It has had a population of 5,000, but now, has not more than half that number.

The Inland Empire, a daily journal devoted to mining interests, is published here.

Treasure City.

This city is three miles south of Hamilton. It is perched on Treasure Hill, at an altitude of about 10,000 feet. Its population at one time amounted to about 6,000, but now it is only 1,000. The While Pine News is ubulished here.

Base Metal Range

Lies to the westward of Treasure Hill, and yields a large quantity of galena ore.

which is smelted at

Shermantown.

Shermantown is located in a sheltered value at the foot of the Base Metal Range of mountains, seven miles south of Hamilton. It is famous for its extensive smelting works, employing at present about 20 furnaces, and turning out a large quantity of base silver bullion, which is shipped to the east.

Having taken this hasty view of White Pine, in so far as it affects Elko by drawing supplies from that place, we will now resume our journey.

Leaving Elko, we continue our way along the Humboltt Valley, which, here, is about two miles wide, and has good land. On our right, the river is full in view winding its course in the most arbitrary manner among dense masses of willows.

Osino.

Osino is ten miles east of Elko and has an elevation of 5,135 feet. It is an unimportant station, having only a water tank and section house. There is, however, an excellent range for stock close by.

In a range of mountains lying about 15 miles northwest of the station a vein of good coal has lately been discovered.

Three miles beyond Osino, we enter Osino Cañon—winding, crooked, and about two miles long. Emerging from the onion we cross the head of a magnificent pasture valley, nearly two miles wide, but, extending far to the northward. Several alternate cañons and valleys closely resembling each other in size and appearance are now passed in quick succession.

The North Fork.

Eight miles east of Osino we cross the North Fork of the Humboldt. This tributary rises in the Owyhee mountains, about 100 miles to the northeast. It abounds with fine trout.

The North Fork is spanned by a bridge 126 feet long, and 17 feet high. Just after crossing the bridge, Humboldt Valley opens out, and through a gap in the hills on our right, we can see the high snow-clad summits of the Ruby Range of mountains. They are tipped with snow all the very round.

The scenery from Osino to Wells is very beautiful and contrasts pleasantly with the bald, barren looking country lying east and west of it.

We still keep on winding across the Humboldt Valley, with the river, now much smaller, on our right.

Peko.

Pekeo is a small station with a section house and water tank. The water is pumped up from the river by a small engine which works in a little house on the river bank. Here, also, there is a small garden in which vegetables thrive well, especially those varieties which can hear frost.

Beyond Peko the valley opens out to the north. It is bounded on the south by the towering Ruby Range, now full in sight and capped with snow. Hugging closely the hills on the northern side of the valley for 4 miles, we come to

Hallock.

Halleck is a freight and passenger station for Fort Halleck from which it derives its name. The station consists of freight and ticket office, Wells, Fargo's office, a store, and two or three other buildings.

Camp Halleck.

This post, which is pleasantly situated at the northern base of the Ruby Range, 12 miles south of the station, was established in 1865 by Gen. S. P. Smith. At that time the Shoshones were particularly hostile and troublesome.

This section of country has been the scene of many of their most horrible depredations. No longer back than 1867, 35 Indians were killed by 16 men of Capt. Smith's command, in an encounter they had one mile west of the present Railroad station.

The post is at present garrisoned by two companies of troops—one infantry and one cavalry. It is the head quarters of the State Commander, Gen. W. H. Grier.

Lieut. Wheeler, and a corps of engineers have surveyed a wagon road from this station to Arizona.

Deeth.

This station, which derives its name from Jacob Deeth, a pioneer in the valley, is 12 miles from Halleck, and has an clevation of 5,340 fect.

Passenger trains do not stop here, and for the general traveler it has few attractions. For sportsmen, however, it is "Multon in Parco." Deeth Valley, behind the station, has plenty of sage hen, prairie chieken, hare and rabbit; the river affords excellent fishing; and the mountains to the north are teening with black tailed ider.

Three quarters of a mile east of Deeth we cross the Humboldt for the last time on a bridge 126 feet long and 15 fect high. East of this point, Humboldt Valley opens out to a width of 6 miles. Eight miles from Deeth we cross Bishop's Creek on a bridge 107 feet long and 10 feet high.

Seven miles more brings us to

Tulasco,

A small, unimportant station with an elevation of 5,484 feet, and no other feature worthy of notice.

Eight miles east of Tulasco we come to

Wells.

This station is situated in the end of the Humbold Yalley, and is likely to be of considerable importance before long. It derives its name from the Humboldt Wells, close by, and has an elevation of 5,629 feet. The station consists of a freight building. Telegraph office, section house, two cating houses, Chinese camp and water tank.

The Wells.

These wells are the source of the Humboldt River. They flow out of a valley adjacent to the station, and (large and small) number about 100. Four of these, because of their size, or other distinguishing marks, have a reputation of their own. These are the Pluto, the Sisters and the Cartain.

The Pluto is the largest of the group. This well is about 20 feet in diameter, perfectly round, and of unknown depth. Its water is good, and very clear.

The Sisters are two wells side by side. They are each about 10 feet in diameter, and very deep. The water in these wells contains sulphur and other mineral substances.

food

The Captain is triangular in form, and, like those already mentioned, is very deep. Its water is warm, full of mineral, and is more abundant in its discharge than any of the others.

Clover Valley.

Eight miles south of the station there is a fertile valley of this name. It extends in a southerly direction for 25 miles. In the centre of the valley, and running its entire length, there is a stretch of meadow land four miles wide covered with white clover; it is from this the valley receives it name. In addition to this clover belt there is also a tract of good agricultural land, about 20 miles long and two miles broad, stretching along the foot hills. This is easily cultivated, and consists of sandy loam-very rich and black. An abundant supply of water for irrigation is obtained from the many snow-water streams, flowing from the Humboldt mountains. These are covered with snow all the year round. About 150 persons have settled in the valley, for farming purposes. Its principal productions are potatoes, wheat and barleyfive tons of potatoes, and 1600 pounds of barley, are the average yield per acre.

Johnson & Latham Mining District.

Fifty miles south of Wells Station, on the north end of Spruce Mountain, sereral ledges of galema, chloride, carbonates of lead and allver, have recently been discovered, and the district designated as above. But little has yet been done to test or develop these ledges. They are said to be very valuable, and are in the hands of enterprising individuals.

Steptoo District.

Five miles further south another district, named as above, has been discovered. The ledges here are small but very rich.

The road to these districts is very good, but will, by a little trouble and expense, be shortened some 15 miles. Along its entire length there is plenty of water and

Leaving Wells, we circle round the southern base of the "100-00-Bita" (Wild Cat) Mountains. Eight miles north of the railroad, and running parallel with it, there is a deep, narrow googe, six miles long, called Emigrant Cañon, because the Emigrants formerly followed that route. They were obliged to abandon it, however, because of the advantage at which the Indians held them when enclosed in it.

After leaving Wells, we begin to ascend the Cedar Range of Mountains. The road leads through a hilly country with scrub cedar near the valley, but fine trees of cedar and nut-pine higher up. Four miles from Wells we reach Cedar

Four miles from wells, we reach ceam station, not shown on the time table, but the place where the railroad company obtained their wood while they were constructing the road. Here they had 700 men cutting wood at one time.

Two miles beyond Cedar Station, we come to

Moore's,

A small station, with an elevation of 6,118 feet, perched on the summit of Cedar Mountain. It derives its name from Mr. Moore, who was in charge of the wood-choppers near this place.

Thousand Spring Valley.

About 25 miles north of this point there is an excellent stock-raising valley which

derives its name from the number of springs it contains. It runs nearly parallel with the Railroad, and is fast being settled.

Leaving Moore's, we descend the Cedar Mountains to

Independence. Independence is a small station eight

miles east of Moore's. It has an elevation of 6,007 feet, and derives its name from "Independence Springs," about two miles north of the station.

These springs were famous in early Emigrant days, as a good watering place for stock.

Otogo.

Nine miles from Independence, we come to Otego, a small station, having an elevation of 6,154 feet.

Our readers will have observed that ever since we left Lovelock's, away back in the Nevada Desert—nearly 300 miles —we have been steadily ascending, and now we have again reached the snow-line. Our old friends, the snow-sheds, are again called to shelter us, and under their protection we journey on for the next thirteen miles. Little is lost in the way of scenery, as the country passed over has a bloak and uninviting appearance.

Pequop.

Pequop is the highest station on the C. P. R. R., cast of the Sierras. It is three miles east of Otego, and has an elevation of 6,184 feet.

At this station the road crosses the summit of the Pequop Mountains, which are covered with pine, fir, spruce, and cedar timber. Here we obtain the first view of that celebrated old landmark that guided the early Emigrants—"Pitot's Peak."

We are now running over the last few miles of the second section of the Humboldt division. It begins at Carlin, and ends at Toano. It is 106 miles long.

Toane.

Toano is ten miles from Pequop, 699 from San Francisco, and 182 from Ogden —elevation, 5,970 feet.

Toano is the end of the Humboldt, and the beginning of the Salt Lake divisions. Here the Company have a Round House of fourteen stalls, and a repair shop. The town consists of these shops and about twenty-five other buildings, of which the principal are saloons and eatine houses.

This is the shipping point for freight and passengers going to Pioche, Ely, Egan Cañon, Kern, Pattison, Deep Creek. and Pahranagat Mining Districts, on the south; and to the mines around Boise City, and Idaho City, in Idaho Territory, on the north. An excellent road, passing through some of the best watered grazing country west of the Rocky Mountains, is being constructed between Toano and Boise City. It is expected that when the road is completed Toano will become the principal distributing point for all passengers and freight going to Idaho. The distance from Toano to Boise City will he less than 190 miles

Leaving Toano we have a down grade for 20 miles, on the eastern slope of the Toano mountains.

Two miles east of Toano we enter Loray Cañon—a mountain gorge about five miles long. Emerging from this, we come to

Loray.

Loray is a small station of no importance. It has an elevation of 5,555 feet, and is seven miles from Toano.

Leaving Lorsy, the Toano range of mountains, on our left, stretch away to the northeast. Between us and the Lucin range on our right, ten miles distant, there is a wide extent of valley—wild, barren and forbidding—a monotonous, dreary uniformity, utterly devoid of either beauty or interest.

Montello.

Montello is nine miles east of Loray, and has an elevation of 4.999 feet.

There is nothing to chronicle about this station but the pretty story of the origin of its name. In May 1869, shortly after the completion of the Railroad, a poor woman, then a passenger on an east-bound train, gave birth at this point to a little daughter. This "interesting" occasion, of course enlisted on the hebalf of the mother and child the interest and sympathy of all the passengers. A subscription was immediately taken un amonest them, and handed to the mother. A baptismal ceremony was gone through and the little girl named " Montello Woolworth." In commemoration of this event the station was called "Montello"

In a few days, mother and child resumed their journey, both doing well, and carrying with them the best wishes of their fellow-passengers.

Leaving Montello we draw close to Pilot's Peak. It has been in sight since we left Pequop, but intervening mountains partially concealed it from our view. Now we have the best view of it anywhere obtainable from the railroad. Looking across the plain, to the south, the old "Pilot" is seen towering far above the Lucin Mountains, which are adjacent to it. Pilot's Pack is rather long than round. Viewed from the east, or west, it resembles a cone; from our present point of view, or its opposite, it shows a long, jagged and irregular ridge, stretching east and west.

Tecoma.

Tecoma is a small unimportant station, ten miles east of Montello. It has an elevation of 4,812 feet. There is nothing here to delay us so we hurry on.

One mile beyond the station we pass the "Surveyor's Mound"—a huge mass of boulders, about 500 feet high. This "Mound" and the fantastic conical peaks that aljoin it, form the eastern termination of the Lucin Range of mountains, which stretch away to the westward.

Leaving the Lucin Range, the hills gradually diminish, and we enter upon the "Great American Desert." This extends north as far as Snake

This exertis north as in as snake River—about 100 miles, and south for about 500 miles more. Water cannot be obtained in this desert except in one place, and here it is so bitter that absolute necessity alone can compel any one to drink it.

Lucin

Lucin is nine miles from Tecoma, and has an elevation of 4,495 feet. About ten miles south of the station there are some very rich copper mines. The most famous of these is the "Green Monster." Recently a massive nugget of pure native copper, worth \$117, was taken from this mine. There are about 12 mines of this class. The ore already obtained from them is very rich, and gives great promise of their future

About 200 yards after we leave Lucin station, we cross "Goose Creek"-a small stream which is always dry in Summer. This creek is the boundary line hetween Nevada and Utah



TITAH TERRITORY.

Utah! Where is the man to be found who has not heard of Utah? and the Mormons? and the great Salt Lake? It is almost safe to assume that no such man exists. At all events, it is safe to premise that no man, or woman either, who has heard of them will pass the threshold of their territory without experiencing a lively interest in this wonderful people and their long secluded home. Let not your interest flag gentle reader, they are all before you; and your curiosity will be gratified to the full. You will find them kind, obliging people, willing to answer everyquestion civilly asked.

Utah Territory derives its name from the "Ute" Indians who lived in it. It originally included a portion of Nevada and Colorado.

It lies between the 37th and the 42nd degrees of north latitude and between the 32nd and 37th degrees of longitude west of Washington.

It is bounded on the west by Nevada: on the east by Colorado; on the south by Arizona, and on the north by Idaho.

It has an area of 84,476 square miles.

equal to 54,064,640 acres.

Much of this is mountainous and harron still there is a considerable area which, when irrigated, is susceptible of a high degree of cultivation. Up to the year 1847 this territory was a "terra incomita." In July of that year, 143 Mormons, under the leadership of Brigham Young, entered the territory, and located the site of the present capital, Salt Lake City. Soon after the main body came. Their numbers increased steadily. On the 9th of September 1850, as the Territorial seal shows, the Territory was organized by act of Congress. Although the land of their adoption-their "promised land"was bleak and inhospitable, their only resource was agriculture. To this they accordingly applied themselves, with an earnestness of which what they have accomplished is the best evidence. The area now under cultivation is 150 -000 acres. We are unable to give the exact areas planted with the several different crops, but from statistics obtained from the Surveyor General of Utah, we are enabled to state that the average yield per acre was as follows: Wheat, 33 bushels; Barley, 30; Oats, 31; Corn (maize), 20; Potatoes, 139; Beets, 265; Carrots.

344; Cotton, 151 lbs; Sorghum, 79 gallons; and hay, about 34 cwt. to the acre.

About 100,000 acres of the land under cultivation had to be irrigated. Labor to the value of \$1,500,000 has been expended in the construction of ditches for irrigation purposes; and canals are now being constructed which, when complete, will have cost two millions of dollars.

Nearing Bovine, thirteen miles from Lucin, the dreary monotony of the desert is broken by Desert Mountain—a solitary peak, about eight miles south of the railroad.

The most gorgous mirages are frequently visible near the base of this mountain, from which they extend east and west. Nothing can transcend their beauty. To describe then is impossible. They are ever changing, and ever increasing in beauty. Sometimes, they equal the stupendous Himalaya in imposing grandeur, at others, the Lakes of Killarney cannot compare with them.

Rovine.

Bovine is a small station no longer shown on the time tables. It is 13 miles from Lucin. From the latter station to this, we have been descending gradually. We shall now ascend in the same manner till we reach.

Terrace.

Terrace is situated on the western slope of the Goose Creek Mountains. .

It is the end of the west section of the Utah Division. Here the R. R. Co, have a Round House of sixteen stalls, and a Machine shop capable of employing fifty men. There is no water in the vicinity of this station. The water consumed here is conveyed a distance of eleven miles.

Terrace is eleven miles from Bovine, and twenty-four from Lucin. It has an elevation of 4,619 feet.

Matlin.

Matlin is a small station of no importance, sixteen miles east of Terrace—ele-

Three miles east of Matlin, at "Gravel Side Track," on the eastern alope of the Red Dome Mountains, we obtain the first view of the Great Salt Lake. It lies directly east of us, and is distant about nino miles. The portion of the Lake in view at this point, is Plessant Bay. It attains a more northern latitude than any other part of the Lake.

By and by we shall have a better view of the Lake, so we shall forbear describing it for the present.

Descending the Red Dome Mountains on a steep grade, we lose sight of the Lake, and arrive at

Kelton.

Kelton, or Indian Creek, is 16 miles from Matiin, and has an elevation of 4,222 feet. It is the point of departure for passengers, and freight going to Essira Idaho, and Western Oregon, and is rapidly growing in importance. Daily stages leave this station for Boise City, and Umatilia, Oregon, where they connect with the Oregon Steam Navigation Co's steamers. The stage road passes the Goose Creek Range of mountains, in which several silver mines are being developed.

Along the course of the Snake river, which the stage road crosses about 110 miles from Kelton, some rich placer mines have been found, and a large number of miners are at work. These miners obtain their supplies from Kelton, and in the spring and fall create considerable travel.

Like Terrace, this station has no water. An adequate supply for all purposes is, however, conveyed in wooden pipes from a spring in the mountains, eight miles northwest of the station.

As Kelton is the point of departure for Idaho, we will here glance briefly at that territory.



IDAHO TERRITORY.

Idaho Territory was organized on the 3d March 1863. It is very irregular in shape, and was carved out of portions of Washington, Dacots and Nebraska. It lies between the 42d and the 49th degrees of north latitude. At its southern boundary it extends from the 110th to the 117th meridian, while at its northern boundary it extends from the 116th to the 117th. The state of the was the state of the 116th to the 117th.

It is bounded on the south by Nevada and Utah, on the north by the British Possessions and Wyoming Territory, on the west by Oregon and Washington, and on the east by Wyoming and Montann. Its northeastern corner is eut off by the Rockly Mountains, which enter the Territory at the 45th degree of north the training across it in a north-western direction, terminate in Stephen's Peak, in Shoshone county, near the northern boundary of the Territory.

Idaho has an area of 86,294 square miles, equal to 55,228,160 acres.

The name of the Territory is of Indian origin, and signifies "Gem of the Mountains."

Climate, Etc.

Idaho extends over so many degrees of latitude that it embraces a great variety of climates.

South and west of the Rocky Mountains the climate is mild, while north and east, it is necessarily colder, but withal not severe.

The population of Idaho does not exceed 25,000. They are chiefly occupied in mining pursuits, and confined to the mining districts.

Boise City.

Boise City is the capital of Idaho. It is situated in Boise Valley—an extensive agricultural region watered by the Boise River. Its present population is about 4 000.

Idaho City.

This town, now the county-seat of Boise county, was originally the capital of the Territory. It is 36 miles northeast of Boise City, and has stage-connection

morld

with Kelton, Elko, and Umatilla, in Oregon.

Silver City.

Silver City is the county-seat of Owyhee county. It is 60 miles south of Boise City, and 180 miles north of Elko, Nevada, a station on the C. P. R. R., which our readers will remember, and with which it is connected by stage.

Silver City is chiefly dependent on quartz mining. The mines are situated in War Eagle mountain, about two anda-half miles from the city, and are the richest and best developed in the Territory.

Pleasant Bay.

As we approach Monument Station a magnificent view opens up before us. Curving gracefully around the head of what is so appropriately named "Pleasant Bay," we see its waters rippling against the shore but a few feet from the road-bed. Behind us, the lotty Red Dome Mountains, who have so long kept watch and ward over the unbroken solitude of this infland see, still stand as sentinels upon its western shore. And before us, the pine-clad headlands of the Promontory, with as just a plea, claim to be its sastern wardens.

Grand as this view of the lake is, we shall yet obtain a better.

Monument.

This station, which is seventeen miles from Kelton and has an elevation of 4,223 feet, derives its name from a low reef of rocks which here juts out about 600 feet into the lake, and terminates abruptly in an irregularly shaped boulder about fifty feet high. Leaving Monument we skirt the eastern shore of the bay and travel in a southerly direction for some distance.

Five miles from Monument we come to

Lake,

A signal station exactly on the same level as Monument—4,223 feet. It derives its name from the excellent view of the lake that can here be obtained. Our readers will expect that surely we will say something about the lake now, when we are at a place so famous for obtaining a good view of it.

They must again bear with us. We are about to tell them of something of

vastly greater importance.

We are now running over the most rapidly constructed piece of railroad in the

Ten miles of Track laid in One Day.

From two miles west of Lake, to Rozel—a distance of ten miles, the track was laid in one day! This is the greatest feat intrack laying that ever was accomplished. A sign board on the right of the road macribed, "Ten miles of track laid in one day," marks the spot where the ten miles began. The whole of the paraphermalis for a camp of over 5,000 mea was brought over this ten mile stretch in a single day! All the massive rails, fish-plates, spikes etc., were teamed out on this day—the 29th of April, 1899. The ties for seven miles of the road were first brought a diamond of the road were first brought at lance of \$100 miles, making 2 miles in mil.

How it was Done.

When the car loaded with rails came to the end of the track, the two outer rails on either side were seized with iron nippers, hauled forward off the car, and laid on the ties by four men who attended exclusively to this. Over these rails the car was pushed forward, and the process repeated. Behind these men came a gang of men who half drove the spikes. and screwed on the fish-plates. At a short interval behind these, came a gang of Chinamen who drove home the spikes already inserted, and added the rest. Behind these, came a second squad of Chinamen, two deep on each side of the track. The inner men had shovels, the outerones picks. Together, they ballasted the track. The average rate of speed at which all these processes were carried on, was one minute and 171/2 seconds to every 240 feet of track laid down!

Six miles laid by Noon!

In six hours and 42 minutes, six miles of track had been laid. But dinner time had now arrived, and here were 1,500 men needing food, and six miles away from where they started in the morning! All this had been provided for. The boarding house train had followed up the workers, and, with dinners cooked and tables laid, was close at hand. After dinner, work was resumed, and by evening the extraordinary feat was accomplished. The place where the ten miles ended, was called "Victory" in commemoration of the triumph over the Union Pacific R. R. Co., who never accomplished more than a little over seven miles in one day.

In the latter end of 1869, Victory had its name changed to

Rozel.

Apart from being the scene of the victory, Rozel has no importance, and is

not shown upon the time tables. Its elevation is 4,609 feet.

Leaving Rozel we again bear to the eastward, and, in doing so, commence the ascent of the Promontory Range of Mountains. The lake is for a time hidden from our view.

We can afford to lose sight of it for a little, as we are fast approaching another scene of thrilling interest-a scene which though not reposing so quietly, was, on the 10th of May, 1869, made clad by the presence of many thousands of enthusiastic people, who were jubilant at the completion of the great Railroad enterprise, and made the grand old mountains ring with shouts of triumph and hymns of joy. We are near the place where the East and West shook hands, where the junction between the roads was effected, where the last tie was laid, and from which, as a centre, the telegraph wires communicated the great intelligence that the last spike was driven, and the Continent was girdled with an iron band.

If our readers watch carefully they will be able to discover the very spot. It is casily detected. The ties (aleepers) of the C. P. road are all stem off at the ends; those of the U. P. road are hern with an axe. Where these ties meet is the place of eclebration. It is about 150 yards west of Promontory station, and the mouth of the side-track.

Promontory.

Of Promontory station itself, but little can be said. It is 16 miles from Lake, and has an elevation of 4,905 feet. The train does not stop here long

enough to permit us to walk back and inspect the junction of the two roads, so while we travel on, we must just imagine ourselves on the spot, and among the assemblage that witnessed the imposing ceremonies of

The Laying of the Last Rail.

It is the 10th of May, 1869. The day is clear and beautiful. About a thousand persons are there. They represent all classes of the community, and every State and Territory on the continent. Humble citizens are there. High civil and military authorities are there. From every State from the Atlantic to the Pacific, and from Canada to Mexico, they have come to enact the last scene in a great drama of peace. There they stand assembled on that little grassy plain. All animosities, distinctions, and preindices of race, and color, are forgotten in the all absorbing interest they take in the grand event about to take place. California contributes a splendidly polished laurel tie, and two gold spikes, each designed to he the last. The citizens of Nevada present a silver spike in these words -

"To the iron of the East, and the gold of the West, Nevada adds her link of silver, to span the continent, and weld the irons." With equally appropriate remarks Arizona also gives a silver spike.

These are fittingly acknowledged by Gorcuron Stanfach, President of the Central Pacific Railroad. Now the crowd falls back, and there is an open space with vaengines confronting each other. The last blow is now about to be struck. But see, they uncover their heads, and a venerable man stands forward and in impressive voice offers up this

Invocation.

"Our Heavenly Father, and our God; God of the Creation of the waters and the earth in whom we move and live and have our being, we acknowledge Thee to he the God of the greation of the human mind, with its power and its successes. Now, on this beautiful day, in the presence of these lonely hills and golden summits, we render thanks that thou hast by this means brought together the East and the West, and bound them together by this stronger hand of union. We implore Thee that thou wilt bless this work of our hands, which we have now completed.this monument of our labor. And that Thy blessing may rest upon it so long as the hills remain among which the ends have been bound together. We thank Thee for the blessings thou hast conferred on us and other nations: bless our future and those whom thou hast appointed to conduct us in it. We again acknowledge Thy power, and beseech Thee to bless the waters that wash the shores of our land-the Atlantic of strength and the Pacific of love; and to Thee and to Thy son, Jesus Christ, shall all honor and glory be ascribed. World without end. Amen."

The magnificent tie of California laurel, with its commemorative silver plate is now put in position. The rails are laid. A gentleman from California presents Governor Stanford with the gold spike and says:—

"The last rail needed to complete the greatest railroad enterprise of the world is about to be laid. The last spike needed to unite the Atlantic and Pacific by a new line of travel and commerce is about to be driven to its place. To perform these acts the East and West have come together. Never since history commenced her record of human events has she been called upon to note the completion of a work so magnificent in conception. so marvellous in execution When Vonice was mistress of the seas, and her Argosies let go their anchors in every port. it was the custom of her Doges to propitiate the genii of the seas by wedding the Adriatic with a costly jewel. More proudly than Venice can America hoast of her wealth and commerce. Not the sea only but the continent is made thus a pathway. Unlike the Doges of Venice, we have no genii of the seas to propitiate, but in emulation of their example, we may fitly ornament and decorate with gold and silver these iron rails on which to a large degree the trade and travel of the continent is about to rolland it is in this mode that California. within whose borders and by whose citizens the Pacific Railroad was inaugurated. desires to express her appreciation of the vast importance to her and her sister States of the great enterprise which, by your joint action, is about to be consummated. From her mines of gold she has forced a spike, from her laurel woods she has hewn a tie, and by the hands of her citizens she offers them to become a part of the great highway which is about to unite her in close fellowship with her sisters of the Atlantic. From her bosom was taken the first soil-let hers be the last tie and the last spike. With them accept the hopes and the wishes of her people, that the success of your enterprise may not stay short of its brightest prominog "

The Blow Struck

Preparations are complete, the telegraph operators are on the spot ready to flash the tidings to the remotest parts of the earth. To the East, and to the West. the intelligence is transmitted :- " Hats off, prayer is being said!" East and West take off their hats-a nation holds its breath! The prayer is ended. The silver spikes and one of the gold ones are driven, and there, with his silver sledge gleaming in the morning sun, stands Governor Stanford, whose blow will literally be heard further than any struck by mortal man. The ancient myth is realized, and there stands the modern Jupiter with the thunderbolt in his hand. The sledge descends, once, twice, thrice! The alarm bells of all the principal cities strike one, two, three, and immediately the crash of cannon and the shouts of a delighted continent announce the tidings. It is done !

The two locomotives move up till their pilots (guards), rub together, as if to greet each other a lasting friendship.

What the Engines Said.

(From the Overland Monthly.)

What was it the Engines said, Pilots touching—head to head Facing on the single track, Half a world behind each back This is what the Engines said, Unreported and unroad!

With a prefatory screech,
In a florid Western speech,
Said the Engine from the WEST:
"I am from Sierra's creat;
And, if altitude's a test,
Why, I resken, its confessed,
That I've done my level best."

Said the Engine from the East:
"They who work best talk the lesst.
Spose you whistled down your brakes;
What you've done is no great shakes:
Pretty fair—but let our meeting
Be a different kind of greeting.
Let these folks, with champagne stuffing.
Not their Engines, do the puffing.

Listen! Where Atlantic bests
Shores of enow and summer heats;
Where the Indian astuma skies
Faint the woods with wanpum dies:
I have thesed the fringe on.
Shores and the theory of the state of the sta

Said the western Engine, "Phew!"
And a long.low whisele blew,
"Come now, really that'e the oddest
Talk for one so very modest—
You brag of your East! You do?
Why, I bring the East to roo!
All the Orient—all Cathay—
Find through me the shortest way.
And the sun you follow here,
Riesi in my hemisphere.
Really—if one must be rude—
Length, my thrend, sint longitude."

Said the Union: "Don't reflect, or I'll ran over some Director." Said the Central! "I'm Pacific, But when riled, I'm quite terrific. Yet to-day, we shall not quarrel Just to show these folks this moral, How two Engines—in their vision—Once have met without collision."

That is what the Engines said, Unreported and unread. Spoken slightly through the nose. With a whistle at the close.

One of the gentlemen present on the "memorable occasion alluded to, said:"The great Benton prophesied that some "day a granite statue of Columbus would "be erected on the highest peak of the "Rocky Mountains, pointing westward, "denoting this as the great route across
"the continent. You have made that
"prophesy to-day a fact. This is the
"way to India." He might have also

added "and to Australia" Let not any of our readers regret that they had not an opportunity to bring away with them a piece of the last tie as a souvenir The last tie was immediately taken ont of its place and replaced by an ordinary one of common pine. Even that no longer exists except it be in infinitessimal splinters which are scattered over the land, and, treasured up as precious relics. The last spike was made into gold rings, and each of the following gentlemen presented with one: Gen. Grant. Wm. H. Seward, Leland Stanford, President: C. P. Huntington, Vice President; John B. Turner, Director; and George L. Dunlan, General Superintendent of the Central Pacific Railroad, John Duff, Director: and C. G. Hammond, General Superintendent of the Union Pacific Railroad. W. B. Ogden, Ex-President of the Chicago and North Western Railroad, and to George M. Pullman, and A. B. Pullman of the palace cars.

Salt Lake.

Descending the eastern alope of the Promontory mountains, we again come in view of the Great Salt Lake. Away to the right, and hundreds of feet below us, we see it spead out like a vast inland sea, its placid bosom, like a great mirror, reflecting the move dad summits of the Wahastch mountains. Between the base of the mountains and the margin of the lake, there is an intervening strip of waste land, covered with a rank kind of grass peculiar to the salt lands surrounding the

lake. Looking back to the westward, we see the mountainous Promontory stretchching southward far into the bay. A little above its glassy shore we see its undulating meadows rising gently into verdant terraces. Higher up its varied and fantastic headlands are adorned with clambering shrubbery which grows thicker as the altitude increases. And above this rise up, as if fifty to complete the scene, the towering summits crowned with splendid forests of Pine and Cedar.

To the south we see Fremont Island, and still beyond, the larger Antelope, blending their verdant tints in pleasing harmony with the charming landscape.

To the eastward we gaze across the placid waters of Bear River Bay; and beyond, we see the prettily situated town of Corinno, 30 miles distant. An occasional farm house, surrounded with cultivated fields, and enclosed with live fences, fills up the fore-ground. In the back-ground, the snow-lad summits of the Wahastch Mountains complete the picture.

Such are a few of the principal features of the beautiful landscape we have visibly endeavored to portray. It is one of vivid beauty, and one which impresses itself upon the memory with ineffaceable distinctness. Those who have seen it can never forget it; and those who have not, we refer to our illustration on the opposite page.

The Great Salt Lake is over 100 miles long by about 45 wide. Several islands rise from its surface—some of them to a great altitude. Antelope Island is the largest of the group. It is fifteen miles long and six miles broad at its widest part. It is said the cattle belonging to the Mormon church are kept on this island. Stanisbury Island, the second in point of size, is 27 miles in circumference. It has a central ridge that rises 3,000 feet above the lake. Besides these, there are several other islands in the lake. The chief of these are the Fremont, Carring-

ton, Hat and Dolphin islands.

The lake derives its name from the great quantity of salt it holds in solution. Nearly a fourth of its weight is solid matter, and, at least twenty per cont. of the gross bulk is chloride of sodjum or common salt. Although the lake receives the Bear, Ogelen, Weber and other fresh influents, its supply of salt is inexhaustible.

Blue Creek.

Ten and a half miles from Promontory we cross Blue Creek. It flows out of an excellent stock valley. Blue Creek station is not shown on the time tables, but it may be at some future day. Three or four miles from this station.

Three or four miles from this station, at a short distance from the road, there are some small lakes of fresh water abounding with fine trout.

Corinne.

Corinne is 29 miles from Promontory, 857 from San Francisco, and 1,056 from Omaha—elevation 4,230 feet. It is the only Gentile town in Utah Territory. It is located on the west bank of Bear River, about 200 yards south of the Railroad, and nearly eight miles north of the margin of Great Salt Lake.

The town was laid out and lots sold in March, 1869, under the U. P. regimé, by General James A. Williamson, their land agent. The town derives its name from his daughter "Corinna."





BEAR RIVER BAY OF THE GREAT SALT LAKE, UTAH TERRITORY.

Although so recently laid out, it has grown rapidly, and already numbers over 1,000 inhabitants. It has two churches, two schools, a large opera house, several hotels, stores, and outfitting establishments. It also supports one daily paper—the Utah Reporter.

Situated on the only navigable river between the Missouri and the Sacramento rivers, it has also the best position for a forwarding business. It is the point of departure for freight and passengers bound for Montana Territory, and the southeastern part of Idaho. A small steamer—"Kate Connor"—owned by Gen. Connor, makes frequent excursion trips, etc., on the Lake, on which occasions she calls at Corinne.

Stages.

Stages leave Corinne daily, on arrival of western trains, for Montana Territory. The junction of the Virginia City and Helena roads is 300 miles from Corinne. All passengers bound for remote points in Montana go to the junction together.

Distances from Corinne, by stage—
Bannock, 350 miles; Virginia City, 360;
Silver Star, 385; Silver Bow, 400; Fort
Shaw, 450; Diamond, 475; Deer Lodge,
480; Helena, 480; Union'ille, 485; Bozeman, 500; Black Foot, 500; Fort Ellis,
550; Missoula Mills, 500; and Fort Benton, 620.

Valleys.

Besides Bear River Valley, on the south end of which Corinne stands, there are several other fine valleys in this vicinity.

Cache Valley,

Lying 22 miles northeast of Corinne, is about 50 miles in length, and ten in breadth. It is watered by the Blacksmith's Fork of Bear River, has good soil, several farms and a plentiful supply of timber on the adjacent mountains. There are two smaller valleys, similar to Cache Valley. Both are partially settled — have good soil, and abundance of water. Several varieties of fish are found in the mountain streams; and the adjoining hills are teeming with game of various kinds.

Malad Valley.

Mahad Valley lies north of Sear River Valley, with which it is connected. It is 20 miles long, ten broad, and watered by the Mahad River. It is extensively settled, having Mahad City-propulation 800—finely situated on the bank of the river in the upper end of the valley, and Fortage Town—population 100—located in its centre.

Logan.

The town of Logan is pleasantly situated in the centre of Cache Valley. It has a population of 3,000, and gives promise of being a place of considerable importance.

MONTANA TERRITORY.

Montana Territory lies between the 45th and 49th degrees of north latitude, and between the 27th degree of longitude west of Washington, and the Bitter Root Mountains, which terminate on the 39th degree of longitude. It is bounded on the south by Woming Territory, on the north by the British Possessions, on the west by 148ho, and on the east by Daota. It has an area which, as nearly as can be ascertained from its irrevalural shape

without an actual survey, amounts, to 172,800 square miles, or 110,592,000 acres.

Like Nevada, Montana has a general elevation of about 4,000 feet above the level of the sea. Her climate, however, is less severe than lower and more eastern States in the same letitudes.

Montana has heretofree been considered valuelese, except as a mining region, but now is acknowledged to possess many rich valleys admirably adapted for egricultural purposes. Her importance in a mining point of view is also greater than ever. Many rich discoveries have recently been made, and Placer mining is being vigorously prosecuted. In the spring of 1870, great numbers of miners and new settlers entered the Cerritory.

Helena.

Helena is the capital of the Territory and its most important town. It was on one occasion completely destroyed by fire, but within 60 days it was rebuilt more substantially. It has a population of about 7,000, and supports two newspapers —the Heruld, weekly, and the Rocky Mountain Gaztet, daily and weekly.

Deer Lodge.

Deer Lodge, the county sent of Deer Lodge county, is situated on the banks of the Deer Lodge River, a tributary of the Columbia. It is located in a magnificent valley of the same name about 50 miles long and varying in width from three to 15 miles. At the head of this valley is the celebrated Deer Lodge Pass— —the prospective route of the Northern Pacific Railroad. Leaving Corinne, we cross Bear River on a Howe truss bridge 180 feet long, and supported on redwood piers.

On our right, as we cross, there is a rudely constructed pontoon bridge for the passage of teams and animals. Higher up on the left, the piles on which a former bridge rested will be seen, sticking up out of the water.

Passing several lagoons on both sides of the road, we journey on. On our left, the Bear River Valley stretches out to the eastward till it rises into a fine upland at the base of the Wabsatch Mountains. The latter viewed from this point have a most imposing appearance, and will certainly challenge the admiration of the traveler.

Brigham City.

That little town on our left, nestling so snugly at the foot of the mountains, is Brigham City. It is 12 miles from Corinna, and, as is name suggests, is a Mor, mon town. The elevation of Brigham station is 4,220 feet. The town is of course, considerably higher. The site of the young city is a very good one, and cannot fail to add to its importance at no distant day.

Willard City.

Willard City, another pretty little Momon town, containing about 800 inhabitants, and situated just as pleasantly and advantageously as Brigham City, lies a little further to the eastward. Many gardens with their groves of fruit trees, can be seen from the cars. Altogether, the town seems to have that look of quite and comfact which is so much admired.

From this point, the farms become numerous on the left side of the road, and also on the right, except where the lake comes close up to the Railroad. The view of the lake obtained when riding along its northern edge is very beautiful.

Bonneville

Is an unimportant station, not shown on the time tables. It was formerly called Hot Springs, because of some hot springs near the Railroad.

The Broad Ledge.

While traveling along through this very interesting country, our readers will perhaps not have noticed a broad ledge running along the side of the mountains, at exactly the same elevation above the edge of the lake. See, there it goes, clear round the mountains.

In trying to account for this well defined line, some people have advanced the theory that it has been formed by avalanches which in their downward course, have carried a part of the mountain side with them and deposited it where we now see this belt. However ingenious this theory may be, it will not account for the ecomess of the line, or rather lines, for there are several of them, all parallel to each other and to the surface of the lake.

There can be no question that the lake at some time, in the annals of the past, has been level with these lines, and, indeed, has caused them, by the washing of its waves upon the mountain sides. But here we are near the terminus.

Before leaving the cars let us take a brief

Retrospect of the C. P. R. R.

We have now traversed its entire length

—881 miles; and when we consider the
very great natural difficulties the Company had to contend with, and how rap-

idly the road was built, we can hardly realize that we have traveled over it safely. But here we are safe and sound, and justice demands that we bear willing testimony to the unexpected excellence of the Central Pacific Railroad of California.

It may be appropriate to state here, that the Central Pacific Co. did not allow any "grogseries," or "gin mills," in their camps, while they were constructing their line. By this wise precaution, debauchery and bloodshed were avoided, and the work satisfactorily done.

The Union Pacific Company could not, or did not follow a like course, and the result was, that every town which, for the time being, was the end of their line, was a perfect hell; violence and nurder kept pace with the line, and there are few towns between Ogden and Omaha, which do not contain the remains of more than one desperado.

We shall notice these as we go a long. Before describing Ogden, let us here say to our readers that if they are going to stay here for any length of time to rest, or look about them, the

Ogden House,

Kept by Mr. J. J. Mahon, is the best hotel in Ogden. It has well furnished family rooms, and good accommodations. It has also a free conveyance to and from the house. It is, in fact, the only suitable place to put up at in Ogden.

Ozden.

Ogden is an important place. It is the great meeting point for the Central Pacific, the Union Pacific, and the Utah Central Railroads. And here are extensive side-tracks, curves, depots, etc., etc., for the transhipment of passengers and freight. Here also, is the Ogden Junction Eating House, the first regular Eating Station we meet (going East), on the Union Pacific line

Ogden City.

This City lies about half a mile north of the Railroad Depot. It is about eighteen years old, and has a population of about 4,500. Until the construction of the Trans-Continental Railroad, it was strictly Mormon, but, since that time, its population has become mixed with Gentiles.

It presents the usual appearance of Mormon towns. The houses are small and far apart, and the spaces are filled up with gardens. It is rapidly assuming the character of other Railroad towns. Saloons, and Billiard Rooms, are becoming numerous.

Ogden receives its water supply from a creek flowing through a cañon behind the town

Difference of Time.

There is a difference of Railroad time at Orden.

The Central Pacific trains run on San Francisco time; the Union Pacific, on Laramie time, and the Utah Central, on Salt Lake City time.

Salt Lake City time is forty (40) minutes ahead of Central Pacific time; and the Union Pacific time (at Ogden), twenty (20) minutes ahead of Salt Lake time.

To avoid mistakes, it is well to set your watch to the time used on the line by which you are going to travel.

Thirty-six miles south of Ogden lies Salt Lake City—"the City of the Saints." A ride of a couple of hours will bring us to that wonderful place, and give us an opportunity of seeing for ourselves the manner of life of this exceedingly interesting people.

We shall certainly avail ourselves of this opportunity, but, before doing so, let us clance briefly at the history of

The Utah Central Railroad.

The Utah Central Railroad Company was organized on the 8th of March, 1869, On the 17th of May following, ground was broken and the first sod turned by the President of the Company, Ex-Governor Brigham Young. Grading soon after commenced, and, but for the difficulty of obtaining iron, the line would have been completed in November. The Union Pacific Railroad Company was largely indebted to the Mormons for work done on their line. They paid them in iron and rolling stock. Notwithstanding repeated delays in receiving rails, etc., from the Union Pacific Company, the track was brought into Salt Lake City on the 10th of January, 1870.

Shortly after two o'clock on the afternoon of that day, the last spike was driven by Brigham Young, President of the road. About 15,000 persons were present on the occasion. Speeches were made, and congratulations received by telegraph. At night, the city was illuminated, and a grand ball was given at the theatr is honor of the even.

The Utah Central Railroad was constructed under very exceptional circumstances. Without subsidy or grant; without a mortgage being given, or shares offered for sale outside of the Territory; and while there was but little money in circulation amongst the people of Utah, they cheerfully engaged in the labor of building the road, and took stock in the company for the work done.

Off to Salt Lake City. Having given this short sketch of the

Utal Central Railroad and the circumstances under which it was constructed, we will now step on board the cars bound for the capitol of Mormondom.

Crossing the Weber in a southerly direction, we pass through a deep cutting out on to an open plain similar in quality and covering to that we saw east of Corinne.

On our right, the Great Salt Lake stretches out magnificently. Hage islands rise from its bed and enhance the beauty of the landscape. Whether this is beautiful or bleak will depend entirely upon whether it is seen clothed in Summer glory or shrouded in Winter snow. On the east our view is bounded by the Wahastah Range, which continue about the same altitude as when first we made their acquaintance.

Kaysville,

Sixteen miles from Ogden, is the first station we come to. It is more of a settlement than a town, and has about 1,000 inhabitants.

Five miles and-a-quarter farther on, and having a more compact appearance, is

Farmington,

The county seat of Davis county. Many gardens surround it, and some fine houses can be seen in its upper portion. It contains about 1,200 inhabitants.

Continuing on our way through a better farming country we arrive at

Controville

Centreville is four miles from Farmington. It is a somewhat scattered village of about 700 inhabitants, and is famous for sending early fruits and vegetables into market.

Wood's Cross.

Two and a quarter miles from Centreville, we come to a place named as above, which does duty as a station for Bountiful—a straggling settlement off to the left and containing 1,000 inhabitants.

Leaving Bountiful on our left, and the lake behind us on our right, we are carried along, and in a few moments put down among the Mormons in

Salt Lake City.

This famous city, is one of the most beautiful, as well as most pleasantly situated cities in the world. It is located at the foot of a spur of the Wahsatch Mountains, which appear to circle round it with a fostering care. Its northern limit extends on to the "bench"-an unland which connects the plain with the mountains. Its streets are 132 feet wide, laid out at right angles to each other, and parallel to the cardinal points of the compass. Each street is profusely adorned with shade trees, and has a stream of clear water gargling down its sides-a decided improvement on the offensive gutter now so rarely met with. The city covers a large area. The blocks in the centre of the city contain ten acres. These were divided into eight lots of an acre and a quarter each. Such portions of these lots as are not required for building purposes are laid out in gardens and orchards. In summer these give the

city a most beautiful appearance, suggestive of health and comfort.

Public Buildings.

Of these there are several. All are interesting, and some are extraordinary. We shall visit some of them.

First in order comes

The Temple.

This embryo building is situated in Temple Block, and is now in course of construction. The building of the Temple was begun on the 16th of April, 1853. From various causes it has been retarded, and now, after the lapse of 18 years, its walls are only level with the ground. The writer was informed by one of the Mormons that as soon as they resumed the building of the Temple, they were sure to get into some trouble.

The extreme length of the Tumple will be 1894/tect, it with, 90 feet. Its foundations are laid 10 feet under the surface and its walls are eight feet thick. It is being built of grey grante obtained from a cailon in the Walsastch Mountains. It is intended to have three towers at each end of the building. The two centro ones will be 200 feet high, and will have circular stairways leading to the different stories, of which there will be three. The foundations of the Temple cover an area of 21,800 feet. When completed according to plan shown visitors, it will be a very impossing edition.

The Tabernacle.

This building, which if not the largest, is certainly the most extraordinary in the United States, lies immediately west of the Temple, in the same block. It is the first object that attracts the traveler's eve, and seen from a distance looks like a huge bell. It is built from designs drawn by one of the Mormons-Mr. Henry Grove. In form, it is elliptical. It has a length of 250 feet, and a width of 150 feet inside. The roof is supported on 46 columns of red sandstone, nine feet by three, and rises in an unbroken arch to a height of 62 feet. When the Tahernacle was first erected, its acoustic properties disappointed its builders. To rectify this, a gallery capable of seating 4.000 persons has lately been built around it, except at its western end. The addition of this callery has had the desired effect The acoustic properties of the Tabernacle are now all that could be desired while its seating capacity has been increased so that there is now room within its wells for 12,000 persons

The speaker's stand is at the west end of the building. It is raised five feet above the floor, and contains three seats, rising one above the other. These are for the presiding authorities. Behind these are seats for a choir of forty voices. Still farther behind, and at a little higher elevation is

The Grand Organ.

It is the third largest in America, and the largest ever built in the United States. It is complete in all its details, and, with the exception of the metal pipes, was built entirely by Mormon artifacers, of material obtained in the territory. It has two manuals, the great and swell, and

is 48 feet high, 30 deep, and 27 wide.

Mr. Ridges was the organ builder, and

Mr. Danes is the organist.





Engraved by G. W. SHOURDS. From a Photograph by SAVAGE & OTTINGER.

The Old Tabernacle.

The old Tabernacle is in the same block. It was built in 1851. It is similar in shape to the new one and can seat 2,500 persons.

Being smaller, and built of sun-dried brick, it has not so imposing an appearance as the new one, but its acoustic properties are, if anything, better.

The Theatre, Council House, Court House, and City Hall, are all worthy of a visit. The former has sitting room for 1,700 persons.

In connection with the Theatre, it may be remarked that, by taking out the seats in the parquette and putting down a floor. which is kept ready in sections, a ball room is improvised canable of accommodating 200 persons at a time. All dances in which the seves "hug" each other, such as waltzes, etc., are carefully eschewed among the Mormons. A series of circles about eight feet in diameter are drawn upon the floor of the Ball room, These are divided into four parts severally marked 1, 2, 3, 4. The Dancers take their places on these circles. However good these circles may be for the purpose for which they are intended, they demonstrate the fact, most conclusively, that the Mormons do not dance "on the square!"

Private Residences.

Several of these are very fine, particularly those of Brigham Young. These are surrounded by a wall built of cobble stones and mud. Two of them are distinguished by different emblems, one, having a conchant Lion over the porch, called "The Lion House;" the other has a bee hive on theroof, and is distinguished as "The Bee Hive House."

Stores.

In Salt Lake City, many fine buildings are devoted to merchandise. The principal of these are Godbe's, and Jenning's buildings.

The Mormons transact business on the cooperative principal. Over their stores they have placed sign-boards having the all-seeing eye painted in the center and surrounded by the inscription:—"Holiness to the Lord; Zion's Cooperative Mercantile Institution."

Newspapers.

Salt Lake City and vicinity supports two newspapers. They are The Descret Nees, organ of the Church of Jesus Christ of Latter-Day Saints, George Q. Cannon, editor and proprietor—daily and weekly. The Salt Lake Telegraph, daily and weekly. The Hord, daily. The Mormon Tribune, (organ of the library of the Christopher of the Christopher of the Latter Latter, semi-weekly. The Juneau Ender Latter of the Christopher of the Christophe

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Prior to the opening of the country by railroads, there was a large and steady demand for the produce raised in this Territory. The various stage lines plying on each side for about three or four hundred miles, consumed a large quanity of grain. So did Montan and Idaho. And the emigrant trains passing through, on their way to California, also required a considerable quantity.

The advent of the railroads has changed all this. To a large extent, the stages have been driven off the roads. Montana and Idaho can procure their supplies cheaper elsewhere, and indeed, are Before returning to Ogden, let us just glance briefly at Arizona Territory, which adjoins Utah on the south.

ARIZONA TERRITORY.

Arizona is a corruption of Arizuma an old Aztee word, signifying "Silver bearing." Arizona Territory lies between 31° 30′ and 37° north latitude, and between 109° and 114° 40′ longitude west of Greenwich

It is bounded on the north by Utah, on the south by Mexico, and on the west by the Colorado River, which separates it from California.

It has an area of about 90,000 square miles, or 57,600,000 acres. Although Arizona was one of the first

Although Arizona was one of the lines settled countries on the Pacific coast, less is known concerning it than almost any other. The depredations of the hostile Apache Indians have been a serious hindrance to its growth and prosperity.

It has a magnificent climate and boundless resources. Its mineral resources are popularly believed to be rich beyond precedent; and its grazing and agricultural capacities all that could be desired. Because of the remains of Aztec civili-

Because of the remains of Azee civilization, which everywhere abound in Arizona, much interest centers in this Territory.

An Alla correspondent writing from

Phonix, Salinas River, Arizona, on the 26th of October, 1870, says: Remains—Ancient Aztec Civiliza-

Remains—Ancient Aztec Civilization.

"The casas grandes of the Gila River, above the Pimo villages, have long been known to the explorer, and have, with other ancient remains, long excited the curiosity of archeologists. The Salinas Valley presents as wide a field of observation, and as large a study, as any portion of the world, illustrated by the energy and akill, and examination and description of Stephens or Squire. Whether it be Central America, Venezuela, Peru or Central Merico, not one of these famous localities have a claim superior to that of the one from which I write. Here, remains and tradition alike compel attention, and here centres—the earliest traces of civilization—the home of Montezums.

"As the barbarians of the North came down in an irresistible tide and swent into the darkness of the Middle Ages Southern Europe-so did the barbarians of North America sweep down upon the Italy of this continent, and obliterate a civilization, how perfect, we cannot tell, but certainly of a far superior type to that of their successors, the present Indians, called peaceful. When some Champollion of our country shall arise and translate for us the hieroglyphics found everywhere on the pottery of these lost tribes, and their word-painting on the rocks, which are to us now only vain symbols, empty of meaning, then, and not until then, shall we read aright the history of this people, we call Aztec, and know not why.

A Tradition of Montezuma.

"Juan Josè, the peace Chief of the Maricopas, says these monuments are the work of Montezuma. That the wonderful head and bust so clearly seen in the face of the mountains west of Maricopa Well, is that of the great Aztec Chief, who sleeps, waiting for the day when with the rising of the sun he shall come and resurrect his people, and rule over them in eternal peace and glory. It is the story of our Saviour over again, except that 'He cometh to judge the world.' The Pimos keep a constant watch for Montezuma's coming, and it is said that the sacred fire, like that of the Ghebers and Parsees, is never allowed to expire. The one eye of Montezuma is on the guard always, and is potent te keep them faithful to their trust.

"The profile of Monterume shows alluded to, is surely one of nature's finest freaks, done in her best mood. The admirable dignity, beauty and sweetness of repose of that face cannot be exaggerated. I thought on looking at it, if Story -the sculptor, our modern Crichtoncould see it, he would gain a new study. from which he might produce a statue which would rival his Cleonatra or Sibyl. The Pimos generally say that these remains were made by their ancestors-they know not how long ago-driven south by the Apaches, they settled in other parts of Mexico, and built the cities since made famous by explorers and ethnologists. The Moguris, who live north of the Pimos, and speak the same language. have the same customs and teachings, say their home was once in this valley. and they earnestly desire to return where they irrigate the land and raise their cotton and wheat. If I may hazard a theory, I would say that the peaceful tribes of Pimos and Papagos we now find in Arizona, came back to their old haunts with the Conquistadores and the Franciscan priests, who established missions in many fruitful valleys, and gathered around them these Indians, who probably had before a rade agriculture and architecture, but learned of God from these holy men. The remains of the mission of St. Kavier and Tunacasori give visible evidence of this truth, and more evidence can be obtained in other localities widely separate on the Colorado and Gila 'reres'."

Having thus briefly viewed the Mormons, their history and territory, and taken a look at Arizona and the Aztecs, we will now return to Ogden.

Before we set out afresh on our eastern

journey, it will be well, however, to acquaint ourselves with the history of

The Union Pacific Railroad.

It will be remembered that the Charter for the construction of the great Trans-Continental Railroad was granted in July 1882. The Central Pacific Co. had their base of operations at Sacramento, in the West; and the Union Pacific Co., at Omaha, on the Missouri River, in the East.

The Central Pacific Company broke ground at Sacramento, our readers will remember, on the 8th of January, 1863, but the Union Pacific Company did not do so until the 5th of November, 1865.

In October, 1863, a preliminary organization was made, and subsequently a formal one was completed.

In August following, the final contract for construction was let, but so great were the difficulties to be overcome, that, for some time, but little progress was made. Omaha, the initial point of the Union

Omans, the initial point of the Onion Pacific line, was destitute, not only of the material, but also of the mechanical skill and manual force necessary for the construction of the road.

Mechanics and laborers had to be summoned; places for supplying their food. and lodging houses had to be constructed. Implements of all necessary kinds had to be imported from Boston, Philadelphia. New York, and other Eastern cities There was no railroad communication nearer than 150 miles east of the Missouri and from that noint everything had to be transported by the slow process of wagon trains. The country adjacent to the base of operations, both east and west of the Missouri, was absolutely destitute of timber for construction purposes. And even the very ties for the road had to be cut in the forests of Michigan, Ohio, Pennsylvania, and New York, and brought across the country by team, at a cost of nearly three dollars per tie. Supplies for the large force employed in constructing the road had also to be transported in the same slow and expensive manner.

These difficulties were finally overcome, and the work begun in earnest. At first, the Union Pacific Company's progress was undoubtedly slow—so slow that up to January, 1866, but 40 miles of the track had been laid. By this time their arrangements were complete, and by the same month of 1867, 305 miles were completed. This stretched to 540 miles in January, 1868. In March, 1869, the Company's cars had passed through Ogdien, and on the 10th of May, of that'y ser, connected with the Central Pacific line at Promontory, 1055 miles from Omaha.

Thus, in spite of predatory herds of savages, and other difficulties, that threatened to prevent the completion of the work, the great Trans-Continental Railroad was made an accomplished fact. We have seen from the foregoing that the U.P.R.R., constructed in all 1,085 miles of the Great Trans-Continental Railroad. Having sold to the C.P.R.R. that portion of the road between Ogden and Promontory, the U.P.Co. still retain and work the 1,032 miles of road lying between Ogden and Ormaho.

It may be interesting to our readers to know the amount of rolling stock required to work this long line.

The following list has just been received from the head office of the U.P.R.R.Co. for insertion in this work, and can be implicitly relied on. In as much as it differs from other lists purporting to give this information, it only shows how far they are from the truth.

Rolling Stock of the U.P.R.R.

Rolling Stock of the U.P.R.R.
Locomotive Engines 153
Passenger Cars, 1st Class 24
" 2nd " 22
Mail and Express Cars , 14
Officers' Cars 1
Ass't Supt's Cars 1
Lincoln Cars
Emigrant Cars
Caboose " 68
Wrecking " 5
Dirt and Gravel Cars 52
Fast Freight " 108
Baggage " 14
Stock " 48
New Dump " 50
Rubble " 8
Box Freight "
Flat "
Coal " 385
Fruit " 12
Powder " 2

3,338

Total



From a Drawing by FRED, WHYMPER,

Engraved by G. W. SHUURDS.

Eastward Ho!

We will now step on board the cars of the U.P.R.R., and proceed on our east-

ward journey.

A glance at the cars in which we now find ourselves is sufficient to convince us

find ourselves is sufficient to convince us that our comfort will be as much cared for as it was on the C. P. road. The fittings of the cars are much the same as those we have left, although in style of finish, color, etc., they are slightly different.

After a preliminary warning given by the bell, the engine begins to snort, and we are once more finally started.

Leaving Ogden, we find ourselves carried along the north bank of the Weber River which flows through the valley and nourishes a luxuriant crop of willows on its banks.

Small farms enclosed with live fences, and dotted over with the small log houses of their Mormon proprietors are very numerous till we reach

Uintah.

Uintah is 7½ miles east of Ogden, and has an elevation of 4,550 feet.

Prior to the completion of the Utah Central Railroad, this was the point of departure for the stages which plied to Salt Lake City. They are now taken off, and there is nothing to support the town but its small farms. It consists of a few small stores on the right of the road.

Leaving Uintah, and with it the Salt Lake Valley, we continue our course along the left bank of the river until our progress seems barred by the Wahsatch mountains, which circle round before us. Providence, however, has literally opened up our way before us; taking advantage of its goodness, we enter

Weber Canon.

Weber Cañon is famous for its imposing scenery.

To describe its various charms would cocupy more space than we can afford; and moreover, there is not time to do so; for although ascending a steep grade, and joing unanally slow, we are passing objects of interest so rapidly that we can only give them brief mention as we pass.

On each side of us rise tall gigantic butterses of black-looking rock, whose very frown inspires us with awe. Beneath us, on our right, the Weber river rushes along as if in haste to escape from its gloomy prison walls, to bask in the sunshine beyond. The heavy grade begins totall, and although the Iron Horse pants vigorously, and pulls with might and main, our sneed is percentibly alsockened.

Locking across the union at the almost perpendicular edit on our right we see a number of dwarf pine tress moderating the stermses of the landscape, and, by their beautiful green foliage, relieving the sombre has of the mountain side. Higher up, on the summit, the snow raigns supreme, and, by tils whiteness, canes the foliage of the pine trees to assume a dark arregarance.

But we must look below us. We are crossing the Weber on a Howe truss bridge.

Beneath us there is a yawning chasm, in the bottom of which, the waters of the river and the boulders are at war. Across the bridge, we pass through a heavy cutting where the solid walls of rock rise up on each side of was and exclude the light. Emerging from the cut, we see the

Weber river circle round on our left and literally "spread itself." This is

Devil's Gate,

A small station 12½ miles from Ogden. Elevation, 4,870 feet.

Beyond this point the slopes of the hills are not so abrupt. The river crosses our path soon after leaving Devil's Gate station. We cross it a second time. Beyoud it, the scenery becomes less wild. The river is broader, has an unruffled surfaceand gravelly banks. On the right are low hills. On the left, a pleasant vallev and a Mormon settlement. The valley widens out as we journey on, but it is a good deal broken by water courses. Every part of the valley gives abundant evidence of the thrift of the settlers. There, on our left, is a large hav rick for the use of the cattle during the winter. On the bottom land just before us, the Mormon husbandman is ploughing with a voke of oxen. Another is clearing off the willows and preparing more land to come under the plow. Away on our right, beyond these well cultivated terraces, we see more houses; that settlement is Morgan City.

But now we have arrived at

Weber.

Weber is 11.9 miles from "Devil's Gate." Elevation 5,130 feet. Here there is a dam and grist mill, and also a few houses.

Leaving these, the valley is again shut in by hills. Again it opens out with here and there a little village surrounded by patches of cultivation. We are now approaching a rougher country. Presently we cross the river and plunge into a tunnel 250 feet long, which has been out through the solid role. In an instant we are out into the sunshine again. Another bridge is crossed, and again we are hid in darkness—this time going through another solid-role tunnel. 540 feet long. Our energing from this second tunnel, we find we are now traveling through a very rough country—nothing but spurs and rwines.

Keep your eye fixed on the scenery on our right, and as we go along you will see

The Devil's Slide,

Two parallel ridges of rock jutting out about 30 feet from the side of the mountain, and running from the bank of the river clear to the mountain top. Between these two slaty ledges, which are some distance apart, there is a beautiful smooth grassy groove. Why these singularly shaped rocks have been designated by such a name we cannot divine, unless it be that those who named them spoke from the abundance of their hearts, and in naming the places they passed, used the phraseology with which they were most familiar.

Lamediately after passing the Devil's Silde, we pass into the eastern end of Weber Cañon. This part of it is noted for its beauty. The course of the cañon is very tortuous, and, in order to see its many objects of interest and beauty, we shall require to watch carefully. There is no dearth of them. here, but we soon lose sight of them.

One Thousand Mile Tree.

A little way up the canon, close to the right side of the road, we pass this solitary tree—a living mile stone with a sign board nailed on it informing the

[&]quot;N. B.—The distances between stations given in this work, are compiled from the OFFICIAL tables of the railroad companies, and consequently correct; our readers may therefore rely upon them incontradistinction to the time tables found in the cars, which are issued by advertising agents, and are frequently incorrect.

traveler that he is "1,000 miles from Omaha."

However much this now important tree may have been neglected in the past, its position now is such as other trees might envy, were they capable of doing so. Henceforth its life is sacred. Never shall the ruthless are be laid to its root. Enhancuded by the memories of the past, each of us will remember our acquaintance with it and be glad to see it again and again; and non will hear of its destruction without a feeling of regret. "Woodman spare that tree!"

East of the 1,000 mile tree the valley opens out. On the terrace seen over the tops of the willows on our right, there is a thriving settlement. Behind it, the snow-clad mountains raise up their heads dotted here and there with clumps of pine

trees.

As we journey on the valley contracts again. Passing through a kind of gateway in the mountains, we emerge on a little valley, with small farms enclosed by snake fences on our right, and on our left, the snug little town of

Echo City.

Echo City is a quiet little town of about 300 inhabitants. It is 15½ miles from Weber, and has an elevation of 5,540 feet.

The town is cozily situated under a high reddish bluff. It was, at one time, a supply station, and a regular eating station. Hopes were entertained that it would attain to something, but, at present, there does not seem much probability of their being realized.

Weber River, and the other small streams that flow into it near Echo City, are famous for the number and excellence of their trout; and the mountains in the immediate vicinity of the city are well stocked with large game.

Just east of Echo City, Weber Cañon goes off to the right. Our course lies up Echo Cañon, to the left; so, before starting, we will just say that here we part company with the Weber River. It rises in the Wabastch mountains, and, after a western journey of about 80 miles, empties itself into the Great Salt Lake below.

Echo Canon.

Leaving Echo City we continue our journey up Echo Cañon. This cañon abounds with objects of interest many of them grand and imposing. They are all on the north side, however, and our readers, while traveling eastward, will do well to change their seats temporarily to the left side of the car.

As soon as we enter the canon its bold red bluffs immediately attract the eye. Many of them are fantastical in shape, and have much interest for the traveler. First of these is

Ogden.

Pulpit Rock,

So called because it somewhat recembles a pulpit, and also, because Brigham Young is said to have preached his first sermon in Utah from its summit.

Monument Rock.

A block of red sandstone, about 15 feet feet high and three wide, which stands up alone, like an obelisk, by the road side.

Further on will be seen, close to the road, a succession of high red bluffs with perpendicular sides. One of these, because of its resemblance to the stern of a vessel, is called "The Great Eastern."

Mormon Fortifications.

In 1857, Brigadier-Geweral Albert Sidney Johnson, with a large force under his command, was on his way to Salt Lake City, and had arrived as far as Fort Bridger, when his further progress was stopped by circumstances to which we shall hereafter revert.

The Mormons were fully determined to defend this pass, and, if possible, prevent the army from entering Utah. For the purpose of better defending the pass, they piled large numbers of boulders, which they intended to hurl down on the troops below, upon the tops of the high bluffs we are now passing. The traveler will see them piled up, like breast works, on the edge of the precipices. At the speed at which the train goes, and the distance they are from us, they appear small, but really, many of them are quite as much as a man could lift. Several of these so-called "fortifications" can be seen from the cars as we ascend the canon.

Dead Man's Rock.

Shortly after passing the fortifications, the rock bearing this singular appellation will be seen. It is high up on the left, and cannot fail to be noticed.

Its history is as follows:—During the construction, by the Mormons, of the fortifications we have just seen, one of their number was curious to know whether a soldier's musket fixed from the cañon below would injure the defenders on the top of the precipiees. To gratify his enriosity he asked a friend to test the matter, and he would stand on the brink of the precipice as a target. He was instantly killed, and the rock on which he fell received this appropriate name.

Passing on up the canon with but little to interest on the right, where the hills alope off gradually, we come to Echo Creek. This is so tortuous in its course that in the next twenty-six miles, we cross it thirty-one times.

A saw-mill, located on this creek by the Mormons, and driven by water power, is the only object of interest on the south side of the canon.

Further up the canon, a small creek, with a few log huts near its mouth, opens up to our left. It is called "Lost Creek" because some early emigrants were lost here.

East of the mouth of this creek, the hills are lower, and not so perpendicular. Along their base, on our left, winds

The Old Emigrant Road,

Hallowed by so many memories of dear ones, who, in the long weary journey westward, have succumbed to the trials and privations they were unable to bear. Who can tell how many unknown graves containing all that was mortal of those loved better than life itself, lie scattered along this old road. How many brave hearts have passed along that beaten track!-hearts that in spite of failure and disappointment elsewhere, have followed the Star of the Empire glittering in the west. How many noble traits of character have been manifested here! How often have those who were "ready to halt" been cheered and encouraged by some brave spirit, who, by example, and

a kindly word, have nerved the desnonding to further effort! And often in the days that are gone, there has been seen here that more lovely picture still-that of a devoted wife, cheerfully sharing the privations of her husband on this long wearisome journey in order that she may be near him in his trouble. In the deep affection of her true woman's heart, she elects to share with her husband the fatigues and dangers he is undergoing in order to build up a happy home for her. By her strong love and cheerful smile she sheds light and gladness on his path, and makes him strong to accomplish great things and happy in his toil. May Heaven's blessing rest upon all such wives. We commend them as a study, to the "girl of the period."

Hanging Rock

This bridge-like formation will be seen on the front of a low hill, on the left side of the road. It stretches across the mouth of a small creek, which, in the lapse of past ages, has gradually worn a hole down through its centre, and scooped out the earth from under it, leaving it as we now see it, hanging unsupported.

This was formerly one of the stations on the overland stage route. Here the stages changed horses, and here was a roadside inn. Alas! its glory has departed; now it is only a watering station for the Iron Horse.

Leaving Hanging Rock, we pass, without stopping,

Milliston.

A small signal station, with a side track.

A little beyond this we arrive at

Castle Rock.

Castle Rock is but a small station, having only three or four houses. It is 16.6 miles from Echo City, and has an elevation of 6 290 feet

Leaving Castle Rock station, we also leave Echo Cañon and turn into

North Echo Canon.

On the left side of this canon there is a long line of reddish sandstone bluffs, rising to a considerable height not accurately known, and resembling in shape some of the fine old castles of feudal times.

Two of the largest of these rocks have large holes resembling embrasures in their western ends, out of these the supposed defenders of these supposed castles are supposed to have hurled their supposed missiles on the supposedly defenceless heads of the supposed enemy below.

less heads of the supposed enemy below.

We will now leave all this supposition
and turn our attention to the stubborn
fact before us.

jact before us.

The Wahsatch Mountains.

We begin to ascend the Wahastok mountains shortly after we pass Gastla Rock. The road is cut on the northern side of the mountains; and towering high up on our right, they raise their frowning summits. Before this part of the road was cut, the summit was reached by a Z or zigzag track, which passed to the south of the mountain we are now ascending.

While we have been making these remarks, we have been approaching the longest tunnel on the Union Pacific line. It is 800 feet long, cut through hard red sandstone, and arched with timber. East of it we career along on two long stretch-

es of trestle work, the first, 75 feet high and 450 feet long, and the second, 30 feet high and 230 feet long.

From this point we leave North Echo Cañon, and enter Yellow Creek Hills. In doing so, we come in sight of

Wahsatch Station.

Websetch Station has an elevation of 6.879 feet. It is 81/2 miles from Castle Rock, 948 from San Francisco, and 965 from Omaha. This is a regular eating station. Twenty minutes are allowed here for meals. The town and station which are located on a piece of table-land on the summit of the Wahsatch mountains derive their only importance from being the head quarters of the Utah Division of the U. P. R. R. Here the company have a round house of ten stalls and machine shop, together with other necessary buildings, which, collectively, create employment for twenty-nine men. The town. which is but small, is located on the north side of the road. Saloons and stores predominate in it. The population amounts to about 500 including 100 railroad employés.

Here the traveler will have an opportunity of purchasing moss agates in their natural state. Boys who find them in the mountains, bring them to the cars for sale.

Leaving Wahsatch, we pass over an undulating table-land, which is much broader than we expected to find on the top of the Rocky Mountains. The soil is better than we imagined it would be, and has quite a good covering of grass. Now for the first time we see some of the anow fences used by this company to keep their track clear in winter.

Snow Fences.

These aloping fences are placed in the precise position where experience has shown they were most wanted, to intercept the heavy snow, which is drifted incertain places by the strong gusts of wind which sweep around these mountain tops. In most cases these snow fences have been found to answer the purpose for which they were intended; but, in some of the most exposed positions, they are being supplanted by snow sheds similar in form to those in use on the C. P. R. B. tut made of unch libite material.

On we pass through small valleys, watered by mountain streams, and dotted over here and there by little shanties. By and by the valley opens out and strekes off to the left. Away to our left under cover of a hill we see what, at first sight, appears to be a village, but really is the mines of the Rocky Mountain Goal Co. That curved track on our left leads over to them. They are vertensive, easily worked, and a great vertensive, easily

WYOMING TERRITORY.

Wyoming Territory lies between the 41st and 45th degrees of north latitude, and extends from the 104th to the 111th meridian.

It is bounded on the west by Idaho and Utah, on the east by Dacota and Nebraska, on the south by Utah and Colorado, and on the north by Montana, and has an area of 91,809 square miles, equal to 58,-752,900 across

Physical Aspect, Climate, Etc.

The face of the territory is broken by high ranges of mountains. The principal ranges are the Black Hills, Medicine Bow, Seminole, Sweet-Water, Wind River, and Rocky Mountains.

In the western part of the territory there are large tracts of prairie land, of poor quality, and much flecked with alkali, but in the eastern portion, the prairies are larger, more fertile, and covered with an abundant crop of crass.

The climate is mild and agreeable during the summer months, but a little cold in winter.

Stock Raising, etc.

The eastern portion of Wyoming is admirably suited for stock raising purposes, for which it is rapidly being taken up. Stock do not require to be housed during the winter, and thrive amazingly all the year round.

Mineral, etc.

Wyoming has several Gold, Silver, and Copper mines; but her chief mineral wealth is coal. Her coal beds are the finest in the West, and extend over an area of 300 miles.

Our readers will have an opportunity of inspecting the Coal mines as we go along.

Evanston.

Evanston.

Evanston was once the distributing point for freight and travel for Salt Lake City. It is I miles from Wabasth, and has an elevation of 7,000 feet. Although no longer a distributing point for either freight or travel, it derives great importance from its coal mines.

The Evanston Coal Beds.

Professor F. V. Hayden, in his report of the United States Geological Survey of 1869, says of these coal beds:

* "The coal heds at Evanston are the finest known in the West, and reach a thickness of twenty-civ feet at one locality. These coal beds seem to be senarated from those at Separation and Carbon, and to present some features different from those in any other portion of the West. I am in doubt as to their precise position, but I am inclined to regard them as of lower tertiary age, possibly on a parallel with the oldest beds of the great lignite group in other localities. On Bear River we find several species of Ostrea, both above and below the coal, and in a cut just west of Bear River City is found the greatest profusion of molluscous life that I have ever seen in any of the tertiary beds of the West. There seems here to be a mingling of fresh and brackish water fossils. At Evanston, impressions of deciduous leaves are abundant in beds above the coal. No portion of the fanna seems to be identical with anything found in other places. The flora seems also to be distinct, although some of the forms may be identical with species elsewhere. I have named the group of coal strata which is exposed from beneath the middle tertiary beds by upheaval at Bear River City, Evanston, and Coalville, the Bear River group,"

An analysis of the Evanston Coal, gives the following results:

	3	Per Cent.
Carbon		. 72.16
Volatile Substances		. 22.00
Water		. 3.34
Ash		. 2.50
Sulphur—no trace		00

Leaving Evanston, we come to the first snow-shed on this line. It is constructed on the same principle as those of the Central Pacific line, but strikes us as being rather fragile. As the snow-sheds on this line are intended only to prevent the snow from drifting into the cuts, they do not require to be very strong.

Dashing on through the first, we come to a second, and a third—but they are not very long. On we go over a narrow belt of table land. On our left, at the foot of a ridge of barr orcks, flows Bear River. It rises in the pine-clad Uintah Mountains, and has five forks. Near the bend of the river there is a small village built of log houses. There is a coal mine at this place, and the houses are used by those employed in it.

From this point we can see the summit of the Uintah Mountains covered with snow, and adorned with groves of pine trees.

Continuing our journey we pass Indian wigwams near the road; beyond them we plunge into a snow-shed. Dashing through it we go through another, and another, till we arrive at

Aspen.

Aspen is a small station on the right side of the track, 17.7 miles from Evanston—elevation 7,463 feet. It is not shown upon the time tables.

The snow-sheds through which we passed before entering Aspen, prevented us from seeing the now deserted site of

Bear River City.

This city, like a great many others which no longer exist on the line of the Union Pacific Railroad, was at one time notorious as the rendezvous of all the roughs and rowdies that Vigilant Committees had driven to the western terminus, for the time being, of this

By the time the lawless vagabonds from all the more eastern towns had arrived here, they were, as they thought, sufficiently strong in numbers to make a stand and force things to be done to their liking.

Frontier Life.

The law-abiding citizens of Bear River City organized themselves into a Vigilance Committee and ordered the rowdies to take themselves off. Instead of doing this, the latter took up a position in the adjacent hills, leaving three of their most desperate characters in the city to observe and report the tactics of the Vigilantes. The ruffians thus left were notorious garroters, and known, on more than one occasion, to have imbued their hands in the sacred font of human blood These, the Vigilance Committee, very properly, hanged; and in doing so they had the approval and support of all the best people in the town

Revenge.

The rowdies rowed-revenge for this set, and attacked the town in force. They nambered about 500, were well armed, and quite unscruptulous as to what means they would take to gratify their thirst for revenge. They first attacked the jail, from which they abstracted a kindred spirit, and afterwards burned. The entire the office of The Frontier Indez—a local paper which had made itself obnoxious to them. This, with its contents, they completely destroyed. Encouraged by unceess, they next attacked the principal store in the city. Here they were met, and repulsed,

by about 30 citizens, who gave them a volley from their Henry Rifles, and then charged them down the street. The row-dies (always cowards at heart), fied in the utmost contison leaving 15 of their number dead on the ground. Only one citizen was killed in the encounter. Many dead bodies were afterwards found in the neighboring gulches, where the wounded rowdies had sought refuge and died. The lesson had a salutary effect and caused the remaining rowdies to go where they could carry on their depredation with greater impunity.

Leaving Aspen, we pass over a rough asge-brigh courty, having several anowfences, and more snow-sheds than any other portion of the road. The longest of these is 800 feet. Emerging from it the line goes down a steep grade, and curves off at right angles, through more sage-brush and snow-sheds, until it brines us to

Piedmont.

This is an unimportant station, of about a dozen houses, mostly built of logs. It is 9.4 miles from Aspen, and has an elevation of 6,540 feet.

Away to the south the mountains are well timbered with pine and cedar. While the railroad was being constructed a great many ties were obtained from this locality; and we see, by the piles of ties stored up here, that the business is still carried on.

We will now hurry on. The country is still the same—rough, barren desert, covered with sage brush, and beds of alkali. A change has, however, taken place. Since leaving Ogden, the bold rocks have been on our left, and the sloping hills on our right; now they have changed places, and we have the rocks on our right, and the sloping hills on our left.

Ten miles east of Piedmont, we come

Leroy,

A small way station, with an elevation of 7,123 feet.

Five miles east of Leroy, we come to

Bridger.

Bridger is a small side track station, with an elevation of 6,780 feet. It derives its name from James Bridger, the celebrated trapper and guide, of whom more anon.

The mountain over which the road is built, has here got a broad level top, over which a small stream, appropriately named the "Muddy," winds about in the most crooked and peverse manner possible.

Away to our right can be seen the posts of the old telegraph line, and also, "the old emigrant road," coming down over the brow of the hill that bounds our view to the southward.

Carter.

Catter is a pessenger station. It is 9.5 miles from Bridger, and has an elevation of 6,440 feet. Around this station there are a few houses and a freight house. At one time it was expected that "Catter" would be the forwarding point for goods and passengers bound for Montana Territory. It is contended that the road from this point to that territory is shorter, by 80 miles, than from any other point on the railroad.

However true this may be in the abstract, it is an undensiable fact that all, or nearly all, the freight for Montana is forwarded from Corinne on the C.P.R.R. Not to deprive Carter station of its prestige as a freighting depot altogether, we must add that it is from this point that passengers and freight are forwarded by Government conveyance to

Fort Bridger.

Fort Bridger is a military and trading post with an elevation of 7,010 feet, about 10 miles south of Carter. It was established by General A. S. Johnson, in 1858. It is named after James Bridger already alluded to, and has been the scene of much suffering and privation.

The present commandant is Major S. La Motte, 13th infantry; the garrison consists of companies "F" and "G" of the same regiment.

The site of the fort was first chosen as a trading station, by the gentleman whose name it bears. When the Mormons were threatened by General Johnson in 1857, they made this their advanced post, and erected a small cobble-stone fortification, which still stands, and does duty as a stable, for the garrison.

Judge Carter, after whom "Carter" Station is named, is sutter of the Fort, and does a considerable trade with the friendly Indians. Of these quite a number live in the vicinity of the Fort. Washa-kie, the head chief of the Shohone (Shake) Indians, with a few of his people, lives in this neighborhood. He has always been the constant friend of the white man.

Leaving Carter, we cross the "Muddy" an almost innumerable number of times. It seems to be the most contrary stream in the world. The country over which we are riding seems equally provoking. There is nothing to break its level, sandy, sage-brush monotony, except the Uintah Mountains—seen far to the right.

About five miles from "Carter" these give place to strange looking hills with horizontal strata. These hills are met with in the same relative position to the road—about ten miles south—for the next twelve miles. They look like solid column of infanty standing in "Eckleton" and intent upon turning our flank. Viewed from other points along the line, they appear like the roofs of gigantic churches. This resemblance holds good, for we find on arrival at the next station that, because of the peculiar shape of these hills, it is designated

Church Buttes.

Church Buttes Station has an elevation of 6,317, feet and is 9.4 miles from Hampton—a small signal station at which trains do not stop—7.5 miles from Carter.

But few houses grace Church Buttes station, and the level stretch of desert that surrounds it does not invite the general traveler to loiter here on his journey. For some travelers, however, it may have an interest in that it contains numbers of Moss Acares.

They are found on the tops of the bluffs all the way from Wahsatch to Green River.

The table land we pass over east of Church Buttes is similar to that just left behind us, except that it is broader.

Ham's Fork.

Between Church Buttes and Granger (the next station), we cross Ham's Fork of Green River. Black's Fork, another tributary of the same river, is seen some distance to the right of the crossing. These two forks rise almost exactly opensite each other. Ham's Fork rises in "Hodges Pass" about 40 miles north west of the place where we cross it, and Black's Fork in the Unitah mountains, as far off in a south westerly direction.

Granger.

This station is 10½ miles from Church Buttes, and has an elevation of 6,270 feet. Leaving Granger, we travel over the same kind of country.

Eight miles and six tenths east of Granger, we pass Marston, a small station of no importance.

Seven miles and six tenths more brings us to

Bryan.

Bryan Station is the end of the Utah. and the beginning of the Laramie divisions of the Union Pacific Line. It is also a regular eating station. The Railroad Company have here a round house of 12 stalls, a machine shop 50 feet by 30, and a blacksmith shop 66 feet by 24. They are built of adobe, i.e., sun-dried brick, and lumber, and are under the direction of C H Marston division master mechanic. Twenty-two men are employed in them. Bryan has an elevation of 6,340 feet. It is 171 miles from Ogden, and 858 4 from Omaha. It is the distributing point for freight and passengers bound for Atlantic City, South Pass City, and the Sweetwater Mines.

Stages.

Stages carrying the express and U.S. mails, leave Bryan for the above men-

tioned places every alternate day, on the arrival of the train.

Population, etc. In early railroad days Bryan had a

large population of rowdies. Of some of these, examples were made by the Vigilance Committee. One desperado whose depredations excited the just indignation of the Vigilantes, now sleeps under the water tank at the station. Another, whose deeds were not bad enough to deserve the noose, was informed that he was allowed 15 minutes to leave the town, and that if he still remained at the end of that time, he would be hanged. He replicie—"tign-tiemen, if this d——d mule does not buck, five minutes is all Lask."

Leaving Bryan, we cross a most barren inhospitable country, composed of mounds of sand sparsely covered with sage brush.

Thirteen miles and four tenths east of Bryan we cross Green River, on a strong Howe truss bridge.

Green River.

This river rises in the Wind River Mountains, near South Peas, and is composed of a number of mountain streams which join about 200 miles north of the Railroad bridge. It has also other tributaries which augment its volume not so far north. The banks of the river in some places, are formed of a decomposing slaty rock of a dark green color. The river derives its name from the peculiar color of the washings from this rock.

About 150 miles south of the Railroad crossing, Green River empties itself into the Colorado River. Excellent fishing can be had anywhere on the Green River or its tributaries; and game of all kinds abound in the mountains adjacent to it.

Apart from its singular color, Green river possesses much interest as the starting point of the Colorado exploring expedition. This expedition was commanded by Major Powell, and started from Green River City on the 24th of May, 1869, Much interest was felt as to its probable results; and much sorrow was expressed when, a few days after its departure, a story was trumped up that it was lost.

The cook of the party, who had been left on shore to prepare lunch, horrified the public by giving the most minute details of how he had seen Major Powell and the rest of the party hurled to destruction over the rapids. According to his own account, he was a good faithful fellow who wept like a baby-who roamed up and down the banks of the river below the scene of the accident, looking for some relic which he could bring home-who ultimately found Major Powell's carpet bag and who traveled over many miles to hand it to the nearest military post! Several other rumors equally false and cruel, were also freely circulated. So much has been said and written shout this expedition, more for the purpose of getting up a "sensation" than informing the public, that it will not be out of place, here, to give a correct statement of the actual results, as far as known.

The following article, taken from the New York Herald, of November 14th 1869, will be found interesting and reassuring.

Maj. Powell's Colorado Expedition.

"Professor J. W. Powell, who commanded the late Colorado Exploring Expedi-

tion, and whose fate occupied so large a share of public attention last summer, delivered a lecture at Detroit on Tuesday evening last.

"Major Powell said the basin of the Colorado extends over a continent equal to Iowa, Illinois, Wisconsin, Minnesota and Missouri, 750 miles in length and 500 in breadth. Snow falls on nearly all sides In summer these snows melt into millions of cataracts these swell into rivers, and these form the great Colorado. It should be borne in mind that these waters fall on the rim of the basin, and nouring down wear deeper and deeper into the solid rock, forming a basin rarely penetrated by white men. A few Indian chiefs hold sway over this land of myths. The region has a great many legends, some of which the speaker related. He had been making a series of geological experiments for three or four years, and thought if the Colorado cañons could be explored it would be like opening revelation.

"It was the plan of the expedition to measure the height of the walls at least every twenty miles. While passing along one morning they found themselves enclosed in an amphitheatre, with only a parrow shelving passage, with the rocks 800 feet above, and the river 500 feet below. The party penetrated a cave in the rock at the end of the passage, and found a skylight, which they reached by pressing themselves between the fissures with hands and feet until the top was reached. and one of the grandest scenes in nature was beheld. There were miles of vermillion sandstone, almost beyond the flight of the soaring eagles. After taking an observation and finding the altitude to be 1,500 feet, they proceeded to refresh themselves. Their victuals were none of the hest and he found one of the servants with telescope and instruments out, who in response, said he was trying to find the latitude and longitude of the nearest pie. Reaching the river again they were beset with danger from the whirling and eddying which would toss their hoat against the rocks. Very often they could run between the lines of the great waves. They launched out, and for forty miles the cataracts succeeded each other at distances of 200 rods to half a mile apart. Sometimes the falls were blocked with rocks, which the explorers frequently climbed and carried their hoats over Sometimes they had to unload, but generally a shute was to be found. They had no fear for water, for their boats were decked fore and aft, but there was danger of being dashed against the rocks.

"Proceeding on they came to a point where the walls had increased to 2,600 feet high, and looking back to the starting noint where they were 1,300 feet, it seeemed like a ribbon meeting the blue sky. Soon they came to a place where another river entered the Colorado The party were in the habit of procuring supplies of fish as they went along. On discovering one river, after passing the Grand and the Green, one of the men in the advance in answer to what kind of a river it was, said it was a "dirty devil." The speaker said the water had an odor like the Democraticointment found in the little alabaster vessels which used to be thrown at Abolitionists' heads-i.e., ancient eggs-so they called the river "Dirty Davil."

"The speaker proceeded to give a geological description of the country. The earth, he said, was composed of a variety of formations, and he explained the "wrinkles" or irregularities in its surface as attributable to the contraction resulting from the cooling process. The ding. contractions or folds of the different formations were made plain to the audience by a number of colored diagrams. Part of the progress the party made was along dipping slopes of these upturned formations of orange sandstone. Sometimes they would find caves and amphitheatres so large that an army might enter, and then suddenly water worn passages, covered with heautiful ferns and liverworts so narrow that a man could hardly turn in them.

"An extinct volcano, which had thrown up vast amounts of scoria, was found. "This scoria, mixing with sand and rain. creates holes or "pockets," as the Indians call them, and in which a few poplar trees are occasionally found growing. Reaching a point called Mound Cañon. where they encamped, they came on another of the hundreds or thousands of ampitheatres which abound. Looking up about two hundred feet to a skylight almost covered with the red rocks, a small stream was seen pouring down, and this was surrounded with beautiful ferns. They called it Music Temple, and many a song the party sang there while resting on the warm days.

"At the next, or Mountain Cañon, the strata began to slope towards them, the party passing through the limestone formation and striking a beautiful marble. The walls increased to 3,600 feet high, with cascades of bright red mud plunging over. At a distance beyond the party beheld a wall seemingly set with brilliants, but on nearing found it to be a fountain springing up from the rock and glittering in the sunchine At the foot of this or Marble Cañon, was another cataract, which the party, so absorbed with the beauty of the scene, almost reached unnoticed, and the consequence was that the leading boat went over, losing nearly all it contained in trying to reach an unseen cutaract beyond, over a passage a few feet wide, and sometimes climbing on each other's shoulders, they found the ledge to "run out." and could have proceeded no further had they not discovered a small fissure in the rock through which they climbed up. The rock still dipping in their direction, they were yet ascending one strata after another. The walls here were 3.500 to 6.000 or 7.000 feet high. It was difficult to give the correct height of the rocks, the tops sometimes being broken off 3,000 or 4,000 feet for a mile or more back.

"The speaker wanted the audience to fancy a gorge a mile deep, no wider than one of our streets, and as long as from here to Chicago. This canon was so cut and subdivided into different strate that a passage through it was next to impossible. Almost everywhere the roar of cataracts and creeks can be heard pouring over or through the worn fissures in the side. The granite formation is here 800 feet thick. One of the greatest difficulties the party met was in running one of the rapids, which would require ten days, while they had but eight day's rations. In the middle of the stream was a rock against which the water dashed in spray thirty or forty feet.

"A number of the men wanted to leave,

and he felt much anxiety whether the others would not want to follow Three men only left however, and the cataraacts were forded one after another in safety. It was afterwards learned that the three men were killed by the Indians. The party had still eighty miles to go, with only five days rations and an unknown number of portages to be met. Here they were obliged to throw away all surplus clothing, and many of their fossils and specimens, to enable them to pass some of the difficult fords. At one place, where trying to carry their forward host over, the rock was found to he ten feet higher than all the rone they had, and the labor of getting it forward was immense. The roar of the cataract was so great that the voice could not be heard twenty feet. Finally the boat was got over, and plunging twenty feet over the fall entered a mist of breakers and eddies, apparently without a channel, but after plunging under waves and among rocks they finally reached a place of safety and were soon joined by the second boat. From this on the passage was without danger, so that in forty-eight hours from the time the three men left, the expedition

entered the bounds of civilization.
The lecture entered into a series of speculations as to the geological age of the calons of the Colorado, and basings his deductions on the amount of alluvial deposits carried by the Mississippi yearly to the ocean, which is one inch of soil in 265 years, he placed it at 60,000,000 of years.

But as the amount of rain falling in the Mississippi Valley is much greater and consequently more wearing than in the Colorado basin, the age of the latter

64 70

might be much more than the number of years stated. In geology years are nothing—we have to count by ages. He dwelt at some length on the formation of lakes and streams at altitudes above the timber line and the clouds; also their influence on the surface as their streams washed down for century after century."

Green River City.

This now small station, with so many

empty houses, is on the east bank of Green River, close to the railroad. It was laid out when the railroad was being constructed, in July, 1868.

Much was expected from it, and all it gave was disappointment. Its geographi-

lead to its resuscitation. When last we saw it, it was in a very dilapidated condition. Indeed there was no place on the line over which "Ichabod" might be inscribed so appropriately. On the left side of the road, opposite

Green River City, there are some peculiar sand hills surmounted by strange conical rocks. The largest of these is known as "Citadel Rock."

Leaving Green River City, we continue on our way through a desert covered with alkali, and much broken by ravines. Its only redeeming feature is some fort-like rocks perched on the hills near the road. At some places, they are so close as to render the scenery impressive.

Rock Springs.

This station is 13.9 miles from Green River, and has an elevation of 6,280 feet. Near the station, a small vein of coal, of good quality, has been discovered. It is the property of the Wyoming Coal Co., by whom it is being worked.

From Rock Springs, we journey on for 14.5 miles through a barren, uninviting country, in which sand hills, and alkali beds, have about an equal share. At a place called Yandykes, seven miles from Rock Springs, a coal mine has been discovered, and a small war-station erected.

Salt Wells.

The name of this station is so suggestive that it needs no explanation. Salt Wells is a coal and side-track station—elevation, 6,360 feet.

It is situated in a desolate country, having nothing to make us stay. We will therefore hurry on to

Point of Rocks,

A freight and passenger station, 11.5 miles from Salt Wells, and having an elevation of 6,490 feet. Coal mines were discovered here, and

an analysis made of the coal, by Persifore Fraser, Jr., of the U. S. Survey of Colorado and New Mexico.

The following is the result of the analysis:

Corbon

Total	100.00
Water and Volatile Substances	30,48
Sulphur	0.42
Ash	4.40

Hallville.

Hallville is a small telegraph and way station, 7.3 miles from Point of Rocks. Having been but recently called into existence, by the discovery of a rich vein of coal, its elevation is not accurately known, but it must be very close to 6,500 feet. During the summer months there are small detachments of troops (principally cavalry) stationed along the line of the U. P. R. R. At some of these posts there are permanent forts which were built during the Indian troubles, and which have always a garrison. At others, the troops merely encamp, and in winter, retire to the nearest fort.

Rawlings is a military post of the latter kind. Last summer, company "A" of the 2nd cavalry were stationed here, under the command of Capt. Thomas B. Dewees. of that reciment.

Both the town and the railroad station derive their name from some springs south of the railroad. They are called "Rawlings Springs," on account of their discovery by a person of the name of Rawlings. The water in these springs is stroncly imprerented with alkali.

Three miles northwest of Rawlings Station, copper and iron mines have been discovered recently by Messrs. Massey and Dyer, who intend to develop them forthwith.

Rawlings has not grown very rapidly. Its present population (1870) numbers about 300.

Having had the wants of the inner man supplied at the spacious hotel which the railroad company have erected here for the use of its patrons, we will resume our journey.

East of Rawlings, we traverse a broad sage brush country which is flanked by a rim of low hills which can be seen in the distance. Here, on our last eastward journey, we met the first herd of antelope. The herd was quite large and made off very fast. Antelope, elk, and sometimes a buffalo, are met with all over this region.

Seven miles from Rawlings we pass Grenville, a small way-station at which trains do not stop, except when signalled.

Further on, we pass, on our left, the now deserted site of "Fort Benton," once garrisoned by eight companies of soldiers, and a fively place indeed, but now having nothing but a low mud wall to mark its position.

Samuel Bowles Esq., when speaking of this place in his "Switzerland of America," says: * * * *

"Here are temporarily gathered that motley crew of desperadoes, outcasts and reckless speculators, that are following the road's progress, and rioting in the license and coarseness of unorganized society. It is a most aggravated specimen of the border town of America, not inantly called "Hell on Wheels," and unknown to all other civilizations or harbarrisms. One to two thousand men, and a dozen or two women, are camped on the alkali plain in tents and board shanties; not a tree, not a shrub, not a blade of grass visible; the dust ankle deep as you walk through it, and so fine and volatile that the slightest breeze loads the air with it, irritating every sense and poisoning half of them; a village of a few variety stores and shops, and many restaurants and grog-shops; by day disgusting, by night dangerous; almost everybody dirty. most filthy, and with the marks of lowest vice: averaging a murder a day; gambling and drinking, hurdy-gurdy dancing and the vilest of sexual commerce, the chief business and pastime of the hours,-this is Benton. Like its predecessors on the track, it fairly festers in corruption, disorder and death, and would rot even in this dry air, should it outlast a brief sixtyday life. In a few weeks, list tents will be struck, its shanties razed, and with their dwellers will move on fitty or a hundred miles farther to repeat their life for antorber brief day. Where these people came from originally; where they will go to when the road is finished, and their occupation is over, are both puzzles too intricate for mo. Hell would appear to have been raked to furnish them; and to it they will naturally return after graduating here, fitted for its highest seats and its most diabolical service.

East of the spot where Benton stood, the hills converge, and the plain becomes out up by water courses. Far below us on the left, we catch the first glimpse of the Platte river, its sluggish waters, deep and black, winding slowly past the base of the hills.

Fort Steele.

Fort Steele is 15.4 miles from Rawlings. and has an elevation of 6 840 feet The fort, which occupies a good position between the railroad and the Platte, was established in 1868. It was named in compliment to General Fred. Steele. U. S. Volunteers, Colonel 20th U. S. Infantry. It is a clean orderly looking place, with an unmistakable military air about it. It is garrisoned by three companies of the 13th infantry and one company of the 2nd cavalry. Commanding officer, Lieut, Colonel Henry A. Morrow. 13th Infantry: Post Surgeon. J. B. Girard, Asst. Surgeon, U. S. Army; Post Trader, G. D. Thayer.

Fort Steele draws its supplies from Fort D. A. Russell, at Chevenne, via U.P.R.R.

The North Platte.

The North Platte os this branch of the main river is called, rises among the Rocky Mountains, in the North Park of Colorado, about 150 miles a little east of south, from where we cross it. But little is known of the country around its head waters cave that it is a rare country for the sportsman. Whether it be a safe one for sportsmen to visit. is quite another question. That both the North Platte, and its tributaries, teem with most excellent trout is true. That the country in which it and they rise. abounds in large game, such as Elk, Deer, Antelope, Bear, Beaver, etc., etc., is also undeniable. But it is equally incontestable that it also contains a large number of Indiana

The mountains in which it takes its rise, are densely timbered. A great number of railroad ties were obtained from this locality.

As we shall have occasion to refer to this river again, we shall now continue our journey.

Leaving Fort Steele, we cross the North Platte on a strong bridge.

Immediately below us, on our right, large piles of ties are stored on the eastern bank of the river; and trees line its
banks as far as we can trace its course.
High, nocky hills bound our view in all
southerly directions. On our left, starting from behind the fort, and keeping us
company for a long distance, is a large,
rugged sandstone bluff, with horizontal
strata. At some places there are three
for up ranglal ridges, whose out-croppings
resemble dykes of rubble masonry. At
others, the formation is changed, and our
others, the formation is changed, and our

left seems flanked by a breastwork of "Gabions." Further east they are nearer the railroad, and we see that they are crumbling away. Large boulders lying by the side of the track, seem to have fallen from the main ridge by their own weight and rottenness.

Walcott.

Five miles and eight-tenths east of Fort Steele, we pass Walcott, a side-track station, where trains do not stop except on signal.

Rattling along through this rugged gorge between heavy cuttings, and over deep fillings, we plunge into St. Mary's tunnel, which is one hundred feet long. On emerging from the tunnel we enter

upon a more open country. It is still covered with the inevitable sage-brush, but is less rugged and mountainous. Away to the south, we can see the snow-clad summit of Elk Mountain, with its splendid forests of cedar.

But here we are at

St. Mary's.

St. Mary s

We were unable to learn from what source this station derived its name. It is 13.6 miles from Fort Steele, and

It is 13.6 miles from Fort Steele, and has an elevation of 6,751 feet. There is nothing here to detain us,

so we hurry on. Our course still lies through a sage-brush country. On our left are the Rattlesnake Hills, and on our right is Elk Mountain. The latter will be our companion for the next hundred miles.

Dana.

Dana is a signal station at which trains do not stop. There is nothing noticable here but snow-fences, of which there are several. Dana has an elevation of 6,796 feet, and lies 7.5 miles east of St. Mary's. Six miles and one-tenth east of Dana we come to

Percy.

A station similar to the last, but having an elevation of 6.950 feet.

This station is named in memory of Colonel Percy, who was killed by the Indians at this spot.

When the railroad was being surveyed, he was surprised by a number of Indian devils—it would be a misnomer to call them "Braves."

As they far outnumbered him, he retreated to a cabin close by the road. Here he kept his assailants at buy for three days. During this time he killed several of them. Getting exaspenated by their ineffectual efforts to eapture him, they finally set fire to the hut. The fire soon effected what the Red-skins could not accomplish. The hut being a frail combustible structure, the roof soon fell in, and compelled the gallant Colonel to rush into the open air. His fiendish enemies were waiting for this result, and immediatedy dispatched him.

Four miles and six-tenths east of Percy we come to

Simpson,

A signal station of no importance, and of an uninviting appearance—elevation, 7,067 fect.

Carbon.

This station is ten miles east of Percy, and has an elevation of 6,750 feet.

It is an important station, and contains some of the best coal mines on the Union Pacific Railroad. Quite a number of stone-houses have been built here, for the use of the workmen engaged in the mines, and their families. In early days they were in constant danger from the Indians. The sad fate of Colonel Percy proved how worthless wooden structures were, and so they built stone-houses, that could not be burned about their ears.

The Carbon Coal Mines.

These mines are close to the railroad. The main shaft is admirably situated between the main and the side-track, so when the coal is hoisted up out of the mine, it is immediately "dumped" into the trucks and noods no second handling. The shaft is 60 feet deep, and supplied with all the latest pumping and hoisting appliances. The chambers in the mine are 700 yards long, and 12 feet wide. The working capacity of these mines is 300 tons a day, though, at present, but 150 tons per day are taken out of them.

Quality of the Coal.

In 1868, Mr. J. P. Carson, of the U. S. Geological survey, made an analysis of the coal from the Carbon Mines. The following is the result:

Volatile combustible matter	27.68
Fixed Carbon	51.67
Ash	6.17
Sulphur	2.88
-	
Total.	100.00
Color of ash, light gray. Specific	gravi-
to 1 97 Weight now embig would	9 910

pounds.

Leaving Carbon we cross an open, rolling country, with low rocky hills. The uneven nature of the country has necessi-

tated some shallow cuttings, which are covered by snow shades. Beyond these, we traverse a smooth open plain, abundantly stocked with game. Several herds of antelope, each numbering at least 300 head, scampered leisurely away on our approach, as if they did not dread us much. Here also there is another variety of game the wife.

We are certain, experiencing a like feeling in ourselves, that this plain will charm the eye of every sportsman who passes over it. It is such a splendid place to bunt the antelope or the deer. Far as the eye can reach does this inviting plain extend smooth and beautiful. Near the road there is, also, a lagoon with lots of wild duck. Any modern Nimrod having time and inclination could spend a week here very pleasantly. But we must proceed

Medicine Bow.

This station is 9.2 miles east of Carbon, and has an elevation of 6,550 feet. It has a round house of five stalls, a coal and wood house, and a double side track.

Company "I" of the 2nd cavalry, under command of Captain Henry E. Noyes, of that regiment, are stationed here in the summer.

The station derives its name from

Medicine Bow River, which flows behind the station in a westerly direction, and empties into the North Platte about 30 miles below Fort Steele.

Shortly after leaving Medicine Bow station, we cross

Medicine Bow River.

This river rises in the Medicine Bow mountains, about 50 miles south of the railroad. Several treaties are said to

Per Cent

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have been made on its banks, between the Whites and the Indians. Many varicties of fish are found in Medicine Bow river and its tributaries, and the mountains around its head waters give excellent sport to the hunter.

East of Modicine Bow River, we dash through more snow sheds. Curving round to the left to avoid a range of reggod rocks which frown upon our right, we startle another heard of antelope who have been grazing by the roadside. We could watch them scudding across the plain, were it not for a beautiful clear lake which shines out on the right of the road. This is Come Lake. It has many fish, and is the resort of flocks of wild dock

Como.

Como station is 7.1 miles from Medicine Bow, and has an elevation of 6,680 feet.

From Como Station, we obtain the first view of Laramie Peak, one of the most porthern of the Black Hills.

Rock Creek—a tributary of Medicine Bow River, which shall be on our left for the next thirty miles, flows behind the station.

Leaving Como Station, we rattle over an undulating plain, which is a favorite resort for herds of Elk. Dashing through more snow-sheds, we come to

Wilcox,

A signal station, 7.9 miles from Como. We do not stop here. Beyond Wilcox the hills converge. Passing between them we arrive at

Rock Creek.

This station is 7.7 miles from Wilcox, and has an elevation of 6,690 feet. An immense number of ties are stored here. They are floated down the river and forwarded by rail to their destination.

Rock Creek Coal.

Near this station, coal has been found. When analysed it gave the following results:

sh				
olatile substances, and water	r.			35.16
m +-1			1	100.00

Passing out of Rock Creek Station, we cross Rock Creek on a Howe truss bridge. Beyond this, we stretch away out on to a level country covered with tuft grass, sace brush, and beds of alkali.

Due east of Rock Creek Station, the Black Hills loom up before us. This range is an impassable barrier to

our further progress in that direction.
We therefore change our course here to
the southward, which direction we follow
for about seventy miles. Within this
distance our road lies between the Black
Hills on the east, and the Medicine Bow
Mountains on the west. Our old friend,
Elk Mountain, is still in sight, and seems

Miser.

to bid us "Bon Voyage,"

This station consisted of only one house when last we passed it. Its appearance was quite in keeping with its name. It is 8.7 miles from Rock Creek, and has an elevation of 6.827 feet.

Eight miles and three-tenths beyond Miser, we arrive at

Look Ont

This station, which has an elevation of 7.169 feet, is similar to Miser.

It is equally lacking in interest unless indeed, that nameless grave behind the station, and surmounted by a cross, be an object of interest. Some member of the great human family has found a quiet resting place here. Who can tell if the occupant of that solitary grave was one of the many poor waifs connected with the building of this great highway over which we now ride with so much comfort : or if he was some widow's only son, who, filled with a love of adventure, and seeking fortune in this distant territory, found only a grave. We cannot tell. But a tinge of sadness comes over us when we think of the many who die far away from their friends, without a kindly smile, or a comforting word.

Leaving Look-out Station we pass through more snow-sheds out on to the same kind of country over which we have lately been passing. On the west side of the railroad there is a beautiful sheet of water, two miles long, and halfa-mile broad. This is Cooper's Lake.

Cooper's Lake Station.

This station, which is 8.7 miles from Look-out, and has an elevation of \$.038 feet, derives its name from the lake we

have just passed.

Leaving Cooper's Lake we stretch away across a level grassy plain. To our left, are the Black Hills, and on our right the Medicine Bow Mountains. Evidences of stock-raising now appear. On our left, there is a corral for cattle; and on our right, stretching away into the distance, are the beautiful plains of Laramie.

We now cross

Whiskey Creek.

A small stream which rises in the south end of the Medicine Bow Mountains, and empties into Laramie River-now flowing on our left

A little forther on we cross Little Large mie River, and enter

Wyoming Station.

This station, which bears the name of the Territory, is 10.5 miles from Cooper's Take Station, and has an elevation of 7,068 feet. Wyoming Station is the nucleus of what will yet be a good-sized town. It has several stores and private houses. Its excellent position on the Laramie River, which is here close to the railroad, gives it great facilities for carrying on a lumber business. During the construction of the railroad great numbers of ties were cut around the head-waters of the Laramie River and floated down to Wyoming. Leaving Wyoming, we journey on

across the beautiful plains of Laramie. Seven miles and six-tenths from Wv-

oming we pass Howell.

A signal station, at which we do not stop. Eight miles more brings us to

Laramie Station.

Laramie is one of the regular eating stations, so when we arrive at the depot we enter the Laramie Hotel. It is kept by Mr. Rumsey, and is one of the cleanest and best provided railroad hotels on this line.

Having partaken of the good things provided by our host, we will now look around Laramie.

Laramie is in Albany county, Wyoming Territory. It has an elevation of 7,123 feet, and is the end of the Laramie and the beginning of the Lodge Pole divisions of the Union Pacific Reilroad

Railroad Shops.

The railroad company have at this station a round house of 20 stalls, a machine shop 125x75 feet, and a blacksmith shop 100x75 feet.

These shops are built of stone, and are under charge of R. Galbraith, Division Master Mechanic.

They formerly gave employment to 108 men, who were distributed as follows: Round house, 48; blacksmith shop, 14; machine shop, 46. Latterly, the road and its equipments are in better order, fewer repairs are needed, and the company's staff of mechanics at this station, has been cut down to 41 men.

Railroad Hotel.

This building which is two stories high, is 200x30 feet. It is the most commodious of this company's hotel buildings. During the summer season it is much patronized by invalids.

Laramie City. This city lies immediately behind the

railroad station. It consists of a few streets laid out at right angles to each other, and contains about 900 inhabitauts. In addition to the Railroad Hotel al-

ready described, it has three others. It has also a bank, several stores of different kinds, and one daily newspaper—the Laramic Scalinel.

Three churches grace this little city. They are St. Matthew's (Episcopal), a Roman Catholic Chapel, and a Baptist

The Rev'd John Cornell rector of St. Matthew's parish—a gentleman to whom we are indebted for information about Larannie—officiates in the former. Methodists, Presbyterians and other denominations not having churches built, hold occasional services.

Laramie has two schools—a good publie school, B. F. Harrington Principal, and St. Matthew's Parish School, under the Rector.

Female Jurors.

Laramie, in common with other railroad towns along this line, was at one time infested by a gang of lawless villation whose hands were against every man, and who made this little city a perfect pandemonium. Wyoning Territory was the first to make trial of female jurors. A jury largely composed of Indies was impanelled in Laramie City. The Indies at first, were reluctant to act. On being assured of the protection of the Court, they addressed themselves with commendable zeal to the dayt adlected to them

Culprits, who, anywhere else, would have got free on the plea of insanity or some other equally despicable subterfuge, were punished in Laramie with the utmost rigor of the law.

Instead of tossing up heads or tails to see whether they would acquit or convict the prisoner, as is too commonly done by male jurors, even when the prisoner at the bar stands changed with the gravest offenses, these ladies, to their credit be it said, weighed the evidence so well that their vendicts gave general satisfaction, and cleared the city of a class whose presence was a nour blight.

Position of Laramie, Prospects, etc.

Lammie is 1,341 miles from Sau Franciso and 572 from Omaha. It is pleasantly located about four miles west of the base of the Black Hills, on the plains from which it takes its name. These stretch in an unbroken level to the base of the Sheep Mountains, about 35 miles west of the city. From the latter, the Snowy Range, about 100 miles to the westward, and covered with snow all the year round, can be distinctly seen.

Laramie River flows to the northward about one half a mile behind the city; and the old Californian stage line passes about nine miles in front of it.

The soil of Laramie plains is a red alkali. It is the best between the Platte and Salt Lake valleys. The plains are covered with a luxuriant growth of wild grass admirably adapted for stock raising purposes. Mosars. Hutton and others, do a large stock business here.

The mountains near the head waters of the Laramie are well wooded, and large numbers of ties and logs are floated down to Laramie, where a saw mill is erected and a growing lumber business done.

Laramie River.

Laramic River rises in the south end of the Rocky Mountains, in Colorado Territory. It flows in a northerly direction for about 120 miles; when south of Laramic Peak; it turns to the northward, which course it follows for about 60 miles and then empties into the North Platte at Fort Laramic

Mines.

Although the mines and mining interests of Laramie have fluctuated a good deal, they are still of considerable importance. The "Last Chance" gold mines, about 45 miles west of the city, have not been much worked lately, but Co. L. W. Downey and others who have been mining in these mines have taken out some rich nuggets, and assert, confidently, that the ground from which they got them is quite as rich as any in Colorado.

"Lead" mining is generally practised at "Last Chance" and, on several occasions, has yielded handsomely.

-Having taken this rapid glance at Laramie, and the different objects of interest in and around it, we will now leave it and proceed on our journey.

Two miles and seven tenths south of Laramie City we arrive at

Fort Saunders Station.

It has an elevation of 7,163 feet, and is the freight and passenger station for

Z OI C Dattituel'S

This post, which is but a short distance east of the railroad, was established in 1866. It is now garrisoned by two companies of the 4th, and two of the 14th Infantry, and one company of the 2nd Cavalry.

Its present officers are as follow:

Post commandant: Major M. M. Blunt, 14th Infantry.

Post Surgeon: W. C. Spencer, Surgeon U. S. Army.

Post trader: E. D. Lane.

Fort Saunders draws its supplies by R. R. from depotFort D. A. Russell at Cheyenne.

Leaving Fort Saunders we continue our journey across the Laramie plains, which are now undulating rather than level. Six miles and four tenths from Fort Saunders we arrive at

Red Buttes.

A side track station, with an elevation of 7.336 feet, deriving its name from some reddish bluffs of sandstone near by. They have been described by one writer as follows: "The sandstone bluffs or hills have been washed and worn by the elements until in places they rear their peaks from 500 to 1,000 feet above the plain, in wild fantastic shapes and grotesque figures. Rocks which, at a distance, might be taken for Castles, rise side by side with the wells of an immense fort. Churches rear their roofs, almost shading the lowly cottage by their side; columns, monuments, and pyramids are mixed up with themselves and each other. as though some malignant power had carried off some mighty city of the olden time, and, wearving of his booty had thrown it down upon these plains without much regard to the order in which the buildings were placed."

Now, however grand this piece of fineworking may be, we submit the similitude between these "columns, monuments and pyramids," all "of the ollen time," and a the Red Buttes, who, innocently enough, are thus having greatness thrust upon them, did not particularly strike us; and at the risk of being supposed to possess a nature utterly devoid of poetry, we are compelled to say they remind us more red-burnt kilns were left for time and the woather to demoils. Whether our matter-of-fact similitude is the happier of the two—judge vs. Leaving the Red Buttes, and everything but the most friendly feelings behind us, we continue our way across the plains, passing a herd of 7,000 cattle belonging to Mr-Greighton, a famous stockraiser here. Until we come to "the fire mile saing," the country continues the same, with here and there double, and even triple lines of stone and wooden snow fences to protect the road. Bepond this point, the plain gives place on the lett tolow rolling hills. On the right, the low hills surrounding Antelope Pass can be seen beyond the plain.

Harney.

This is a small side-track station 6.2 miles from Red Buttes. It has an elevarion of 7,857 feet.

Here we have arrived at the south end of the Black Hills, and the railroad turns sharp off to the eastward.

Beyond Harney the country becomes more broken. Heavy cuttings, snow sheds, and snow fences, are met in close proximity to each other.

Dale Creek Bridge.

This extraordinary bridge is 716 feet long, and 120 feet above the creek. It is constructed of treatles strongly bound together, and has a span of 40 feet. Having crossed the bridge, we are able, for the first time, to realize how appropritately the term Rocky Mountains is applied to what we see around us. The aspect of the country has completely changed. Instead of the smooth grassy plains, we have now gigantic rocks rising abruptly from their beds, without a particle of soil adhering to their almost perpendicular sides, or a spear of grass adorning them. While we have been intently watching the rocks, we have at the same time been toiling up the steep ascent, and almost before we are aware of it, we are at Sherman—the highest railroad station in the world.

Sherman.

This station, which has an elevation of 8,242 feet, is the highest on the whole trans-continental railfoad. It is 1,365 miles from San Francisco, and 549.3 from Omaha

Since the war, it has been the custom to perpetuate the names of our great generals, both alive and dead, by naming places of interest after them. This station being the highest on the road, and General Sherman the tallest general in the service, some analogy was seen to exist between the two, and so this rocky summit has been made immorth.

Sherman has a round house of five stalls, and a small repair shop. On the north side of the track there are a few stores and saloons—the latter predominate.

From this elevated position a splendid view can be had of the surrounding country. "Long's Peak" and Pike's Peak can both be seen to the southward, and Elk Mountain, our old friend, is still visible in the dim west.

During the Summer months there is a small detachment of troops stationed at Sherman. Last Summer Company "G," 5th Cavalry, under the command of 1st Lieut. A. B. Bache, was stationed here.

Objects of Interest near Sherman.

Apart from the interest inseparable from this place, and its huge bare rocks,

there are several objects of no little interest.

For the Keen Sportsman.

Who is able to do "hill shooting" without crying-out "bellows to mend," as seon as he begins to climb, this is an excellent place to spend a few days. Every rawhe, and hill side, is covered with a dense forest. Every creek abounds with trout of the finest quality. For sage hen, grouse, antelope, deer, (blacktailed), elk and bear, no better place can be found.

For those in quest of

Less Dangerous Amusement, There are innumerable objects of in-

terest to be inspected. The huge bald rocks close to the station will well repay inspection. Some of them are of immense size and fantastic shape. From these awe-inspiring rocks, turn then to another kind of beauty—the wild flowers. Here they abound in the greatest profusion and are robed in the gaudiest dress.

Dale Creek.

Perhaps the best place, near Sherman, to gather wild flowers, will be on the banks of this beautiful creek. It is but a mile-and-a-half distant. When last we passed over it, it seemed the most charming spot we had ever seen. The Cheyenne school children, and their parents, had assembled on the banks of this creek for a pie-nic. They had a brass band with them, and, just as we crossed the bridge, were dancing joyously to the music.

Our readers may not find the young folks, nor the music there, but they will find an immense variety of flowers of every hue. And they will find the cool, clear pools of the creek itself filled with speckled trout.

Having now glanced hastily at Sherman, and its surroundings, we will continue our journey.

Leaving Sherman, we also leave all upbill work behind us. Henceforward our journey is a steady decline. The iron horse, no longer snorting vehemently to pull his heavy load up hill, is now playing like a high mettled charger. The brakes—his "curb"—are now in requisition to hold him back.

Smoothly and pleasantly we glide down hill past

Buford,

An unimportant signal station, with an elevation of 7,780 feet, 6.8 miles from Sherman. East of Buford, we pass over a table-land adorned with trees, and having double rows of snow-fences to protect exposed portions of the track.

Granite Canon.

This station is 6.9 miles east of Buford, and has an elevation of 7,298 feet.

Here there are extensive quarries whence the stone for the company's buildings and other warehouses at Cheyenne was taken. Limestone is also pleniful here, and some of it has been burned in kilns in the vicinity.

The Lone Tree Creek, a tributary of the South Platte, takes its rise a little to the south of this station.

Leaving Granite Canon station we pass down the steep grade between high hills, heavy outtings and snow fences, and come out among rolling hills having a good covering of grass and a variety of game. Five miles and one tenth east of Granite Canon station we pass

Otto.

A small signal station at which we do not stop. Otto has an elevation of 6,724 feet. Continuing on ourdownward course we pass several low hills away on our left. Crow Creek, a stream which we shall cross before we enter Cheyenne, rises in them.

Eight miles and one tenth east of Otto, we stop at

Hazard.

Hazard has an elevation of 6,291 feet. It is quite as unimportant as Otto, but possesses more interest to us as it is from this station we obtain the first glimpae of Cheyenne—"the magic city of the plains." To the left of Cheyenne, and, apparently a little nearer to us, we see Fort D. A. Russell, to which we have so frequently referred as the depot from which the other forts that we have passed have drawn their supplies.

Careering on across the now level ulain.

we cross "Crow Creek" on a Howe truss bridge, and, after a short level run, we arrive at

Cheyenne

Cheyenne is one of the regular eating stations on this line. It is also the junction of the Denver and Kansas Pacific Railroad.

Whether we are going to brauch off here and travel through the buffalo country, or "fight it out on this line," matters not; our appetites have been whetted by the keen pure air of Sherman, and our first business is to call upon the Railroad Hotel, and make the acquaintance of mine host Mr. Jones—agentleman who supplies juicy, tender steaks from the famous "grass-fed beef of Cheyenne."

Having made a practical test of these celebrated steaks, we shall have an oppor-

tunity to look around us.

Chevenne is 1.398 miles from San Francisco and 516 from Omaha-elevation 6.041 feet. It grew so fast when first laid out that it was called "the magic city of the plains." For a time it was doubtful if, like other railroad cities, it would not move on as the road was opened to the westward. Its early population was more like demons than human heings Under their regime it became a hell upon earth. This state of things could not be allowed to continue. A Vigilance Committee was organized and a number of the thieves and rowdies strung up. The desired effect was produced, and since that healthful example. Chevenne has been quiet and orderly.

Wood being the most convenient material of which to build houses, Cheyenne was at first composed of very combustible materials. Unfortunately a fire occurs in one of the buildings of the town, and as there was no effective means at hand to quench it, nearly the whole town was burned. Since that time, more substantial buildings have been excetch.

The City.

The city is on the north side of the railroad. It contains several streets laid out at right angles to each other.

The buildings, as a rule, are low; although there are some two-storied, substantial brick stores in different parts of it. It has several churches, schools, breweries, a "Theatre Comique," and a "Museum of Living Wonders,"

Trade, etc.

Prior to the opening of the Kansas Pacific Railroad, Cheyenne did a large forwarding business to Colorado and New Mexico. Since that road has opened, however, this trade has fallen off considerably.

Newspapers.

In the gala days of Cheyenne, some three or four newspapers struggled for an existence. The Leader, and the Argus, were then prominent; now, we hear more of the Tribune, and the Advocate.

Railroad Shops.

The Railroad Company have here a round house of twenty stalls. It is also used as a Machine Shop. J. E. Calhoun is Master Mechanic at this place, and has one hundred and eleven men under his supervision. Their aggregate monthly salary averages 88,485.27; cost of material, 83,850.90; total, \$12,344.17.

The Denver Pacific Company have also shops at Cheyenne.

Fort D. A. Russell.

This Fort, which is connected by sidetrack with Cheyenne, is located on the banks of Crow Creek, three miles north of the City. It was established in 1867, and named after Brigadier General David A. Russell, U. S. Volunteers, Major 8th U. S. Infantry, who was killed at the battle of Winchester, Virginia.

The present officers of the Fort, are : Commanding Officer, Colonel John H. King, 9th Infantry; Post Surgeon, J. H. Frantz, Surgeon U. S. Army; Post Trader, J. D. Woolley.

Garrison: Headquarters 9th Infantry; six companies of 5th Cavalry, and six companies of Infantry (9th and 14th Regiments.)

The Supply Depot of the same name, is located between the Fort and the city. It is under command of Captain D. W. Burke, 14th Infantry, and garrisoned by Company" C," of that regiment.

Indians.

There are now no hostile Indians near any of the stations of the Trans-Continental Railroad.

Before the road was built, however, difficulties frequently occurred at different places along the line which it follows. The following reminiscence of Cheyenne, from the pen of Grace Greenwood, will be road in this connection with interest.

"At the Land Office, the other day, Mr. Wilson, the Commissioner, who has collected a remarkably curious and valuable cabinet and museum, showed us a sincular trophy of Indian warfare -- a head-dress of the most diabolical description. It was composed of buffalo horns and skin, adorned with wampum and tinsel, and long, wild tufts of buffalo hair, Depending from it was a tail of inordinate length, also tinseled and tufted, with small sleigh bells running all the way down it. This unique accoutrement was once the property of Tall Bull, a Chevenue chief, who was killed in a fight with the U. S. Fifth Cavalry, and their Pawnee auxiliaries, under Gen. Carr. sometime last summer. When this chief, who was a cicantic savage, saw that the day was lost, he put his wife and child on a pony, and sent them within our lines. telling them to surrender to the whites. The Indian woman, who was kindly received, said that when her husband told

her she must give herself up, she urged him to go with her, but that he covered his ears with his hands to shut out her entreaties, and rushed back into the fight. which was the last she ever saw of the lamented Tall Bull. He was speedily killed, and these are his remains. In this same engagement, another Chevenne woman, young, and remarkably handsome, came dashing into our ranks, with two children, on her pony. But she did not come to surrender. She came like a fighting fury, armed with a long knife, with which she struck frantically right and left. At last, seeing herself about to be captured, she stabbed to the heart, first one child, then the other, then herself. and so perished - a Medea whom there is no Euripidas to immortalize."

Our readers going east by the U. P. R. R. had better turn over the pages referring to Colorado and the Buffalo country till they can read them at their leisure.

Those going by the Denver Pacific Road can observe the same rule with reference to matter descriptive of the U. P. route.

The Kansas Pacific Railway.

Travelers across the continent will do well to remember that by the recent completion of the last division of the Kamsas Pacific Railway, a new route is opened across the plains through Kansas and Colorado. This route connecting with the U. P. R. R. at Cheyenne and with the great lines of road from Chicago, New York, Philiadelphih, Baltimore, Washington, Norfolk and Cincinnati, concentration, Norfolk and Cincinnati, concentra-

ting at St. Louis, affords every facility for pleasant, comfortable and speedy transit from the Pacific to the Atlantic States, and vice versa.

The main trunk line of this great throughfare is the Kansas Pacific Rail-way, which, starting from Leavenworth and Kansas City, and uniting at Law-rence, runs up the entire Kansas or Kaw valley, estending for nearly five hundred miles through the centre of the State, and three hundred and fifty miles through Colorado Territory vis Denver City to Chevenne.

The Commencement of the Road.

The road was commenced fiveyears ago, but owing to the lack of much needed congressional legislation, the terminus remained for a season out on the prairie, with no connection except by stage lines with Santa Fe 4 and Denver City. Last year, when still failing to obtain the sid required to complete the road, by way of the thirty-fifth parallel, to the Pacific Coast, an arrangement was made with the Denver Pacific Railroad Company to extend the road to Cheyenne, and thus form a connection with the Union Pacific and

Kit Carson to Denver City—one hundred and fifty miles—was constructed under the superintendence of Gen. Wm. Palmer, in 150 days, being at the rate of a mile and a half a day, including grading. This rate was attained in the face of many serious obstacles, not the least of which was the interference of the trescherous Indians of the plains, who constantly harassed working parties, and killed altogether some nituetees men and ran off several hundred mules. Every man em-

This last division of the Road, from

ployed on construction had to be armed: but through the indomitable energy and good management of the company the work was at no time discontinued. Track laying began only in the early part of July and, occupying forty three working days, on an average of three and a half miles per day, colminated in ten and a quarter miles on the last day before 3 o'clock P. M. The ties and timber were hanled by wagons from the spurs of mountains over distances of one hundred to one hundred and thirty miles; and some of the telegraph poles two hundred miles. Over 6,000 oxen, chiefly Mexican, were engaged in this work. The last 234 miles of this road-with the line from Denver to Chevenne-106 miles, making 340 miles in all, have been finished in one year without subsidy from the Government except in land .. But for the desire to make as speedy

connection as circumstances would allow with the only through route to the Pacific, the line would have been run from Denver by way of Sall Lake City to Ogden, thus saving a distance of nearly one hundred miles, and securing the advantage of a junction with the Central Pacific Railroad at that point. This, being practicable, may yet be done.

It is to be regretted that the road was not pushed through on a sontherly route to the Pacific Coast, for by reason of easier grades and immunity from beavy snows, it would, doubtless, when built, scenre a heavy winter business in transporting freight, and become the favorite rotte from ocean to ocean. Circumstances will, however, compel the early completion of the road, as originally projected, to the Pacific Coast. The magnitude and

importance of the work, the absolute demands of trade and travel will compel Congress to see to the completion of this great line.

Advantages of this Line.

Going east by this route, the traveler has all the advantages of the Central Pacific Railroad from Oakland to Ogden. and of the Union Pacific Railroad from Ogden to Chevenne. This portion of the trip embraces all the valley and mountain scenery of California, the sage covered plains of Nevada, the rugged romantic views through Weber and Echo Cañons of Utah, Laramic plains, and the Wahsatch and Rocky Mountain ranges of Wyoming and Colorado. From Chevenne the Denver Pacific Railroad, a well built road, running through a beautiful rolling country, diversified by high hills and fine streams of water, carries him to Denver City. Between these two points. a distance of 196 miles, there are several stations, the most important of which is Greeley, a colony founded by Horace Greeley, situated on Cache de la Poudre Crook, about half way between Chevenne and Denver.

COLORADO TERRITORY.

Colorado Territory lies between the 37th and 41st degrees of north latitude, and between the 25th and 32nd degrees of longitude west of Washington.

Colorado is bounded on the north by Wyoming, on the south by New Mexico, on the west by Utah, and on the east by Kansas. Its area is precisely the same as that of Wyoming Territory, viz; 105,-818 square miles or 67,723,520 acres. The Rocky Mountains run through the centre of the Territory from north to south, dividing it into two grand divisions, as the Cascade Mountains do Washington Territory.

When Colorado was not so well known as she is at present, it was generally believed that her western portion was composed of barren inhospitable mountains. and her eastern portion a boundless waste of arid, desert, woodless land. This idea was erroneous. While her mountains are high and rugged, they are beautiful beyond description and tecming with mineral wealth. And the fact that she has now a population of 70,000 people proves that she has considerable agricultural resources. The following passage quoted from "Colorado, its parks and mountains," by Samuel Bowles, will more than substantiate all that we have claimed for her agricultural resources,

"As Pennsylvania is the key-stone in the Atlantic belt or arch of States so is Colorado the key-stone in the grand continental formation. She holds the backbone, the stiffening of the Republic. Lying a huge square block in the very centre of the vast region bounded by the Mississippi valley on the east, the Pacific Ocean on the west, and British America and Mexico north and south the continental mountain chain here dwells in finest proportions, exaggerates, puffs itself up and spreads itself around with a perfect wantonness and luxuriance of power,-great fountains of gold and silver, and lead and copper, and zine and iron,-great fountains of water that pours itself in all directions through the whole interior of the Continent, feeding a wealth of agriculture that is little developed and never yet dreamed of even,—great fountains of health in pure, dry and stimulating air,—great fountains of natural beauty; she may proudly bid the nation come to her for strength, for welath, for vigor, —for rest and restoration,—and may well call her mountains the Sierra Madre, the Mother Mountains of the Continent.

Her geographical prominence and parentage are but type and promise of her future relations to the developed and developing life of the nation. Stretching two hundred and sixty miles north and south, and three hundred and seventyfive miles east and west, her territory has three natural subdivisions. The eastern third is of the Plains and forms their western section .- a high rolling plateau from four thousand to five thousand feet above the sea level, richly watered by streams from the mountains, the strips along the rivers ripe for abundant harvests of grain and fruits and vegetables, the whole already the finest pasture land of the Continent, and with irrigation, for which the streams afford ready facility. capable of most successful cultivation .beautiful in its wide, treeless sea of green and gray, with waves of land to break the monotony and lift the eye on to the great panorama of mountains, snow-slashed and snow-capped, that hangs over its western line through all its length of two hundred and sixty miles, and marks the second or middle division of the State."

Denver City.

Denver City, the capital of Colorado Territory, has a population of 5,000 people, is beautifully located and well built. It has fine public buildings, handsome churches, public schools, comfortable hotels, and four newspapers. Three railroads centre here. The mining region, the magnificent mountain scenery, Long's, Craig's and Pike's peaks, towering above the lofty outline of the Rockty Range, and the beautiful Colorado peaks, Sulphur Springs etc., are easily accessible by daily lines of stages. Stage a also leave here for Santa Fê, New Mexico—distance of nearly 400 miles. Denver is a prosperous improving place with a progressive, industrious population. Now that its connection with the East and West by rail is complete, it bids fair to go shead rapidly.

From this point eastward, begins the Kansas Pacific Railway proper, the distance hence to Kansas City, State Line and Wyandotte, the eastern terminus of the road, being 639 miles. Between these points (Denver City and Kansas City) there are eighty-four stations, some of which are large cities and some flourishing towns with thriving populations, while others are merely military posts, occupied by small bodies of troops for the protection of the road and settlements from the incursions of the Indians of the plains. The principal cities are Kit Carson, Salina, Abilene, Junction City, Fort Riley, Manhattan, Topeka, (the capital of the State.) Perryville. Lawrence. Leavenworth and Kansas City. Of these Leavenworth is the principal, with a population of 35,-000. Many of the military posts "out on the prairie" will strike the traveler as being of the primitive prairie dog style of architecture, as they are composed of adobe huts built two-thirds under ground. the one-third visible being loop-holed for rifle purposes, and roofed with rafters covered with earth and a plentiful growth of

buffalo grass. They afford good protection, however, to the troops, and are more serviceable in the peculiar savage warfare of the plains than more pretentions blockhouses would be, either for attack or defense. Kit Carson, a place which grew from a railfroad terminus out on the prairie to quite à lively town, has a stage line running to Santa Fê.

The Buffalo Country.

From Kit Carson to Salina, a distance of 300 miles—is the great buffalo range of 300 miles—is the great buffalo range of Kanass. Here thousands upon thousands of these animals can be seen erossing the line of the railrood in their migrations from north to south or vice versa. So great are their numbers at certain season of the year, that the train has to be stopped frequently to permit the herds to pass. Running into a head of buffalo might prove a more serious joke to the train than to the herd. This portion of Kanasa is principally rolling prairie country, generally well wastered.

It is rated high as a grazing country. Large numbers of stock are brought here from Texas and forwarded from Salina, to the eastern eities by rail. From Salina so, want to Kansas City the country is beautifully diversified, and very fertile. It is watered by large rivers, the chief of which are the Kansas, or Kaw, the Solmon, Republican, Big Blue and their branches.

Within the past few years, flourishing settlements, villages, towns and cities, adorned with orchards and vineyards, have grown up along the main trunk of this line and its connecting lines north and south.

KANSAS.

Kansas lies between the 37th and the 40th degrees of north latitude, and extends from longitude 94° 25′ to 102° west from Greenwich. It is bounded on the north by Nebraska.

on the south by Indian Territory, on the west by Colorado, and on the east by Missouri.

It has an area of 78,418 square miles, equal to 50,187,520 acres.

General Appearance, Etc.

In describing the general appearance of Kansas we cannot do better than quote from "The Great West," in which Mr. Hall, when speaking of Kansas says:

"The surface of the country rises from the deep valleys of the streams by a series of steps or terraces, stretches away in smooth slopes, and culminates in centlyundulating uplands about 900 feet above the sea. Between each terrace are intervals often several miles in breadth. smooth as if levelled by the roller, but inclined toward the valleys. Near the large streams the land is sometimes broken, but leaving the immediate banks there is scarcely an acre of land where the surface is incapable of cultivation. It is one unbroken stretch of arable land, with a drainage so perfect that not a pond or swamp exists over its whole extent. The seenery, though less varied than in rugged and mountainous districts, is exceedingly picturesque and beautiful; the swelling surface of the prairie dotted with island groves; lofty table-lands overlooking great rivers, belted with luxuriant forests, green flowery plains, and vales of quiet beauty, walled in by the eternal battlements of nature ; bluffs and hills lifting their bold, graceful outlines against the sky, everywhere delight the eye and redeem the landscape from monotony."

Climate.

The climate of Kansas, though differing in some degree from that of the Territories through which we have already passed, vet has much resemblance, in that it is healthful and invigorating. The Winter, is generally mild, though some times cold-snaps occur. The heat of the Summer, never too great, is tempered by fresh breezes, which rise and fall with the sun. Of the agricultural capacities of Kansas, our readers who travel through it, will have an opportunity of judging. For the benefit of those who may not have an opportunity of forming their ideas from personal observation, we need only say that its soil and climate are adapted to the growth of all the grains, grasses and fruits raised in temperate climates.

Kansas has now 1.283 miles of railroad in paying operation. It has a fine climate, the winters being very mild, and the summers not too warm : it has millions of acres of rich, deep, black soil. fit for fruits, vegetables and grains; 2,500,000 acres of timber land; coal mines everywhere, iron mines, saltsprings ; immense deposits of magnesian limestone for building purposes, and a better diffusion of the elements necessary to the sustenance and comfort of a large population, than almost any other western State. Kansas is within three days easy, comfortable and cheap travel of the Atlantic Coast

From Kansas City to St. Louis there are two excellent lines of railroad—the

North Missouri and the Missouri Pacific —leading through a thickly settled, fertile country, in the centre of that State, to the "Mound City"—the most beautitile and thriving city of the Great West. The distance from Kansas City to St. Louis is 290 miles, (a pileaant ride of 14 hours,) making the entire distance from Cheyenne to St. Louis by the Denver Pacific and the Kansas Pacific Bailroads 1,025 miles. The roads are provided with Pullman cars and every other modern improvement and convenience of railway traveline.

Lines of Travel at St. Louis.

From St. Louis, lines of railway run north, south, east and west, so that the traveler, after he reaches that city can take a choice of the road leading most direct to his destination.

Now that the Kansas Pacific Railway is in close connection with the Central and Union Pacific Railroads, its advantages are apparent, even in its present limited range of travel. There is no doubt when it is open along the 35th parallel to the Pacific Coast, by way of New Mexico, Arizona and California, it will prove a great success. If Congress, in its wisdom, does not see fit to aid further in the completion of this road, it will. as a paying route, be built without Congressional assistance. The advantages that would accrue to the territories above named, and, particularly, to the central and southern portions of California, from this road, demand its speedy completion.

Having now seen something of Colorado and Kansas we will again resume our journey. Leaving Cheyeone we follow up Crew Creek Valley. Here and there, there as a farm house, and a herd of cattle; and as if to supply a contrast with the latter, the little Parinie Dog stands up at the mouth of his burrow, and gazes on us as we pass. Reeping on through snow sheds, we emerge on a better grazing country, where the plains stretch out in broad magnificence.

Archer.

Archer is an unimportant side-track station, with an elevation of 5,690 feet. It is 8.4 miles east of Chevenne.

In the next twelve miles, the plains give place to low rolling hills well covered with grass.

Hillsdale. This is a side track station, of no im-

portance, where we wait but a few moments—elevation 5,591 feet.

graves surmounted by head boards. One of these boards is smaller than the other. Whether the difference in the size of the boards is intended to typify a corresponding difference in the size of the persons they commemorate we do not know.

The larcest head board bears this in.

The largest head board bears this inscription (evidently cut with a knife):—

"F. F. Fountain.

Boru 1843, Accidentally shot himself, July 1st, 1868,"

Hillsdale derives its name from a Mr. Hill, who, when the railroad was being located, was killed by the Indians near this station.

Leaving Hillsdale we enter upon a new aspect of nature. For upwards of a thousand miles—ever since we left Colfax, California—we have been traveling among

"Scenes of Nature's wildest grandeur."

Sometimes we have been whirling along beneath the frowning precipice, at others looking down from the dizzy height into the vawning chasm below. Now all that is left behind. The summits of the Black Hills are barely discernible; and the Peaks of the Rocky Mountains are fading from our view. Instead of black frowning cliffs, whose rugged sides spoke of sterility and barrenness, we shall henceforward have the rolling prairie, bedecked with many flowers. Instead of cavernous rocks reverberating with the snorting of the iron-horse, we shall have the merry children's glad huzzah. And instead of the savage wolf scowling upon us as we pass his lair, the rosy matron. coming to her cottage door, shall bid us smiling welcome as we pass along.

Egbert.

Egbert is 12 miles from Hillsdale, and has an elevation of 5,272 feet. At this station we catch the first view

of Pine Buffs; and here also we come close to "Lodge Pole Creek," from which this division of the U.P.R. L derives its name. Lodge Pole Creek rises in the Black Hills, about 40 miles west of Egbert, and flows into the South Platte at Julesburg. We follow its course. Around its head waters, bear, wolf, deer and antelope are numerous.

Leaving Egbert, the sandy slopes of the bliffs can be seen in the distance, their sides here and there dotted with the trees from which they take their name. As we lessen the number of miles between us and them, the bluffs appear almost at right angles with the road, their northern end coming close up to the track. They are bold and precipitous, and we can see their horizontal strata as we pass. The bluffs seem triangular in shope, with their aper next the road. Just book at that magnificent lawn sloping so beautifully down from the eastern side of the triangle. Would we not like to have a game of croquet there with some girts of our acquaintance! Confound these stolid cars! With the most providing indifference to the beauties of this charming spot, they huryon, and here we are at

Pine Bluffs.

Fine Bluffs Station is 11.2 miles from Egbert, and has an elevation of 5,026 feet. During the summer, a company of cayalry are stationed here. Company O, 5th cavalry, under command of Liest James Burns, is now doing duty at this station. Seeing such piles of ties and cord wood stored here, we can readily understand that the now bere buffs opposite were at one time richly clothed with the graceful pine.

One mile east of Pine Bluffs Station we enter Nebrakel. We leave Wyoning and its female jurors behind us to complete the work of territorial renovation which they have so nobly and efficiently begun. We wish them every success. Their action is the most cogen argument in favor of Woman's Suffinge yet given to the world.

NEBRASKA.

Nebraska lies between the 40th and 43rd degrees of north latitude and between 94° 34′ and 100° of longitude west of Greenwich. It is bounded on the west by Wyoming Territory, on the east by the Missouri River, on the north by Daocta, and on the south by Kansas. It was organized into a Territory in May, 1854, and has an area of 122,007 square miles, or 78,084,480 acres.

For some time after its organization it settled up rather slowly. The depressions of the Indians retarded its progress very much. Within the last three years however, since the opening of the Trans-Continental Railroad, settlement has gone shead more rapidly. The census returns of 1870 show the population of Nebrasks to be 116,883. The settlers are chiefly engaged in agricultural and stock raising pursuits, and are principally located along the Missouri River, where the State has a water frontage of 300 miles, and along the Platte, Wood River, Elkhorn and Papillion creeks

The general aspect of the Territory, as we shall see, is rolling prairie. The western part of it has rather poor soil, but it improves as we go east. In the more neatern parts the soil is very rich and easily brought under cultivation. The climate of Nebraska is delightful. The atmosphere is pure, clear and dry, and admirably suited for persons sufficient from pulmonary diseases. Grazing is a favorite pursuit in Nebraska, and for this purpose it cannot be surpassed.

Our readers will be able to judge of its capabilities in this and other respects as we travel through it, so we will now pro-

Bushnell.

Bushnell is a small side track station, of no importance, 10 miles from Pine Bluffs. Elevation 4,860 feet. Leaving Bushnell, we cross the Lodge Pole Creek, and continue to traverse rolling, grassy plains. We cross Lodge Pole Creek, a second time, just before we enter

Antelope.

Antelope is another of the stations at which troops are camped, during the summer. Company "M" 2nd cavalry, under command of Captain John Mix, has been stationed here during the last summer.

Antelope station, is 11.9 miles from Bushnell, and has an elevation of 4,712 feet.

Bennett.

Nine miles and two tenths from Antelope, we pass a signal station of the above name. It is a place of no importance, so we hurry on. The country has still the same appearance, except that for miles along the line of the railroad, it is in possession of the prairie dogs.

Prairie Dog City.

The cities, or settlements, of these lively little creatures, can be seen on both sides of the road for many miles. This, however, from its size seems to be their metropolis.

The Prairie Dog, is about the size of a guinea pig. It is of a light brown color upon the back, and white on the belly, and on the inside of the legs. It is very active in its habits, and graceful in appearance.

When it is alarmed, it immediately scampers off to its burrow. Here it stops, perches itself upon its hind quarters, and awaits further developments.

Its burrow, which is dug in a spiral form, is about three inches in diameter. The most singular thing about these dogs and their cities is, that they do not inhabit them alone. Owls and rattle-snakes are their close companions; and in the majority of cases, each burrow is occupied by a prairie dog, an owl, and a rattlesnake. They do not quarrel, and are really a happy family.

Their cities frequently cover a space of from two to three miles square. It has been asserted that their burrows have subternacean connections; and that many buckets of water are needed to drown the prairie dog out of his retreat. This may sometimes happen, but, as a general rule, two or three bucketsful of water will unearth him.

Potter.

Just before entering this station, we again cross the Lodge Pole Creek.

Potter is nine miles from Bennett, and has an elevation of 4,370 feet.

It is another troop station. Company "L," 5th Cavalry, under command of 1st Lieut. Chas. B. Brady, was stationed here during last summer.

Brownson.

This is a signal station, 9.9 miles from Potter. We do not stop here, but hurry on to

Sydney.

Sydney is a regular eating station, and more of a town than any station we have met since we left Cheyenne. It is nine miles from Brownson, and has an elevation of 4,073 feet.

The railroad company have a ten-stall round house, and a machine shop, here, both built of Omaha brick.

The town, which lies principally on the south side of the railroad, consists of a few stores and saloons. Sydney is also a military station. It was established in 1867. At present it is garrisoned by Company "F," 9th Infantry. Commanding officer: 1st Lieutenant M. J. Fitzgendl, 9th Infantry. Post Surgeon: Chas. Mackin, Assistant Surgeon United States Army. Post Trader: Wm. Chambers.

Having refreshed ourselves at Sydney, we will again resume our journey.

We now ride along the northern bank of Lodge Pole Creek, whose course we follow till it is lost in the South Platte, near Julesburg.

Lodge Pole Valley, through which we are traveling, yields an abundant crop of succulent grass, and is a favorite resort of herds of antelone.

Colton.

Colton is a small station 7.7 miles east of Sydney. It has but recently been established, and its elevation is about 4.000 feet.

Lodge Pole.

Lodge Pole is a small station of no importance. Is 10 miles from Colton and has an elevation 3,800 feet.

Following down Lodge Pole Valley, to which the last description given is still applicable, we pass

Chappell,

A small signal station, 9.1 miles from Lodge Pole, and hurry on to

Julesburg.

Julesburg is a passenger and freight station. It is 19.1 miles from Lodge Pole, and has an elevation of 3,500 feet. During the early railroad-days, when this station was the western terminus, it was one of the most lawless places that could be found. The transhipment of freight from this point to its destination, created a good deal of "teaming." It is a common expression among the people living in railroad-towns, that :-"Shifting freight from one company's cars to another's, is no good, but teaming makes business." Teaming made business in Julesburg. While business was "lively." the town had about 3,000 inhabitants -and such inhabitants. The lowest villains unhung, congregated here from all parts. Day and night, at the cambling house, and the low dance, they held high carnival, and every successive day saw some poor wretch murdered in rage or spite. Fortunately for Julesburg the railroad moved on, and with it, the rowdies. "An empty house is better than a bad tenant." and certainly it is better for Julesburg to be depopulated as it is. than have such a population as we have referred to.

Julesburg derives its name from M. Jules, a French trader, who suffered a most barbarous death at the hands of an old enemy—a desperado named Slade.

Fort Sedgwick.

This post is situated three miles south of Julesburg station. It was established in 1864, and named after Major-General John Sedgwick, United States Volunteers, Colonel 4th United States Cavalry, who was killed in battle at Spottsylvania Court-House, Virginia.

Post Commander: Lieutenant-Colonel Geo. A. Woodward, 14th Infantry.

Post Surgeon: Jno. M. Dickson, Assistant Surgeon, United States Army.

Post Trader: Wm. Chambers.

Garrison: Headquarters and Companies "I" and "K", 14th Infantry. Fort Sedgwick obtains its supplies from

Omaha Barracks, by U. P. R. R. to Julesburg, thence by Government wagons.

The South Fork of the Platte River. Just before entering the town of Jules-

Just before entering the town of Julesburg, Lodge Pole Creek, whose compamy we have so long and pleasantly kept, empties its waters into the South Platte, which is to be our escort for the next seventy miles, until it joins the main body of the Platte River at North Platte City.

Before hurrying on in company with this new associate, let us make some inquiries as to his respectability, for of all places, we do not want to pick up an acquaintance at "a gay old town like this," without knowing who he is. Mr. South Platte's character can bear investigation.

He points us to his origin away back in the summar rann of the Rocky Mountains, in Colorado Territory—nearly 200 milles. He has always been pure and blumeness. During his estire curer thus far, he has kept company with the greenest hills and choicest valleys Numerous friends—game of all kinds—to whom he has never proved false, have constantly, and without reproach, been partakers of his boundless hospitality, and he is here before us without a stain upon his character!

Rejoicing that Mr. South Platte bears such an unexceptionable character, we, metaphorically, give him the right hand of fellowship, and go on our way; happy in his company.

South Platte Valley, whose course we follow after leaving Julesburg, is some-

times very narrow. Passing through cuts and fills, with low hills and ravines on each side of us, we arrive at

Big Spring.

This station, which is 16.5 miles from Julesburg, and has an elevation of 3,325 feet, derives its name from a large spring on the north side of the railroad, opposite the station.

It has no importance.

Brule.

Brule is a signal station. It is 9.7 miles from Big Springs, and has an elevation of 3,266 feet. Trains do not stop here except when signalled, we therefore hurry on to

Ogallala.

Here there is a company of cavalry stationed in summer. Captain Elijah R. Wells, commanding Company "E," 2nd Cavalry, was stationed here last summer. Ogallala is 9.6 miles from Brule. and

has an elevation of 3,187 feet. Leaving Ogallala, we continue to trav-

Leaving Ogallala, we continue to traverse the same kind of country, passing

Roscoe,

A small signal station with an elevation of 3,105 feet. East of Roscoe, we leave the valley,

and are carried along through cuts and over fills of considerable size. Our way is flanked by sand bluffs, which come close down to the road as if to see us as we pass. Beyond these, the country opens up, and we arrive at

Alkali.

Alkali is 9.6 miles from Roscoe, and has an elevation of 3.038 feet.

There is nothing to note here, except that the old stage station, which gives this its name, is directly opposite, on the south side of the South Platte.

In 1865, this country, along the bank of the South Platte, was raided by Indians. who spared neither age, sex, nor condition. Every ranch, except one, and every station seventy miles east of Julesburg, was captured and burned! The one they could not capture belonged to Hollen Godfrey-"Old Wicked," as they afterwards called him. One hundred and sixty warriors attacked Godfrey's ranch. His house was protected by a loopholed sod wall. Godfrey, two other men. and two women, composed the garrison. They had plenty of guns and ammunition, and soon exhausted Indian strategy. The Indians first formed a circle round Godfrey's house, at four hundred yards distance, hoping to draw Godfrey's fire so as to get his range. He had no ammunition to waste and reserved his fire for closer quarters. Deciding upon a direct attack, the Indians selected thirty of their fleetest riders, who dashed up to within thirty yards of the wall, when they wheeled and fired at different loop-holes. This maneuvre was frequently repeated, but each time some of the attacking party bit the dust. Finally they set the grass on fire at various places, hoping to burn down the house. In this also, they failed. They kept up the siege till night. when they were glad to abandon their dead as trophies for the victor.

O'Fallon's.

This station is 14.5 miles from Alkali, and has an elevation of 2,976 feet.

Leaving O'Fallon's, we traverse a beautiful stretch of prairie. The soil is rich and such as will make splendid agricultural land. Before many years this country will all be settled with smiling farms.

Eight miles and a half east of O'Fallon's, we pass

Nichola.

A signal station, at which trains do not stop, 8.5 miles from O'Fallon's.

North Platte City.

This city, which is one of the regular eating stations, is 1,623 miles from San Francisco, and 291 from Omaha—elevation, 2,789 feet.

It is the end of the Lodge Pole, and the beginning of the Platte Division of the U. P. R. R. Here the Company have a round house of twenty stalls, a machine shop, and a blacksmith shop. They are built of Omaha brick, and employ fiftyone men.

This city, like Julesburg, Cheyenne, Benton, Bear River, and other mushroom cities, was at one time the western terminus of the railroad. And in those palmy days it had a "gay old time."

Its population amounted to about 2,000, composed principally of the rowdies, whose deeds of blood and horror we have become familiar with on our journey. Life in North Platte City is thus described to one who saw it in its palmy days:

"The flaming sambling tents, the dance-houses, the strumming of banjos, the wretched wrecks of womanhood, who have to dance all night long with about as much hilarity as o many prisoners in the tread-mill, the game of faro, and the hundred other little games too numerous to mention; the tumult and uprost, and din of mingling cries, the flash and bang of pistols, the quarreling, cursing, and drink-

ing, the shameless depravity that flaunted its banner in the broad daylight."

Such was North Platte City. It has now but a tenth of the inhabitants it had in those days; and it is much better without them.

It has several fine stores, and a good

to as several line stores, and a good hotel. There is also a Railroad Hotel, at the station, for the convenience of passengers.

North Platte City is also a Military Post. It was established in 1867. Its present officers are: Post Commander, Captain W. H. Brown, 5th Cavalry; Post Surgeon, E. Lauderdale, Contract Physician; no Post Trader. Garrison: Company "F," 5th Cavalry, Post supplied by U. P. R. R., from Omaha Barracks,

One mile east of North Platte City we cross the North Platte River, on a long and substantial wooden bridge.

A little south of the crossing, the north and south forks of the Platte unite and form one bread but shallow stream whose course we shall follow to Valley (250 miles) where, receiving the waters of the Elichorn River it diverges to the right and joins the Missouri at Plattesmouth, 20 miles south of Omaha.

The North Platte River.

This, our readers will remember, is the river whose acquaintance we made at Fort Steele, in Wyoming Territory, more than 400 miles west of this point.

As before stated, it rises in North Park, in Colorado. Pursuing a circuitous course for a long distance, it finally flows in a southeasterly direction, to this point. Its exact length is not known, but it can-

It has the same characteristics as the South Platte, already described, and re-

not be less than 800 miles.

ceives many tributaries. Several Forts are located at various intervals along its banks, and many sanguinary conflicts have occurred between the troops located in them, and the Indians.

After crossing the North Platte we traverse a level grassy country. A fringe of cottonwood trees, seen on our right, marks the course of the Platte River.

We are now entering upon

The Great Valley of the Platte, A rich tract of agricultural land almost

as boundless as the ocean. As far as the eye can reach nothing can be seen but the most beautiful grassy plains.

McPherson.

This is a freight and passenger station for Fort McPherson, from which it takes its name. It is 13.5 miles from North Platte and has an elevation of 2,095 feet. Some of the little sod structures used in early days as defences against the Indians, are still visible, near the station. They are now in a dilapidated condition.

Fort McPherson.

This post is situated 7 miles southeast of McPherson station. It was established in 1863, and called Fort Cotonwood. In 1866 its present name was given to it in honor of Brigadier General James B. Mc-Pherson, who was killed in the battle before Atlanta, Georgia.

It is at present commanded by Colonel W. H. Emory, 6th Cavalry, F. W. Elbrey, Assistant Surgeon, U. S. Army, is Post Surgeon, and Messrs. Woodin and Snell are the Post Traders. The garrison consists of headquarters and 5 companies of the 5th cavalry.



Engraved by G. W. SHOURDS.

feet

This post draws its supplies from Omaha to McPherson station by rail. thence by wagon.

Brady Island.

This is a small station similar to the last. It is 9.1 miles from McPherson station and has an elevation of 2,637 feet. It derives its name from an island in the river.

Warren.

Warren is a freight and passenger station, eight miles from Brady Island. It

has an elevation of 2.570 feet. Willow Island.

This station is 10.3 miles from Warren and has an elevation of 2 511 feet

It derives its name from an island in the Platte, next in size to Grand Island -the largest in that river.

Nine and coven-tenths miles east of Willow Island station, we pass

Cayote,

A small signal station, with an elevation of 2,440 feet, and about two miles east of the one hundredth degree of longitude.

Plum Crook.

Plum Creek station, is small and unimportant. It is 10.1 miles from Cavote. and has an elevation of 2.370 feet.

Plum Creek, from which this station takes its name, flows into the Platte from the south. The Republican River, the great stronghold of the Indians, is about 40 miles south of this station. Riding over to Plum Creek Bluffs, which can easily be seen south of the river, the Indians used to lie in wait there for the passing emigrant trains.

Some of the most ernel massacres have been perpetrated by the Indians nearthis ctation

Overton.

Overton is a small station of no importance. It is 9.8 miles from Plum Creek station, and has an elevation of 2,305 foot

About eight miles east of Overton, we cross Elm Creek-a small stream that gives its name to the next station. The banks of this stream are well wooded with red elm

Elm Creek Station.

This is a freight and passenger station, 9 miles from Overton-elevation 2.241

Besides the station-house, a few primitive-looking houses are found here.

Large quantities of ties, and cord wood, cut on the creek, are stored here.

Leaving this station, the eye of the traveler is delighted with the broad, expanse of level plain, that stretches out before and around him. On the south of the railroad, the Platte River, here returning from a detour to the south, is now seen like a thread of silver winding gracefully across the plain.

Just before coming to the next station. we saw, away to the north,

The Prairie on Fire.

It was one of those grand spectacles which no description will enable us to realize. The accompanying illustration from a drawing made on the spot by Fred. Whymper, Esq., will give our readers a more vivid and correct idea of a burning prairie than anything we could say.

Ten miles and three-tenths from Elm Creek Station, we pass

Stevenson,

A signal station with an elevation of 2,170 feet.

At this and other small stations along the line, small detachments of five to eight Infantrymen, under charge of a non-commissioned officer, are posted during the Summer. They draw their supplies from the nearest military post, and are withdrawn in the Winter.

Here, there are a few houses, and right and left as we journey eastward from this station, settler's houses, and cattle, are seen occasionally.

We are now approaching what is to us the frontier of Eastern civilization; but what, in the Eastern States, is spoken of as "away out west."

Kearney.

This station is 9.9 miles from Stevenson, and has an elevation of 2,106 feet. It is a freight and passenger station for Fort Kearney, from which it derives its name.

Fort Kearney.

This post is situated on the south bank of the Platte, five miles from Kearney station. It was established in 1848, by volunteers of the Mexican War, and designated Fort Childs, in honor of General Childs, Major of Artillery. In 1849, it received its present designation. It was rebuilt in 1858. Its present commanding officer is Captain Edwin Pollock, the Infantry. Post Surgeon: R. B. Grimes, Contact Physican. Post Tander: Moses Sydenham. Garrison: company "E" 9th Infantry. Fort Kearney draws its supplies from Omaha depot, via U. P. R. R. to Kearney station; thence by Government wagons.

Gibbon.

Eight miles and four tenths from Kearney station, we pass Gibbon, a signal station, with an elevation of 2,046 feet.

East of Gibbon, flocks of poultry, herds of cattle, patches of corn, and log huts, loopholed, and covered with turf, indicate our approach to civilization. Ahs! there, on the left, stands the most condusive proof of all—a church surmounted by the cross, that emblem of "Peace on earth, and good will toward men."

Wood River.

This station is 10.8 miles from Gibbon, and has an elevation of 1,974 feet. The belt of trees seen on our left as we enter the station, fringes the bank of Wood River, from which this station takes its name. This is a thirving little settlement, three years old. It contains 800 minabiants, and is already in a prosperous condition. The low, sod-covered cabins seen around here, show how mindful the early settlers were of the subtle foe they had to contend negation.

While the train by which we traveled winted at this station, abeautiful little girl with golden ringlets, entered our ear, and ast our sentimental mind a thinking as to the probable degree of resemblance between her and "Rosalie, the Prairie Flower." Without being able to arrive at any satisfactory conclusion we "gave it up."

The course of Wood River, is southeasterly, and that of the railroad, at this point northeasterly. They therefore converge, and cross each other midway, about five miles east of Wood River station. This fact enables us, as we approach the crossing, to notice that the land along the banks of this stream, is of a very superior quality, and well settled.

Wood River abounds in fish, and the adjacent country is well stocked with game.

Pawnee.

This station is 10.6 miles from Wood River station, and has an elevation of 1,907 feet. It is only a signal station, so we pass it without stopping.

The country around this station is well stocked with many varieties of game. Wild turkeys, prairie hens, rabbits, &c., are quite numerous.

After we left Pawnee station, many prairie hens, who were startled by the snorting of the Iron Horse, rose from their grassy beds and flew away. They are very like the partridge, both in their plumace and manner of flight.

We saw one beautiful one covering among the grass. It was so tame it would not fly away. It had the most gandy plumage too, of any that we had yet seen. It has dawn so brown, but its neak shoulders tapered off with the most beautiful symmetry, and its back and wings had the hue of the emendd. It was evidently a new species. Ohl if we could only eatch it! If the cars would stop but for a second—our estage was abruptly stopped when we got a full view of it—if we saw and we got a full view of it—if we saw and we got a full view of it—if we saw earner when yet one saw and yet dampage about the saw and we have a saw empty dampage and the case are empty dampage to the saw and we have the saw and we have a saw and yet dampage to better.

Grand Island.

Grand Island is one of the regular eating stations—twenty-five minutes are allowed here for meals. In less than the allowed time we have refreshed ourselves and strolled out to see this, the first eastern town that we pass through.

We find it is the county seat of Hall country, and derives its name from the largest island in the Platte River. It has churches, schools, several stores, steam flouring mill and about 800 inhabitants. The United States Land Office is located here, and the R.R.Co., have a round house of ten stalls, built of Omaha brick, at this station.

Grand Island, from which this town obtains its name, is about 40 miles long and two broad. It lies to the south and west of the station and is well wooded and very fertile. A wooden pile bridge 1800 yards long is being built across the Platte at Grand Island.

Leaving Grand Island we come to the fixenciosed field we have seen for a long time. The plough is busily at work, and, as we pass the cottage, the rosy cheeked young wife is seen standing at her door. Young orchards can be seen from the ears, and the country has a general sir of prosperity.

Chapman.

This is only a signal station. It is 11½ miles from Grand Island, and has an elevation of 1,760 feet. We pass it without stopping and hurry on to

Lone Tree.

This is a passenger and freight station, and the county seat of Merrick county. It is ten miles and four-tenths from Chapman, and has an elevation of 1,686 feet. The old emigrant road to Colorado, crosses the Platte at "Shinn's Ferry," south of this station.

Valley.

This is a passenger and freight station. It is 11.3 miles from Fremont and has an elevation of 1,120 feet. Although it contains but few houses, it is situated in the centre of a thriving farming community, and is certain to grow rapidly.

About five miles from Valley, we cross the Elkhorn River, and pass through a cutting in the low hills to

Elkhorn.

Elkhorn is the freight and passenger station for Elkhorn Valley. It is 6.3 miles from Valley and has an elevation of 1.150 feet. At this station there is a side-track, a freight depot, and a few houses

From Elkhorn to Omaha, the country becomes more hilly.

Leaving Elkhorn, we journey on among low, rolling hills, and through a narrow but well cultivated valley, to

Papillion.

This station is 14.4 miles from Elkhorn, and has an elevation of 972 feet. It is located at the point where the creek. from which it takes its name intersects the railroad, and is intended for the use of the settlers in Papillion Valley.

Gilmore.

Gilmore is a small station with a sidetrack for freight trains. It is five miles from Papillion, and has an elevation of 976 feet. It is situated in the midst of a well cultivated district, and is only nine miles from Omaha.

Leaving Gilmore, we pass through a series of cuttings, interspersed with clumps of trees.

Summit Siding.

This is merely a signal station at which we do not stop. It is 5.3 miles from Gilmore.

Leaving this Siding, we come in sight of the city of Omaha.

The Great West

Before we enter Omaha, let us glance for a moment at the "GREAT WEST." over which we have journeyed, and which for the present, we have left behind.

A writer in the Boston Journal in a review of the West, and the benefit it will receive from railroad communication. savs:

"People these great States - Dacota.

Wyoming, Colorado, Utah, Idaho, Montana, Washington, Oregon, Nevada, California-with the sons of toil : cast into their fertile molds the seeds of cereal harvest : unlock the gates of their hidden mineral wealth, constrain their water courses to the benign utilities of civilization: convert their forests into vehicles of commerce : turn their decaying exuberance into living, active values, and give them avenues of passage east by Pacific Railways, to the marts of trade by lake and ocean shores, and west by the splendid steamers plying between San Francisco and Eastern Asia, to the teeming millions of China and Japan, and who can calculate the wondrous tide of travel and freight that shall find transit along this great artery of motion, commerce, wealth, national unity and peace. But more than this must be true. So great will be the saving of time and the safety

of freightage, that a large proportion of the commerce of China and Japan (in the years to come to be marvelously developed under commercial freaties with theory people), their teas, their spices, their woods, their silks, and all their wonderful products must find their natural transit over the road of the Union Pacific Company."

Since the foregoing was written, other avenues of commerce, then unthought of, have been opened up. We have now a line of steamers plying between San Francisco New Zealand and the Australian Colonies This link was all that was wanting to connect the great English speaking peoples of the earth. By it, the great tide of travel and freight shall be increased, and international unity and peace placed upon a firmer basis. The passage money actually paid by the Colonists in 1869, amounted to \$5,732,267; and their imports during the same time, amounted to \$180,205,427. When the greater part of this travel and freight passes along our Trans-Continental Railroads, how much will, not only the West, but the whole country be benefited by it.

At present, this vast trade is in its inact, and care must be taken that it is not strangled. Large corporations are proverbially wanting in consciences, and if frequently happens that both travel and freight have to seek more circuitous routes in order to avoid inefficient transportation, or exorbitant charges. Let our Raitroad, and Steamship Companies be careful that their accommodations are good, and their charges reasonable, and a new era of commercial prosperity and international good will shall dawn upon our country.

A Retrospective View of the Union Pacific Railroad.

Since we left Ogden we have ridden over the entire length of the U. P. R. R. -1,032 miles. Before pronouncing an opinion upon it, it will be well to remember the circumstances under which it was constructed

When the war demonstrated the road to be a military necessity, surveys were settended through a tract of country, reaching from the Missouri River to the California State-Line, and covering a width of two hundred miles. In carrying out this line, whose general direction followed the forty-second parallel, fifteen thousand miles of instrumental lines were ran, and over twenty-five thousand miles of reconnoissness made.

In 1866, the country was systematically counjed. Do yand night, Summer and Winter, through dangers and hardships, the explorations were pushed forward. Every mile had to be run within the range of the musket as there was not a moment's security. While the surveys were being made, numbers of the mengaged on them—some of them the ablest and most promising—were killed, and while the road was being constructed the company's stock was run off by the thousand.

The first grading was done in the autumn of 1864, and the first rail laid in July, 1865. Prior to 1867, but 270 miles had been constructed. In that year 240 were completed. Next year 430 were added, and by the 10th of May 1869, the remaining 145 miles were in running order.

Our readers will remember what we stated of this road before, that, at its initial point, and for five hundred miles west of it, there was neither timber, fuel. nor material from which to build or maintain a road. Everything had to be brought from a great distance at an enormous expense. Constructed under such unfavorable aircometance and with such astounding rapidity, the excellence of the road was its most astonishing feature. Persons who passed over it when it was first opened were amazed to find it so smooth and well-built. Since then a large force has been constantly employed improving it. Cuts and embankments have been widened, the beds of rivers have been changed, and new culverts and bridges have been put in. There are on the Union Pacific road 1.402 culverts, bridges and trestle-works, aggregating 69,281% feet.

The following table will show the different kinds of bridges used, and the number of each:

Bridges, Culverts and Trestle-work

Nus	mber.	Foot.
Howe truss bridging in use	30	7,620
Howe truss, on the ground	10	2,150
Howe truss, at Echo, for Ogden River	1	300
Strain beam bridges	10	429
Post's truss bridges	. 3	485
Post's combination	. 2	890
Treatle on atone abutments	. 376	30,385
Trestle on pile foundations	. 74	6,228
Pilo bridges	. 223	16,731
Stringer bridges	. 40	591
Stone arch culverts	. 49	571
Stone bex oulverts	373	817
Wood box culverts	. 20	37
Open stone culverts	. 59	372
Open wood culverts	. 133	1,684
	_	-
Total,	1,402	69,281

The road is protected by over seventy (70) miles of snow-fences, and nearly seven (7) miles of snow-sheds. There are in all 29 of the latter, whose accregate length amounts to 35.784 feet. They are distributed as follows: 13 on the Utah Division-length 14,452 feet; six on the Laramie Division -- length 9,315 feet, and 10 on the Lodge Pole Division -length 12,017 feet. The longest is 3,495 feet and the shortest, 570. The average length of each is but a fraction short of 1,234 feet. The road has now been open for over 18 months, and experience has shown that the precautions taken for its protection, keep it as free from obstruetion by snow as are the roads of New England or New York.

Without going into a statement of the U. P. R. R. Co's accounts we may be permitted to state here that the carnings of the road, for the year 1870-71, are exneeted to be over \$12,000,000. This statement shows that the railroad is a great specess, and is steadily growing in the confidence of the traveling public. We have traveled over it, and we can youch for its excellence. We have seen how much of it is over level land, and how little over mountain In this connection it will be interesting to our readers, to know that the Government Commissioners classified the road as follows: 525 78-1000 miles at \$16,000 per mile: 363 602-1000 miles at \$32,000 per mile: and 150 miles at \$48,000 per mile. This does not include the portion sold to the C.P.R.R. Company.

Probably no enterprise in the world was ever so much criticised, as the Trans-Continental Railroad. Its location has been critically examined by some of the ablest engineers in the country. They all give it the highest praise. Its future is fraught with great good. A proper policy, systematically and persistently followed out will make it a blessing, not only to our own country, but to the world. We wish it every success, and hope it will be for the greatest good of the greatest number.

Omaha.

Oman

Omaha is situated on the west bank of the MfSnouri river. It is located on an undulating upland, about 70 feet above the river, and 966 feet above the level of the sea. In 1854, it was a mere village. As the fine country lying west, north as south of it became more generally known, it began to grow rapidly. When the U.P. R. was inaugurated and Omaha was fixed upon as the eastern terminus of the Great Trans-Continental line, a new impetus was given to it, and it grew with almost unprecedented rapidly.

The late Albert D. Richardson, when writing of Omaha, as it was in 1866, says in his excellent work "Beyond the Mississipp;"

"Omaha is not on the water's edge, like Leavenworth and other Kansastowns; but leads a sprawling existence back on a level and hillside, with a broad strip of low land intervening. Its area is immense; horizontally it is a great city.

"From the boat (crossing the Missouri, Ed.) I could not detect one feature of beauty, save the white capitol on a symmetric hill a mile away. But riding up to the summit, and looking back down upon the young metropolis, I saw the fairest town site on the Missouri. The birdseye view takes in many shaded and beautiful dwellings, upon neighboring hills; frame residences and brick blocks springing up like mushrooms; a level floor of prairie and corn fields, which stretches for six miles, up to Florence; broad, smooth, generous avenues, pointing from the State House down to the Missouri; the river itself; and beyood it, rich Iowa prairies, extending back four miles, to Council Bulis.

"When Lewis and Clark penetrated this solitude, they found those bold hills upon the eastern bank the common conference ground of many tribes, and named them the 'Council Bluffs.'

"That was but sixty years ago; yet this region was less known than Siberia. Now in its early future will rise a great cityheart of a dense population-on the grand highway of travel and traffic for the whole world. And sixty years hence,-what imagination so rich and wide as to paint that picture? The centre of an empire stretching from the North Pole to the Equator; with every climate, every product, every industry; with more than a hundred millions of people, embodying democracy, illustrating Christianity; giving to each child, though the offspring of ignorance, poverty and vice, a fair start in the race of life, freedom from every burden, and the rich endowment of education and opportunity; recognizing in every man and woman, even those we name outcast and criminal, brothers and sisters of one great family, whom the same loving Father made, and the same Teacher died to redeem. That were a destiny worth the having.

"From 1857 to 1864 Omaha had a hard struggle. But the great Pacific Railroad infused wonderful vigor, and I found the little capital of Nebraska the liveliest in the United States. The railway company had erected an immense brick car house. engine house and machine shops; and five or six hundred buildings have gone up during the summer. One brick block cost a hundred thousand dollars. Streets were being graded, sidewalks thronged with returned gold seekers, discharged soldiers, farmers selling produce, speculators. Indians, and other strange characters of border life. The population was eight thousand. Single grocery houses were doing a business of half a million dollars a year: and the pioneer merchants and bankers had accumulated fortunes. The railroad disbursed a quarter million dollars a month. Business lots commanded from two to five thousand dollars."

Such was Omaha in 1866. Since then its growth has been less spasmodic. Its present population is about 25,000. Its streets which have many fine stores and residences, are wide, well kept, and bordered with shade trees. It has several newspapers, schools and churches. A street railroad starting from the U.P.R.R. Depot leads to the northwestern city limits. The city possesses all the modern appliances for comfort and convenience, and is destined to be a centre of commerce wealth and population. Those who have seen its growth during the last sixteen years, expect that it will continue to grow at the same rapid rate, and ultimately dwarf Chicago!

What the future of Omaha may be, it is not our province to depict. We have shown you what she is, and now, leaving her to her destiny, whatever that may be, we will draw the attention of our readers to

Omaha Barracks.

This military post is situated three miles north of the city, with which it is connected by an excellent carriage road. It was built in 1868-69, and is capable of accommodating 1,500 men. In winter it is garrisoned by Headquarters and four companies 2nd Cavalry, and six companies of Infantry. In summer its garrison is reduced to two companies of Cavalry and two of Infantry.

The present Post Commander is Colonel Innis N. Palmer, 2nd Cavalry; Post Surgeon, F. Meacham, Assistant Surgeon U.S. Army; Post Trader, J.J.L. C. Jewett.

This post draws its supplies from the Quartermaster's and Subsistence Departments at Omaha.

The Military Headquarters of the Department of the Platte are also located at Omaha. For the benefit of those of our readers who are interested in military matters, we append the names of the troops and officers connected with this department:

Department of the Platte, Headquarters, Omaha, Nebraska,

ters, Omaha, Nebraska. Troops: 2d and 5th Cavahy; 4th, 9th, 13th and 14th Infantry.

Headquarters: Brigadier-General C. C. Augur, U. S. Army, commanding. Staff Officers:

Major George D. Ruggles, Assistant Adjutant General U. S. Army.

Captain George B. Russell, 9th Infantry, Aide-de-Camp.

Captain H. G. Litchfield, U. S. Army, (unattached,) Aide-de-Camp and Acting Assistant Adjutant General.

Major Nelson B. Sweitzer, 2d Cavalry, Acting Assistant Inspector General. Major H. P. Curtis, Judge Advocate U. S. Army, Judge Advocate.

Major Alexander J. Perry, Q. M., U. S. Army, Chief Quartermaster.

Captain John W. Barriger, C. S., U. S. Army, Chief Commissary.

Surgeon Joseph B. Brown, U. S.

Army, Medical Director.

Major Benjamin Alvord, Paymaster U.

S. Army, Chief Paymaster.
Major William R. Gibson, Paymaster

U. S. Army.

Major Jacob E. Burbank, Paymaster

U. S. Army.

Major R. D. Clarke, Paymaster U. S.

Army.

Captain William A. Jones, Corps of Engineers U. S. A., Engineer Officer.

First Lieutenant John R. McGinness, Ordnance Department, Chief Ordnance

Ordnance Department, Chief Ordnance Officer. Second Lieutenant A. W. Greely, 5th

Cavalry, Acting Chief Signal Officer.

Depot Quartermaster, Omaha: Capt.

John H. Belcher, A. O. M., U. S. Army.

Railroad Shops.

Omaha being the initial point of the U.P. R. B., the Union Pacific Company have built their principal work-chops here. One bundled and sixty-four men are at present employed in them. They are built on the west said of the riveron the first bunk—and are very substantial structures. They have 56,135 feet of side-track in connection with them, and, with all the different yards and outbuildings, cover an area of 30 acres.

The Machine Shop.

This building, which is very strong, is 60x120 feet. It has all the latest mechanical improvements, and is under charge of J. H. McConnell.

The Blacksmith Shop. The blacksmith shop is 76x200 feet. It is high, well ventilated, and affords working room for 150 men. It is under the

management of A. A. Gibson, foreman.
Besides these, the company have also a round house of twenty stalls; four foundries, two paint shops, two car shops, two tool houses, three stanks, and a host of minor shops and offices which we have not space to describe; they will well repay a visit, however, and we recommend all our readers who can spare the time to visit them.

Lines of Travel.

Omaha occupies a central position, and has lines of travel radiating from her in every direction.

The traveler leaving Omaha by steamer, can ascend the Missouri to Fort Benton a distance of 2,276 miles; or he can descend through the Mississippi more than 2,000 miles in the opposite direction. North, south, and east, there is a network of railways leading to all the important cities of the United States and Canadas.

From Omaha to Chicago, there are three distinct lines, whose time, fare, and accommodations are about equal. It matters kittle by which of these roads we travel. Each of them will land us safe and sound in Chicago—the great railway centre of the United States.

The Missouri River.

This river, which we shall require to cross in going east of Omaha, is the largest tributary stream in the world. Its name signifies "Mud River." Itrises in the Rocky Mountains, in lat. 45° N., lon. 110° 30′ W.

The springs from which it takes its rise are but a mile from the head waters of the Columbia River which flows west. and empties into the Pacific Ocean. At a distance of 411 miles from the course of the Missouri, are what are denominated the Gates of the Rocky Mountains. For nearly six miles the rocks rise perpendicularly from the water's edge to a height of 1,200 feet. Here the river is compressed to a width of 150 yards, and for the first three miles there is only one spot, and that of but a few yards in extent, on which a man could stand between the water and the perpendicular walls. One hundred and ten miles below this. and 2.575 miles above the month of the Missouri, are the great falls, where the river descends by a succession of falls and rapids 357 feet in 161/4 miles. There are four falls; one of 87 feet, one of 19 feet. one of 47 feet, and one of 26 feet. These falls, next to Niagara, are regarded as the grandest in North America.

Throughout the greater part of its course, the Missouri is a rapid, turbid stream. Excepting its shallowness, during seasons of drought, it presents no serious obstact to navigation. Except the arid and sterile region near the head waters of the river, the Missouri Basin is composed of vast prairies with narrow strips of alluvion skirting the river.

The entire area drained by the Missouri is estimated at 500,000 square miles.

East of Omaha.

East of the Missouri river there are many separate railroads, running in nearly the same directions. To describe the route followed by any one of them would be an injustice to all the rest, and to describe them all would incresse the size and expense of this work beyond the wants of the public. Moreover, the country passed over in this section of the journey is more thickly settled; towns and cities are more numerous, and descriptions of them would necessarily occupy larger spaces.

For all these reasons, therefore, we are compelled to pass on to

CHICAGO.

Chicago is the largest city of Illinois, and the most important commercial centre in the northwestern States. It is situated on the southwestern shore of Lako Michigan, in latitude 41° 52′ 20″ north, and longitude 87° 35′ west.

Forly years ago, Chicago was but a military post and fur station. It consisted of a log fort garrisoned by two companies of U. S. troops, three taverns, a blacksmith shop, and one or two other rade apologies for houses. The surrounding country swarmed with Indians. Indian trails radiated then from the fort as railroads do now from the city.

Chicago River.

From 1833 to 1835 a rush set in, and Chicago by the end of the latter year, had a population of three thousand. The cause for this rush was the discovery that the Chicago river furnished the possibility of making a harbor, on the shore of Lake Michigan—notorious for its violent

storms Chicago river, so-called, is not a river at all, but merely an arm of the lake which had cut its way into the soft prairie. About 100 vards wide, it runs in about three fourths of a mile, where it branches off north and south, and extends for several miles. Originally but 20 feet deep, and its mouth obstructed by a sand bar, vessels of 40 tons were the largest it could admit By artificial means it has been cleared out so that it now receives the largest ships that sail the lakes, and gives Chicago 30 miles of wharves. Another reason for the rapid increase of the population of Chicago was the discovery that the extensive prairies in which the embryo city was located, were rich beyond all expectation. They were unencumbered by stones, rocks, roots, or bogs, and extended for many miles north, south and west of the city.

Meat Salting Business.

In 1839 the salting of beef and pork began to be a large business in Chicago. In that year 3,000 cattle were barreled and exported. And the export of wheat, which in the previous year, was 78 bushels, in this year, amounted to 4,000. In 1840 it amounted to 10,000. In 1841 it had increased to 40,000; and in 1842 it went un to 800 000 tushels.

Grade of the City.

While this large export trade was being developed the streets of the young city were a perfect quagmire, and frequently impassable. To remetly this, drains were cut, planking yas put down, and hollows were filled in. All was of no avail. Some parts of the city were below the level of the lake, and it became evident that nothing short of raising the grade of the city would remore the evil. This was accordingly done; but did not answer the purpose, as the new grade was not high enough. A higher grade was next tried. This, also, was defective in that it was too low. Finally the present grade was established, and found to answer every purpose. It is 12 feet above the original level of the prairie.

Railroads.

In 1849 Chicago got her first railroad.
Now she is the centre of 8,000 miles of
track. A passenger train reaches or
leaves the city every fifteen minutes of
the twenty-four hours. No less than two
hundred trains arrive or depart in a
day and night.

Population.

Her population in 1830 was but 4,853. In 1845 it amounted to 12,088, and in 1850 it reached 29,963. During the next ten years it grew to 110,973. In 1865, after four years war, it amounted to 178,900, and in 1870 it has risen to 299,370.

While her population was growing at this rapid rate, her commerce was keeping pace with it.

Shipping.

Not many years ago but one small schooner had ever entered Chicago River. According to an article in the Atlantic Monthly, to which we are indebted for information about Chicago: "77 steamers, 118 barques, 43 brigs, 613 schooners, 53 scores and barges,—in all 904 vessels, carrying 218,215 tons, and employing 10,000 sailors—now ply between Chicago and the other lake ports. In the winter, after navigation has closed, four hundred vessels may be counted in the harded vessels may be counted

bor, frozen up safely in the ice," * * *

Grain Trade.

"The export of grain, which began in 1838 with seventy-eight bushels, had run up to six millions and a half in 1853. In 1854, when there were two lines of railroad in operation across the State of Michigan to the East, the export of grain more than doubled, the quantity being nearly eleven millions of bushels. From that time, the export has been as follows:—

Handling of Grain.

The ease, the quietness and celerity with which this inconceivable quantity of grain is "handled," as they term it, although hands never touch it, is one of the wonders of Chicago. Whether it arrives by canal, railroad, or lake, it comes "in bulk." i. e. without bags or barrels. loose in the ear or boat. The train or the vessel stops at the side of one of those seventeen tall elevators, by which the grain is numbed into enormous bins. and poured out into other cars or vessels on the other side of the building,-the double operation being performed in a few minutes by steam. The utmost care is taken to do this business honestly. The grain is all inspected, and the brand of the inspector fixes its grade absolutely. The owner may have his grain deposited in the part of the elevator assigned to its quality, where it blends with a mountain of the same grade. He never sees his grain again, but he carries away the receipt of the clerk of the elevator, which represents his property as unquestionably as a certified check. Those little slips of paper, changing hands on 'Change, constitute the business of the "grain men" of Chicago, When Chicago exported a few thousands of bushels a year, the business blooked the streets and filled the town with commotion; but now that it exports fifty or sixty millions of bushels. a person might live a month at Chicago without being aware that anything was doing in grain."

Economy in Transportation.

To economie in transportation, Chicago is beginning to export flour instead of wheat. She has ten flour mills which collectively produce 1,000 barrels of flour very working day. Instead of exporting "corn," the corn is fed to hogs and exported in the shape of pork. In one season of three months, in 1863, Chicago converted 904,659 hogs into pork. In addition to this, about 1,000 cattle in various forms are sent east from Chicago every working-day.

Lumber Business.

The lumber business done in Chicago amounts yearly to about "six hundred and fourteen millions of feet of timber, equal to about fifty millions of ordinary pine boards."

Miles of timber yards extend along one of the forks of the river; the harbor is

THE INMAN LINE OF STEAMERS. TO EUROPE

LIVERPOOL NEW YORK AND PHILADELPHIA Royal Mail Steamship Company,

Full Powered, Clyde-Built, Iron Steamships, Under Contract for Carrying the

EW TORK FOR L Every Saturday and every alternate Tuesday, from Pier 45 North River,

LANDING PASSENGERS FOR IRELAND AT QUEENSTOWN, Where the delay is about half an hour

RATES OF PASSAGE:

FIRST CABIN, Payable in Gold. To Queenstown or Liverpool. \$75 and \$100 To London..... 85 To Antwerp and Rotterdam., 85 To Halifax To St. Johns, N. F., by Branch Steamer 40

STEERAGE, Payable in Currency. To Livernool, Queenstown, Glasgow or Londonderry.

To London, through by Bail

To Antwerp and Botterdam

To Sweden, Norway and Denmark
To Halifax. To St. Johns, N. F., by Branch Steamer .. Children between One and Tweive Half Fare. Infants under one year, Free,

FROM LIVERPOOL OR QUEENSTOWN.

These Steamers leave Liverpool every Thursday and alternate Saturday, embarking Passengers from Children under Twelve, Half Fare, Infanta Free,

Tickets can be bought on this side at the above rates by persons wishing to bring out their friends, ago These Stoamera are built in Water-tight from Sections, are supplied with Patent Fire Annihilators, and carry-caperenced Surgeons. The accommodation and attendance is equal by any steamer along. For Passage or further information apply at the Company's Offices.

WILLIAM INMAN, Agent, JOHN G. DALE, Agent, 15 Broadway, N. Y. Nov. 62 and 63 Tower Buildings South, 22 Water St., Liverpool, No. 6 St., Enoch Square, Glasgow.

Philadelphia, O'DONNIL, & FAULE, 62 Chestnal Street; Homon, M. S. CREGER, 10 Stare Ct. Cange, F. C. BROWN, M South Clark St., London, EVIZE & ALLES, S. King, William St.; Paris, so Drouge, S. Hen Noter Barns and Se Victories, Paris, see de la Bourse, Hamburg, Fault, & Co., 10 St. Drouge, St. Hamburg, Fault, & Co., 10 Ch., 10 JANUARY, 1871. THEO. HOSMER, 422 California Street, San Franch

BEAUT HEAT.TH! Strong and Pure, Rich Blood-Increase of Flesh and Weight-Clear Skin and Beentiful Complexion,

SARSAPARILLIAN RESOL

made the most astonishing curve; so quick, so rapid are the changes the body undergone, under the indusence of thie truly wonderful Medicine, that every day an increase of Flesh and Weight is seen and felt.

Scrofals. Concumption, Spiblite assumed and body resulted Veneral, in its many forms, Glassfalls, Market States, and States, a

KIDNEY, BLADDER, URINARY AND WOMB DISEASES, GRAVEL, DIABETES, DROPSY, STOPPAGE OF WATER, INCONTINENCE OF URINE, BRIGHT'S DISEASE, ALBUMINURIA.

OF WAILE, INCOMINENCE OF URING, BEIDIN'S DISEASE, ALBUMINUTA,
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OVARIAN TUMOR CURED.

A Tomor of Twelve Years Growth Cared by Radway's Resolvent. DR. Rainwey, I have held no fewer through the Green by Mandaya, and the doctors and "brew as no help for it." I trade over thing that was no help for it." I trade over thing that was recommended, but nothing helped it, I away sens the lone of the foresten in the same recommended by the nothing helped it, I away sens the lone of the foresten, but no trade of the foresten, the both of Redwing Plain and whether he helped its first properties of the foresten, and the foresten between the foresten for the foresten foresten for the foresten foresten for the foresten foreste \$1 a Bottle | Sold by Druggists, and at Dr. RADWAY'S, 87 Maiden Lune.

RADWAY'S READY RELIEF WILL AFFORD INSTANT EASE

Inflammation of the Kednell LLT. APPLYISTED SEAS AND TAXABLE SHOWS A SAME AND TAXABLE SHOWS A LONG-TOWN AND TAXABLE SHOWS AND TAXABLE SHOWS A LONG-TOWN A LONG-TOWN A LONG-TOWN AND TAXABLE SHOWS A LONG-TOWN A LONG-TOW

FEVER AND AGUE.

Pever and Agne Cured for Fifty Centa. There is not a remedial agent in the world that will cure Fever and Agne, and all other Malarious, Editons, Scarlet, Typhoid, Yellow, and other bivers, laided by Ranwar's Pittal, an equip as Ranwar's Rendy, Relleft, Price 36 Cents per Hittle.

DR. RADWAY'S PERFECT PURCATIVE PILLS. orfently tasteless, elegantly coated, for the oure of all disorders of the Stomach, Liver, Bowels, Kidneys

to effect a Positive Cure.

A. D. W. L. Y. P. P. I. I. N. will free the system from all the shore named disorders.

Price 23

Cents Per Box. Mold by all Druggiets. RADWAY & CO., No. 87 Maiden Lane.

choked with arriving timber vessels; and timber trains shoot over the prairies in every direction.

Manufactures.

" Newly settled countries cannot manufacture their own pins, watches, and pianos, nor even their own boots, overcoats, and saucepans, and they are glad enough to give other communities some of their surplus produce in exchange for those articles. But, happily, there is PREE TRADE between the Eastern and Western States. The only and sufficient protective tariff imposed upon that trade is the cost of transportation. Consequently, we find that just as fast as it is best for both sections that the West should cease to depend upon the East, just so fast, and no faster, Chicago gets into manufacturing. In all the history of business there cannot be found a more exquisite illustration of the harmonious and safe working of untrammelled trade. At first, Chicago began to make on a small scale the rough and heavy implements of husbandry. That great factory. for example, which now produces an excellent farm-wagon every seven minutes of every working day, was founded twenty-three years ago by its proprietor investing all his capital in the slow construction of one wagon. At the present time, almost every article of much bulk used upon railroads, in farming, in warming houses, in building houses, or in cooking, is made in Chicago. thousand persons are now employed there in manufacturing coarse boots and shoes. The prairie world is mowed and reaped by machines made in Chicago, whose people are feeling their way, too,

into making woolen and cotton goods. Four or five miles out on the prairie. where until last May the ground had never been broken since the creation, there stands the village of Austin, which consists of three large factory buildings, forty or fifty nice cottages for workmen. and two thousand young trees. This is the seat of the Chicago Clock Factory, the superintendent of which is that honest and ingenious man. Channey Jerome, the inventor of most of the wonderful machinery by which American clocks have been made so excellent and so chean. After his melancholy failure in Connecticut, (wholly through the fault of others, for he had retired from active business.) he found an honorable asylum here, and is now giving to this establishment the benefit of his fifty-five years' experience in clock-making. The machinery now in operation can produce one hundred thousand clocks a year; and the proprietors had received orders for eight months' product before they had finished one clock. They expect to be able to sell these clocks at New Haven quite as cheap as those made in New Haven: since nearly every metal and wood employed in the construction of a clock can be bought cheaper in Chicago than in Connecticut. A few miles farther back on the prairies, at Elgin, there is the establishment of the National Watch Company, which expects soon to produce fifty watches a day, and to compete for a share of the ten or eleven millions of dollars which the people of America pay every year for new watches. They are beginning to make pianos at Chicago, besides selling a hundred a week of those made in the East; and the great music house

of Root and Cady are now engraving and printing all the music they publish. Melodeons are made in Chicago on a great scale.

Stores, &c.

"Of course, Chicago is still a forming city. It stretches along the lake about eight miles, but does not reach back into the prairie more than two. In the heart of the town the stranger beholds blocks of stores, solid, lofty, and in the most recent taste, hotels of great magnitude, and public buildings that would be creditable to any city. The streets are as crowded with vehicles and people as any in New York, and there is nothing exhibited in the windows of New York which may not be seen in those of Chicago. Asthe visitor passes along, he sees at every moment some new evidence that he has arrived at a rich metropolis. Now it is a gorgeous and enormous carpet-house that arrests his attention; now a huge drygoods store, or vast depot of groceries. The next moment he finds himself peering into a restaurant, as splendid as a steamboat and larger than Taylor's; or into a dining room window, where in addition to other delicacies of the season. there is spacious cake of ice covered with naked frogs, reposing picturesquely in parsley. Farther on, he pauses before a jeweler's, brilliant with gold, silver, diamonds, and pictures, where a single item of last year's business was the sale of three thousand two hundred watches. of which one thousand were American. The number and extent of the book-stores is another striking feature, and it is impossible to go far without being strongly reminded that pianos and cabinet-organs are for sale in the city."

Water Supply.

Chicago has an abundant supply of pure water. She has several artesian wells which, in the aggregate, discharge 1,250,000 gallons daily. The wells are about three miles from the City Hall, and are 700 feet deep. The water is free from all mineral toints and stands at 57° Februarit From the force with which it comes to the surface it is believed it must have a head of 125 feet above the level of Linke Michigan; and as the country for hundreds of miles around is almost as level as a prairie, this head of water indicates that its source is in the high grounds in the north or northeast. or that it is forced up by some unknown subterranean pressure.

The Lake Tunnel.

There is perhaps nothing about Chicago which will excite the admiration of travelers so much as the tunnel which has been constructed under Lake Michigan for the purpose of conveying to the city an adequate supply of the pure water of the lake. This tunnel, which is one of the triumphs of engineering skill and enterprise which mark the present age, is two miles long. It is capable of supplying 50,000 gallons of water daily, and cost about \$1,000,000. Work was commenced on the shore end of it in March 1864. The perpendicular shaft, which was eight or nine feet in diameter, was sunk to a depth of some 80 fect. At the lake end a huge coffer dam, of immense strength, built on shore and floated out, was sunk to the bottom and firmly moored. Within this a similar strong iron cylinder was forced down into the bed of the lake to a depth of 66 feetthe requisite depth. This cylinder was pumped dry, and then the work of construction was commenced at both ends. Work was carried on day and night. On the 17th of November, 1866, the workmen met in the centre. The variation from perfect accuracy in the meeting of the two sections was only one inch, perpendicularly, and nine and-shall horizontally. The tunnel is built of brick throughout, and is five feet in diameter.

Places of Interest.

Besides the general features of Chicago to which we have briefly alluded, there are many places of interest in and around the city, which our readers should vist, if they have time to do so. Among these may be mentioned the new and splendid settlement of Riverside. The celebrated stock yards situated about four miles south of the city, and facetiously styled The Grear Bovers Crr or THE WORLD, also deserve a visit.

of the World, also deserve a visit.

Here, there are 345 acres enclosed in cattle pens, and of these 345 acres, 150 are floored with plank. The pens have room for 75,000 hors, 20,000 sheep, and

The enclosures for the two former are

20 000 cattle

In an article like this it is impossible to go into every minute detail of so great a city as Chicago. We have given our readers such points as we thought should be brought prominently before them, and we now leave the remainder for their personal inspection when they arrive in Chicago.

Social Life.

"The great question respecting Chicago,-and all other places under heaven, -is. What is the quality of the human life lived in it? It is well to have an abundance of beef, pork, grain, wool, and nine boards so long as these are used as means to an end and that end is the production and nurture of hanny. intelligent, virtuous, and robust human heings. This alone is success: all short of this is failure. Cheerful, healthy human life -that is the wealth of the world: and the extreme of destitution is to have all the rest and not that The stronger therefore, looks about in this busy, thriving city, and endeavors to ascertain, above all else, how it fares there with human nature. In Chicago, as everywhere, human nature is weak and ignorant, temptable and tempted; and in considering the influences to which it is there subjected. we must only ask whether those influences are more or less favorable than alcowhere "

Churches, Etc.

" Nowhere in the world are there such striking proofs of the inexhaustible vigor and power of Christianity as in this new prairie town. Here, far inland, on the shores of this blue lake, amid these grain mountains, these miles of timber, this entanglement of railroads, this mighty host of new-comers, even here it is still the voice from Palestine, coming across so many centuries, that delivers the needed message: 'Rest not, Chicago, in planks, nor grain, nor railroads, nor in infinite pork. These are but means to an end. Never mind about cutting out St. Louis : try only which shall do most for the civilization of the prairie world.' Chicago is not inattentive to this message, and is learning to interpret

it aright. Those beautiful temples, those excellent schools, those local benevolences, that innocent social life, those ceaseless hattlings with vice, that instinct of decoration, that conscientionsly conducted press those libraries and bookstores, all attest that Chicago does not mean to laboriously champ up the shells of the nut of life and throw the kernel away. It is our impression, that human nature there is subject to influences as favorable to its health and progress as in any city of the world, and that a family going to reside in Chicago from one of our older cities will be likely to find itself in a better place than that from which it 00ma **

Hotel Accommodation.

There are somewhere in the neighborhood of twenty hotels in Chicago, besides the new ones in course of crection. Travelers will never suffer here for want of accommodation. The only question is, which house to go to. Perhaps the price per day, charged by each hotel, will help our readers to choose which they will partonize. The principal hotels are, the Sherman House, \$4.50 per day; Tremont, \$4.00; Briggs, \$3.50; Adams, \$3.30; Sty, \$3.50; Adams, \$3.30; Sty, \$2.50; Barnes, \$2.50; Metropolitan, \$2.etc., ctc.

Lines of Travel from Chicago.

Of the lines of travel from Chicago, it

is almost unnecessary to speak.

We have already informed our readers
that Chicago is the great Railway centre
of the United States, and that she has
8,000 miles of railway gradiating from her
in every direction.

Wherever the traveler may desire to go, he will find every facility already provided, and ready for his acceptance.

Bills, setting forth the merits of each route, are on view in all the hotels, and our readers will have no difficulty in making choice of the line by which they intend to travel. Only one caution is necessary in this connection, and that is, to beware of sharpers. Whether they desire to sell you a railroad ticket, or anything else, have nothing to do with them. Purchase your ticket at the office of the railroad by which you are going to travel, for thus only will you be secure.

All the railroads leading from Chicago pass through or terminate in large cities. It is obvious we cannot describe all these cities, and also that we cannot foresee which of them will be most frequented by our readers. In this dilemma New York claims a description on the ground that she is the metropolis of the United States, and also the point of embarkation for all European travel. It would hardly do, after describing small villages minutely, to pass over the metropolis with only a passing notice. For these reasons then, we shall award the distinction to New York.

Presuming our readers have seen all the points of interest in and around Chicago, and also all the charming country between it and New York, we bid them welcome to the latter city.

NEW YORK.

New York, the metropolis of the United States, the greatest commercial emporium in the New World, and the third in point of wealth and population of the cities of Christendom, is situated on the southern extremity of Manhattan Island, at the junction of the Hudson and East rivers, 18 miles from the Atlantic Ocean. The city and county have the same limits, composing the whole of Manhattan Island, which is 13½ miles long, and about two broad. The densely populated parts of the city occupy about four miles of the southern portion of the Island. The City Hall is in lat. 40° 42° 23″ north, and 74° 0° 3″ west lonetime.

Manhattin Island, on which New York. City is built, was discovered by Henry Hudson, on English navigator in the employ of the East India Company of Holland, who ascended the river which now bears his name in 1699. No permanent settlement was made, however, till 1614, when the Dutch founded Fort Ornage, (now Albany) and New Amsterdam.

Growth of the City.

In 1664 it was surrendered to the British, and came into the possession of the Duke of York. Its name was now changed to New York. In 1673 it was retaken by the Dutch who held it but a single year. In 1677 there were 384 houses in the city, and in 1696 it owned 40 ships, 62 sloops, and 60 boats. In 1700 it had a population of 6,000. In 1711 a slave market was established in Wall street, and in 1725, the New York Gazette a weekly newspaper, appeared. A stage route to Philadelphia was established in 1732, and stages started for Boston every month, taking a fortnight on the road. In 1712 a negro insurrection occurred. The negroes fired the city, and killed a number of persons, for which 119 negroes were afterwards executed. A second, but less disastrous insurrection occurred in 1741-'42. In 1769 the imports of the city amounted to \$839,782. The British evacuated the city in 1783, after holding it for 119 years.

The first steamboat made in the New World was constructed at this point in 1807. Eighteen years afterwards, the Erie Canal was opened. This event gave the young city a fresh impetus, and made her the first city of the Union, a position she has ever since maintained. In 1835, the city was visited by a disastrons conflagration, which, igniting in the most valuable part of the city, consumed 648 houses. and destroyed property to the amount of \$20,000,000. In 1837, the Croton Aqueduct was commenced - an aqueduct which holds the first rank among the publie works of New York, and is only surpassed by the aqueducts of ancient Rome. Five years later it was completed. and the pure waters of Croton River were brought a distance of 401/2 miles, and poured into the reservoirs of the city.

Population.

In 1853-'54 the World's Fair was held in the city. To give our readers a better idea of the rapid growth of New York we need merely show the growth of her population. It numbered 4,302 in 1697: 8,628 in 1731; 10,381 in 1756; 21,876 in 1777; 33,131 in 1790; 60,489 in 1800; 96,373 in 1810; 123,706 in 1820; 202,589 in 1830; 312,710 in 1840; 515,547 in 1850; 813,669 in 1860; and 927,436 in 1870. Among her population there are as many Germans as there are in Hamburg; twice as many Irish as there are in Belfast; and twice as many Jews as there are in all the land of Palestine.

the snow, it will always charm the visitor. It contains several beautiful ponds, or lakes, which in summer carry a fleet of boats for the accommodation of visitors. and in winter, when frozen over, are much frequented by skaters of both seves.

Prospect Park, Brooklyn.

Prospect Park, in Brooklyn, is also very fine. It has the advantage of the Central Park of New York, in that it has clumns of fine old trees, whose umbrageous foliage shades its drives, and gives it an additional charm. It is well worth a visit.

Other Places of Interest.

Besides these places we have briefly mentioned, there are numbers of others which we have no space to notice, and which our readers would do well to visit. Small hand books, which describe the objects of interest in and around New York, can be obtained for fifty cents. If our readers intend to spend any time in the city, we would advise them to purchase one of them.

Beware of Sharpers.

While advising our readers to procure what shall add to their pleasure during their stay in the Empire City, we must also caution them against the army of vagabond sharpers who throng its streets to prey upon strangers. Visitors cannot be too careful to avoid them. They present themselves in the most unexceptionable manner, and fleece many a too-confiding victim before their integrity is even doubted. Those of our readers who are charitably disposed are particularly liable to be imposed upon. The number of dodges that are resorted to in order to obtain money under the guise of distress is perfectly astonishing. As a case in point, we will mention one to which the writer's own unsuspicious nature fell an easy prev.

A New York Dodge.

While walking down Broadway one afternoon, the writer's attention was attracted by a small boy who was sitting on a door step and crying violently. The boy had been vending lucifer matches. and, by accident, had ignited, and rendered unsaleable the greater part of his stock. He was afraid his mother would beat him, and was consequently crying, Such was his story. The writer and several other gentlemen who had gathered round gave the poor little fellow twentyfive cents each, and walked off pleased that they had done a good action, and saved the boy from a severe and unmerited castigation. Think of the intense disgust when three days later, we met the same boy, at the same place, with the same box of matches, the same story and crying in the same heart-rending manner. The young swindler was making a business of it!

Now gentle reader, we have nearly done. We have brought you across the Continent and given you all the information our space would permit. We hope we have enhanced the pleasure of your journey, and deserved that you will recommend us to your friends.

If you remain in the Eastern States for a time, we hope you will again consult us on your return to California. If you are proceeding to Europe, we refer you to the different steam ship lines advertised in this work.

On arrival at your destination Murray or Bradshaw will supply our place. When next we meet, our GUIDE will be enlarged and improved.

Au Revoir.

DISTANCES BETWEEN PRINCIPAL PACIFIC PORTS.

From San Francisco to Acapuleo, Mexico.	MILES,*	MILES.
From San Francisco to Acapulco, Mexico.	1,740	1,850
From San Francisco to Calcutta, via Honolulu.	0,010	11,380
From San Francisco to Callao, Peru.	3,012	4,010
From San Francisco to Cape San Lucas, Mexico.		1,145
From San Francisco to Guaymas, Mexico.	864	1,530
From San Francisco to Hongkong, via Honolulu	6,012	7,000
From San Francisco to Manzanillo, Mexico.		1,550
From San Francisco to Mazatlan, Mexico	1,200	1,480
From San Francisco to Melbourne, via Honolulu	6,860	7,160
From San Francisco to New Archangel, Sitka Islands		1,300
From San Francisco to New Westminster, B.C	690	815
From San Francisco to Panama, N. G	2,886	3,260
From San Francisco to Portland, Oregon	642	670
From San Francisco to San Diego, California		446
From San Francisco to Shanghai, via Honolulu	5,328	5,740
From San Francisco to Sydney, via Honolulu	6,456	6,700
From San Francisco to Valparaiso, Chile	5,124	5,300
From San Francisco to Victoria, V. I	654	746
From San Francisco to Yokohama, via Honolulu	4.460	5,580
From Honolulu, H. I., to Acapulco, Mexico	3,282	3,282
From Honolulu, H. I., to Callao, Peru	5.172	5,364
From Honolulu, H. I., to Canton, China	4.848	5,017
From Honolulu, H. I., to Cape San Lucas, Mexico	2,658	2,658
From Honolulu, H. I., to Guaymas, Mexico.	2.580	3,012
From Honolulu, H. I., to Mazatlan, Mexico.	2.856	2.856
From Honolulu, H. I., to Melbourne, Victoria.	4 810	5,280
From Honolulu, H. I., to New Archangel, Sitka Islands	2 370	2,370
From Honolulu, H. I., to New Westminster, B. C.	2 358	2,410
From Honolulu, H. I., to Panama, N. G.	4 560	4,580
From Honolulu, H. I., to Portland, Oregon.	2 256	2,330
From Honolulu, H. I., to San Diego, California	2 262	2,262
From Honolulu, H. I., to San Francisco California,	2.080	2,080
From Honolulu, H. I., to Sydney, N. S. W.	4 405	4,820
From Honolulu, H. I., to Valparaiso, Chile	5 998	5,990
From Honolulu, H. I., to Victoria, V. I.	9 310	2,330
From Honolulu, H. I., to Yokohama, Japan	3 354	3,475
From Panama, N. G., to Canton, China.	8 760	9,577
From Panama, N. G., to Sydney, N. S. W.	7 648	7.690
From Panama, N. G., to Tahiti, Society Islands.	4 420	4,540
OCEAN TRAVEL TO PORTS ON THE PACIFI	C GOA	ST.

Up the Coast. Down the Coast. To Bellingham Bay, W. T. 79 To Guaymas, Mexico. 1,530 To Crescent City. 280 To La Faz, Mexico. 1,805 To Humboldt Bay. 223 To Mazatlan, Mexico. 1,480 To Menderion City. 128 To Monterey 92
To Bellingham Bay, W. T. 798 To Guaymas, Mexico. 1,530 To Cressent City. 280 To La Faz, Mexico. 1,865 To Humboldt Bay. 223 To Mazatlan, Mexico. 1,460 To Mendocino City. 128 To Monterey. 92 20 To Monterey. 92 10
To Crescent City. 280 To La Faz, Mexico. 1,805 To Humboldt Bay. 223 To Mazatlan, Mexico. 1,480 To Mendocino City. 128 To Monterey 92
To Crescent City. 280 To La Paz, Mexico. 1,805 To Humboldt Bay. 223 To Mazatlan, Mexico. 1,480 To Mendocino City. 128 To Montreey 92
To Humboldt Bay. 223 To Mazatlan, Mexico. 1,480 To Mendocino City. 128 To Monterey. 92
To Mendocino City 128 To Monterey 92
To Portland, Oregon 670 To Santa Cruz 80
To Tomales 45 To San Pedro. 364
To Victoria, V. I
To San Diego 446
*Shortest Distances in Nautical Miles. Shortest Sailing Boute in Nautical Miles.

TABLE OF DISTANCES TO POINTS INLAND.

From San Francisco.

To Benicia via Ferry	MILES
To Benicia, via Ferry To Fort Mohave.	881
To Fort Yuma, St'r to San Diego, thence by Stage.	621
To La Paz, Steamer	1 805
To Los Angeles, Steamer	
To Monterey, via S. P. R. R., and Stage	92
To Napa, via Ferry and R. R.	
To Oakland, via Ferry.	6
To Petaluma " .,	48
To Redwood City, via S. P. R. R.	281
To Rio Vista, via steamer	
To Sacramento, via Oakland	
To Sacramento, via Valleio	
To Sacramento, via River	
To San Mateo, via S. P. R. R.	203
To San Josè, via S. P. R. R.	50
To San Quentin, via Ferry	
To Santa Barbara, Steamer	
To Stockton, via Oakland	
To Stockton, via River	
To Suisun, via Ferry and Cal. P. R. R.	43
To Vallejo"	
To tallejo.	20

From Sacramento.

To White Rock, via F. & S.S.R.R. . . 291/2

From Stockton.

To Woodland, 55 To Yountville, 25

To Junction, via F. & S. S. R. R. 71%	To Sonora,
To Latrobe, " " 371%	To Yosemite Valley,
Fo Marysville, via Cal. & Or. R. R 52	From Vallejo.
Fo Nevada, C. C. P.R. R., & Stage 71	To Calistoga, 43
Fo Oregon City,	To Knight's Landing, 65
Po Oroville, via Cal. Nor. R. R 78	To Marysville 88
Fo Portland, Oregon,	To Napa Junction,
To Red Bluff,	To Napa, 16
To Salem, Oregon	To Oakville, 28
Fo Salsbury, via F. & S. S. R. R 161/2	To Sacramento, 60
l'o Shasta	To Sacrainento,
Fo Shingle Sp'gs, via F. & S.S.R.R. 481/	To St. Helens,
Po Vroko 989	To Suscol,

GENERAL ROUTES OF TRAVEL FROM SAN FRANCISCO.

The following are the popular routes to the principal towns on the Pacific Coast.

The towns are arranged alphabetically.

San Francisco to

Albany, Oregon—678 miles. Steamer or railroad to Sacramento, railroad to Chico, stage to Albany.

Alvarado, Cal.-29 miles. Ferry and railroad to Hayward's, stage to Alvarado.

Arcata, Cal.—300 miles. Steamer to Petaluma, stage to Cloverdale, stage to Arcata (or by steamer via Eureka.)

Astoria, Oregon-566 miles. Steamer once in 10 days.

Auburn, Cal.-174 miles. Steamer or rail to Sacramento, rail to Auburn.

Aurora, Nev.—429 miles. Steamer or railroad to Sacramento, railroad to Reno, stage to Carson, stage to Aurora.

Austin, Nev.—612 miles. Steamer or railroad to Sacramento, railroad to Battle Mountain, stage to Austin.

Belmont, Nev.-697 miles. (Same to Austin) stage to Belmont.

Big Trees, Cal.-183 miles. Railroad to Galt, stage to Big Trees.

Boise City, I. T.—792 miles. Steamer or railroad to Sac., railroad to Elko, stage to Boise City.

Calistoga, Cal.—66 miles. Steamer to Vallejo, railroad to Calistoga.

Carson, Nev.-324 miles. Str. or rail to Sac., rail to Reno, stage to Carson.

Corvallis, Oregon—677 miles. Steamer or railroad to Sac., railroad to Chico, stage to Corvallis.

Columbia, Cal.—160 miles. Str. or railroad to Stockton, stage to Columbia via Sonora.

Colusa, Cal.—142 miles. Str. to Vallejo, rail to Marysville, stage to Colusa, or rail to Knight's Landing and stage to Colusa.

Corinne, U. T .- 857 miles. Str. or rail to Sac., rail to Corinne.

Dallas, Oregon—739 miles. Str. to Portland, str. to Lafayette, stage to Dallas. Dalles, Oregon—790 miles. Str. to Portland, str. to Dalles.

Downieville, Cal.—178 miles. Steamer to Vallejo, railroad to Marysville, stage to Downieville.

Dutch Flat, Cal.-205 miles. Str. or rail to Sac., rail to Dutch Flat.

Eureka, Cal., 223 miles. Str. twice a month.

Eugene City, Oregon-637 miles. Str. or rail to Sac., rail to Chico, stage to Eugene City.

Geysers, Cal.-Railroad to Calistoga, stage to Geysers.

Gilrov. Cal.-80 miles. S. P. R. R.

Grass Valley, Cal.-205 miles. Str. or rail to Sac., rail to Colfax, stage to Grass Valley.

Havilah, Cal. -370 miles. Railroad to Gilrov, stage to Havilah.

Hayward's Cal.-221/2 miles. Ferry and Railroad.

Healdsburg, Cal. -80 miles. Str. to Petaluma, stage to Healdsburg.

Idaho City, I. T .- 828 miles. Str. or rail to Sac., rail to Elko, stage to I. C. via Boise.

Jackson, Cal.-181 miles. Str. or rail to Sac., rail to Latrobe, stage to Jackson, Jacksonville, O .- 476 miles. Steamer or rail to Sac., rail to Chico, stage to Jacksonville.

Lafayette, Oregon-714 miles. Str. to Portland, str. to Lafayette.

La Grande, O'gn-975 miles. Str. to Portland, str. to Umatilla, stage to La Grande. Lakeport, Cal.-Str. to Petaluma, stage to Cloverdale, stage to Lakeport.

La Paz, A. T .- 676 miles. Str. to Los Angeles, stage to La Paz via San Bernardino. Lewiston, I. T .- 1.070 miles. Str. to Portland, str. to Lewiston via Dalles.

Los Angeles, Cal. -- 389 miles. Str. to San Pedro, R. R. to Los Angeles.

Mariposa, Cal.-191 miles. Str. or rail to Stockton, stage to Mariposa,

Martinez, Cal.-33 miles. Str to Benicia, ferry to Martinez. Marysville, Cal.-111 miles. Str. to Vallejo, and rail to Marysville. AlsoC.P.R.R.

to Sac., rail to Marysville. Monterey, Cal.-130 miles. Railroad to Gilroy, stage to Monterey.

Nanimo, V. I .- 830 miles. Str. via Victoria.

Napa City, Cal,-39 miles. Str. to Vallejo, railroad to Napa.

Nevada, Cal.-209 miles. Str. or rail to Sac., R. R. to Colfax, stage to Nevada. New Westminster, B. C .- 830 miles. Str. via Victoria, once a month.

Olympia, W. T. -Str. to Victoria, str. to Olympia.

Oregon City, Oregon-683 miles. Str. to Portland, str. to Oregon City.

Oroville, Cal.-137 miles. Str. to Vallejo, R.R. to Marysville, railroad to Oroville. Petaluma, Cal.-48 miles. Str. to Donahue, railroad to Petaluma.

Placerville, Cal.—1881/4 miles. Str. or rail to Sacramento, rail to Shingle Springs, stage to Placerville.

Portland, Oregon-670 miles. Str. once in ten days.

Prescott, A. T .- 943 miles. Str. to San Pedro, stage to Los Angeles, San Bernardino. La Paz. Wickenburg, horseback to Prescott. Provo, Utah-9671/2 miles. Str. or rail to Sac., rail to Ogden, stage to Provo.

Onincy, Cal. -276 miles. Str. or rail to Sac., rail to Oroville, stage to Quincy via La Porte.

Red Bluff-255 miles. Str. or rail to Sac., rail to Chico, stage to Red Bluff.

Redwood City, Cal .- 281/2 miles, S. P. R. R., three times a day,

Roseburg Oregon-532 miles. Str. or rail to Sac., rail to Chico, stage to Roseburg. Sacramento, Cal.-83 miles. Railroad or Steamer. Salem, Oregon-730 miles. Str. to Portland, str. to Salem.

Salt Lake City, U. T .- 9171/2 miles. Str. or rail to Sac., rail to Ogden, rail to Salt Lake City.

San Andreas, Cal.-133 miles. Str. or rail to Stockton, stage to San Andreas.

San Bernardino Cal.-454 miles. Str. to San Pedro, railroad to Los Angeles, stage to San Bernardino.

San Diego, Cal,-446 miles. Str. every six days.

San Jose, Cal.-50 miles, S. P. R. R. and C. P. R. R. The latter twice and the former three times a day.

San Leandro, Cal.-18 miles. Ferry and rail, via Alameda five times a day.

San Luis Obispo, Cal.-209 miles. Str. three times a month.

San Mateo, Cal,-203/ miles. S. P. R. R. three times a day.

San Pablo, Cal.—18 miles. Ferry to Oakland, stage to San Pablo twice a day.

San Rafael, Cal.-16 miles. Ferry to San Quentin, railroad to San Rafael. Santa Barbara, Cal.-280 miles. Str. every six days.

Santa Clara, Cal. - 461/2 miles, S. P. R. R. and C. P. R. R. The latter twice and the former three times a day.

Santa Cruz, Cal. -761/2 miles. Railroad to Santa Clara, stage to Santa Cruz.

Sitka, Alaska-1,663 miles. Steamer.

Snelling, Cal.-155 miles. Str. or rail to Stockton, stage to Snelling,

Sonoma, Cal.-51 miles. Str. to Vallejo, rail to Napa, stage to Sonoma.

Sonora, Cal. - 154 miles. Str. or rail to Stockton, stage to Sonora via Chinese Camp. Stockton, Cal .- 91 miles. Railroad and Steamer daily.

Suisun, Cal. - 43 miles. Str. to Vallejo, railroad to Suisun. (Fairfield).

Susanville, Cal.-388 miles. Str. or rail to Sac., rail to Reno, stage to Susanville. Yreka, Cal.-405 miles. Str. or rail to Sac., rail to Chico, stage to Yreka.

Treasure City, Nev .- 726 miles. Railroad to Palisade, stage to Treasure City. Tucson, A. T .- 921 miles. Str. to San Diego, stage to Tucson.

Tuolumne, Cal. Railroad to Stockton, stage to Tuolumne. Ukiah, Cal.-128 miles. Str. to Petaluma, stage to Cloverdale, stage to Ukiah.

Umatilla, Oregon-890 miles. Str. to Dalles, str. to Umatilla.

Unionville, Nev .- 450 miles. Railroad to Mill City, stage to Unionville.

Visalia, Cal.—255 miles. Railroad to Gilrov, stage to Visalia. Vallejo, Cal.-23 miles. Steamer twice a day.

Victoria, B. C .- 750 miles. Steamer.

Virginia, Nev.-313 miles. Str. or rail to Sac., rail to Reno, stage to Virginia. Watsonville, Cal. Railroad to Gilroy, stage to Watsonville.

Woodland, Cal.-781/2 miles. Str. to Vallejo, railroad to Woodland.

STATISTICS OF CALIFORNIA FOR 1868-9.

TABLE

Showing the Area of Land Euclosed and Cultivated in each County in the State, and also the Area Sown in Wheat, Barley, Oats and Potatone, and the yield of each.

	I In-	Culti-	WH	EAT.	BAR	LEY.	0.	ATS.	РОТА	ATOES.
counties.	Acres of Land closed.	Acres of Land vated.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Agres.	Bushels.
Alameda	97,383	131,819	87,944	1,533.182	24,017	692,948	5,280	146,675	1,341	112,175
Alpine	57,274	600	2.364	3,000	2.826	5,500 47,402	150	4,500	100	8,000 8,556
Amador	164,502	19,371	21,705	36,222	9,267	196,686	16 729	15.210	156	19,691
Calaveras	45,914	12.3%	789	6,761	1,007	17,209	17	64	68	5.422
Colusa	135, 250	62,120	44,746	1.642.380	17,374	596,220	265	8,480	25	1,250
	83,210	52,500	40,015	609,718	8,917	21,781	510	20,205	81	8,713
Del Norte	5,265	1,657	387 933	10,346 8,466	76 291	2,750 2,305	484 227	20,057	105	16,540
El Dorado Fresno	11,930	5,700	870	7,465	5,043	126,240	221	80	35	114,160
Humboldt	30,115	12.826	1.647	49.767	410	20,890	3,879	127,100	2,420	738,428
Inyo	5,000	1,010	350	8,500	100	2.870	43	900	100	5,000
Kern	5,000	2,398	559	16,500	906 32	27,189 625	149	2,000 3,800	125	2,400 9,878
Lake	4,111 12,009	1,525 90,026	5.082	1.413 79.429	2,050	25,475	250	3,998	16	600
Lassen	21.855	6,174	815	16.310	2,718	81,569	1,335	33,392	24	7,281
Los Angeles	23 240	19,950	765	18,300	5,800	203,200	29	1,400	1,000	89,400
		28,656	2,740	60,280	2.522	32,130 18,500	11,160	401,240	2,593	223,870
Mariposa Vendocino Merced Mono Monterey	23,410	4,800 50,000	1,130	226,600	7,800	18,500	12,000	360,000	1.000	50.000
Morend	135,000	33,000	15,000	225,000	11,000	275,000			40	5.500
Mone	11,720	3.317	915	15,6%	1,340	53,702	160	6,225	145	11.095
Monterey	124,550	70,484	29,319	1,401,342	13,875	943,500	246	11,900	1,750	367,500
Napa Nevada Placer	55,000	41,2/0 25,000	36,115 650	601,250	2,605	52,150	1,139	23,904	28 150	3,640 75,000
Nevada	77,875	21,485		74,060	2,300	21.350	490	952	150	4,200
Plumas	51,150	2.370	1.0:19	19,170	100	3,200	993	35,784	103	8,519
	231,609	2,370 67,165	7 999	124,626	15,921	304,639	1,910	32,444	517	33,885
San Bernardino	18,550	15,414	3,50	45,000	6,000 2,500	150,000 75,00		*****	35	3,410 6,250
San Francisco	8,000	16,000	1,816	45,000	163	4,000	91	2,730	1.30	142,463
San Joaquin	270,600	163,000	135,000	1,750,000	24,000	440,000	1.5	870	2(0)	22.600
San Luis Obispo	61,683	7,530	2,590	14,701	835	33,40 %	63	400	287	11,490
San Mateo	150,000	89,000	22,500	450,000	13,000	390,000 180,000	20,000	800,000 12,500	6,000	600,000 20,000
Santa Barbara	31,553	21,186	4,000 89,150	1,760,247	8,579	175,650	500 465	5,450	345	25,650
Santa Clara Santa Cruz	476,541 51,092	15.518	7.077	[83,86]	2,244	78,289	812	29,512	424	85,400
Shasta										
	18,132	1,480	311	7,585	480	12,257	256	7,900	110	10,240
Siaktyou .	75,296	24 263 112,269	11,525 88.573	229,500 1,635,481	3,674	130,200 207,750	4,200	168,000	340 172	51,460 13,215
Solano	212,645 510,782	2 7,405	164,188	2,120,213	8,166	212,121	7.294	201,357	3,517	211 ::98
Stanislaus	110 000	200,450	144,000	2,317,672	42,000	851,960			2.5	1.500
Sutter	134.870	57,900	44,488	423,187	18,266	246.781	484	7,070	25	6,390
Tehama	10/2,040	28,400	19,310	386,000	8,129	19,086	125 170	7,000	133	13.091
Trinity	10,370	4,284 83,111	1,035	14,192 40,884	40.757	2,446	27	550	133	14,000
Tulare Tuolumne	46.025	9,412	931	9,739	478	5.612	26	231	50	4 888
Yolo.	F21,773	89,373	58,287	991,220	15.022	213,699	80	490	580	39,125
Yuba	57,660	20,343	6,129	23,725	12,680	147,480	1,640	40,700	284	10,370
Totals	4,463,127	2,142,155	1,118,791	19,751,984	363,839	7,332,333	79,064	2,570,159	27,275	3,226,997

STATISTICS OF CALIFORNIA FOR 1868-9.

TABLE

Showing the Number of Grape Vines, Gallons of Wine, Gallons of Brandy, Assessed Value of Property, Real Estate, Improvements, Personal Property, Total Valuation, Population, etc., of each County in the State.

			dy.	ASSESSED VALUE OF PROPERTY.					
Counties. Counties.		Gallons of Wine.	Gallons of Brandy.	Real Estate.	Improvements.	Personal Prop- orty.	Total Valua-	Population in 1870.	
Alameda	176,795	27,140	200	\$7,736,920 00	\$1,685,395 00	\$589,246 00	\$10,011,561 00	24,218	
Alpine	100 683,623	129,993	2,750	248,000 00 962,284 00	247.549 00	93,000 00 527,625 00	233,000 00	688 9,600	
Butte	573,697	30,828	2,676	654,512 00	241.549 10	1,658,035 00	1,737,458 00 2,614,289 00	11.315	
	704 471	55,132	3,263	572,741 00	210,570 00	576,774,00	1,260,085 00	8,896	
Colusa	68,000	150		1.897.556.00			2 919 490 001	6,171	
Contra Costa	302,417	61,370	****	1,884,106 00	145,650 00	1,305,324 00 310,880 00	3,335,080 00	8,468	
Del Norte	1,147,27	168,638	47.419	123,021 00	81,773 00 6:0.916 00	310,880 00	515,674 00	2.113	
Proceso	7,480	163,648	41,409	229,419 00 737,973 00	128,946 00	940,610 00	1,829,945 00 2,007,108 00	6.236	
Fresno Humboldt	280			450,950 00	268,180 00	872,427 00	1,691,557 00	6.109	
				92,412 00		144,755 00 866,500 00		1.959	
Kern Klamath Lake	4,600	640		449,000 00	40,000 00	866,500 00	1,346,560 00 352,768 00	2,335	
Klamath	3,484 16,400	640		120,663 00 92,500 00	140,000 00	222,105 00 415,916 00	352,768 00 648,416 00	1,678	
Lassen	2,249			185,780 00	140,000 00	\$32,775 00	518,555 00	1,231	
Lassen Los Angeles Marin	3,84=,000	1.111.299	85,890	9.159.977.00		1,604,068 00	3,764,045 00	15,100	
Marin	10,800	3,000		1,797,193 00		920,410 00	2,717,603 00	6,775	
Mariposa Mendocino	97,000 15,000	8,000	****	125,155 00	457,435 00	510,512 00	1,093,102.00	4,572	
Merced	246,070	29,000	1,400	477,973 00 814,385 00	162,906 00 229,065 00	1,402,045 00 1,235,447 00	2,072,924 (4)	7,025 2,810	
		27,000	1,400	75,775 09	113,889 00	169,198 00	2,215,511 00 1,58,853 00	431	
Monterey	162.5/9	4.00	600	1.611.375 05	189,210 00	894,572.50	2.125.237 55	9.889	
Napa Nevada	1,580,255	25,440	46.143	2,636,250 00 3,478,588 00		1,288,635 00	3,924,885 00	7,155	
Placer	250,660 588,618	51,300	5,620	2,649,949 60	514,475 00	2,507,244 00 2,184,865 00	5,586,232 09 4,749,289 00	19,134	
	2.300			612,128 (0)	319,913 00	589,692 00		11,376	
	1.598.507	65,864	3,214	5 382 899 00	528,140 00	4,583,595 00	10.574.384 00	27,102	
San Bernardino.	425,000	74,500	10,500	253,478 (0)	7,100 00	364,405 00	624,963 00	2.934	
San Diego San Francisco	80,000	2,820		75 000 000 00			22277777777	4 789	
San Joaquin	525,000	25.0 0	3.250	3.219.230 00	1.849.000.00	32,640,646 00 2,540,150 00	7,601,500 00	150,272	
San Luis Obispo	25 900	24	4,2,90	713,665.75	191,779 00	674,995 00	1.580.139.75	21,084 4,786	
San Mateo	756,376			. 7 911 AGS 00	361,319.00		1.519.790.00	6.648	
Santa Barbara	350,010 1,000,000	20,800	560	019,476 00	492,661 00	525,060 00	1,428,197 00	7,788	
Santa Clara Santa Cruz	249.0 0	47,450	11,5 0	5,688,705 00 1,003,223 00	2,615,880 00 634,053 00	4,060,592 00 804,116 00	2,441,392 00	25,268	
Shasta	1,321,426	12,700 7,020	1.949			004,116 00		8,752 4,191	
Sierra	9,000	(6)(9)	211-00	879,160 (0)	92,372 00	1.274,500 00	2.2.6.032 00 1,950,318 00	5,337	
Siskiyon Solano	33,724	3,290	****	585,223 09	***********		1,950,318 00	6 851	
Solano	654,396 4,112,279	23,891 348,135	2,840 6,515	2,116.277 (0) 3,501,307 (0)	1,013,594 00	1,214,263 00	4,371,134 00 6,138,836 00	16 386	
		70:00		560,852,00	360,468 00	1,214,263 00 2,523,725 00 687,804 00	1.609.124 00	19,679 6,510	
		23,116	3,260	766,334 00	200,286 00	820,766 00			
		20,666	4,312		329,523 (0)	666,213 00			
Trinity	20,409		141	81,291 00	179,206 60	419.794.00	650.39160	3 173	
Tulare Tuolumne	175,875 342,317	3,660	1,500	592,248 00 625,079 00	1,493,137 (6)	2,0%5,4%5 00	4.170,870 60 1,177,249 60	3,782	
Yolo	244,580	21,310	6.261	1.817.353 00	569 521 00	552,170 00 1,740,583 00	4,127,457 00	8,171 9,913	
Yuba	424,665	25, 10	4,285	735 280 00	1,235,340 60	1,956,315 00	4,066,535 00	10.855	
0.1		_	_						
Totals		2,594,784	259,273	\$127,167,417 80	\$18,098,137 00	\$86,809,005.50	\$212,074,529 20	556,613	

STATISTICS OF CALIFORNIA FOR 1868-9

TABLE

Showing the Number of Horses, Mules, Asses, Cows, Calves, Beef Cattle, Oxon, Neat Cattle, Sheep, Hogs, and Chickens in each County in the State.

COUNTIES.	Number of Horses.	Number of Mules.	Number of Asses.	Number of Cows.	Number of Calves.	Number of Beef Cattle.	Number of Oxen.	Total Number of Neat Cattle.	Number of Sheep.	Numbur of Hogs.	Number of Chickens.
Alameda Alpine Amador Calaveras Colus Costa Colus Colu	3,373 920 4,646 5,215 2,225 1,373 6,619 3,506 4,280 8,000 11,900 11,900 2,925 4,538 9,973	946 20 731 731 731 731 731 731 731 731 731 731	355 hee 43 43 49 49 49 45 45 45 45 45 45 45 45 45 45 45 46 49 49 49 49 49 49 49 49 49 49 49 49 49	5,603 2,064 3,1940 12,000 6,103 2,574 26,027 8,482 2,633 1,200 1,200 1,5	3,421 500 1,600 3,288 1,502 8,830 3,281 1,500 1,	1,701 2,666 3,953 2,166 1,332 2,666 4,516 2,166 2,171 1,300 2,171 11,300 11,300 2,000 11,300 11,300 2,000 11,300 11,300 1,300	628 150 200	11,353 1,800 1,800 11,640 11,640 12,657 12,657 12,657 12,657 12,657 11,612 13,616 13,616 13,616 14,6	28,478 12,935 71,940 17,348 168,749 87,190 17,348 18,749 18,749 16,749 16,749 104,044 17,348 17,348 17,348 18,749 104,044 17,348 18,749 18,74	9,161 600 5,573 13,134 10,144 10,145 10,	50,542 13,344 16,334 16,334 16,334 16,334 16,334 16,334 16,334 16,431 17,14 27,430 1,714 1,714
Santa Cruz. Shasta Sierra. Siskiyou Solano Solano Solano Solanislaus Stanislaus Statier Telaums. Trinity Tulare Totals. Totals.	324 6,112 5,925 9,856 6,136 2,700 0,115 568	125 117 1,125 1,051 1,156 620 628 814 209 675 1,137 333 25,882	33 41 8 53 40 9 8 7 50 44 28 32 32	1,600 080 3,410 2,782 11,187 3,412 2,633 5,112 20,000 1,397 3,722 1,397 259,583	1,132 2,914 173 7,615 3,008 1,746 1,910 451 12,355 1,638 2,747 1,617	2,017 485 29,216 2,638 5,507 4,009 626 1,409 1,152 2,975 545 1,948 2,284	451 210 420 130 714 170 112 214 422 128 126 125 20,738	5,200 1,928 26,580 6,634 25,023 10,420 5,185 8,561 2,795 36,751 3,108 8,513 6 023	314 150 27,480 29,2450 167,090 3,090 123,108 346 100,430 1,877 48,087 12,769 2,137,948	768 6,784 8,296 26,146 30,600 2,215 10,113 1,083 18,351 6,884 15,632 8,389	8,317 19,850 16,232 45,547 65,040 4,984 17,640 9,921 116,976 9,921 46,016 22,539 913,310

STATISTICS OF CALIFORNIA FOR 1868-9.

TABLE

Showing the Number of Turkeys, Geese, Ducks, Hives of Bees, Olive Trees, and Pounds of Honey, Wool, Cheese, and Butter in each County in the State.

COUNTIES.	Number of Turkeys.	Number of Geese,	Number of Ducks.	Number of Hives of Bees.	Pounds of Honey.	Pounds of Wool.	Pounds of Cheese.	Pounds of Butter.	Number of Olive Trees.
Alameda. Alpine Amador. Butte. Calaveras Colnss Contra Costa Del Norte. El Dorado.	3,332 500 1,579 2,782 1,542 5,500 8,703 27 1,064	1,318 916 245 501 625 861 62 362	8,274 100 695 386 1,118 500 1,814 134	428 20 628 2,045 421 15,650 1,256 131	4,480 200 8,560 10,215 3,125 15,372 17,100 930	197,044 33,256 166,645 33,696 485,645 142,000 6,550	2,000 831 700 2,551 1,724 20,308	18.261 56,456 22,096 18,525 170,523 25,200	16 53 2 8 91
Humboldt Inyo Kern Klamath Lake Lassen Los Angeles Marin	535 1,054 100 70 19 800 83 1,500	218 218 25 6 330 600 200	818 162 490 12 1,509 179 2,200 2,000	290 78 859 29 1,590	11,040 10.250 3,550 1,960 528 5,939 569 87,450	10,236 271,506 25,118 299,496 24,230 800 629,000	1,340 500 500 22,056 9,175 11,250	133,155 8,700 67,820 3,500 4,000 28,500 40,000 26,500	
Mariposa Mendocino Merced Mono. Monterey Naps Nevada Placer Plumas.	1,200 1,200 55 590 5 200 3,000 14,075	160 175 812 329 350 213 12	920 1,280 21 959 2,100 500 605 137	1,340 9 1,748 450 273 973 13	850 80 18,500 700 40,000 4,800	1,330 53,000 190,000 472,785 625,820 19,000 73,120	162,000 650 10,000 2,400 2,000 1,016,200 3,500	1,896,400 9,000 70,000 8,500 11,000 101,800 165,000	1 27 50
Sacramento. San Bernardino. San Diego. San Francisco San Joaquin. San Luis Obispo. San Mateo. Santa Barbara. Santa Clara.	13,466 456 100 442 8,000 450 1,142 800 1,500	1,195 255 120 447 1,100 50 ,383 184 7,500	2,274 1,668 140 932 4,500 119 741 924 1,750	1,424 1,257 32 29 500 809 527 450	10,170 34,657 800 200 1,500 10,000 5,270 4,100 8,469	252,570 71,275 68,000 151,000 580,230 1,338 965,835	22,940 2,800 6,000 15,000 20,000 221,910 186,516 88,419	163,000 215,412 23,060 8,290 9,600 200,000 70,000 150,000 27,150	174 70 700 700 287 9 15,000
Santa Cruz. Shasta Sierra Sierra Siskiyou Solano Sonoma Sonoma Stanislaus Sutter. Tehama	197 842 1,531 3,589 19,000 275 7,000	217 213 410 545 5,414 2,680 203 412	26x 518 1,099 4,387 4,032 214 640	325 68 576 225 143 1,949 232 466	2,400 798 8,618 2,600 1,568 77,600 15,756	21,100 21,100 109,448 1,978,000 105,460	1,760,320 500 2,490 17,892 1,000 732,635 5,200 5,300	312,175 64,456 47,375 94,780 9,132 916,568 20,000 56,530	150 28 171 76
Trinity Tulare Tuolumne Yolo Yuba Totals	506 940 1,036 12,438 11,263	207 175 158 3,323 566 34,165	63,950	308 318 1,435 490 1,222 1,358 43,763	3,420 1,200 7,850 3,334 19,410	628,942 539,750 6,268 139,702 9,492,364	20,010 870 1,150 1,318 3,350 4,422,355	33,604 18,740 12,414 14,900 68,950 5,571,132	1 14 25 18,946

STATISTICS OF CALIFORNIA FOR 1868-9.

TABLE

Showing the Number of Orange, Almond, Walnut, Lemon, Fig, Apple, Pear, Peach, and Cherry Trees, and also the Number of Strawberry Vines, in each County in the State.

COUNTIES		1									
Although	COUNTIES.	5	- ·	-	~	amber of Fig	70	of Pear	~	amber of Trees.	Number of Strawberry Vines.
California	Alpine		3,391	3,269	91	1,347					5 984 978
Colored Color 20			816	359		941	34,850	13.80	100		300
Control Cont	Calaveras	24				2,072		12,20	38,243	1,435	167 202
Del Norte,	Coluxa	70		150	125	1,2%		5,34	16,325	1,166	
Section Sect	Del Norte	89	381		29	891	22,508	9.80	S 18 101		350
Section Sect	El Dorado	9	368			*******	6,812	334	9.10	368	15 025
Section	Fresno	17		86			88,726		31,540	2,476	147,7639
Dec Dec	Inyo		13	61	1		\$7,880	1.39	585	1.311	
Dec Dec	Kern	20		29	20	100				50	2,500
Dec Dec	Lake			5							\$,000
Marcin				-40		62	10,400	1,206	6.542		25,000
Section 1	Los Angeles	25,000	550	3,500	2 600	2.000		506	2,017	47	253,745
Memory	Murinose					18	5,100	1,100			144,000
Second 27	Mendocino		20	100		260	7,221	780	7,823	106	
Montemy			37		28	331	25,000	1,709			10,000
Name	Monterov		3	26		310	943	753			
Primara Prim				750		133		17,417	11,500	972	125,100
France 1	Nevada	100	50	7.5				15,585		6,755	3,800
See See	Plumas	17	515	249	28	1,233	41,554	10,857	23,684		187,000
San Farmicro 2		163	2.156	4 121	95	1 100	2,700	513		72	78,500
San Francisco 1.27	San Bernardino		600	756	257	450				3,216	142,770
San Islandon 1 20		2,122	62	48	106	3(4)	860	500	701	140	530
San Markov. 1 160 200	San Joaquin	8	250	150			2,000		200	200	42,000
Santa Barbern 1,500 13,000 2,000 60 21,000 12,000 2,000 10,000 1	San Luis Obispo			61	2	100	2.200	603		1,000	18,000
Senia Clara 50 200 1/20 1/2 Line 27/10 6/23 200/2 1/20 1/20 1/20 1/20 1/20 1/20 1/2					64		18,000	* 2,500	20,000	6/40	3,000,0 0
Shatha 30 12 602 5 142 50.00 2.01 2.02 1.00 98.00	Santa Clara	95	500	1,850	12		14, 800 825 000				2,500
Sirra	Shasta	30	22	452	5		36,491	3,913		1.508	
Subtrace 11 2 16 17 12 16 17 12 17 18 17 18 17 18 17 18 17 18 17 18 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Sierra	i .	10	13			6 170		******		
Semons 28 4.34 2.21 21 1.21 1.00 5.78 1.53 1.50 1.50 Standard		14	29	16	8	23	45,700	1.866			1,200
Stanislam 0		32	454			1,921	19,087	8,798	14,575	3,593	8,630
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Stanislaus			4,631	212	1,997	322,760		55,965	8,516	
Triaire 22 130 - 2 18.89 2.39 3.60 562 125,61 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Telama	1 22	181	287	10	1,468	11.051	3,156	12.012		2 099
		33	71		9	720	10,052	11,015	21,081	506	128,161
Yolo 8 1,135 350 9 1,576 30,971 17,884 48,430 1,890 8,630			22	160		217	8 236	2,239	3,863		
Vulta 9 1,556 30,971 17,484 48,480 1,860 8,600		45	1 177	61		874	30,674	8,046	27,462	1.017	204 975
	Yuba			617		1,576	30,971	17,484	48,430	1.880	8,600
Totale 20,00 1,329 113,000								7,941	26,786	1,929	115,000
Totale 30,588 22,410 25,888 5,279 40,819 2,172,218 348,736 795,489 96,034 13,177,888	* Otale	au,5851	32,410	25,883	5,279	40,819	2,172,218	348,736	795,499	96,634	13,177,888

MEMORANDA.

Urrived of Jeraneisco May 20th Lift for England Sury 3? - Lift his york on 11th g. a.m. arrives it Chicago & Am on 12th Laft Chricago at g a.m. on 13th un? G. Sact Lake lig - at 8 pm. 16 t deft - to _ af 8 p.m. 18k and at & Francies - 8pm 200 Left Sklo at 8 a. mon - 3 Suly histo - Ro 8 a.m. 4h lirriois at Glanbrook housen / pm

MEMORANDA.

Cimional cin Caroon lig) at Engine ligt at 6 pm ledg 5 to a 2 ft lignin lig 5 pm 4 7 to Light Kins ch/she - 8th arriver at thicago 4 pm 124 Left Chicago - 9 a.m. 13th arrived at her fork & pm 14th Left hew fork by " was themen at 2 pm. on 19th Karriana in Liverpool at 10 pm on Charley 29th July 1871



