Next: title page

The Atlantic to the Pacific: What to See and How to See it (1873), by John Erastus Lester

About the Author

John Erastus Lester, a Rhode Island lawyer, traveled west in 1872 in hopes of improving his health, visiting Yosemite and other areas. During his visit to Yosemite the author met several pioneers, including John Muir, Galen Clark, James Hutchings, James Lamon, and John Smith (of the Cosmopolitan Saloon). After his return in late 1872, he presented a paper before the Rhode Island Historical Society. Due to demand from his friends, he revised it and printed a short book the following year, *The Yo-Semite, Its History, its Scenery, its Development*. It includes a rare early glimpse of Muir in Yosemite. Shortly after publishing this book, Lester wrote a more-extensive book of his western travels, *The Atlantic to the Pacific: what to see, and how to see it* (1873). The following obituary appeared in the Providence *Journal* May 5, 1900:

> John Erastus Lester, aged 59 years, died Thursday after an extended illness. He was well known in this city and attained a reputation as an author and as a pomologist [Editor's note: fruit grower—dea]. By profession he was a lawyer. He was born Aug. 3, 1840, in this city, and attended the public schools of that period, graduating with honors. After leaving school he entered Brown University and was a member of the class of '62, taking the degree of A.M. On leaving Brown he took a course of study in the Harvard Law School, graduating in 1864. He studied law in C. S. Bradley. Later ill-health compelled Mr. Lester to sever his connection with the legal profession. He travelled extensively throughout the West, and shortly afterwards wrote his first book, "The Yosemite," which was followed by "From the Atlantic to the Pacific." After completing his writings he was again taken ill and his doctors advised an European trip, at the conclusion of which he returned to this city and engaged in the practice of law. Some few years ago he was obliged to retire on account of poor health, which ultimately resulted in his death. . . .

Bibliographical Information

John Erastus Lester (1840-1900), *The Atlantic to the Pacific: What to See and How to See it* (London: Longmans, Green and Company, 1873), LCCN rc 01001523. xii+293 pages. Illustrated. 18 cm. Includes errata slip inserted at page 1. Bound in blue cloth with gilt and black lettering and design. Page edges in gilt. Library of Congress call number F594.L64. Currey & Kruska 237; Cowan p.389.

Also published in Boston: Shepard and Gill, 1873. 365 pp. The Boston edition has a fold-out Yosemite Valley map, and was bound in green cloth with lettering and design in gilt and blind.

The London edition is reproduced here. The London edition has a single page Yosemite Valley map, fewer pages (but same text), and added footnotes to explain some Americanisms. Some dollar amounts in this book were converted to British pounds, denoted with *l*, at the rate of 1*l* for $5.

This book is also available on microfiche in the *Travels in the West and Southwest* series from Primary Source Microfilm (Gale).

Next: title page

Frontispiece

The Atlantic to The Pacific.

LONDON: PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
AND PARLIAMENT STREET

The Atlantic to The Pacific.

WHAT TO SEE AND HOW TO SEE IT.

BY

JOHN ERASTUS LESTER, A.M.

AUTHOR OF
"THE YO-SEMITE: ITS HISTORY, ITS SCENERY, ITS DEVELOPMENT;"
MEMBER RHODE ISLAND HISTORICAL SOCIETY, ETC. ETC.

WITH MAP AND ILLUSTRATIONS.

LONDON:
LONGMANS, GREEN, AND CO.
1873.

TO

THEOPHILUS E. SICKELS

GENERAL SUPERINTENDENT AND ENGINEER OF THE UNION PACIFIC RAILROAD

In Memory of

PLEASANT DAYS PASSED IN THE EAST
AS WELL AS IN THE WEST.

PREFACE

In the early spring of 1872 the Author, starting from New York, undertook the journey from the Atlantic to the Pacific: and the following pages contain the record of that journey. His object has been to lay before his readers accurate descriptions, which, if they should visit California, may show them what to see and how to see it. It may be said, without fear of contradiction, that the tracts of country here described exhibit some of the most beautiful and sublime scenery in the world; and these magnificent regions are practically unknown not only to Englishmen, but to many Americans who are familiar with the countries of Europe. To the latter he presents his book in the hope that it may induce them to undertake a journey which he has found most delightful; and the former he addresses in the hope that English travellers visiting the United States may not confine themselves to the Atlantic cities, but extend their journey across the Rocky Mountains to the wonderful scenery of California.

J. E. L.

London: *July* 4, 1873.

CONTENTS

PAGE

LIST OF ILLUSTRATIONS

Errata.

Page 169, line 1, *for* (the Southern Pacific) *read* (Visalia Division)
” 221, ” 4 from foot of page, *for* 1861 *read* 1871,
” 223, ” 15, *for* 6,250 *read* 5,250
” 225, ” 6, *for* 1849 *read* 1859,

THE ATLANTIC TO THE PACIFIC

Those who accompany me through the following pages will find therein an account of the principal points of interest to be visited in a journey, overland, from the Atlantic seaboard of the United States to and through the state of California, with various digressions by the way in States and Territories on either side of the Rocky Mountains. Such of my readers as are not already familiar with the localities named are advised to consult frequently a map of the country, in the course of the narrative. The experienced tourist needs no urging upon this point. Such travellers find that a little preliminary study of the geography and history of the sections along their intended route often converts what might otherwise have been a merely tiresome and uninteresting journey into a pleasant and really valuable experience.

Routes from New York to Chicago.—Towards New York, as the metropolis of the United States, all railroad lines converge. It was for me, as it will be for most others, the starting-point for the journey overland. I took the usual route—that in which Chicago and Omaha are the principal midway stations. Some, for special reasons, go by way of St. Louis, thence reaching the Union Pacific Railroad either by way of Omaha, or, taking the Kansas Pacific Railroad, by way of Kansas City and Denver. The Chicago route is the more direct however, and is unquestionably better in all respects. There are four separate routes from New York to Chicago or St. Louis. These routes take their designations from those of the great railway companies which, by the process of ‘amalgamation’ or otherwise, have acquired control of the lines lying between their own original termini, and the distant points on the Mississippi River and the Lakes. The most northerly of these routes is the ‘New York Central;’ next, south of it, is the ‘Erie;’ next, the ‘Pennsylvania;’ next, the ‘Baltimore and Ohio.’ The respective merits of these several routes need hardly be a subject for discussion, the standard of carefulness in management of trains, speed attained, and provisions for the comfort of passengers being as nearly as possible the same in all. The choice of routes is therefore usually determined simply by the inclination of the traveller, who, as the lines traverse widely divergent paths to their common termini, may prefer to view one section of country, or one prevailing class of scenery, rather than another. Without attempting to lead the reader to a conclusion as to which route should be chosen, some account of the prominent features of each seems requisite.

The ‘New York Central’ Route.—The railroads comprising this route are the New York Central and Hudson River Railroad, to Buffalo; and, thence, by way of Cleveland, the Lake Shore and Michigan Southern Railway, or, by way of Detroit, the Great Western Railway of Canada and the Michigan Central Railway to Chicago. The scenery to be viewed in the journey from New York to Albany (144 miles), directly along the banks of the Hudson River, has become celebrated as being among the finest in the world. The River takes its name from Hendrik Hudson, the Dutch navigator, who was one of the earliest explorers of this part of the New World. New York City, having outgrown the bounds of Manhattan Island, is now extending itself for several miles along the banks of the Hudson. Looking across the broad bosom of the river, which is here about two miles wide, the traveller’s attention is attracted by the palisades; the high perpendicular cliffs, which form the western bank of the stream, extend for about two miles, and are an unfailing cause of wonder and interest. All along the river on the eastern side lie country mansions and cottages of the merchant princes and the old Knickerbocker families, the elegant retreats of thousands noted for their wealth or for success in business, politics, or literature. The landed estates are extensive and highly cultivated. The river is navigable as far as Albany, Beyond Albany, the traveller by this line passes through the Mohawk Valley, famous as an agricultural region; and hence, as will be observed by reference to the map, he will find a continuous

chain of cities and large towns as far as Niagara Falls. This is one of the most important, most populous, and wealthiest sections of the Union. The Erie Canal, the greatest public work of its day in America, will be frequently seen on the way from Albany to the Falls. New York is called the 'Empire State,' having held a more numerous population, and, until the admission of Texas, having been larger, than any other state of the Union. The controlling interest in the New York Central and Hudson River, and other railroads, in this state is owned by one man, Cornelius Vanderbilt, usually called the 'Commodore.' From an humble beginning as simple captain of a passenger boat on the Hudson River, he has added to his wealth, during a long and busy life, until now, at about seventy-five years of age, he is regarded as one of the three richest men in America1—his fortune being roundly estimated at $80,000,000, or 16,000,000*l*. The main line under his control, from New York to Niagara or Buffalo, is 441 miles in length, has a double track, and with its various branches and sidings is 845 miles of railroad. It is admitted to be one of the best managed railroads in existence. The 'Commodore,' by the way, is credited with the exertion of great energy and ability in checking wastefulness in the operation of the roads, in taking care to have no useless servants, and in securing the highest possible dividends in the shape of income from these great properties.

1William B. Astor, $200,000,000, or 40,000,000*l*. Alexander T. Stewart, $50,000,000, or 10,000,000*l*.

The 'Erie' Route.—All the world, it may be safely assumed, has heard something of the Erie Railway, the management of its affairs in the days of Fisk and Gould having been such as to secure for it a very undesirable kind of notoriety. A greater amount of English capital was absorbed in its construction than in the case of any American railroad, with perhaps one or two exceptions. For a long time after its completion it was a favourite line; the American travelling public resorting to it as a more direct route between New York and Buffalo, and as affording views of the singularly interesting scenery in the semi-mountainous country in southern and south-western New York—the region of the Catskills, the farther Alleghanies, and the picturesque slopes drained by the head-waters of the Delaware and Susquehanna Rivers. The road has been distinguished also by its broad gauge, the width of its tracks and those of its principal auxiliary, the Atlantic and Great Western Railway, being six feet, while the prevailing gauge of American railroads is four feet eight inches and a half. The broad gauge adds somewhat to the steadiness of trains in motion, and admits of more liberal allowances of space to passengers in cars— conveniences which are well appreciated by the Yankee public, which is accustomed to enjoy a degree of luxury in travelling to which the people of other nations are strangers. When, however, the Erie Railway was taken into politics, under the Tweed *régime,* and when its managers, driven by the exigencies of their speculations in the Stock Market, began embezzling portions of its earnings which should have been devoted to keeping in good repair its tracks and equipment, prudent and well-informed travellers, fearful of accidents or delays, avoided this route. Under a new management, Erie is rapidly recovering its good name and all its former popularity. The connexions of the Erie Road, at its western end, and their location with reference to it, give it some peculiar advantages. Thus, just before reaching Buffalo, the traveller may take the Atlantic and Great Western Railway for Cincinnati or St. Louis; the Lake Shore and Michigan Southern Railway, for Chicago; or by Niagara, the Great Western Railway of Canada, for Detroit, and thence by the Michigan Central Railway to Chicago. On account of these and other facilities for distribution of passengers, the Erie is called upon to transport the greater part of the immigrants passing through New York to the West. The 'emigrant trains,' as they are called, are run at a lower rate of speed, and at much lower fares, than those used for general travel.

The 'Pennsylvania' Route.—The Pennsylvania Railroad is the giant rival of the New York Central—the struggle between these two for supremacy overshadowing other contests throughout the whole length and breadth of the railway system of the United States. They are the chief competitors for traffic between the Eastern and the North-Western States, between New York and Chicago, St. Paul, Omaha, St. Louis, San Francisco, and all the regions of the Far West. The war between them is waged in New York City, all through the broad states of Ohio, Indiana, Illinois, and beyond to the great plains; each seeking control of connexions and tributary lines to the exclusion of the other. The Pennsylvania Railroad Company1 represents one of the largest aggregations, with the most compact organisation, of capital in the hands of a few private individuals that has ever been known to history. The road, as originally built and operated, was less than 400 miles in length, its main line extending simply from Philadelphia to Pittsburg—those great cities lying at opposite ends of the state of Pennsylvania. The Company has acquired control, by purchase or lease, of lesser and tributary lines on every side, so that its branches ramify the state in every direction, collecting the greater part of the product of the mines of coal and iron for which Pennsylvania is noted all over the world, as well as the products of her vast and fertile farming districts, and of the 'oil region,' and distributing to all parts of the Union the manufactures of her iron-furnaces, rolling-mills, &c. It now owns, or controls by leases (generally for '999 years'), about twenty separate railroads in the state, the aggregate length of the tracks being very nearly 1,700 miles. Needing outlets of its own to New York, it has recently leased, 'in perpetuity,' the railroads of the United Companies of New Jersey, acquiring three separate lines across that state to New York. Needing a direct connexion with Chicago, it built, some years ago, the 'Pittsburg, Fort Wayne, and Chicago' Railway (370 miles). It controls connecting lines to Cincinnati and St. Louis, contends with the New York Central for the control of the Union Pacific Railroad, is acquiring lines reaching out to the South-West, and is chiefly supplying the means for the construction of the new transcontinental road, the Southern Pacific, or, as it has been more recently named, the Texas and Pacific Railway, which is now in course of construction in Texas toward the Rio Grande. The master spirit of this vast combination is Thomas A. Scott, the Vice-President of the Company—younger by nearly twenty-five years than 'Commodore' Vanderbilt, but, like him, risen from a very humble station in life, without the aid of inherited wealth or family influence.

1I use this designation as synonymous with Pennsylvania Company, which is in fact a distinct corporation engrafted upon the Pennsylvania Railroad Company. The same gentlemen manage the two companies, and their interests are identical.

Pennsylvania is called the 'Keystone State,' taking its name, it is supposed, from its location among the original thirteen colonies. In area and population it ranks next after New York. The main line of the Pennsylvania railroad traverses the state centrally, and therefore crosses the successive ranges of the Alleghany Mountains, which rendered the building of the road a work of vast labour and expense, and often involving difficult engineering problems. As will be readily imagined, the scenery here is exceedingly varied and pleasing, the prevailing outlines being rugged, bold, and picturesque. Philadelphia, the second city in the Union as to population, is first in amount of manufactures. Its streets are laid out with perfect regularity, at right angles to each other. The city is remarkable for the great extent of the area it occupies, the thrifty citizen generally taking care, in building, to provide simply for the accommodation of his own family, and

to secure, if possible, a little inclosure about his house for planting shrubbery. The area of Philadelphia, with a population of 700,000, is 120 square miles; while New York, with a population of 1,000,000 covers only 22 square miles; and London, with nearly 4,000,000 population, occupies 125 square miles. Pittsburg is at the head of navigation on the' Ohio River, is the principal point of shipment of Pennsylvania coal and iron to the West and South, by rail and river, and is conspicuous for its iron and steel works.

The 'Baltimore and Ohio' Route.—The traveller to the West or South-West by this route goes by the Pennsylvania Railroad to Philadelphia; by the Philadelphia, Wilmington, and Baltimore Railroad, to Baltimore; by the Baltimore and Ohio Railroad through Maryland, Virginia, and West Virginia, to Parkersburg, on the Ohio River (384 miles); thence by various lines to Cincinnati, St. Louis, or Chicago, and beyond. Many tourists take this route in order to visit Washington, the capital of the United States, which is reached by a *détour* of two hours' journey. The Baltimore and Ohio route is manifestly less direct than those which have been named, and cannot be said to present so great attractions for the sightseer, unless he be specially interested in the section traversed. The Baltimore and Ohio Company is in the thick of the fray among the competitors for the patronage of travellers by rail, and has been very successful in securing control of connecting lines, both westward and southward. Its affairs are ably administered, and its President, John W. Garrett, holds an eminent position among the railway magnates of the country.

These routes are to be regarded as not merely thoroughfares for passenger travel between the East and West, but as the great channels through which pour the overflowing products of the Middle and Western States, seeking markets in the cities of the seaboard, or destined for shipment to foreign countries. They are the great arteries through which surge the tides of travel and traffic to and from the immense, basin-like interior of the continent—a marvellously fertile and increasingly populous area, bounded on the east by the Alleghany Mountains, and on the west by the Rocky Mountains, and known as the Mississippi Valley. The westward-bound traveller by either of the routes cannot fail to share the general and strong impression of the magnitude of their operations which grows from observation of their numerous and often overburdened trains, the long distances traversed, the armies of employés, and the gigantic works built for the crossing of rivers and mountains. The ambition of their managers is, apparently, to bestride the continent like a Colossus. Americans themselves are sometimes startled when suddenly brought to contemplate some development, some evidence of far-seeing design, in railroad combinations, involving the use of capital amounting, it may be, to a hundred millions of dollars for the launching of new lines through regions where the Indian and the buffalo are still the principal inhabitants. The railroads which thus thrust their tentacles beyond the frontier (if there be any frontier still remaining in America!) are simply acquiring a growth commensurate with the advance of settled communities across the continent. In earlier days, national thoroughfares extended only from the Atlantic coast to the Alleghany Mountains, or, like the Erie Canal, to the Lakes nearest the coast; and, later, the National Road (a wide turnpike) extended hardly as far as Illinois. Now, 'through' routes must extend from ocean to ocean, and the four main lines, previously described in this chapter, in effecting consolidations with other lines to the westward, or in building new ones in that direction, are fulfilling what Americans are accustomed to call, with profound significance, their 'manifest destiny.' The lines from New York will find their parallels, on an enlarged scale, in the Union and Central Pacific—already built— and in the Northern Pacific, and Southern Pacific, which are now in course of construction. At present, however, and for some years to come, the tourist who sets out from New York for the Pacific coast will understand that of the four routes named each will lead him to the Union and Central Pacific Railroads.

I assume that my reader will determine for himself which of the routes from New York is to be selected, and that he will hasten forward with me to the less frequently described regions of the West. He will, if he chooses, embark from Boston rather than New York, making close connexions thence to the main line of either route. He may stop at Niagara Falls, if he takes either the 'New York Central,' or the 'Erie' route. He should not omit to see Buffalo, at the eastern end of Lake Erie, a great grain mart, and one of the largest of interior American cities. Ohio, Indiana, and Michigan he will discover to be great and populous states, consisting chiefly of level agricultural lands now and for long cleared of the chief part of the forests which the farmer-settlers found there. He will hear, along the way, of the wonderful prosperity of Cleveland, Detroit, Toledo, Indianapolis, Columbus, and other cities, the names of which, if a foreigner, may be new to him, but which, by their populations ranging from 50,000 to 100,000, will be found intitled to places in history. If he passes through Toledo, he is sure to be told of a 'reach' of railroad extending 69 miles on his way beyond that city in air line—claimed to be the longest perfectly straight railroad division known. Fellow-passengers will be at hand to tell him, too, of great battles between the whites and the Indians, only a little more than half a century ago, in that region where now are to be seen only peaceful farmhouses and fruitful fields—where even the sight of a real Indian would now attract wondering crowds, among which would perhaps appear, leaning on his staff, more than one veteran relic of the early struggles. He will find cities and towns more numerous than the wigwams of the aboriginal tribes, and a network of railways extending and opening fanlike to the West.

The distance from New York to Chicago is about 900 miles by either route, or twice the distance from London to Glasgow. The passenger express trains accomplish the journey in a little over thirty hours; so that, leaving New York in the evening, as is usual, one arrives at Chicago on the second morning following. The 'through' trains are all provided with drawing-room cars and sleeping-cars—those 'American institutions' which, for the first time in the history of civilisation, have rendered travelling as comfortable as staying at home.

Thus much respecting the journey over the familiar ground of the Eastern States. I have not attempted in the preceding pages to present such a direct narrative of my personal experiences and observations as I contemplate for the journey beyond Chicago. I have hoped to present, even at the risk of being thought tedious and of restating many well-known facts, a brief preliminary sketch which may prove of some interest to the general reader, rather than of special value to the actual tourist. The first stage of the overland trip terminates at Chicago, at which wonderful young metropolis it is well to tarry a day.

Chicago

Chicago.—I arrived at Chicago on May 7, 1872, on my way across the continent. In frequent previous visits I had learned to know the city thoroughly, and cavilled less and less against the self-asserting spirit of her citizens, who are usually accused of rather frequent proclamations of her greatness. They boast of her as the prodigy of the Western World; and, even in her destruction by the conflagration of October, 1871, they seemed to forget their misfortunes in exulting that it was the greatest bonfire on record. Now, a few months after the fire, I often lost my way while wandering through the ruins of streets once perfectly familiar to me. I could not but pay hearty tribute of admiration to the astonishing energy and hopefulness of a people who had evidently recovered so promptly from the shock of their heavy calamities, and were already busily occupied in clearing away the wreck of one city in order to. build a new and finer. One of their first resolutions after the fire was to re-arrange the various business districts, to assign for the more important purposes of shipping and jobbing houses valuable spaces which had previously been occupied by long rows of private residences studded with churches, to bring ships and stores, railway-stations and warehouses, as close together as possible, and generally to reform errors incident to the early spasmodic and irregular growth of the city. Next, they determined, in rebuilding, to build better than before, to consider rather how to render their houses absolutely proof against future fires than to dazzle the beholder with merely elegant exteriors. These resolutions, mind you, from a people supposed to be overwhelmed by financial losses! I had the evidence of my own eyes as to the seriousness of their intentions, and as to their own confidence, and the confidence of the capitalists of the Eastern States, in the future of the city; for, while remnants of the fire were still sullenly smouldering beneath masses of *débris* in some quarters of the city, the stately fronts of permanent new buildings were already rising in, more eligible locations. There is no lack of goods and supplies to fill the new buildings; for, though Chicago had no money to buy with, the Eastern merchants and manufacturers freely credited her, and the abundant agricultural products of the North-West flowed still, as a matter of course, and in unabated streams, to her ample wharves and storehouses. Among changes in business locations, which I observed with interest, and which may be equally interesting to anyone who has ever visited Chicago, was the removal of the principal dry goods houses to places farther from the Lake by half a mile or more—the congregation of the banks in State Street—the appropriation of Wabash Avenue, throughout its extent of almost three miles, for business houses instead of residences and churches, giving it a relative importance greater than that of Oxford Street and Holborn in London, and only comparable with that of Broadway in New York—and the occupation of all the streets running west between Lake Street and Van Buren Street by magnificent and substantial trade structures, instead of unsightly frame dwelling-houses. The astonishing growth of Chicago does not appear to have been checked by its recent disaster. Its population is now 400,000, spread out over a perfectly flat area of 223 square miles (nearly twice as large as the area covered by London), and with a surface which is but a few feet higher than the level of the Lake.

The visitor to Chicago should not fail to see the great hotels; the tunnels under the River, the stockyards, a regularly laid-out and well-built wooden city, the inhabitants of which are vast droves of cattle, sheep, and hogs; the immense storehouses and ‘elevators,’ which are planned upon a scale worthy of the greatest grain market of the world; the water-works, the reservoir of which is the cool and pure depths of Lake Michigan itself, beneath which, to points about two miles from shore, two tunnels have been dug and protected from within with brick and cement so as to serve for water-pipes for the supply of the city; and the various fine suburban parks and drives. An added pleasure in sight-seeing at Chicago is derived from the fact that the whole city is laid with wooden pavements, on which vehicles pass swiftly and almost noiselessly to and fro. The greatest marvel of Chicago is, however, the people themselves. They have need to work fast to accomplish so much as they do, and to the eye of a stranger they seem to carry even into their pleasures their habits of rapid execution, manifesting everywhere a restless indomitable spirit.

The ‘North-West,’ a section of rather indefinite boundaries, but generally understood to include the states of the Upper Mississippi Valley, is rapidly becoming the most populous portion of the Union. Illinois now disputes with Ohio the position of third in rank as to population among the States. Wisconsin, Iowa, and Minnesota are growing at an equal pace, and to their vicinity the ‘centre of greatest population’ is tending. In the recent new apportionment of representation in the American Congress, the North-West was declared to be entitled to some twenty more representatives than before.

Amazed and delighted with the prodigious increase in population, power, and wealth of this region which has so lately been reached by the tides of civilisation, I would gladly devote more space to the multitude of easily-ascertained facts, which even the transient visitor soon acquires, concerning the country and people. It will suffice, however, if I succeed in inducing my reader to inquire further, either by making the tour himself, or by referring to works designed especially for the description of these states. We are now to enter upon the second stage of our journey—that from Chicago to Omaha, ‘the gateway to the Far West.’

Chicago to Omaha

Chicago to Omaha.—We have choice of three routes by which to reach the Union Pacific Railroad at Omaha (or at Council Bluffs. which is on the east bank of the Missouri River, and lies opposite Omaha). These routes are by railroads forming continuous lines across the states of Illinois and Iowa, namely, the ‘North-Western,’ the ‘Burlington and Quincy,’ and the ‘Rock Island.’ There is no ground for preference of either of the three, so far as I know, as they all convey the passenger to their common terminus in equal time and equal comfort. By agreement between their managers, the profits of ‘through’ business are divided proportionately, and they do not compete against each other, but are combined against the more southerly routes on which passengers are conveyed by way of St. Louis. The ‘North-Western’ crosses the Mississippi at Clinton; the ‘Rock Island’ at the city of Rock Island; and the ‘Burlington and Quincy’ at Burlington.

Desiring to see that section of Iowa along the line of the ‘North-Western,’ I chose that route, embarking in the night express train at 9.45 p.m. I found a cleanly and comfortable sleeping berth ready for my occupancy, and giving the porter directions to call me when we reached the Mississippi River, I soon went to bed, and, in evidence of the satisfactory character of the arrangements for travellers in America, will add that I was soon fast asleep. The day was just breaking in the east when I looked out of the car-window. We soon reached Fulton, and crossed the river to Clinton. The bridge is in two sections, an island about the centre of the river dividing it. The

first section is of iron, the last of wood, and both together more than a mile in length. This point is about 2,000 miles from the mouth of the river, which is navigable for more than 400 miles farther North.

From Clinton to Mount Vernon we pass through the 'garden of Iowa.' The comfortable brick and frame houses, the well-built barns, the fences, the sleek cattle, all betoken thrift and wealth. Here the land is rolling, well watered, and as productive as on the prairies of Illinois. They say here, that when a farmer gets his lands paid for, and a little ahead, he builds a brick house. This section is the fairest I have seen during the journey. It reminds one of the country seen in passing from Liverpool to London.

Cedar Rapids, a large town on Cedar River, is a busy place, where are good facilities for water-power. Leaving it, we reach again prairie-lands, and we pass for 200 miles through a purely agricultural region in which wheat is growing finely and the farmers are busily planting their corn. At one place there were more than 100,000 bushels of the surplus of the previous year's crop of corn piled in temporary cribs along the line of the railroad to be shipped East.

Marshall, a town of some importance, 289 miles west of Chicago, was the terminus of the road until the Union Pacific was begun. From here to Council Bluffs we pass through prairies where plough has never been, and with only here and there a dwelling. Along the old stage-road you see the 'schooners,' as they call the emigrant wagons, wending their way West. The classes which adopt this style of 'moving West' include large numbers who, used to free roving in pursuit of deer, squirrels, and other game, now complain that the Middle States are becoming 'too thickly settled' for them. Others are offshoots of thrifty families, now turning pioneers as their fathers were before them. The liberal policy of the Government in giving farms to actual settlers tempts them to abandon the older settlements, where the increase of population renders it impossible for every one to have a hundred or more acres of land of his own.

There was upon our train a gentleman, some eighty years old, who emigrated to the North-West before there were any states called Ohio, Illinois, or Indiana; and to hear the old pioneer recount his adventures was very interesting. He was now going upon a journey to the West, to visit some of his grandchildren, of whom he had twenty-eight scattered through the country around.

Although I have described somewhat in detail my journey over the North-Western Railroad, I would not thereby give my readers. any intimation that this route should be chosen in preference to either of the others mentioned. The Rock Island route takes tourists through populous sections of the States of Illinois and Iowa and the city of Des Moines, the capital of the last named State. The Burlington and Quincy has a delightful country and the largest cities and towns along its line. The roads composing this last route are unsurpassed in the United States for their good management and the elegance and comfort of their cars. Attached to the express trains are hotel-cars, in which you have cooked and served for you a dinner, and of which you partake while the train is speeding on at thirty miles in the hour. To one who has never seen these modern contrivances in railroad travel, they are of unusual interest. Such a car is very ingenious in its arrangement. It contains a kitchen—the existence of which would not be detected by any unpleasant odours—wherein is a cooking range, a sink with hot and cold water, a wine closet, a china closet, and provision lockers. It can carry stores for forty people during a journey from Chicago to San Francisco, and is supplied with 1,000 napkins, 200 table-cloths, 400 towels of different kinds, ample bed-linen, &c. &c. The commissariat is as ample as can be wished, and the tables will seat forty persons. By day you can write comfortably at a table, in a room closed off if you wish, or lounge in easy arm-chairs, or stretch yourself out at full length on a sofa, while by night these arm-chairs and sofas are transformed into beds, upon which you cannot fail to sleep soundly. The cars are heated by hot-water pipes, are thoroughly ventilated, made with double windows, and so constructed that the noise of the train is almost entirely overcome. The introduction of hotel and sleeping-cars upon American railroads has made travelling almost as comfortable as staying in one's own drawing-room.

Council Bluffs, the seat of Pottawattomie County, Iowa, is situated about three miles east of the Missouri River. It contains some 10,000 people, and is the oldest and largest in Western Iowa. Formerly, and as early as 1846, it was called Kanesville, and was peopled chiefly by Mormons. From the circumstance that here the explorers Lewis and Clarke held a council with the Indians, it was named, in the Charter of Incorporation, Council Bluffs; but the people round about always call the place 'The Bluffs.' It is the western terminus of the three great railroad lines before named, and has made a hard fight with Omaha for the eastern terminus of the Union Pacific.1

1Since the above was written, the President of the Union Pacific Railroad Company has announced, under date of May 29, 1873, that the Company will fix its depôt and general offices at Omaha, and has directed the immediate construction of the necessary buildings.

The several newspapers published here, a seminary for young ladies, a high-school, good district schools, and many fine churches, all contribute to the welfare of the people.

There are two good hotels—the 'Ogden' and the 'Pacific,' the latter of which is more centrally located; indeed, one is at a loss to understand why the 'Ogden' was placed so far away from the business portion of the city.

The main portion of Council Bluffs is built upon the low lands bordering the river; but the finer residences are situated in the shady 'glens' among the hills which rise in rear of it. Its present site is some two miles back from the river-bank. Of the early Mormon town, which was located about a mile to the eastward, there remains hardly any other vestige than a solitary log-house.

Omaha is situated about 50 feet above the river at highwater mark, and contains a population, according to the Census of 1870, of nearly 17,000. It was the first capital of the state, as it was indeed the first settlement made in the territory. A few squatters were here in 1854, one of whom some time in that year was appointed postmaster, and immediately opened an office 'in the crown of his hat.' Riding over the prairies, or strolling about the infant settlement, he would deliver the letters which had collected in the 'office.' The town began to spread in 1859; and the commencement of the Union Pacific gave it fresh means for increase, and day by day it grew at wonderful speed. Stores and houses, hotels and 'saloons,' were erected; and a few months saw the straggling settlement a busy city, overcrowded with adventurers. All the material for the building of the railroad was shipped from here. As the road pushed West, the villages which were established along its line took away the floating population. The subsequent growth of Omaha was for the most part substantial, though rather unhealthily rapid, and the ideas of many of her citizens as to her prospects proved to be unduly inflated.

The streets are broad, and laid out at right angles and the ground rises from the river in such pretty undulations, that the location could not be bettered in many a mile around. There are some very fine brick structures already erected, several business blocks, the new Grand Central Hotel, and the high-school building on Capitol Hill. The latter, when completed, will be one of the finest brick buildings that I

have seen in the West. The hotel building is creditable, and already $350,000 have been expended upon it; but it is a sad financial failure. George Francis Train early took up his abode here, and harangued and shouted, until he thought he owned all the land in the city; and the people, in their infatuation, became thoroughly imbued with his wild ideas. He erected a great hotel, called the Cozzens House, but it is now closed, and it would seem that the dreams and hopes of 'this modern philosopher' were not to be realised. But, notwithstanding all this, the place is a wonderful example of what can be done in this country in the way of city building in the short space of eight years.

About three miles north of the city are located the barracks of the Government troops, belonging to the military Department of the Platte,' in which this section is included. This is a fine place to see the *élite* of the city, who drive out on pleasant days to witness the reviews.

They have here such thunder and lightning as we are not accustomed to at home. One morning I was awakened by deafening thunder, and a more marvellous display of lightning flashes than I had before seen. Not in one part of the heavens, but from horizon to zenith, it was one lurid flame. The rain poured in torrents for more than an hour, and streets and squares were flooded. I thought it a great storm; but the clerk of the hotel called it only a 'baby-shower,' and assured me that I ought to be here sometimes to know what a thundershower is.' I was aware that they had everything upon a large scale in Omaha, but was not aware till now that they could boast this 'the most thundering city upon the globe.'

I once heard two gentlemen—one from New York, and one from Philadelphia—praising each the advantages of their cities; and, after exhausting all arguments, the Philadelphian retorted, 'Look here! Now, I would rather be a lamp-post in Philadelphia than an alderman in New York.' So for me, I had rather be almost anything in an Eastern town than a citizen of Omaha,

The Missouri River flows by the city, but is of little service as a highway of commerce. It is a capricious stream, changing its channel so often that it has become a common saying, that you never know where to find it in the morning; and this fact, with the frequent and sudden changes in the depth of water, causes the ferry and steamboats (of which I have seen two in the river) to seek new moorings daily. As there are no wharves, the boats are run high and dry upon the banks for the purpose of landing freight and passengers—not a pleasant way for passengers, but no doubt economical for the steamers. This river is navigable more than 2,000 miles above this city at the high stages of water; but the railroads are fast taking the place of river service; and a few years more will see the steamers on the upper waters entirely withdrawn. It is a remarkably muddy stream at all seasons, and at its junction with the Mississippi its waters discolour those of the latter stream, changing them to its own cloudy yellow hue.

The Railway Bridge.—The Union Pacific Company has recently built an iron bridge over the Missouri River, between Council Bluffs and Omaha, which is regarded as one of the finest in the world. I obtained from T. E. Sickels, Esq., the engineer under whose direction the bridge has been built, the following information in regard to its construction.

Although erected upon principles heretofore applied, still, in the details, it has some peculiarities; and the whole structure has a grace and lightness, without the want of seeming strength, seldom seen in bridges of this class. The plans were recommended by Gen. Grenville M. Dodge, well known as the former chief engineer of the Union Pacific Railroad; but the bridge has been erected under the direction of Mr. Sickels since his election to that position. To the latter gentleman, therefore, belongs the honour of having erected the bridge, making it a success in every way, and that, too, at a saving of more than $100,000 from its estimated cost.

The plan of the bridge comprises eleven entirely distinct spans of iron superstructure (each span 250 feet in length), elevated 50 feet above high water, and supported on three stone masonry abutments and eleven piers, formed of cast-iron columns 82 feet in diameter, filled with cement masonry. The foundations of the abutments and the piers extend to the bed-rock underlying the sand, which is found at an average depth of 60 feet below low water in the river. Each span has a play of 2 1/2 inches for expansion and contraction. The original plan has been so modified as to provide for the use of the bridge for highway travel on the same level with the track of the railway; and wrought-iron has been substituted for cast-iron in the columns above high water.

In September 1868 a contract was made for sinking the iron columns, and the work was begun in February 1869; but, for various causes, the work was delayed, and afterwards entirely suspended until April 1871, when work was again commenced, which has been prosecuted since with great vigour; and, aided by the long continuance of the ice last winter, the bridge was completed sooner than was anticipated. The frozen river furnished a secure foundation for the transportation of the heavy iron-work, and for the erection of the 'false work,' as it is termed, which holds in place the iron-work until it is fastened securely. The superstructure is of the plan known as 'Post's truss,' and is made of wrought-iron.

Those portions of the iron columns below water were cast in sections of ten feet each, having internal flanges at the ends; and, by means of bolts passing through them, the sections were securely fastened together. The ends of the sections were faced off in a lathe; and a red-lead joint was used to make them air-tight. The wrought-iron portion of the column (above high water) is also in sections of ten feet, the sections being fastened together with rivets. The thickness of the iron in this portion varies from half an inch at the bottom to three-eighths of an inch at the top. The thickness of the cast-iron portion is 1 1/2 inch.

The columns were first sunk as far as possible by the application to the top of the column of a weight connected with a lever. The water was then expelled from within the column by the pressure of air forced in by a steam air-pump; and the sand within was excavated by labourers down to about two feet below the bottom of the column, and taken out in small bags or buckets at the top. The air pressure was then withdrawn, and the column sank to a depth varying from 6 inches to 182 feet, according to the character of the materials through which the column was passing. The latter distance was the greatest descent made by any column in twenty-four consecutive hours.

This process of sinking iron columns is similar to that which has been largely used in Europe and India for like purposes, and for a few bridges in this country. By no other known method can subaqueous foundations be obtained with equal certainty and economy, where the depth necessary to secure stability is very considerable. The system is especially applicable to the construction of foundations for bridges across rivers like the Missouri, where the river-bed is composed chiefly of sand, and is liable to scour to depths of 50 or 60 feet. In the process of excavating sand from within the columns, lignite rotten-wood and bones of animals were found at the depth of 50 feet below water, showing that the river-bed has been scoured to that extent at least.

The upper surface of the rock, in every case where the columns reached it, was found to be worn smooth, presenting an appearance very similar to the effect produced on rock by the attrition of sand under great pressure. For greater security, the rock at the base of the columns was in every instance excavated to form a recess into which the column was sunk, whereby any horizontal motion of the base of the columns is effectually prevented.

The difficulties which were anticipated in sinking the columns were surmounted as fast as they arose, so that the work was in nowise delayed. In seven days, one of the columns was sunk to its rock-bed at a depth of 72 feet, the greatest depth to which either of the eleven columns was sunk being 82 feet.

The greatest pressure to which the men working in the columns were subjected was 54 pounds per square inch in excess of the atmosphere; yet from this extreme pressure, which is beyond precedent in works of this character, no injury or inconvenience resulted to the labourers. The bridge operations have fortunately been free from serious accidents to life or property. It was apprehended that the exposure of the labourers in the iron columns to an atmosphere condensed to three times its normal pressure might produce paralysis too severe, in some cases, to yield to medical treatment; but experience has proved that injuries to a person are not necessarily more frequent in the prosecution of work of this peculiar character than in works of a different kind, but of like magnitude. There have been employed in all some 500 men, 250 being the average number; and ten steam-engines have been required for hoisting, excavating, driving air-pumps, &c.

To connect the bridge with the main track of the railroad on the west side of the river, a branch line of road 7,000 feet in length has been constructed. From the river bluff to the west abutment, a distance of 700 feet, a timber trestle-bridge, 60 feet in height, has been built, around the timbers of which dirt is being filled as fast as possible: so that, in a short time, a handsomely-formed embankment will be made, which, on the river-end, is faced by a stone wall for some 15 feet up the side. The east approach will be by a continuous grade 1 1/2 mile in length, commencing on the Council Bluffs table-land, and ascending, at the rate of 35 feet to the mile, to the east end of the iron bridge. The total quantity of embankment in this approach is 550,000 cubic yards, which is now almost completed.

The weight of the superstructure is a ton per lineal foot. It is capable of sustaining a weight of ten tons to the foot, in addition to its own weight; but it is not intended that a greater load than two tons to the foot shall at any time be brought upon it. A train of the heaviest locomotives would weigh about 1 1/2 ton to the lineal foot. Each wrought-iron piece of the superstructure was tested with a tensile strain of five tons to the square inch of sectional area, before being accepted; and this strain is as great as any portion of the bridge will be required to endure under a load of two tons to the lineal foot.

The total cost of the bridge has been, in round numbers, $1,750,000 and, although trains have been running over it since spring, still the work goes on. It is hoped that, a few months will see the structure completed in every detail.

This bridge is the link which completes the chain binding together the oceans. Even after the rails were joined at Promontory (now a station on Central Pacific Railroad, fifty-two miles west of Ogden), still the Missouri had to be passed by a ferry. Now the passage is made over the bridge in the cars of the ‘Transfer Company.’ This Company was formed for the purpose of transporting passengers and merchandise across the bridge. By the payment of a stipulated sum to the Transfer Company, freight is taken to the Far West without breaking bulk.

Omaha to Salt Lake City

To Salt Lake City.—At Omaha our journey upon the Union Pacific Road begins. But one train leaves daily, running through to the Pacific. Taking a section in a Pullman car, we are entitled to enjoy a drawing-room by day and a bed by night. These cars are comfortable, cleanly, and the *attachés,* for the most part, polite and accommodating. A throng of strange faces are around us; and all are busily engaged in preparations for the journey.

For three or four miles we pass along the bluffs upon which Omaha is built, and then push out into the open prairie, the fertile lands of Nebraska. A vast plain, dotted here and there with trees, stretches away upon every side. Upon this broad prairie, at long intervals, the cabin of the hardy frontiersman is seen, and now and then a sturdy yeoman, with team of four, breaking up the rich soil for the first planting.

We pass Gilmore, and reach Papillion, where the train from the West awaits us upon the siding. Running along the Elkhorn River, we soon come in view of the hills to the South-West, which bound the Platte Valley; and, just before reaching Fremont, we catch our first view of the Platte River, along the banks of which, now upon the left, and then crossing to the right, we keep our way as far as North Platte. The old emigrant road followed this valley, and crossed the river at old ‘Shinn’s Ferry,’ near the station of Lone Tree.

Our day’s journey brings us to Grand Island, a town named after an island in the Platte. About 1,000 people are gathered here, many connected with the railroad. This is an ‘eating station.’ So far, our ride has been pleasant; and the passengers have generally become acquainted with each other. In our car we have the genial Langford of Montana, who has graphically described the wonders of the Yellowstone Valley; a corps of engineers going out upon the line of the Northern Pacific Railroad to push forward that highway through that hitherto unexplored region; several ladies from my own New England city; gentlemen from New York and Boston, Chicago, and other cities—all enjoying with high spirits the novel experiences, and praising the pure and exhilarating air of the plains.

Two other Pullmans are ahead of our car, each filled with tourists. As the evening came on, the ladies and gentlemen of the ‘Berger-family Troupe’ visited our car, and gave us a concert, both vocal and instrumental. Our car contains an organ, in as good order as the jarring will permit, for our entertainment.

Music sounds upon the prairie, and dies away far over the plains; merry-making and jokes, conversation and reading, pass the time pleasantly till ten o’clock, when we retire, to awake in the morning far out on the plains.

While in Europe, I was often asked if I had seen a ‘wild Indian’—one who carried a tomahawk, painted his face, and wore feathers in his cap. Of course, having rarely been, to my knowledge, within a thousand miles of one of them, I could give but a faint idea of

a ‘wild Indian;’ and even here I have not been helped by the sight of the few ‘Pawnee’ who came around us at Grand Island, saying, ‘Good squaw!’ ‘Good Injun!’ ‘Give five cents!’

We have passed through the length of the state of Nebraska, over whose broad acres the fleet antelope runs, and the little prairie-dog digs its holes, and makes its cities. The broad valleys furnish immense grazing-fields; the river-bottoms, rich farming-lands; and the high ground along the road, sites for towns and villages. As the railroad advanced from Omaha, each halting-place, for a time, became the terminus, and was the point where congregated all the roughs and desperadoes. A large town would grow up in a few weeks, and in as short a time pass away, and the deserted houses and cabins now tell of departed glory and ruined business.

Through the state we follow along near the path over which the pioneers of 1848 pushed on to the gold-fields of California, their track being marked here and there by the solitary graves of those whose strength failed.

Between the settlers of the prairies and the Omaha people there is, it seems, a singular antipathy which is somehow connected with a supposed willingness on the part of Omaha to manage the affairs of the rest of the state. The farmers tell you of the great sins of the ‘Omahogs;’ and in the city they sing their own praise, and speak of all the state outside as peopled with ‘Nebraskals.’

At Antelope, 451 miles west of Omaha, we have our first view of the Rocky Mountains, whose snow-capped peaks rise high above the Black Hills, often hiding themselves in the clouds. To these mountains we look anxiously, as they seem impassable; and we await with eager eye to behold the triumph of the engineer who has laid the track for the iron horse over their very summit.

Many who have written of their journey have praised the ‘eating stations,’ as they are called; but I have found so far the food ill cooked and poorly served. A free ticket to dinner may have found aroma in the cup of chicory, comfort in the burned steak, and solace in the black bread. The Company would favour its patrons by reforming this part of their service. Still, do not take a lunch-basket; for it is always in the way. A man who had such an institution, from which every now and then was taken the rich food for the repast, to the evident discomfort of the other passengers, with a devilled ham, a devilled chicken, a devilled turkey and all the fixings, tired at last with carrying about the great basket, exclaimed, ‘Wife, I wish all these devilled things were to the *Devil!*’

Cheyenne.—We now enter the young Territory of Wyoming. We have passed through the Lodge Pole Creek Valley, which abounds with herds of antelope, and where are found deer, bears, and wolves. Just before we reach Cheyenne, we see directly before us the Rocky Mountains, lifting their huge, dark sides against the sky. Fifty miles to the south of Hillsdale, on the South Platte River, is the often-described Fremont Grove of cottonwood-trees.

Cheyenne is the terminus of the second division of the road (the first extending to North Platte), and is also the junction of the Denver Pacific Railroad. A few houses around the dépôt, the Company’s buildings, and a few scattered over the plain, form the city, where, a few years ago, a defiant mob held sway, and all the roughs from the States found a home. It is five hundred and sixteen miles from Omaha, twelve hundred and sixty from Sacramento, and a hundred and six from Denver. On July 4, 1867, a single house stood on the site of the city, which afterwards, at one time, had six thousand inhabitants. Two newspapers are published here. The people tell you that this is to become a large city, and their expectations will doubtless be realised, though after a longer interval than Western hopefulness is usually prepared for. The abandonment of Fort Russell, a military post which is supplied from Cheyenne, would abate much of the present prosperity of the town, but it must, for a long time, remain the distributing dépôt for freight destined for Colorado and New Mexico.

The Rocky Mountains.—Leaving Cheyenne, we at once begin the ascent of the slope of the Rocky Mountains, by a steep grade; two engines, with difficulty, drawing our train up the mountain-side. We pass the quarries in Granite Cañon, twenty miles from Cheyenne, at 7,298 feet elevation. Wild, rugged, and grand are the peaks which surround us. On every hand float great masses of vapour, through which, now and then, appear the snow-clad mountain-tops. It is a sea of fleecy clouds, to which we seem so near, that we could reach the floating mass. To the south-west, above a broad, dark line, rise the sunlit sides of Long’s Peak. I now realise the truthfulness of Bierstadt’s paintings of the scenery of these hills. The dark, deep shadow, the glistening sides, and the snow-capped peaks, with their granite faces, the stunted growth of pine and cedar, have been faithfully reproduced on his canvas. Snow-banks twelve feet deep are at the road-side; and in the ravines between the mountains are seen huge heaps of snow and ice. By slow stages we reach Sherman, at an elevation of 8,242 feet above tide-water—the highest portion of the Union Pacific line, and the highest railroad elevation in the world. A severe storm prevails; and, if one should desire to paint Desolation, here is the scene for him. The necessities of the road alone keep a few people about the station. In the distance are seen Long’s and Pike’s Peaks, with the Elk Mountains to the north. Though the air is here so rarified that there is some difficulty in breathing, yet, while the train waits the time may be profitably occupied in walking about the station, observing the different rock-formations and the little mountain-flowers, which. with their tiny blooms, greet the eye of the tourist, reminding him of their more gaudy sisters which dwell in the valleys. The profusion of blossoms in the plateau, called Laramie Plain, contrasts with the sterility of the plains beyond. We have here more than 300 distinct varieties of flowering plants,

From Sherman to Laramie the train runs without steam, down a grade of forty-seven and a half feet per mile, under the control of the air-brake. Dale-Creek Bridge is a noble piece of trestle-work, one hundred and twenty-six feet high, spanning a picturesque valley, through which trickles the creek. Now the fantastic red sandstone rocks appear, rearing their spires, domes, and castles from 500 to 1,000 feet above the road-bed. The water, having washed away the loose material, has left the hard rock, whose form has named a station,—Red Buttes. To the south we see the Medicine Bow Mountains, among the deeply serrated sides of which are the springs that feed the Laramie River.

Laramie, the Western terminus of one of the five divisions of the road, and the proposed site of extensive railroad-shops, is a busy place. It is the natural outlet of the Laramie Plain, a well-watered and fertile ‘expanse, which is now opened up as a great grazing field, over which thousands of cattle roam. Several churches, schools, and a newspaper, tell of prosperity.

Laramie is the place where sat the first legally-organized jury of women on record, in the history of the trial and decision of causes under the forms of law. It is said that they all invoked Heaven's aid in making up their verdict. How far the household duties were neglected during the trial is not told; but their obedient husbands, who staid at home to mind the children, sang away the hours with,—

Nice little baby, don't get in a fury,
'Cause mamma's gone to sit on the jury.

At Laramie the Company have erected a capacious hotel-building, which has become a favourite stopping-place for tourists, who are not obliged to hurry over the road. At this station, and all West of here, we shall see the 'John Chinamen' as road-hands. We pass Lookout, Rock Creek, Como, from each of which places the rolling prairies stretch far away. Then we strike into the coal-country. At Carbon Station some 300 men are employed in mining coal for shipment as far East as Omaha. During the night we pass out of this region; and morning finds us upon the banks of Green River, where begins the Little Laramie Plain. Green-river Station is now a deserted city, but was once a noted station on the overland road, from which point many an exploring expedition has started forth. We get a poor breakfast here. The sun has risen brightly, and lights up the deep ravines through which we are to find our way down into the Salt Lake Basin. The country hereabouts is very uninviting, barren hills and sage-bush land meeting the eye on all sides. Passing Bryan station, the next, Granger, is in Utah territory.

On the way from Granger to Evanston it was arranged to hold religious services, the day being Sunday. Friends from the other cars come into ours, and with the conductor, porters, and train-men, fill every seat. The Episcopal service appropriate for the day is read by one of the passengers. After this a sermon is read. The hymn,

When, Lord, to this our western land,

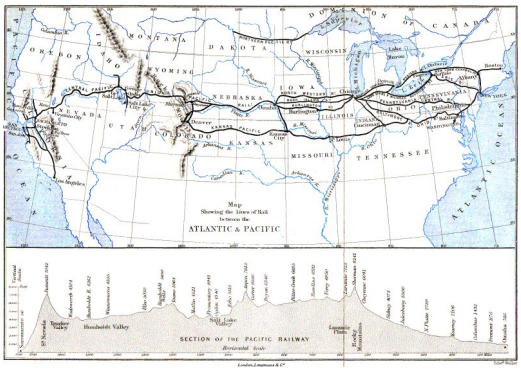
is then read; after which a select choir, composed of members of a troupe of travelling minstrels sing,—

Nearer, my God, to thee,

and several other familiar tunes, closing with our national hymn. Our services lasted nearly two hours; and the closest attention was given by all, the extraordinary circumstances of the occasion certainly detracting far less than might have been expected from its solemnity.

We dined at Evanston, from bountifully-spread tables, and were soon after at Wahsatch, which is the entrance to Echo Cañon. Passing through a tunnel 770 feet long, we enter the North Fork. Around, the hills rise abruptly on every side, the gloomy cañons dividing them. We see the towering, castle-like rocks which stand up out of the hills; we rush on through the ever-narrowing cañon until it becomes only a mere gorge, down which Echo Creek dashes, marking out the track for the road. It seems that God himself had designed this to be the gateway through which we were to enter the valley. Castle Rock, Hanging Rock, Pulpit Rock, frowning cliffs and receding hills, come in view as the train speeds its way. At the narrowest part of the ravine, on the top of the cliffs, may still be seen the fortifications erected by the Mormons in the year 1857; and, close to the brink, the huge bowlders intended for the destruction of our troops, but, happily, never used, and now only marring the landscape—monuments of folly.

Away to the south now in full view are the snow-clad



MAP OF RAILWAY LINES BETWEEN THE ATLANTIC AND THE PACIFIC

Wahsatch Mountains, among the springs of which the Weber River takes its rise, flowing thence into Salt Lake, near Ogden. As we come to the river, it seems that there is not room enough for both railroad and river, so narrow is the pass; but man has conquered, the very mountains furnishing a safe road-bed. Echo City is just beyond this narrow pass; and as it is the centre of a fertile region, with the several rivers furnishing fish in abundance, the place seems destined to gain some importance.

Weber Cañon is now entered; and for miles the track is laid along the banks of a dashing, foaming, angry stream. High mountains bound this ravine on each side, and in many places the road-bed is cut out of the hillside. Every step presents new wonders. The rocks, apparently from the effect of volcanic action, have assumed peculiar forms; the strata, in some places rising vertically from the hills, like huge walls. These serrated rocks at one point are called 'The Devil's Slide.'

A thrifty pine, of giant form, marks 1000 miles west from Omaha. There it stands, a solitary sentinel, telling to every passing traveller the same tale of home far away. Occasionally, we catch glimpses of the peculiar yellow stone which has rendered famous large sections far to the North. Granite, slate, conglomerate, sandstone, and limestone, are also seen.

Just where the river is forced between two great walls of rock into a foaming, boiling current which rushes madly on, the road crosses the stream, and we soon emerge into the fertile plain of Salt Lake Valley. The Wahsatch Mountains are now passed, and we see on either side the well-tilled farms of the Mormon settlements. A short ride takes us to Ogden, a town of 4,000 souls, mostly Mormons, and the point of junction of the Union Pacific and Central Pacific Railroads. I had decided to visit Salt Lake City, on my way westward, and as Ogden is the point of connexion with the Utah Central Railroad, leading to Salt Lake, I here quitted the pleasant company of those who had been my fellow passengers for three days. Some few of them decided, however, to join me in visiting the city of the

‘Saints.’ We reached our destination in a journey of thirty-six miles, which was accomplished in two hours, the railroad traversing a southerly course along the shore of the Salt Lake.

The Mormons.

The Mormons.—As we approach Salt Lake City the first object which meets our view is the huge roof, oval in form, of the tabernacle; then the groves of trees, blooming in almost tropical luxuriance; and then, as we draw nearer, the adobe houses of the farmers; and, when within the city limits, the cottages of the people, nestled among their apple and peach orchards.

In the mellow twilight of the Sabbath day, the great snow-clad mountains, whose weird forms rise on every side of the valley; the houses of the rich Mormon trader the cottages surrounded by luxuriant gardens; broad streets, along either side of which rippled a little brooklet; long blocks of stores; the walls of the Mormon houses of worship, with the people who abide here going and coming,—these are the sights we see in riding from the dépôt to our hotel.

In journeying across the Continent, it is better to remain over for a few days in this city, as well for rest, as to see this interesting place, and also to make preparation for the balance of the trip; for, if not already provided therewith, a little gold will be required to pay for meals and other unavoidable expenses. The ‘Walker House’ here has 130 rooms, and is reputed to be the best hotel west of Chicago, on the overland route. The Townsend House is the Mormon hotel, and is also favourably remembered by tourists who have lived there.

Refreshed by rest and sleep, we start out to ‘do’ the city. It lies upon a spur of the Wahsatch mountains, the northern part being well upon the ‘bench,’ from which a glorious view is had of the rest of the town and adjoining country. It was settled July 24, 1847, by Brigham Young and his followers, who, driven from Nauvoo, in Illinois, had pushed westward through the wilds of what is now Iowa, and across the plains, through the mountain defiles, into this valley. This band of religious zealots soon organised a government, calling their State ‘Deseret’1 electing Mr. Young president,—a title and office which he holds to this day.’ As is well known, he was Governor of Utah for several years, until 1857, during which time he did much towards developing the Territory, whose 65,000 square miles include farm-lands, great inland seas, wild mountain-ranges, and rich mines of gold, silver, lead, and iron. The Valley in which this city is situated is bounded on the east by the Wahsatch, and on the west by the Oquirrh mountains, through which deep cañons extend, the only doors of ingress and egress. To the East are Emigrant and Parley Passes, through the former of which the Mormons came into the Valley. As we came out of Echo Cañon, the old stage-road left the railroad, and turned off to the south, following the Weber River, and entering the Salt Lake Valley by the first mentioned cañon.

1This name signifies the land of the honey-bee.

2At a general convention of the Mormon Church held in May last, Mr. Young resigned all his civil offices, but still remains as the head of the Church.

Standing in the main street, and looking south-east, we see Little Cottonwood Cañon, where is located the Emma Mine, which is now considered the richest argentiferous galena deposit in the world. To the west we see Brigham Pass, where are mines rich in golden treasure. Russ Valley mines are well known; and, indeed, every cañon and every mountain-side present great inducements to the adventurous miner. From all the streets, the mountains are seen, some snow-capped all the year; and from some points the lake and River Jordan are in view. The hills are well wooded; maple, pine, and oak abounding. There is also abundant sandstone, which is a good building material, and a hornblende granite, of which they are constructing the ‘Temple.’

Salt Lake City.—The streets are all at right angles, broad, well-shaded, and to some extent graded. Many good and substantial structures have been erected; and the dwellings which contain the 22,000 people are comfortable and neat, some of them being elegant mansions. Outwardly, comfort and prosperity are seen. The stores are well stocked with merchandise; and not only can you find the needful, but Luxury has gathered many of her votaries around her here, to the peril of the young Mormon girls and boys. The church people try to prevent their Gentile brothers from opening shops within the town, which they trusted Nature had so defended that they would alone occupy it, undisturbed by those not of their faith. That the Mormons may know their friends, by an edict of the church a sign is placed over the stores, upon which is painted a *large eye*, with the words, ‘Holiness to the Lord. Zion’s Co-operative Mercantile Institution.’ Here the *followers* are expected to trade.

Fortunately, next morning after our arrival was to be May-day for the children, and a good Mormon said to us,

‘I wish you would go down and see if poly-g#-mous children are not as good as mono-g#-mous children’ (as he spoke it). Of course we went to see the 6,000 school-children with their parents start upon their excursion. No better chance could be offered to see these people in their holiday garb; and we must admit they *seemed* happy: certainly they looked well; and nothing occurred to remind us of their peculiar customs. Said a good bishop of the church, ‘This happy sight is the result of our religious faith.’ In vain did we look for those woe-stricken faces which had been described to us, and for the signs of degeneracy in the children.

The Mormon tabernacle is a huge building, 250 feet long by 150 feet wide, with forty-six stone columns, from which springs the roof, probably the largest self-sustaining ceiling in the country. On entering the building, the organ, second to but one in the United States, first attracts our attention; next, the astonishing number of the plain pine seats on the floor and in the galleries. There is said to be sitting-room for 14,000; probably 10,000 can be comfortably seated. Immediately in front of the organ is a desk or pulpit, raised very high, where Brigham sits, and from which he preaches; next below, one for the counsellors, then one for the bishops, then the deacons; and on either side of the platform are the seats of the ‘seventies.’ There is little paint, as yet, inside the building: so that all looks cold and uninviting. The doors are so arranged, that the people can depart in a few minutes from all sides of the structure.

In the ceiling we noticed numerous little holes, and asking our Mormon friend their use, were told that through them chains could be let down, to which scaffolding was attached when they wished to make repairs: thus much expense is saved in the operation, as the ceiling is 65 feet from the floor.

The Mormons are trying to build a 'temple' also, but the work is advancing very slowly. If they complete it according to the plans, they will have a piece of architecture to boast of. Until the opening of the railroad, all the stone used in building the 'Temple,' was hauled by ox-teams, some 20 miles, over a mountain road. It is to be 100 feet high, and, upon the ground, 99 by 186 1/2 feet, with towers and spires at each corner.

The Mormon Community.—Brigham has a large and valuable plat of ground enclosed with walls, within which are his various houses, called 'The Bee,' 'The Lion,' &c., his school-house, and other buildings. His farm is not so well cultivated as we expected to find it; and some of his followers, if not as good at 'scheming,' are far better at 'farming.' The theatre, the council-house, the city hall, and university are all stone buildings, of some architectural finish. There are several newspapers published here, of none of which can we say much in praise. Several religious denominations have established missions here, all of which, we were told, are flourishing. The Protestant-Episcopal Church has founded St. Mark's, and has just completed a fine stone chapel, where services are held regularly. For the religious purposes of the Mormons, the city is divided into twenty wards, in each of which meetings are held, presided over by a bishop; and for political purposes also, these divisions are preserved. The people of each ward, both Mormon and Gentile, are presumed to govern the schools, which in theory are independent of the Church; but, as the Mormons are so largely in the majority, they exercise, in fact, the control. The schools are free to all upon the payment of a small tuition-fee for their support. The Sunday schools are held in the same buildings.

We took pains to call upon Mormon gentlemen, hear their views, and observe their customs. All of them attributed their recent troubles to the rumseliers, who attempted to break down their license system established by the city government. The sum fixed upon as the price of a license, was three hundred dollars per month, to be paid at least three months in advance,—terms to which the dealers were not inclined to accede, hence the troubles. The Mormons do not attempt to conceal their satisfaction at the recent decision of this business in their favour by the Supreme Court; but none of the leaders spoke in any defiant tone, and all attribute their deliverance to *divine* interposition. We heard their arguments in favour of polygamy *in extenso*. In answer to our direct question, they admitted that their wives were often unhappy when a new one came into their husband's house.

A ride about the city is inspiring; the views are grand, the scenery delightful, and the roads in fair condition. As the houses of the Mormons are passed, the number of his wives may be known by the number of front-doors, although the wealthier have houses in different parts of the town, and farms in the country, each presided over by a favourite wife.

The water, which is conducted from City Creek through the streets of the city, furnishes a good supply for use and irrigation, and gliding along on either side, enclosed by grassy banks, gives to the streets an air of coolness even under a summer's sun.

Brigham Young is, of course, the 'lion' to be seen. By favour of his secretary we were introduced to him. He is a well-preserved, good-looking man of seventy-two, with frank, open face, and the air of a gentleman; above the ordinary stature, and, in brief, one who would be selected from the many as one of talent. His address is good, and he is fluent in speech. In manner he shows that suavity which makes and keeps friends.

He has taken a prominent part in the public improvements in the Territory; organising lines of stages, expresses, a telegraph; building railroads; and opening avenues of communication between the various settlements. He is beloved by his followers, and has a controlling voice in all their affairs.

Thus much must be said. Still we do know that life was for a long time unsafe in the Territory; that Gentiles were forbidden to open mines or carry on trade; that even the Mormons themselves were forbidden to prospect for gold and silver; that secret 'councils' were held, and that men were missed from their homes; that people. were warned out the Territory; and that the 'Danite pill' was too often administered. Had Brigham taken the course to invite immigration, Utah would now have been a bright star in the constellation of States, her lands ablaze with the fires of smelting furnaces; and the hills would have echoed with the noise of the mills, crushing out the wealth of her mountains. Her resources would have made her, probably, the first in mineral richness of all the States in the Union.

The railroad is certainly working some changes: the richness of her mines, the fertility of the soil, and the salubriousness of climate are calling in new people; fresh impulses to trade and development are given; churches and school-houses are making their way, and a new party is being formed. A gentleman who has lived in the Territory four years told me that a great change had taken place among the Mormons themselves, respecting the theory and practice of polygamy, within that time. There are probably, at this time, 130,000 people in the Territory, two-thirds of whom are Mormons, and of whom, again, one-third do not believe in or practice polygamy; and their number is increasing.

Salt Lake City to San Francisco.

Salt Lake to San Francisco.—At Ogden we take the cars of the Central Pacific Railroad, continuing our journey. We have the Great Salt Lake to our left, and on our right the great mountains, from the sides of which the roadbed has been hewn, and far up the faces of which can be seen the marks which fix the height of the once even larger inland sea than that which we now look upon. Hot springs are in View, clouds of sulphurous vapour rising from them. Passing through fine farming lands, now rich in promising crops of wheat, barley, and corn, we reach Willard City, near which are many evidences of volcanic eruptions in extinct craters. We reach in succession the thriving Mormon town of Brigham City, and Corinne,1 on the west bank of the Bear River. The latter place has already grown into some importance as the distributing dépôt for Montana; and, as it is situated in the midst of a fine farming country, there is here the foundation of a healthy growth. Stages start from here to Virginia City (358 miles) and Helena (482 miles) daily.

1*The National Park of the Yellowstone*.—At present, and until the completion of the Northern Pacific, or a railroad north-west from Cheyenne, the Yellowstone country is reached from Corinne, as the nearest railroad point. This national park includes the falls and cascades of the Yellowstone, the great lake of the same name, and the unequalled geysers, which are situated in the valley of that river. This domain, the scenery of which rivals in some respects the Yo-Semite, has been by act of the American Congress made for ever a

‘place of public resort and recreation.’ Tourists from all parts of the world will be attracted here, whenever better modes of conveyance are furnished; and even now, every summer, there are those with a liking for rough frontier life who make the journey. All who have visited the Yellowstone country express themselves as amply repaid for the privations which it entailed, by a view of those wonderful developments of nature.

The great falls in the river are 350 feet in perpendicular height, and in other parts of the stream there are rapids and cascades equal to those of Niagara. The Yellowstone Lake is undoubtedly the most elevated sheet of water of like extent on the globe. It lies at an elevation above the sea of 8,337 feet, is 25 miles long, and from 70 to 80 miles in circumference. It is situated within the territorial limits of Wyoming, upon a broad plain between two spurs of the Wind River Mountains. The waters of this lake are so warm that they do not freeze in winter, but not so warm or so charged with sulphur as to prevent the existence of fish in them, although, from the many near-by hot sulphur springs and geysers, streams flow into this lake.

The geysers in this section can be counted by many hundreds, throwing columns of hot-water and mud into the air to the height of from 60 to more than 200 feet. These geyser fountains are from five feet in diameter down to a few inches. Often large stones, mingled with mud and smaller stones, are thrown high in the air and scattered in all directions. Pools of boiling water and springs of sulphurous vapour meet the tourist at every step.

N. P. Langford, one of the explorers of this section, thus closes an account of these geysers:—

‘They are but a reproduction, upon a much grander scale, of the phenomena of Iceland. A wider field for the investigation of the chemist than that presented by the geysers may be found in the many-tinted springs of boiling mud, and the mud volcano. These were objects of the greatest interest to Humboldt, who devotes to a description of them one of the most fascinating chapters of “Cosmos.” It would be rash for us to speculate where that great man hesitated. We can only say that the field is open for exploration, illimitable in resources, grand in extent, wonderful in variety, in a climate favoured of Heaven and amid scenery the most stupendous on the continent.’

The next interesting point is Promontory, where the track-layers of the Union Pacific and Central Pacific met in completing the two roads. This was the scene of the ceremonies, grand yet happy, solemn yet full of gaiety, which took place at ‘the driving of the last spike.’ The actual junction of the two roads is five miles west of Ogden, although the latter place is now the apparent union. The proposed new dépôt buildings will be erected at the point designated by Act of Congress as the junction.

From the hills here the best view is to be had of the Great Salt Lake, which stretches away to the South, a vast sea. This lake is 150 miles long, and 45 wide; contains several mountain-like islands, as Church, Antelope, Fremont, Stansbury, and others of less size. Of these islands, one is stocked with horses, one with cattle, and another with sheep. The waters are so impregnated with salt, that a person easily floats upon the surface. There flow into this sea the waters of Weber, Jordan, Bear, and other rivers: and yet there is no visible outlet. Its waters are reduced by evaporation; and in the summer the salt that is left along the margin is carried away by wagon-loads. Some people assert that there is a hidden stream, which continually flows from the lake; but one fact remains to be explained,—how the waters are now some 12 feet higher than when the Territory was settled, fields where the early pioneers planted their grains being now under the waters.

Further along in Utah, we pass through the ‘Great American Desert,’—a vast waste of about 60 miles square, which without doubt, was at some remote day, the bed of a vast saline lake. Beyond this we mount the long rough ridge of the Goose-creek Range, the presence of a vegetation, which becomes more and more abundant as we advance, indicating that we are out of the Desert. A few miles on, we find ourselves at Toano, in Nevada, where the second division (the Humboldt) begins. The station is so located, that in time it must become a distributing point for several mining-districts. The road now begins to climb Cedar Pass, toward which, the emigrants of former days looked with longing eyes, and through which they toiled after enduring the hardships and. exposures of their march across the Desert. Through the pass we enter the Humboldt Valley. The country around looks very dreary; the stream is a mere muddy brook; there is some snow still upon the ground; the air is cold, the sky cloudy: so we resign ourselves to a day of very uninteresting travelling, only brightened by the hope of soon reaching the Sierras. We stop now and then at stations, the positions of which seem to us strange, but which we suppose to be determined by the proximity of towns or the wants of the railroad. The valley of the Humboldt river is a fertile section, but is sparsely settled. The river, rising in the mountains of the same name takes a westerly course of some 250 miles. Near the station called Brown’s, we see the ‘Sinks of the Humboldt,’—a series of lakes into which the Humboldt and other rivers flow, but which have no visible outlet. During the rainy season these lakes are all united, becoming a sheet of water, which covers several hundred square miles.

All day long we have run through a very unpromising country, unpeopled and unknown. Such stations as are required for the service of the road must be erected at the proper intervals along the line. Winnemucca is such a one, for here a division begins; and the employés of the company are almost the only residents. Night still finds us out in these vast wastes. As to-morrow is to be one of grand sight-seeing, we must console ourselves with the reflection that the tameness of this part of our journey is to prepare us for the passage of the wonderful Sierras. A good night’s rest refreshes us; and an early hour sees us up, and looking around to find out our position, as the mariner out upon the ocean daily takes his ‘observations.’

Humboldt Cañon, the next noted point, does not possess the interest that is found in either Weber or Echo Cañon; but still, at some points, there is a grandeur which impresses us as we look up its bleak, brown, naked walls. These rock-faces rise so high, and press the foaming river so close, that we seem to be rushing into an abyss, out of which there will be no escape. We observe here and there seams of iron ore and copper, which tell of the riches held in store by these brown old hills. Red Cliff, the highest point, is a narrow gorge, about twelve miles in length, which seems to have been opened by Nature that we may pass, though she grudged us the needed space for river and road-bed between the frowning crags.

Battle-Mountain Station, the freighting-point for a large mining-district, lies in a barren, clayey country, with little to see save dark hills far away, and the bunch-grass scattered over the plain. The station-house is a creditable frame building; and by cultivation and irrigation a good garden has been made to the west of the hotel, and a fountain throws up its sparkling waters, —a refreshing sight to the weary traveller who has just passed over the barren wastes. From this station the names of all Westward bound passengers are telegraphed to the San Francisco papers.

During the night, we entered the Valley of Truckee. The river of that name has its rise in Lakes Tahoe and Donner, and flows by two branches, until, near a town named from the river, they unite, and empty into Pyramid Lake. I refer to this little valley, only ten miles long and about two wide, because here it was that the early pioneers, both themselves and teams exhausted and nearly dead from their toils in the desert, found a resting-place, where green fields furnished food for their horses and cattle, and where cooling waters and shady trees gave them strength and hope.

Reno, a somewhat 'noisy' place, deserves special mention. It is situated 1,620 miles west of Omaha, and 154 east of Sacramento. This lively town is said to contain 2,000 inhabitants, has a little paper called 'The Crescent,' and vaunts itself upon its greatness.

What gives to Reno its importance is, that it is the nearest point on the Central Pacific Railroad to one of the great silver-mining districts of Nevada.

Virginia City, Nevada.—Twenty-one miles almost due south of Reno, on the side of Mount Davidson, at an elevation of more than 6,000 feet, is situated Virginia City, and, adjoining it so closely that one cannot tell the dividing line, is Gold Hill. These two mining towns have become well known wherever mining shares are bought and sold. They together contain more than 20,000 inhabitants, three-fourths of whom dwell within the corporate limits of Virginia City. In the summer of 1857, Joseph Kirby discovered gold at the base of Mount Davidson in the sand and gravel which had been washed down from the mountain, and for two years he, with a few others, continued to work these 'placers.' On February 22, 1858, the first quartz claim was located by James Finney. He was known among the miners as 'Old Virginia,' and as the section became peopled and mines were opened, the settlement took its name of Virginia City, in honour of the old miner. In June 1859, rich deposits of silver were discovered by Peter O'Reilly and Patrick M'Laughlin, in making an excavation into the hill as a basin to hold water to be used in their placer mining.

These early-acquired rights becoming more valuable by development of the mines, a man by name of Comstock sought to purchase the titles of those miners who were in possession. He succeeded in acquiring most of the rights in what has since proved the richest silver-bearing quartz vein in the world, and the 'Comstock Lode' has become famous in the money centres of Europe as well as America. This lode extends in an irregular and broken vein along the mountain side for 25,000 feet, at some points having a width of 200 feet, while at others the walls nearly close up. The untiring hand of the miner has already made the hill look like a honey-comb, and he has carried his shafts under the city in all directions. Upon this lode are now located seventy claims, bearing familiar names on the share list, as Gould and Curry, Savage, Hale and Norcross, Yellow Jacket, Belcher, Crown Point, &c.

From Verdi, we enter the Truckee Cañon, toiling up the eastern side of the Sierra Nevadas. Presently, and while we are in the depths of the cañon, we cross the western boundary of Nevada, and enter the 'Golden State,' whose borders soon greet us with hills covered with grand old trees, with grassy levels along flowing streams, with the pleasing song of birds, a cooling breeze, and a clear sun.

Truckee, a bustling town, is our first stopping-place. In the midst of a heavily-timbered country, its wealth is in its saw-mills, turned by the waters of the Truckee river, and huge piles of boards and timber now encumber the ground and block up the streets. The town is elevated 5,845 feet above tide-water, contains between 2,500 and 3,000 people, and has a newspaper (the Tribune), schools, and churches. The houses are all built with regard to the snows of winter, traces of which are even now seen in great drifts upon the northern sides of the buildings and lumber-piles.

Here we enter upon the Sacramento division of the Road; and, having improved the thirty-minutes' stop in looking about the place, the bell summons us to our seats in the train, which from this point is to be drawn by two powerful engines up the steep sides of the hills to the summit of the Sierras.

The Truckee Region.—From Truckee to Summit, in a distance of 15 miles, the road rises nearly 1,200 feet, or about 80 feet to the mile—a grade sufficient to require the most powerful engines to draw the cars. Our pace is slow indeed; but we must bear in mind that we are now doing what, a few years ago, the engineers themselves despaired of accomplishing—crossing the Sierras in a railroad car.

The morning sun is casting his early beams upon the landscape, lighting up the great pines and firs, causing the snow-clad mountains to glisten, the tumbling waters of the river to sparkle, and the surface of Donner Lake, seen now and then between the hills, to shine like a mirror. Eleven miles beyond Truckee we enter a cañon called Strong's, and climb its tortuous course, rising higher and higher, until we see far below us the lake, the line of the road, and hills which, a little while since, presented themselves to us as apparently impassable barriers. We now enter a line of well-built sheds, covering the track, and framed, boarded, and braced to protect them against the fierce snows. From openings in the sides we catch glimpses of a landscape so lovely that we all regret that necessity compels the erection of these ugly sheds, so dark and gloomy, for most of the way, that we cannot tell shed from tunnel. Some Yankee will find a way to open this beautiful landscape to view during the summer; while in the winter the road shall be protected from those great, drifting snows for which the Sierras are so noted.1 Even as we are passing (May 16), the snow still remains in huge piles against the sides of the sheds, while all along inside it lies in a drift from two to four feet deep. After snorting and puffing, whistling and screaming, for an hour and a quarter, our pair of iron horses stop in the snow-sheds at the station called 'Summit.' Here we have a good breakfast, well cooked and fairly served; although we could not expect to find so many waiters as are required to attend a rush of passengers, with appetites sharpened by mountain air and a long ride, all with one voice calling, 'Steak! coffee! bread! trout! waiter! a napkin!' Even a company of regulars would be somewhat disconcerted at such a confusion of commands.

1These sheds have, since the above was written, been fitted with reat doors, which will be opened during the summer.

Looking about the station, a single building perched here upon the mountain, we perceive that near by are many higher hills, peaks of the Sierras, whose bare and craggy sides lift themselves one upon another until their tops, snow-clad, are lost in the clouds. Here these great granite hills form the 'divide' which determines the course of many mountain streams, all of which to the West, by many windings, find their way to the Sacramento.

The descent of the mountains begins at Summit, and from our elevation of 7,042 feet above the sea we make a down-hill run to Sacramento valley, distant 105 miles, and generally elevated only 250 feet above the sea. No steam is now required in moving the train; it is propelled down the steep grade by its own momentum, and the brakes are applied to prevent the speed from becoming too great. By the breaking of a wheel or an axle we should be hurled down into the chasm below. No train is sent from Truckee without having the air-brakes as well as the hand-brakes and every other precaution against accidents, attached to the cars. With all the care and all the devices for controlling the train, great risk is run upon such a fearful grade, but your car glides so quietly and steadily that unless you look out of the window nothing unusual would be perceived.

From Summit to Dutch Flat (38 miles) we descend 3,639 feet, and to Colfax (51 miles) 4,621 feet—grades which, only a few years ago, were considered insurmountable. As we glide along, we catch occasional glimpses of the Yuba River dashing between the hills; and, further on, the Bear River, winding its way towards the Pacific. Losing sight of these views, we soon reach the head waters of the American River, and, passing several unimportant stations, we reach Emigrant Gap, where the old road, so long and weary to the pioneer, crossed the mountains. By a tunnel we pass under the old trail, and rush on down towards the valley; and, after a ride of about a dozen miles, we enter the Great American Cañon. Here, between almost perpendicular walls 2,000 feet high, the river, hard pressed by the hills, roars and tumbles, impatient of restraint. So smooth and sharp-cut are the sides, that we can stand upon the brink, and look down into the waters. From the cars, occasional views, grand and imposing beyond description, rivet our attention. We stop a few minutes at Dutch Flat—a pretty town of miners, whose cabins are adorned with tidy gardens and little orchards.

How differently are we crossing these mountains from the emigrants of even a few years ago! *Then*, inch by inch, the teams toiled to gain a higher foothold, or toiled equally hard to keep a foothold, as, inch by inch, they *climbed* down the rugged passes; *now* in luxurious coaches, with horses of iron, with a skilled engineer for a driver, we are carried along in comfort. Then and now! Who of us on this train can know of those toils and hardships? and who of those pioneers could have dreamed that this day the steam-engine would be crossing the Sierra Nevadas?

The tunnels and snow-sheds continue for 31 miles; the longest tunnel being 1,659 feet, and many ranging from 100 to 800 feet in length.

The snow-sheds upon this road are entirely different in their construction from those on the Union Pacific: here they are framed and erected as permanent structures, at a cost of about 10,000 dollars per mile. Knowing that the snow falls here from 16 to 20 feet deep, and that great avalanches of snow and ice rush down from the mountains into the valley, we can understand the necessity for these structures. They are so built—either with sharp, sloping roofs, or against the side of the mountain—that the snow passes over them, while the trains, as through a long tunnel, pass in safety. Precautions are taken to prevent fires and accidents, watchmen being stationed at frequent intervals, with water and an engine always in readiness.

Hydraulic Mining.—All along the road now, for miles, we see little ditches filled with running water. These are dug around the sides of the hills, tapping the river near its source, where perpetual snows furnish a constant supply, and are carried on and on to the various mining ‘claims’ below in the valleys. These claims are located upon what is known as the Blue Lead, which extends from Gold Run, a few miles beyond, through Nevada County, into and through a part of Sierra County, and constitute the best large ‘placer-mining’ district in the State. The whole tract was, without doubt, the bed of a once large mountain stream, which has piled up these great beds, within which are the fine particles of gold, worn away from the great quartz mountains by the action of the water upon them. Petrified trees are now found like those growing upon the hills around—pines, oaks, the manzanita, the mahogany, and others—in this peculiar formation, which is from one to five or six miles in width. From these ditches the water is taken in a ‘telegraph,’ which is a long, narrow flume of wood, extending out over the claim; to this hose with a nozzle is attached, from which the water spouts in a constant stream, and is by the miners directed against the hillside. By this action the soft dirt is washed away from the gravel, and, forming one liquid mass, is carried through a ‘tail-race’ into long flumes, often miles in length. Within these flumes are placed ‘riffles’—little slats attached to the bottom of the flume, for arresting the gold, which by its own gravity seeks the bottom. Along the flumes, at intervals, are stationed men, who throw out the large stones and pieces of rock from which the dirt has been washed. When the ‘riffles’ are supposed to be full, the water is turned off, and the dirt, which contains the particles of gold, is taken out.

The next process is the use of the ‘long tom,’ which is a sheet-iron box with a duplicate bottom extending diagonally over a little more than half the box: This secondary iron plate is perforated with holes; and under it, in pockets made by two cross-slats upon the bottom, is placed the quicksilver. This ‘long tom’ is now attached to a sluice-way, and the water turned through it. The dirt which has been taken from the riffles is shovelled upon this perforated plate; the particles of gold fall through, and unite their atoms with the quicksilver. This process of throwing the dirt upon the plate, washing away the sand and rock by the flowing water, and the taking up of the gold by the quicksilver, is continued until the ‘quicksilver is full,’ as they term it. Then the amalgam is removed, placed in a retort, heated to some 480° Fahrenheit; when the quicksilver is sublimed, and passes away in a vapour, leaving the gold.

Of course such mining is very expensive (vast sums having been laid out in building the ditches and flumes), and can never be an economical mode; for, with every precaution, much of the gold is carried away. After the last riffle is passed, the ‘slum,’ as it is called, is carried into the streams which empty into the great Sacramento, the waters of which are now muddy and dirty from the vast amount of sand, clay, and loam washed into it, as each miner, by his ceaseless labour, wears away the hills and the mountains, and carries them by his flumes into the rivers. It is a strange sight to look around and see what this constant flow of water has done in so short a time; and then we are enabled to understand some of those great changes which Nature has wrought by her rivers flowing on for ages and ages.

Since the miners began their work in California in 1849, they have levelled hills, often 300 feet in height and hundreds of acres in extent, and carried them into the valleys; they have denuded whole counties, and now only the waterworn surface and jaggy sides of the bed-rock are to be seen; they have turned the course of great rivers and dug their beds over and over; they have thrown the surface of the plains into ridges; and all this for the gold which they held.

I have described what is called ‘hydraulic’ mining, and which is to-day one of the chief industries of the State. Often water is brought from 100 to 150 miles, to be directed against the side of a hill which the miners suppose to contain gold, or to cover a bed of ‘pay dirt,’ as they call auriferous earth. So long as gold is found, just so long will there be men who will put capital into the enterprise.

In the earlier days all the miners used simple devices, as the ‘cradle,’ the ‘pan,’ &c., by which they accomplished the results I have described, of separating the gold from the earth. This was called ‘placer’ mining, and is the term used still to designate mining upon a small scale and with rude devices. When a river-bed or a stratum of ‘pay-dirt’ has been dug over and the gold taken out, the mass which is left has received the name of ‘tailings.’ All through the State to-day, the Chinamen are again going over these heaps of dirt and stones—the tailings—and by their patient and careful toil are finding gold enough to give them a living. These instances are almost the only ones of ‘placer’ mining in these days. ‘Hydraulic’ mining is not as extensively carried on as formerly, and as I have said, ‘placer’ is almost entirely abandoned. Quartz mining is the form now prevailing,. and this is described in a subsequent page.

But we are nearing that famous ‘tumble’ down the mountain, called ‘Cape Horn;’ and we must stop our talk upon mining and miners, and observe the grandeur and beauties of our ride for the next few miles, that my readers may know how to ‘double the horn.’

Cape Horn.— People who are naturally timid shrink from looking out of the cars down into the deep chasm on our left, or up upon the dark, bleak mountains which all around rear their craggy, snow-capped crests far into the very clouds. Even the cunning Indian failed to make a trail directly across this hill. As we round the hill, we see far, far below us, the river, which looks like a little brook; and what appears to be a little plank spanning it, is really a large turnpike bridge. We turn sharply to our right, and lose sight of the river; and as just across the chasm we see the road-bed, seemingly within a stone’s throw, we look anxiously for some way to reach the other side. As we move along the brink of the precipice, we look down a thousand feet into the valley below. Gliding slowly on, a turn to our left brings us upon a trestle 878 feet long and 113 feet high, which is to take us safely over this gorge, and to the road-bed which we saw so near us, yet so unattainable. When this section of road was built, the Chinamen were lowered down by ropes from the mountain peaks, and in this position gradually hewed out a foothold; the foothold enlarged to a working-place; and the working-place, after much labour, to the road-bed over which we are passing in safety. No one can view this point without being struck with the herculean labours which accomplished this result, and without rejoicing that American skill and energy directed it, and thus in the passage of the Sierras achieved the triumph of railroad engineering.

While we have been looking, admiring, and wondering, we have reached the pretty town of Colfax. As this is the point for distributing freight for Grass Valley, Nevada, San Juan, Little York, You Bet, and other mining towns and camps, the company has erected large and substantial dépôts for the merchandise, which is taken by ‘fast freight expresses’ (four-horse wagons carrying a light load, and driven at a rapid rate by relays of horses) to all the interior points. Stages also are ready at the station to convey the passengers and mails.

Eighteen miles further on, we stop at Auburn, the county seat of Placer County, containing a thousand people and many neat and substantial buildings. Although the place has no air of business, still the houses, seen from the cars, indicate home-comfort in their neat and well-kept gardens and orchards. We pass for some dozen miles the scenes of early mining operations, where, even now, some of the ‘old settlers’ may be seen at work.

At Rocklin, the Company has a machine-shop and round-house, which are built of handsome granite found near by. As we leave this place, the foot-hills of the great mountains, down whose sides we have been picking our way, are left behind us; and, although the land is still rolling, we see beyond the plains of the American River Valley. We make good time over the meadows, across the marsh-lands of American River upon trestle-work, and the river itself upon a bridge of wood, and now are in the suburbs of Sacramento, the ‘Queen City of the Plain.’ Orchards and gardens are upon either side; flowers send us choice perfumes; the fig-tree lifts its great green leaves to the sun; the soft balmy air fans our cheeks—all telling us of Summer. What a change! Only a few hours ago we were up in the snows of the Sierras, so cold that we needed a fire in the cars, and our overcoats on besides; now we are in the land of flowers of almost tropical luxuriance.

Passing the great brick repair-shops and dépôts for supplies of the Company, we are soon taken into the station upon the banks of the Sacramento River. Until the year 1870 this was the western terminus; but the completion of the Western Pacific to San Francisco brought about the union of the two roads. The distance from here to Omaha is given at 1,770 miles; and from here to San Francisco, by way of Oakland, 138 miles.

As we stepped from the cars upon the platform, what a scene presented itself! Here are gathered persons of every nation, speaking every tongue—a jargon of languages. Here were merchants and mechanics of the city and the country; old miners from the ‘diggins;’ fashionable belles who were to take the cars for the city near the ‘Golden Gate;’ young men ‘with no particular occupation;’ old men ‘waiting for a chance’—altogether the most cosmopolitan people I have ever met. As the train waits thirty minutes, we pass around among the people, observe them and their ways, talk to some, and ask the price of the nice fruits and flowers.

At the stations along the Central Pacific, as persons entered the train, they would inquire of those they met, ‘Are you bound for Frisco?’ Here everyone is inquiring of his friend, ‘Are you going to the Bay?’ We see some substantial stores and blocks along the street fronting the river. The great State House, with its lofty dome, stands out from the other buildings; but, save these, we see little of the city.

Here the ‘overland express’ is made up, with several coaches added; and we push out of the station, and run for some distance along the river. We soon begin to see what looks strange to a Yankee; that is, the windmill pumping water into a large tank, built sometimes upon the house, often upon the barn, and oftener upon stilts. Fine vineyards skirt the road; and great fields of wheat stretch away from the river.

Crossing the great bridge over the San Joaquin River, we push on through a rather uninteresting country. Occasionally we catch a view of Mount Diablo far away towards the Pacific, and the snow-caps of the Sierras far behind us. Just ahead we see high hills, which seem to offer another barrier to our progress; but our train winds itself along, twisting in and out through this coast-range, until it finds its way out by Livermore Pass.

Presently the station Niles is announced, which is the junction of the San José branch. It is now too dark to see the country; and we can only wait to hear the glad sound—Oakland! While we are wishing, the conductor cries out ‘Oakland!’ and many passengers prepare to leave at this ‘Brooklyn’ of the Pacific coast. The train reaches the boat which is to carry us across the Bay of San Francisco, by running out for some two miles upon trestle-work to the deep water; and while we are slowly crawling over this bridge, I collect my ‘traps’ and prepare to leave this ‘car-home.’ As soon as we reach the deck of the ferry-boat we peer into the fog, trying to get a glimpse of the lights across the Bay. We are told that the cold wind which blows in our faces, and the fog which hangs over the Bay, are quite frequent in summer, usually coming up in the afternoon. A sail of twenty minutes brings us to the wharf at ‘City Front,’ whence we are driven to the hotel. Here we find rooms, all in proper order, awaiting us; for we had done what every one should do—telegraphed the day before for accommodations.

San Francisco.

San Francisco.—I had expected to find San Francisco a busy, bustling city, where every one jostled against his neighbour in his hurry to and fro upon the business streets; but in a walk, on the morning after my arrival, down Montgomery towards California Street, I was struck with the absence of bustle and all confusion, although past the hour for beginning general business. The brokers and bankers all wore a look of despair, and men were assembled in little knots here and there upon ‘the Wall Street’ of the Pacific. An inquiry disclosed the fact that stocks had been tumbling for the past few days, and threatened a further decline. On Friday of the previous week (May 10), the prices of almost all mining stocks had fallen at a rate unknown before—in one case from $1,900 to less than $300 per share, and made it a day to be remembered hereafter as the ‘black Friday.’ Men who a few days before were millionaires were now bankrupts. The clouds hung dark and heavy over financial circles; and despondency and gloom filled the houses of bankers and brokers. A friend and myself made an estimate of the aggregate depreciation of the stocks upon the market up to noon that day; and our footings showed it to be not less than $47,000,000. Of course this tremendous fluctuation in value had a depressing influence upon all branches of business, in a community which is chiefly dependent upon mining interests. The shock was doubtless all the more severely felt because, as one may learn without a very long stay here, business has been overdone, and is now toiling for a legitimate basis.

During a walk along Kearney Street, a fashionable thoroughfare, I observed a strange sight—two ladies coming down the street, the one dressed in a suit of thin lawn with hat telling of summer-time; the other dressed in a gown of dark, heavy cloth, and with a long fur cloak on, and hat and costume telling of a New England winter. I seemed to be the only person who remarked this strange contrast—this evidence, on the one hand, of distrust, and, on the other, of perhaps undeserved confidence in the climate.

The architecture of the principal streets is very peculiar, ornate, and often grotesque. To accommodate them to earthquakes, the ‘Friscans’ build their blocks and houses rarely more than two stories high, and often only one.

YO-SEMITE VALLEY IN EARLY MORNING

The prevailing material used is the redwood, painted; but, when the owner can afford it, the exteriors are covered with elaborate iron and wooden ornaments, in such excess as to become ugly.

The people whom one meets are extremely polite and affable, and ready to show you about their city, of which they are very proud. The weather is supposed to be that of a fair May day; the thermometer is about 65°, and, when out of the sun, you are a little uncomfortable; and it is so desirable to have the sun in this climate, that you see in the advertisements of houses to let, &c., a prominent announcement that ‘the rooms are sunny.’

I was warned to prepare for the wind; and, in my walks took with me an overcoat, which by three o’clock proved most serviceable. Looking over the hills to the west, you see huge banks of fog rolling in towards the city; and the cold ocean wind, surcharged with fog, rushes upon you like an evil spirit. I shivered and hurried, and walked down streets lying in opposite directions; but still the same spirit was upon us, until I was driven into the hotel to take refuge before a glowing coal-fire in the grate. This they tell me is a *fair sample* of their summer weather. One may get used to it, but the first experience is very unpleasant. It is utterly out of the question to sit out of doors during the evening: little inclination is felt to walk or ride out, unless business or urgent social calls demand it.

A good dinner at your hotel does much to dispel the gloom which an afternoon's fog creates; and the confident assurance with which the 'Friscans' tell you that these are their unpleasant days, and invite you to wait for their pleasant season, compels one to be satisfied, and enjoy what there is of blessings before him.

Seal Rock and the Sea Lions.—No one has seen this city, at least in the estimation of 'Friscans,' until he has been to the Cliff House and seen the seals. No matter how cold are the blasts which blow in from the Pacific; no matter how fearful are the showers of sand, or even how angry look the skies, the Cliff must be seen; and a drive over the Cliff House Road is indispensable to a proper reception into this wonderful town. At breakfast, upon my first morning in the city, I was asked, 'Have you been out to the Cliff?' Therefore, on the second day after my arrival, I made this pre-eminently necessary excursion. The drive of a little more than a mile through the city was a kind of martyrdom. The fine sand from the hills round about fills the air, and, borne upon the *Pacific* blasts, cuts the face until we cry for quarter. These sand-hills were blown up from the ocean beach; and their position seems to be constantly changing. The streets often run through these sand-banks; and, if you plough through one, you then can understand what a sandy road is indeed. In places, where the streets have been graded and macadamised, the sand comes in, and repossesses itself of its old quarters, covering side-walk and carriage-way, door-step and front gardens.

By dint of courage and perseverance we succeeded in getting beyond the city street proper, and upon the famous road. As there were races at one of the agricultural parks, the road was unusually lively and gay; and we had the pleasure of seeing the 'fast nags.' The road is nigh three miles long, and has a hard, smooth carriage-way, in width some 60 feet, and a trotting track-way of some 40 feet; and the whole is kept in most perfect order from the funds received at the gate, the toll being four 'bits'1 each carriage. As a road, it is of great merit. The drive is almost wholly without interest, unless it be to watch the varied surface of the great sand-banks made by the wind, or look over a field and observe the ripples and the changing colours in the sand which has been blown up from the beach. The road takes a sharp grade down towards the beach, and, by a very nicely curved way, you are let down to the level of the Cliff House Piazza; and a short distance more brings you down upon the sandy beach.

1A 'bit' is an old silver ninepence; and so the toll is a silver half-dollar each carriage.

The Cliff House is a wooden structure built out over the rocks, and has evidently been enlarged as business increased. It is neither pretty in its architecture nor inviting in its appearance; but inside the house creature comforts are dispensed with lavish hand. Standing upon the veranda looking out to the ocean, you have, a little to your left, the great Seal Rock, whereon disport the sea lions—now crawling up the rocks, their sides dripping with the foam; now stretching themselves out in the sun; and now rubbing their sides with their fins, which serve them as paddles, hands, and feet; or now again lashing the rocks with their tails, all the time growling, or rather howling. Their antics afford much amusement to the people who throng this popular resort.

Among the lions which have grown old and ill-looking, in the service of entertaining with their strange freaks and pranks the populace of this fun-loving city, is one whose eyes now squint from over-feeding, who seems to rule the rock with the greatest bravado, and is called 'Old Ben Butler.' For the peace and good of the other lions, may 'old Ben' soon take his last leap into the sea!

To our left is Gull Rock; further around are the Headlands, and to the right, the gate called *Golden,* through which all the commerce of this port must enter, and through which our ships seek a path to China and Japan. The hills, where they are of rock, rise majestically from the sea; and with the air free of fog, and at setting sun, a beautiful picture is seen here, and this narrow roadstead found to have been rightly named the 'Golden Gate.' For miles, you may ride along as pretty and sandy a beach as you could desire. The ocean dashing at your feet, or surging against the projecting rocks, tells us of our 'other ocean'—the blue Atlantic. Navigators called this the 'Pacific' because its waters were so calm; but they only knew of its Southern character. Then they had not been far enough North to determine whether California was an island or the mainland; and, indeed, upon early maps which I have seen, it is laid out as an island. If you desire to test the 'pacific' nature of its waters, you are told that a voyage North, to Portland, Oregon, or to Alaska, will settle the question; and you will only wish that Drake, and his compeers, had sailed further North before they named this great ocean, the Pacific. Its waters about San Francisco are evidently not so blue as those of the Eastern coast, neither are they so clear; but this, undoubtedly, is caused, to a considerable extent, by the mining, which sends down into the Bay so much soil and decomposed rock.

A delightful drive took us back over the road, and through some of the best-built streets of the city, to our hotel, as thoroughly initiated into the mysteries of the Cliff House, and the famous road leading to it, as is a hazed Freshman into the great mysteries of college life. Let not anything here written deter you, however, from taking this drive, lunching at the Cliff House, and taking a. sight of 'Old Ben Butler,' should he still live to torment his enemies, and disgust his friends, when you visit California.

On the morning of my first Sunday in San Francisco I was awakened by the sounds of martial music and the tramp of soldiery. For a time I thought it was the Fourth of July. From the hotel-window I saw no less than three military companies, each with a band, marching on their way to some picnic. The side-walks were thronged, by eight o'clock, with men with wives and children, oftener, perhaps, with their sweethearts, hurrying to the boats, the cars, the 'buses,' and every sort of conveyance which would take them to some 'place of resort,' or into the adjoining country. The horse-cars were all placarded with advertisements of shows and performances at 'Woodward's' and the 'City Gardens,' the theatre and the circus. Used to the staid customs of our New England cities, I was a little bewildered at these sights, but was told that Sunday was the great holiday for the people—perhaps to-day a little more parade; but still that every pleasant Sunday takes the people into the country, to the islands in the Bay, or to that greatest of all great places—Woodward's Garden; for Woodward is the California 'Barnum.' He is better known among the mining population of California as the proprietor of the What Cheer House. Later in the day I found that there was a large church-going population, and by service time the city became as quiet, and was all day as orderly, as any in the East.

Views of the City.—As is well known, San Francisco is greatly exercised of late about the occupation of Goat Island, and the building of a rival city on the Oakland side of the Bay; and I must say that, to one unacquainted with the early history of the city, the site where

Oakland is built seems the place for the great city of the Pacific. The deeper water-front of the early days determined the commercial superiority of the site selected, aided, and perhaps assured, by the Spanish mission-church and fortifications, then already established. The city has moved away from the deep-water-front, and is finding its commercial marts far to the South, where they must fill out into the Bay for the wharves, that ships may have protection from the gales which at some seasons of the year prevail.

Oakland Wharf is a favourable point from which to get a panoramic view of the city and harbour. The wharf extends out so far into the bay, there is nothing to obstruct the vision. The atmosphere is so much clearer than in England, that one accustomed to that foggy air, is surprised to find his range of vision so extended and the outlines of objects brought out with such distinctness.

From this point, looking west, you have, just by that huge rock which rises from the water about a mile from the end of the bridge, called Goat Island, and which has given so much trouble, the roadstead which leads out into the Pacific, through the Golden Gate. To the left rises Telegraph Hill, whereon, in early days, the beacon-light was placed, and at the foot of which the early miners pitched their tents, and began their city. For many years the business portion of the city lay at the very base of this hill, with the tents and cabins of the new-comers far up its sides. It seemed to me, now, that I could see the scattered tents of the primitive town, and the good ship 'Niantic,' in charge of Capt. Brewer of Boston, gracefully sailing up the Bay, to become the first hotel of the city. I saw the little settlement increase from hamlet to town, and from town to city. I saw her people gathered in the plaza, witnessing the fights of the bull and the bear. I saw snips flying the flags of every nation coming to the new-found harbour, bearing the living freights, and carrying away the golden treasure.

Now the city has stretched away to the South,—as far as Mission Bay, and to the West two miles, and more, towards the Ocean. The place where the 'Niantic' used to lie is now covered by a large brown-stone block of stores; and to the East, for nearly a mile, the Bay has been filled in to find deep water, and the whole space covered with large, and, in many instances, substantial storehouses. Around Telegraph Hill decay has attacked both the buildings and the dwellers therein; the stores have been emptied of their merchandise; and but little now remains to tell of the bustle and noise of the early settlement. The plaza has been inclosed by a neat iron fence, and beautified with trees and shrubs, to remain for ever a park, to which the old inhabitants love to come and think over the scenes of early days. As you look upon the city, you see the shipping, with flying banners, at the wharves, war-vessels riding at anchor, then long lines of storehouses which cover the low land West to Montgomery, next the Mansard roofs of Montgomery and Kearney Streets, and above them the clock-tower on the Chamber of Commerce, on California Street, come in view. Rising above the city is the bald form of Telegraph Hill, and, to the South, the house-capped sides of Russian Hill. Further to the South is Lone Mountain, where they have laid out a cemetery; and then the land stretches away in a gentle slope to Mission Bay, with the foothills separating the ocean from the Bay to the West. To the extreme South are the China Docks; and away down the Bay is seen the dry dock and South San Francisco. The open sea is not visible, as the city is situated upon the Southernmost of two ridges, or arms, which jut out towards each other, cutting off the view seaward, and leaving only a narrow pass between them, thus forming the 'Golden Gate.' To the West of all rise the great sandhills, over which we must pass to reach the ocean. In the summer months, generally, a fog-bank, after ten o'clock in the morning, hangs over the Western suburbs, ready to be taken over and upon the whole city by the trade-winds, which prevail at this season of the year.

Montgomery Street, running from Telegraph Hill, South, to Market, is the principal business street. Kearney, the next street West, and parallel with it, is attracting the shopkeepers whose trade is with the women. New Montgomery, which was to be an extension of the old street of that name, and upon which one front of the Grand Hotel is erected, was an unfortunate enterprise for its projectors, many of whom have been ruined.

The streets in the business portions of the city have wooden pavement; those in the sparsely settled portions are macadamised. The sidewalks are nearly all of plank, save upon the principal business streets, where all kinds of walks may be seen. Many of the streets are so steep, that it is with difficulty that one can drive up or down them, Clay Street being a pretty good test even for pedestrians. The horse-cars are compelled to make long *détours* around these hills; and, even then, four horses are often required to draw a car up the grade.

I cannot speak very favourably of the architecture of the city. Around the old adobe church of the Mission Dolores many of the old clay houses still remain, bearing the marks of a century. The dwellings are not generally elegant, and stately mansions are rare. Small, one-story, three-roomed houses are occupied by the people. Recently some fine private houses have been erected; but all seem very unhomelike in their exterior appointments. The public buildings are so out of proportion, that they exhibit no architectural beauty. House-builders seem to have accepted the situation,—that every October the earth *will* quake, and that masonry *will* crack, and ceilings and chimneys *will* fall: hence they have sacrificed taste to a style which they call 'earthquake proof.' The great hotels—the Lick and the Grand—present long and somewhat imposing *façades;* the Occidental has the most harmonious front, but is considered too high for that 'peculiar institution,' an earthquake. The newer buildings are of wood; and all are covered with ornaments, to such an extent that they become often very repulsive. The structure which the Bank of California has erected for its offices, although neither large nor pretentious, is, to my eye, the best specimen of graceful and classical architecture. The Treasury Building of stone, in the Doric style, has just been completed, and compares favourably with the Government buildings of other-cities. The new City Hall is not far enough advanced to decide its merits, although the plans show a very elaborate, but still very ornate design.

The churches in their architecture are not as a whole pleasing. Several new ones, among them Dr. Stone's in Post Street, are fair in their proportions; but there is in them all a lack of harmonious blending of materials used, and in the adjustments of the lines of gables, windows, and doors. The Episcopal church is almost ugly in its appearance; Calvary is better, but has the look of an opera-house. The church which the lamented Starr King designed, and in which his society still worship, has a pleasing and harmonious Gothic front. This edifice also in its interior finish and arrangements shows the cultivated taste, as well as the wisdom, of its architect. Just outside this church, within the little yard, separated from the street by an iron fence, and beneath the shade of a Monterey cypress, is the sarcophagus which holds the cherished dust of Starr King. New England gave of her best when she sent this eloquent divine, in the trying hours of need, to the Pacific. He infused his own life and teachings into a people who now hold his name in honour, and revere his memory, telling their children of him whom they loved so well. This done, his mission seemed ended. The memory of his life and his recorded utterances remain a perpetual legacy to the people of the state of his adoption as well as to those among whom his labours began.

In riding about San Francisco, one is amazed with the luxuriance of foliage and blooms which are seen in the gardens. Hedges made with the fish geranium fuchsias trained against the house, reaching above the windows, or in a tree, with stern four inches in diameter the century-plant in full bloom; the tea roses, pelargoniums, and the choicest pinks, all growing out of doors without protection—such are

some of the sights. There is a lack of shade-trees along the streets; but in the gardens I saw the pepper-tree, with its delicately-fashioned leaves; the cypress, with its feathery foliage the eucalyptus, from Australia, which grows very fast, and is said to rival in size the sequoia (of which species are the 'big trees' of California); the fig; the several varieties of palm; and choice evergreens, the arborvitae, the cedars, and many other trees, all growing in luxuriance. As there are no grasses indigenous to this region, much difficulty has been found in making lawns; but some of the southern grasses, like Kentucky red-top, the Timothy, together with the white clover, have been made to grow upon prepared soil, with constant irrigation; for even here a windmill is almost as common, and certainly as useful, as in Stockton. The lawns, however, are not like those which give to the English country places their special charm. As you look at these plants and trees, growing the year round, it seems that they must be tired, and need a Northern winter to sleep away a part of the year.

The schools I found much better than could have been expected. By the kindness of the superintendent, I was enabled to visit several of them. The scholars are much further advanced at the same age than with us. They excel in the languages. We found children of ten to twelve years speaking quite fluently French and German, and those, too, who hear only English at home. They show great talent for the drama. In the rendering of selections from the authors, they not only spoke well, but acted well, and brought into play accessories in costume and furniture in a manner creditable to an Eastern Amateur Dramatic Society. Much prominence is given to instruction in instrumental and vocal music.

There is in the city but very little manufacturing of any kind. The Mission Woollen Mills are now, by the union with the Pacific Mills, and by using Chinese labour, enabled to keep their machinery running. The market being so limited, they are forced to produce a great variety of fabrics, among which the 'Mission blanket' is justly celebrated the world over. Some few shoe-factories are carried on with Chinese labour; aside from these, but little is done: and Chicago—now so near, since the railroad was completed—is made to supply what the city ought to produce within itself. The click of machinery, the hum of the loom, and the puff of the steam-engine, all are lacking, which make Eastern cities so full of life, and which tell that within our workshops are being fashioned the most curiously-formed products, both useful and ornamental, which other States will need in exchange for the farmer's grains and cattle.

As is well known, California, unwisely as it seems to us and, now, to very many of her people, refused a paper currency, and has to this day used only gold and silver. That they are now learning that a paper note, when duly honoured, is more convenient for use than coin, is at last acknowledged by the bankers and merchants in the demand for a national gold bank, which has recently been established, and whose issues, in lieu of coin, are eagerly sought for by the people.1 The smallest piece of money used, after the early custom of using gold-dust ceased, was an old ninepence (twelve and one-half cents), which was always called a 'bit.' A quarter of a dollar was a 'two-bit piece,' a half dollar a 'four-bit piece,' &c. Now that this coin has departed, and the nomenclature as well as practice remains, a great difficulty is experienced. If you buy anything for a 'bit,' and hand a quarter of a dollar in payment, they return you ten cents in change, which would be, as they say, 'taking the long-bit; 'the 'short bit 'being a dime. A person who tenders a dime for a 'bit' is stamped as a mean man, and is avoided: so, what is demanded is, that you should try to pay about equally *long* and *short.* No nickels1 are seen, and very few silver half-dimes. The leading bankers, I think, are now satisfied that it would have been better to have adopted our common currency; and, if this State had done so the difference between gold and greenbacks would have been long ago made up by the general confidence in our paper. I discover two reasons which determined the course: first, as the people had always been accustomed to gold coin, never having used paper currency, it was a difficult matter to effect a change; and, secondly, it must be said, although I regret it, that there was a large and very influential minority who were favourable to the South during the late civil war, and averse to the use of the 'war-issue' of currency. The bank of California is the leading financial institution, wielding an immense influence, and presided over by Mills and Ralston so ably, that it has the confidence of the entire financial world.

1Two Note Banks are now doing business, and others are projected.

1American five-cent pieces.

The street-cars are of all sorts and sizes,— two-horse cars, four-horse cars, and one-horse cars; and the prices for riding in these conveyances vary, like the cars, from three cents up to seven cents. As there is little small silver and no cents in use the passenger is forced to accept tickets in settlement of the balance of the dime (ten cents) which he has presented the conductor, for his ride. The consequence is, that, after you have been in 'Frisco' a few days, you have a collection of car-tickets, Which, for variety in shape, colour, and printing, cannot be surpassed. The roads do not generally exchange; but the three-cent line takes a seven-cent ticket of any other company. How the people submit to such inconvenience, it is hard to say; but I suppose a horse-railroad company is substantially of the same genus in 'Frisco' that it is in—say Boston.

'Fighting the Tiger' is the phrase used for gambling. In the early days of the city, all the people spent their nights around the gaming-table, and with the miners, even although they have now become rich, the love of Faro remains. There are in the city numerous dens where you can loose your money almost surely, although Californians boast of their 'square-game.' What was once done openly is now carried on in defiance of law. With the old population gaming is a pastime, and they stake their money with that recklessness which is born of becoming suddenly rich, and with the numerous prizes in gold-mines still undrawn. Admittance to a Faro Bank is easily obtained, and as a warning in nearly all the dens you will see hanging upon the wall a tiger's head with open jaw, ready to seize his prey. Once having 'bearded the lion' they say this becomes only a pleasing picture—a wall decoration.

The Chinese.—If ever there is a study which repays one, it is to learn of this curious people, who, transplanted from their 'native heath,' are trying in this foreign land to preserve the customs of their country. Meeting with many difficulties, suffering much, working hard, they still succeed in maintaining their own 'Joss House,'1 their own theatre, and in not mixing at all with the white race. There are, at present, more than twelve thousand in San Francisco. Although there are large monthly arrivals, the demand for their labour in the country keeps the average very nearly the figures stated. They swarm in the section around Sacramento Street, and are scattered throughout the city. For the most part, they are sober, kind, and submissive, and in certain places they are exceedingly valuable as servants. It is the custom here to have a China*man* as chamber*maid;* and your cook is 'John,' who—arrayed in neat blue tunic, with pigtail, black and neatly braided, reaching to the heel of his thick, cork-soled slippers, and whose big trousers at least hide ungraceful legs—goes about his work without bluster, and sends to your table dishes exquisitely prepared. Your dinner is served by a 'little John,' in tunic as white

as snow; and your garden is weeded by another, in a hat so large, that, looking down upon it, you see no ‘John,’ or any thing else save bamboo braided into a peculiar shape.

1The name given to their temples of worship. There are three rival houses in the city, but within they appear exactly alike.

The Chinese have monopolised the laundry business; and in this they excel. You see around the city little signs over little doors in little buildings, upon which is printed ‘High Lung, Washing and Ironing; Hup Lee,’ Quon Lee,’ ‘Hi Boo,’ or ‘Le Chung,’ either one of whom will come for your linen, and return it in a short time nicely prepared, and at very low prices. Chinese servants quit without notice, or without giving any reason for so doing; but, aside from this, a large majority of them are faithful at their work, quick in learning and exceedingly neat.

They are addicted to gambling; but theirs is the only fair game that I ever knew to be practised for this purpose. It is simply this: A grave-looking Chinaman called the umpire sits at the head of a long table, before him a large heap of *checks* or *chips*, round, with a hole in the centre: a handful of these is taken up, and laid away nearer the centre of the table. Upon the left of the umpire sits the banker, who now wagers something, from his bank,—seldom over fifty cents,—that there is either an odd or an even number in the heap. Some one of the crowd now wagers as much money as the banker against him. If any other one bets, then the banker must advance the same amount; the money being laid upon a little board marked off into squares. The customers use representatives of money; while the banker lays down coin. When all are done, the umpire, with ivory stick slowly. draws the checks one by one from the pile, and places them in *twos* back in the large pile. The experienced eye of the Chinaman, long before they are all drawn away, will detect whether the number is odd or even, and so whether he has won or lost. This causes a general talk in a most animated manner. After the games are closed the patrons of the establishment settle for their checks.

The banker would seem to have no advantage, save a small fee which is charged for the privileges of the house; and, if people *must* gamble, the plan of the Chinaman is highly recommended. It is by far fairer than the modes adopted and practised in that great den at Saratoga, or at any other gambling-saloon, if I am rightly informed by ‘those who have been there.’ Bret Harte’s Chinaman had evidently learned all his tricks from some old Californian, who, being about ready ‘to pass in his checks,’ was willing to tell others ‘how it was done.’

Many of them are intelligent, and come from home with a knowledge of simple English words: all of them know how to read in their native tongue, to count, and to keep accounts. I made the acquaintance of many Chinese gentlemen, not only of intelligence, but of culture, and whose friendship I prize.

The Chinese live very frugally; rice and pork forming their chief food, with chickens, of which they are passionately fond, when they can get them; and often their last bit’ goes for a *bit* of chicken. Tea is their favorite drink.

We lunched one day at the *fashionable* Chinese restaurant, and, for the first time in our lives, learned what a good cup of tea is. We could not use the chop-sticks, so we could not eat rice; but we took from a tray, filled with nice-looking food, which was brought us, some very delicate cake with almonds in it. This was the place where the wealthy Chinamen lived; but in the other restaurants the food looked good: but of course, as in all such communities, there were places where you would not believe that anything deserving the name of food could be obtained. At night the great mass of them huddle together in the smallest space.

They keep innumerable little shops. The doctor has his filled with all sorts of barks, leaves, and berries; the tea-man has his teas; the grocer has his supply of China-packed goods, including jars of the choicest ginger; the butcher has his stall full of the most curiously cut bits of pork, often smoked black, chicken, and fish; the clothier has his tunics, trousers, hats, caps, and slippers. The great tea-merchants have simply an office, as they deal only in large quantities direct from China. There is among them an artist, who paints in oil, or photographs with Chinese accessories, doing creditable work. Their theatre is a favorite place of amusement; and the piece which is now on was begun at the opening of the house, years ago, and will occupy many years more to compete it: hence the necessity of going often to keep up an interest in the play. This ‘China Theatre’ is situated in Jackson Street, and is one of the strangest sights in the city. Words would fail to describe the grotesque scene inside the house. Of the playing there is no standard of comparison—it is wonderful, exceptional, indescribable.

Their ‘Joss-houses’ are attended daily but especially upon *fête* days. Here they have their hideous images of the good, the evil, the pretty princess, the man cast out of heaven, the great prince, &c., before all of whom the sandal-wood taper is kept burning, and dishes of food in great abundance are placed for the gods to eat. Adornments of odd designs cover the sides and ceilings of the rooms; and a great bell, which is beaten at times of worship, stands near the door. These temples are presided over by a soothsayer, who sits in his little room adjoining the door, and writes out the teachings of the gods. As he works he mutters to himself the words of the legend. Around sit other Chinamen engaged in hearing the will of the god whose image is in sight.

The whole of the Chinese religion is simply this, stripped of its form of development: They believe that there are two spirits,—the good and the evil. The good cannot do harm in any way; as it is good, it can do only good: but the evil, while it cannot do good, *may* not do bad; so they try to appease the evil spirit, that it may not exercise its terrible power. This they do chiefly by keeping *him* well fed, and by following certain rules of life, which traditions from the old philosophers have taught them to be the proper way to live, that after death, if the evil spirit does not come, they may dwell in peace and happiness. But in heaven, constant care must be taken lest they may be cast out, like the man whose image is always set up in their Joss-house as a warning. There is a deep philosophy in their religion, which Confucius gave them, and which, with the lapse of time, they have not lost. The Chinese are honest,—a trait which seems to be a part of their natures. A close study of them for five weeks leads me to hope that we shall soon have them more numerously in the East, not to come into opposition to any form or kind of labour nor to injure any class, but to take their places side by side with all, and do their share of the labor, which is far more rapidly increasing than are the hands to do it. As soon as the present labouring-classes of the East understand them, they will cease their opposition, and allow them to take such places as they are fitted for. When we consider the grape-growing interests of California, we see how advantageous they have been, saving from utter ruin an enterprise of which now the whole country is proud, and continuing it in prosperity where no other people could or would work.

So my voice is for the Chinaman, praising his virtues, and dealing leniently with his many faults.

Before closing what I have to say about San Francisco, mention ought to be made of the hotels. No city is better supplied. The four large houses—Grand, Lick, Occidental, and Cosmopolitan—offer pleasant homes. As the Grand is new, it is filled with tourists; the wide-spread reputation of the Occidental brings all the business-men to its halls; while the Lick is a great family boarding-house, whose magnificent dining-room used to be thronged with the *élite* of the city. Hotel life is not so general as it was formerly; and, the supply being greater than the demand, hotel property is at a sad discount just now. It is often stated that you can live cheaper in this city than elsewhere; but this applies specially to food, for clothing and rents are higher than in the East.

The Californians are, as a class of people, very hospitable and free, live easily, and spend their money without stint. Such a people demand places of resort; and they have them in this city in every form,—gardens, theatres, circuses, saloons, skating-rinks where a polished floor takes the place of ice, and restaurants where choice viands are set before you. Liquor-drinking is here perfectly open and free; and the bars are fitted up in the most elaborate and costly manner, with choice woods worked into the artistic panels and mouldings, with mirrors of costly plate, and with all the appurtenances of the bar in pure silver. There are at all the bars, during certain hours, free lunches; and in some places on and near California Street, you can, by purchasing a glass of wine for two bits (twenty-five cents), obtain a good dinner. It seemed a contradiction that a man could make profits and carry on such an establishment; yet they succeed, and are making fortunes for their proprietors. During the whole day, drinks are dispensed; but the price is always the same,—twenty-five cents. There are other places where a dime is charged, and where the lunch is less elaborate. All are carried on in the most orderly manner.

In the East, we drink behind curtains and screens; here in a room carpeted with Brussels, and furnished with velvet cushioned chairs, and open to the street by plate glass windows and doors. During my whole sojurn here, only a few intoxicated persons have been seen. These facts are stated, not to favour the use of liquor, but that some lessons may be drawn to aid the suppression of an evil which has become such a curse.

The city is too young to have many libraries, picture-galleries, or museums. The Mercantile Library and the Mechanics' Institute are both creditable, and offer to their members the advantages of pleasant reading-rooms, and well-filled libraries. The patronage given to them shows a growing interest among the people for reading.

'The Pioneers' is a society composed of all those who landed in California prior to the first day of January, 1850. It has a fine hall, offices, reading-rooms, library, &c., in a building owned by it on Montgomery Street. Here are preserved the trophies of the early days of California; the old 'bear-flags 'adorn the walls; and in these rooms are nightly gathered those whose names and deeds are closely connected with the founding and early history of the State. It was a rare treat to visit the rooms of this society, there to meet the very men of whom I had read, and hear from their own lips of the struggles and hardships which surrounded the birth of the State, and those still harder struggles which freed the country of the desperadoes and ruffians who so long infested the Pacific Coast.

The Bohemian Club is composed of the artists and *literati* of the city. Their kindness in giving me the freedom of their elegantly-furnished rooms added much to the comfort and happiness of my visit. In their cosy parlours, every afternoon, after business, and during the evening, are gathered genial spirits; and the hours glide away so pleasantly, that all cares are forgotten, and upon the faces of all hang

'Wreathèd smiles,
Such as Hebe brings.'

Who could fail to be happy with the Bohemians? May success and prosperity attend the club! for, without it, a visit to this city would be robbed of much of its interest. They seem to carry into practice the German saying, 'He who creates a laugh creates forgetfulness; and he who creates forgetfulness distributes oblivion.'

I had the great pleasure of attending, on the evening of June 18, the first reception of the Art Association. In well-appointed rooms on Pine Street, which the Association have fitted up for a permanent gallery, were gathered the artists and their friends, a brilliant assembly, to view the pictures. The pictures were not numerous, and many seemed badly hung: still, for the first reception in a new city, and so far from the great art centres, it was very creditable. Bierstadt, who is staying at San Raphael, a few miles from the city, is represented by 'Mt. Hood' and 'Cathedral Rocks in the Yosemite.' His 'Mt. Hood' is a grand picture, and full of those pleasing 'bits of painting' which he can so well put upon canvas,—as in this, the herd of deer browsing and feeding upon the margin of the quiet lake. Thomas Hill, who is for the present here, sends 'A View from Point Lobos,' in which you see the great waves of the Pacific dashing against the cragged rocks and among the deep caverns of the shore. Kidd, formerly of Albany, but now located here, gave two very pleasing pictures, of which one, 'A Dead Mule on the Prairie,' was, in drawing and detail, a capital work. Brooks sent two exquisitely-painted salmon, and several still-life pieces. Loomis placed upon the walls a landscape, which, though it failed to attract much attention, still was as choice coloring as any of those exhibited. A picture by this artist in another place, and some pencil-drawings, gave us much satisfaction. If I mistake not, Mr. Loomis has charge of the drawing in some of the public schools. Irvin presented a portrait of the poet Miller; and Champion and Tojetti also contributed portraits. These, with a large number of old master-pictures, said to be originals, from the collection of the late Mr. Pioche, together with a few pieces of sculpture, formed the chief art attractions. I speak of this exhibition to show what a cultivated taste exists in the city. Although young, San Francisco can rival many of her older sisters in the fame of her artists, and this, the first, general exhibition of the Artist Association was a success beyond the expectations of its promoters.

Goat Island.—Undoubtedly you have known something of the great excitement which has stirred this city, caused by 'The Goat Island Scheme,' as it is termed, and the question of ceding Mission Bay to the Central Pacific Railroad Company. Rather than take anything at second hand, I had an interview personally with Gov. Stanford, and took occasion to discuss this matter. The city, as I understand (it being almost impossible to find any two who alike state their grievances), feels alarmed, lest if Congress should grant the railroad company even the use of Goat Island, it would be immediately levelled down, and a city, as a rival to this, be built there, and all the freights over the railroad be transhipped at its wharves, that the China steamers would make their terminus there, —all having a tendency to lessen the importance of San Francisco. The completion of the railroad has injured business, and hence lowered the value of real estate. New York now is within seven days of here, and other markets proportionally near. Buyers instead of being forced to San Francisco, now find their way to the great metropolis, and other Eastern cities. This feeling of depression only makes the people the more sensitive

to any thing which *may* injure their city. They have a committee of one hundred, with chairman and secretary specially charged to look after the interests of the community.

The Mission Bay matter is this: The city gave to the company the land of this Bay to be filled out to a deep-water-front, to the extent of some sixty acres; and through this tract streets and avenues had been surveyed and plotted. The company asked the board of supervisors to pass an order giving it those streets and alleys. The resolution as worded was rather indefinite; and the people think, that, under this cover, it is endeavouring to obtain a perpetual grant of this bay and India and China basins, freed from all streets. So much for the people's side of this fight, the magnitude and bitterness of which can hardly be conceived by one who has not been here.

Gov. Stanford says, 'The bill now pending before Congress asks that Goat Island be appraised, and rented to our company; the government to reserve the right to repossess themselves at any time. The fight has arisen more between the land speculators at Ravenswood on one side, and Saucelito on the other; and the city between is made the apparent antagonist of the company. By a new road we can reach Oakland in about 87 miles from Sacramento; the road now through Livermore Pass being 137 miles. For this reason, we want Goat Island, that we may level down its outer edges, and erect storehouses thereon. It will bring us a mile nearer our business in the city,—Mission Bay. From here to our business, we should be obliged to use a ferry, as we do now to Oakland Point. Goat Island is a barren rock 380 feet high, situated in the bay about 4 miles from the Oakland shore, and its nearest point only five-eighths of a mile from the present wharf from which the ferry starts. We intend to approach the city of San Francisco by three main lines,—one from Humboldt, Oregon, and all west of Sacramento, centering at Saucelito, and thence by ferry to the city; all east of Sacramento and the great valley of the San Joaquin, to Oakland as now; the southern roads, including the Southern Pacific lines, by rail direct to the city by way of San José. As a general principle, business must reach the city by the shortest and most direct route, and by the easiest grades. It is folly for the people to say that we intend to level Goat Island, and build a city there. It would not pay us to do it: our business is in San Francisco. We have already real estate and improvements there valued at more than 4,500,000 dollars, and this city is our terminus; and there never has been any intention of making any other place or places the real terminus of our roads. This whole panic, which has so disturbed the people, is a foolish, unnecessary, and wicked plot; and those who are aiding this excitement, which is so injurious to the trade and prospects of the city, are criminally to blame. I have faith in San Francisco and her people: I shall oppose them only so far as self-protection of our road is required, believing, that, in time, they will see the right, and understand the motives which have actuated me, and the officers of the company, in the course which we have pursued.'

Thus rests this quarrel, which is and has been so injurious to both city and company.

Although I find that the dreams of the people about the effect of the railroad across the continent have not been realised, although all business is stagnated, lands less valuable than before, business-property sadly depreciated, and the people disheartened, still San Francisco is plainly destined, by a slower but steadier growth, to march on to a grand national importance. The great valleys will send to her storehouses their unmeasured yield of wheat; energy, and better knowledge of the manner of working the mines, will force the mountains to yield up their treasure; the wine-growing interest will add to her wealth; the South will contribute its varied fruits and nuts; ships from China and Japan must find here a port; and soon, I have no doubt, Australia will send her mails and treasure to this port, to be conveyed across the continent to the steamers at New York. Thus it is that San Francisco must ever remain the mistress of our Western ocean.

I take my leave of San Francisco by addressing to her these beautiful words of her own poet, Bret Harte:—

'Serene, indifferent of Fate,
Thou sittest at the Western Gate.

Upon thy heights so lately won
Still slant the banners of the sun.

Thou seest the white seas strike their tents,
O warder of two continents!

And, scornful of the peace that flies
Thy angry winds and sullen skies,

Thou drawest all things, small or great,
To thee, beside the Western Gate.'

The Geysers

The Geysers.—On May 23 I set out for a tour through Napa Valley to the famous hot springs. Taking the 4 o'clock boat, I had a delightful sail through the bay to Vallejo. As we leave the city, we pass in sight of the Golden Gate and Fort Point, alongside of Alcatraz and Angel Island, thence through the Straits of San Quentin into the Bay of San Pablo. This is a broad expanse of water, bounded on all sides by high hills, save to the north-east, where Mare Island forms the harbour of Vallejo, and where begin the Straits of Carquinez, opening into Suisun Bay, into which empty the great rivers Sacramento and San Joaquin. Upon Mare Island are erected the buildings connected with the Navy-yard of the United States Government, including extensive machine-shops and other workshops, a hospital, storehouses, a magazine for powder, and houses and quarters for the officers and men. In the river facing Vallejo have been built fine docks and wharves, which make safe landings for the largest vessels; while the harbour is of a size sufficient to accommodate all the fleet of the country if necessary. Here lies the old 'Kearsage,' whose crumbling frame and rotting timbers could now ill stand a battle, but whose every plank has been made famous by that memorable fight with the Alabama.

Vallejo lies a little way from the landing, has the only steam-elevator in the State, some good buildings and many poor ones, and looks very old. It is only kept alive by the trade of the soldiers and sailors; but its people still cherish a fancy that it is to be a great city.

Of this place I cannot speak much praise; for, with all its natural advantages of a fine harbour and government patronage, it seems to be asleep—almost dead. Near the city is the terminus of a railroad called the California Pacific, which is by far the pleasantest route between Sacramento and San Francisco.

Napa Valley.—This is one of the most beautiful and fertile of those great plains which lie between the mountain-ranges of this State, being the eastern one of three —Sonoma, Petaluma, and Napa—which start from the bay, and take a general north-west course. From Vallejo to Napa City the road follows Napa River. The country around is pleasing, the ranches well farmed, and the buildings better than in most parts of the State. This Valley is productive in wheat, barley, corn, and grapes, yielding immense crops. Napa City has about 4,000 people, lies upon the west bank of the river, is well laid out, contains many stores, two banks, has two daily papers, and is one of the most flourishing towns. A little steamer runs up to it from San Francisco. The climate is very agreeable: the cold winds of San Francisco are here modified into soft and balmy breezes. About five miles from the city are soda-springs, where they dip up soda-water, put it into bottles, surcharge it a little more with gas collected from the spring, and send it away to be drunk by all. No fountains, no sulphuric acid, no limestone and intricate machinery, are here needed to manufacture soda; for Nature has her own laboratory, where she makes this 'delicious drink.' I found in one of the gardens here finer roses, and by far finer pinks (both carnation and picotee), than I ever saw growing in the open air. Here were all the tea-roses, great beds of verbenas, and pinks in almost endless variety, and in size equal to Henderson's choicest blooms. There was also a fine collection of conifers, among them the Sequoia, as well as many deciduous trees. All that is needed to make this one of the handsomest of gardens is a good lawn of fresh-growing grasses. The roses of Napa are the finest I have found; the foliage entirely free from all insects and worms, and giving, I am told, blossoms every month in the year.

I next visited St. Helena and Calistoga. The ride to the first-named town is even more interesting than that to Napa. The grape-lands begin here; and we see vineyards of twenty, fifty, and even a hundred acres, now in all the luxuriance of setting fruit. Large wine-houses are seen along the line; and extensive farmhouses dot the landscape, embowered among the beautiful trees for which this Valley is famed. Many of the wealthy 'Friscans' have their summer residences here, where they are protected against the cold winds which make the city climate so disagreeable, especially in summer. Among the many fine places, that of Woodward's seemed to be superior in its appointments and the great neatness which prevailed in every department. I noticed that in some places the apple-orchards were badly stripped of their leaves by the caterpillar, but was told that it was quite uncommon. As we go North, the Valley narrows so perceptibly that it seems an easy walk between the hills which bound it on either side. All things considered, this is the best farming-section which I have seen.

White Sulphur Springs.—At the pretty little town of St. Helena we take a carriage for the Springs. They are some two miles up a beautiful cañon; and, as I drove up to the hotel, I felt assured that I had found the gem of California resorts. There are nine of these springs, the largest one of which discharges 6,144 wine gallons per day. They were first discovered in 1850, having been a favourite resort for the Indians, where they came to drink or to bathe in their warm waters. Around the pools, where the water gushes from the ground, the Indians erected little huts of skins and barks, and in them sweated themselves in the hot sulphur vapours. The waters of these springs are warmer than most of the sulphur springs of Europe. They contain, beside sulphur, carbonate of lime, magnesia, sulphate of soda, salt, lime, &c. Many sufferers from rheumatism and skin diseases told me they found great relief by the use of these waters.

From the surrounding heights fine views are had; and the various trails which have been cut lead by easy grades to the tops of mountains and along steep precipices. The cañon in which the springs are located is a little gulch between hills, in which there is little room to spare, for the hotel buildings occupy nearly all the space. The hillsides are occupied by pretty cottages and sleeping-houses; for here they build summer hotels upon a plan which an inclement climate would forbid. The hotel is a building containing the office and a common parlour, adjoining neatly-arranged bath-rooms, into which the waters from the spring are conducted; across the drive-way way is the dining-room, and to the right the billiard-hall; the kitchens are farther back; and up the gulch are several buildings, each divided into three sections, for sleeping-rooms. To the left of the hotel, on the plateau (upon which stood the finest summer hotel in the State, but which was unfortunately burned), have been erected some dozen single cottages. All the occupants of these various cottages take their meals at the common dining-hall, or gather in the common parlour after dinner, but can at any time remain in their own cottage as quietly and as secluded as they desire. The grounds are laid out with taste; and the most scrupulous neatness is shown on every hand. Up the gulch a little way is a grove of seven redwood-trees, the only specimens of this tree in many a mile—the only ones I have found since leaving the Truckee region in the Sierras. A stream runs through the estate, in which there is good fishing.

The genius of the place is Mr. John Bremberg, whose position is express-agent, telegraph-operator, writer of the bills of fare, catcher of butterflies, superintendent of the baths, general helpmeet for everybody, and charged with the important duty of making every one happy. To attend to all his duties, of course, John is kept busy; and he rushes here and there, he sweats and foams, but always has a kind word for all. For now it is some little child who wants John to help at her play, and he goes; now some old lady wants John to come and pack up her trunk, and off he goes; or some 'Spanish beauty' comes for John to go for a walk, and protect her against snakes, and he goes willingly. He keeps a medicine chest, which has gained him the title of 'doctor;' and, as he peers over his gold-bowed spectacles, he does really *look* wise.

Calistoga Springs.—From St. Helena, a ride of nine miles brings us to the town, Calistoga, the derivation of which is easily perceived—*calis*, 'hot,' and *toga*, 'a garment.' The name was given by a gentleman who had received benefit from the numerous hot sulphur springs here. The 'Little Geysers,' as they are called, were used by the Indians, who erected their sweating-huts, here also. The railroad terminates here; and the train which starts from Vallejo upon the arrival of the boat which leaves San Francisco at 4 p.m. reaches Calistoga at 8 in the evening. Hence are wagon-roads, which traverse the great defiles in the mountains, up to the Great Geysers, the Clear Lake, the Petrified Forest, and Mount St. Helena. This mountain rises 4,360 feet above the plain, and was named by the Russians in honour of Helena, the mother of Constantine the Great. A valley near by, and in which the Spanish permitted the Russians of Alaska to come and raise their wheat, is still known as Russian Valley. The town has no other importance than as the railroad station for the 'Springs,' which is undoubtedly the 'Saratoga' of the West. Here, as at White Sulphur, we have a hotel, and a great number of pretty

cottages, the Revere, Occidental, Adelphi, Delevan, &c., arranged in a circle around the central building. Over the springs have been erected fantastic structures, which mar the landscape, but which have been built to please the fancy of the proprietor, Sam Brannan, as he is familiarly called. Mr. Brannan was one of the early pioneers, and has done as much as any one man to develop the resources and advantages of the State. In conversation, he charms you with interesting descriptions of the olden times. To him alone is due whatever Calistoga and its surroundings are to-day; and with lavish hand he has tried to make the place beautiful. But his trees, plants, and vines, gathered from every quarter of the globe, have been a failure; for no plant the roots of which extend more than a foot into the ground will grow here, owing to the heat as well as to the mineral deposits.

Every kind of a bath which Mr. Brannan ever saw, read of, or heard of, he has here reproduced; and it would seem that, by the number, he had counted up the numerous ills of life, and for each prepared his panacea. People from all over the State, and of course all tourists, come here to spend a few days in a climate genial and warm, ranging from 50° Fah. at night to 86° at noon, and but seldom varying from these figures.

The drives through the grounds are delightful. A close examination of the springs reveals their wonderful character; for here are waters from cold to boiling, pouring from the earth within a circuit of an eighth of a mile, and each spring different in the component parts of the water. There is one spring the waters of which, by adding a little pepper and salt, are said to become chicken-soup—at least with as much ‘chicken’ in it as most hotels use in these days.

The Great Geysers.—We are now to visit, by a stage-coach ride over the mountain-road, the greatest wonder of this region. We find that the engineer who built that road, Mr. William Patterson, is to go over it to-day; and we gladly accompany him. We are to be driven in a four-horse coach, by an experienced driver, who does not yield the ribbons even to Foss, that knight of the whip, known all over California. Punctually at 7 we are off, a jolly company of eight, for the wonderful mountain which is on fire; and away through the village we dash. The first ten miles of the road are through a wild and broken country, with hardly a habitation in sight. So far, we are on a county-road: we change horses, and strike off upon a run over the mountain-road proper, and our interest begins. Around the sides of the hills we wind, and up the rocky faces of mountains, where a track has been blasted out of the solid rock, just wide enough for a single carriage. There are places where, if the wheel should turn from its course one-half a foot, the carriage would plunge down a precipice from 2,000 to 3,000 feet. As we ride along, the difficulties which beset the workmen upon the road are pointed out and explained; and at every step a new interest is excited, new views obtained, and new dangers successfully passed. This road was built in 1869, at a cost of $22,000. Its length is seventeen miles. The highest grade is one foot in eight; but the average is one foot in ten. Calistoga is 400 feet above the sea; the summit of the road is 3,600 feet; and the plateau, upon which stands the hotel at the Geysers, is 1,700 feet.

Reaching the summit, we stop to look at as grand a spectacle as eye ever beheld. In front, far, far below us, we see the line of the great Russian Valley; but the mountains beyond seem so near that, at this altitude, the plain of the valley is lost sight of. Around us on every side rise hills piled one upon another; mountain succeeds mountain; the clouds, fleecy and white, as they scud over our heads, seem within reach. Magnificent flowers have made our ride charming; the lupins, the geraniums, and mountain daisies greet us; while the ceanothus, in many colours, adorns the hills. The madrona with its curious bark, the manzanita with its curious-coloured wood, the several varieties of oaks, firs, and cedars, all line our track, and offer here and there refreshing shade.

Our pace up to this point has been slow; but now even the horses seem to know that the rest of the way lies down hill; for at the word they prick up their ears and start upon a run; the driver screams and cracks his whip; the horses catch the excitement, and are soon going at a twenty-mile gait. For the whole eight miles down there is no quarter-mile where, for that distance, the road is straight, but it winds and twists, makes ox-yoke curves, crosses dashing brooks, by dancing waterfalls, and over yawning ravines, always seeming to you that its end has come, but always finding some way out. The eight miles have been done in some thirty minutes; and we are nearing the hotel, where we are to rest for the night within sound of the hissing and roaring steam of the Great Geysers. The genial German, Susenbeth by name, always called ‘Susey’ for short, is at the piazza to welcome us, and help us shake ourselves free of dirt and dust, and assures us that there is no danger from the volcanoes which are easily imagined under our very feet, and ready to burst forth.

As we were running down the mountains, with our well-trained team at their speed, and guided by ‘Corneil Nash,’ I said to him, ‘Are you not sometimes afraid? and how do timid ladies like to ride in this manner?’ ‘Perfectly safe, sir,’ said our knight. ‘Driven here nine years, and no accident. Guess I’ll land you at the hotel all right.’

Our dinner was ready by the time we had the dust brushed from our clothes, and were in trim for table; and, with appetites sharpened by our ride, we filed into as uninviting a dining-room as you could imagine. The walls were of rough boards, whitewashed; and even these were made to look more ugly by hanging upon them the advertisements of several insurance companies, some of which we knew *to be no more* since the Chicago fire. Our food was an attempt at the preparation of French dishes. There was an abundance of it; but, oh, what peculiar concoctions! Still they all had splendid names. As I told you, ‘Susey’ is a German; his people

TENAYA CAÑON—YO-SEMITE VALLEY

around him are the same; and his cook is probably of the same nationality, but with French aspirations in cookery. A German always makes a poor show at imitating a Frenchman; and a *Garsthälter* who attempts to become a *maître d' hôtel* does it at the peril of reputation. The food satisfied our hunger—so much in its favour— and we felt ready to explore the steaming and hissing gorge which lay in front of us across the brook.

To give an idea of our location, imagine a long building with a verandah in front, from each end of which, but upon opposite sides, extend other buildings, connected with the main one by covered passages. In one of these is the general parlour, in the other the dining-room; while the main building contains the sleeping apartments, which are arranged in two stories and on the two sides, those above as well as below being entered from the verandah. Standing in front of the main building, and looking west, we have the whole extent of Pluton Cañon in view. Geyser Cañon crosses it at right angles, just a little way from the hotel, and is far the larger, a river called Pluton, finding its course through it. All the near-by country is mountainous; and upon the sides, and even around the springs, grow in luxuriance the oak and many woody shrubs, together with the madrona and manzanita. Just at the head of Pluton Cañon a rock juts out into the gorge, which has received the name of 'The Pulpit.' Here the cañon divides; and to the right and left rise hills, with sides in places as precipitous

and straight as the walls of a building. Looking far away, hills succeed hills; while behind rises a great mountain with the euphonious name of the 'Hog's Back.'

At about 4 p.m. we started, under the conduct of a guide, to explore the cañon, and to take a near view of these wonderful springs. While the sun shines in the gorge, the steam which issues from the earth is dissipated by the heat; but in early morning the whole cañon is filled with the clouds of steam, which roll through the gorge, giving it a grand and awful appearance. Crossing Pluton River, we find ourselves at the bottom of the cañon, which at this point is some 35 feet wide, but which narrows, as we look up its whitened surface for half a mile, at an angle of some 45 degrees. There are about 200 fountains, or springs, where steam, to a greater or less extent, issues from the ground. The guide having given to each a long, stout stick, we step upon the bed of mineral deposits, which was once a steaming geyser, but the residuum of which has for years been bleaching under the suns and rains of the recurring seasons. The first spring is the Alum and Iron, the temperature of which is 97° Fahrenheit, and around its sides are incrustations of iron. A little further on we find a spring containing Epsom salts, magnesia, sulphur, iron, &c.—a highly medicated compound, and which has been named the Medicated Geyser Bath. Around us we see beds of crystallised Epsom salts. We pass in order Boiling Alum and Sulphur Spring, Black Sulphur, Epsom Salts Spring, and Boiling Black Sulphur, which roars unceasingly. By far the largest is the Witches' Caldron, the diameter of which is about 7 feet, and the waters of which boil and bubble, sometimes being thrown 2 feet into the air. It is said that all attempts to find a bottom have failed. We next reach the Intermittent Geyser, which sometimes throws up boiling water 15 feet in the air, but which was moderately calm the day we visited the cañon, the water being thrown only 3 or 4 feet. The Devil's Inkstand is a small spring, out of which flows a liquid which is a good substitute for ink, and has the quality of being indelible. It is a custom to dip the end of your handkerchief into this spring, that you may carry away the ineffaceable mark of your visit.

We are walking over ground which is honeycombed by extinct geysers; and often our feet sink ankle-deep into the mineral deposits; or, again, we place a foot where the ground is too hot for comfort. As we are obliged sometimes to cross a space where the very earth seems on fire, and to step from stone to stone, between which are boiling, steaming openings, from which arise sulphury fumes so strong as almost to stifle you, it is hard to persuade yourself that you are not in the realms where old Pluto holds sway.

The most wonderful (if one can be placed above another) of these springs is the Steamboat Geyser. It is on the left, and raised 10 to 15 feet above the cañon level. From its many apertures issues steam, resembling in look, and especially in sound, the blowing off of steam in a steamboat. Around this spring, for some distance, are evidences that once the spring or springs extended over a much larger space. Just beyond this we reach the rock called 'The Pulpit,' which we saw from the verandah. We climb up there: the guide fires a pistol to let those at the hotel know that we have reached this place in safety. At this point, the cañon makes a division, and we take the right. From these positions we have an extended view of the cañon down its length; and all these springs—even the Steamboat Geyser, the Witches' Caldron, and those boiling, sulphurous fountains—are seen from above, and, as we gaze, it seems impossible that we could have made our way up among them to this place.

We pass on over the Mountain of Fire, which is covered with orifices from which once poured fire and steam; and around us, within the space of, say, one mile in length, and a few rods in width, we see strata of sulphur, Epsom salts, alum, copperas, yellow ochre, magnesia, cinnabar, ammonia, nitre, tartaric acid, etc. A little further on, we find the Indian Spring, where the Red men used to bring their sick to be healed, and where were found the rude sweating-huts erected by the natives. Here, in 1869, Edwin Forrest received great relief from the use of the waters. The Eye Water Spring has also effected many cures for weak and inflamed eyes.

Next a great whistling attracts our attention; and, with the guide, we hasten on, and soon come to a small aperture, from which the issuing steam is carried into a small iron pipe made like a boy's whistle, which is thus made to screech fearfully. At this point we perceive that we have been nearing the hotel, although now at a considerable elevation above it, and some distance away. A fine view is had of the surrounding hills; and, after a rest, we make our way down the sides of the mountain, to Geyser Cañon, and along the river to a bridge which spans it, and over this to the hotel.

The guides who accompany us have a fashion of giving the name of every spring as in some way connected with the Devil—as, Devil's Kitchen, Devil's Office, Devil's Punch-Bowl, and many more in equally bad taste. I have avoided these names. If those who have control over this property would have the cañons surveyed and mapped, with the location of the principal springs, and give them names which would designate their properties, much would be done towards making them more generally known and deservedly popular.

As soon as we reached the hotel, I asked the proprietor if he could tell me who discovered these springs. 'Elliott,' he said, 'was the name; and upon an old register, the first the house had, I will show you the entry in his own handwriting.' Taking from a desk an old book, and turning over its pages, we found, under date of April 1847, the occasion of a visit of Elliott to the springs, the following:—

'William B. Elliott was the first known visitor to the Geyser Springs, when out on a bear-hunt, and now resides at Clear Lake.'

Under this a friend has written, in trembling hand—

'Poor fellow! was killed by the Indians at Pyramid Lake, May 1860.'

Thus is told the simple story of the discovery of these wonderful geysers, and the death of the hardy hunter, who modestly calls himself 'the first known visitor.'

In regard to the causes of these phenomena two theories are advanced—one that they are produced by purely chemical action, and the other by volcanoes. The latter hypothesis requires evidences of volcanic action in the hills and mountains around; and the former seems to attribute to chemical force greater power than we had supposed could be thus produced—as in the great boiling caldron, or in the spring whose waters are sometimes thrown 10 or even 15 feet into the air. As I have before said, the most impressive view of the cañon is had in early morning, just as sunlight appears. Then the whole gorge is filled with billowing vapour, and with the noise of the escaping steam, and the sulphurous odours. It is indeed a fearful spot at this time.

There is another road to the Geysers, by way of Healdsburg and over the summit of the mountain called 'Hog's Back.' By this route more extended views of Russian Valley and River are obtained. The best advice to the tourist is, to go by one road and return by the other. This mountain journey is among the most famous of those made in California, and those who have been to the Geysers will relate

in glowing terms their experiences with Foss and his ‘six-in-hand,’ and of having made such sharp turns in the road that the ears of the leaders were for the time being lost to sight.

Reaching the town again we more fully realise the mountain solitude which we have left—a place where the Creator has made it impossible for man to build his cities or for people in great numbers to congregate—a spot inviting to the sick, where springs and fountains pour out health-giving waters.

Santa Clara Valley.

Santa Clara Valley.—My Visit to the hot springs was followed by a brief sojourn in ‘Frisco,’ after which I set out (May 29) for the Santa Clara Valley to the southward. As soon as we were out of the suburbs, the fertile farms of San Mateo County were seen upon either side of the line. We are now going in a south-easterly direction, along a narrow ridge of land, which pushes north towards a similar jutting spur, which extends to the south, and separates the Bay of San Francisco from the Pacific. As we pass along the low stretch of shore to the East, towards the bay, we have on the West the hills of the Sierra Monte Diablo range, which hide from view the ocean.

A few miles out we pass directly through the great farm of D. O. Mills, Esq., President of the Bank of California; on the right, just upon the foot-hills, stands his palatial residence, built of brick, in the style of the French *Rénaissance*, surrounded by conservatories, which are a necessity with us, but here more for ornament, as it is only for a few weeks, during the great rains, that any plants, even those in pots, require protection. Near the track are situated his extensive barns, milk-houses, and other necessary farm buildings, up to the doors of which a ‘siding’ has been run, so that the milk from this great dairy can be taken directly from the barn upon the cars, to be transported, in a very short time, to the city. Away to the East a beautiful reach of low, marshy meadow intervenes between us and the waters of the Bay. The whole farm gives proof of unbounded wealth; and it seems a good omen that Mr. Mills sees fit to carry on this magnificent farm, improve the breed of cattle and horses, by experiment decide the most useful crops, and by his example teach others how to till the ground, that health and plenty may come to the people of the State.

Our train draws up at a station called Belmont; and, as we had been told that this was the station nearest ‘Ralston’s *royal* mansion,’ we looked around in hopes of seeing that house; but it is so situated among the foothills that it cannot be seen from the road. When I describe an entertainment given to a party of ladies and gentlemen at this mansion, and of whom I had the good fortune to be one, I hope to make you acquainted with the house and grounds, and know something of the sumptuousness of the private life of a rich Californian.

We now enter the Valley proper by making a little turn eastward; and at once we see that we are within one of Nature’s great parks. This Valley has been often called the ‘garden of the State;’ but we would rather term it the ‘park.’ The greak oak-trees, both the black and the live oak, stand in all their majesty upon the plain, and from their branches hang the mosses, just as you see them in the States bordering the Gulf of Mexico. They are scattered through the fields just as the landscape-gardener would desire them, but in an order which he always fails to get whenever he tries his hand at imitating Nature’s planting. The grasses look greener and fresher than anywhere else that we have seen in the State; and, although we do not see a great variety of flowers, we do have the yellow blossoming mustard-plant, covering acres in one mass of gold. We see wheat-fields of 1,000 acres—that is, with no fence between, and the only breaks being dead-furrows; orchards of apple, pear, peach, and nectarine, of great extent; as well as plantations of English walnut, almond, cherry, and fig. From this valley come as fine strawberries as are produced in the State; and we visited one strawberry-patch which contained sixty acres, the vines covering the ground almost entirely. Oats, barley, and, to some extent, corn, thrive; and the potato produces large tubers, but the quality is not as good as in sections further to the north. The hay made from the wild oats and the volunteer crops—that is, grain which grows from the droppings from the last planting (they have here none of our grasses), is considered very nutritious; and the fields which we visited yielded immense returns. One field upon which we went was being cut for the second time; and the farmer said he should obtain one more crop before the drought succeeded in killing all green things.

The villages through which we pass have a look of thrift; and the many fine grounds and elegant mansions which are seen along the line convince us that here ‘wealthy Friscans’ love to make their homes. Back from the railroad, the spires and housetops of the old town of Santa Clara appear in view; and, after a ride of three miles, we arrive at the city of San José, which is located in the very heart of the valley, and just fifty miles from San Francisco.

The Spanish had their military post, called the Presidio, near the entrance to the Bay in 1776, which is now within the limits of San Francisco. The commander of the post in 1777 resolved to make an agricultural settlement near the mission which had already been established at Santa Clara some ten months, and accordingly, on November 29 of that year, made a beginning on the banks of a creek, which they had named Guadaloupe: but the early settlers were much annoyed by the floods which overflowed the banks of the creek and destroyed their property; so they moved their town to the North. All that is now left of the ancient town is one large store-house, and the Halls of Justice, both built of adobe, and now in a very dilapidated condition. In 1797 the town had changed its location and occupied the present site. All this was in the time of Charles IV., when all that section, of which California is only a part, belonged to the crown of Spain, and was ruled by a governor, who with soldiery kept the Indians in subjection. The name given to the new town was El Pueblo de San José de Guadaloupe. In 1814 there were only twenty dwellings; and the only foreigner (that is, not a Spaniard or Indian) was John Gilroy, a Scotchman. In 1831 the population was 524; and, as late as 1834, there were in all the town only twenty foreigners. In 1844 arrived the first party of Americans from Missouri; and in 1846 another party of 120, commanded by Fremont, reached this valley, and came to the city. On July 11, 1846, Capt. Thomas Fallon took possession of the town in the name of the United States. It was the first capital of the State; and here the legislatures of 1849 and ’50, and 1851 and ’52, were held. After this the capital was removed to Sacramento. San José has now a population of about 14,000, and is increasing faster, proportionally, than any of the cities. Although the loss of the capital was a severe blow to the little town, still it grew slowly, as the centre of a rich farming section. People seeking a pretty town to reside in, after they had ‘dug from the earth a fortune,’ came here; and soon the community was one where existed great individual wealth—a position which it still retains.

The streets are broad, laid out at right angles, and mostly well graded. The city is well supplied with water; as in most parts, by sinking an artesian well, the water rises several feet above the surface—a pleasing substitute for windmills. The depth of these wells does not average more than 30 feet. This gives to San José peculiar advantages, as water in California is the great *desideratum* during a large

part of the year. The building were very commonplace till within a year or so, during which time several fine blocks have been erected, doing credit to the enterprise of the citizens. The Court House is the finest public building (save the Capitol at Sacramento) which we have seen in the State. The State Normal School building, built of wood, in the Corinthian style, is the finest, as well as the largest, wooden building in the State. It is to be ready for occupancy in about a year; and when the park around it is laid out, and planted, the whole will have a very showy effect. The Academy of Notre Dame is located here, and, as a school for young ladies, is of much celebrity. The Auzerais House is a good hotel, in a pleasant position, where a Yankee, by name Churchill, will see that you are well cared for, at prices which are moderate.

In the old part of the town, near the Halls of Justice, we found the old plaza, where the bull-fights used to take place; and scattered through the city are many old Spanish families, the members of which look, even now, as if they would relish 'just one more bull-fight.' There still remain many of the old adobe houses; but, for the most part, the residences of the people are not only comfortable, but in many instances elegant. The grounds surrounding many of the residences are very finely laid out, and the planting done with good taste and judgment: of all which we saw, those of Gen. Negley pleased us most; and when we were told that, nine years before, they were within a great field, and that most of the trees had been only three years planted, we were perfectly amazed. But we must bear in mind that here the seasons are so much longer, that the trees and plants can make much larger growth, which, when compared with the season in our North Atlantic cities, gives probably three times the growth in a year; and with many plants the proportion would be still greater.

The Alameda is the road connecting the cities of San José and Santa Clara. It is about three miles long and was laid out by the monks, who planted upon each side of the way trees (the willow, oak, and sycamore), which have now become very great, so that, for a great part of the way, their branches interlace above your head, offering a grateful shade, Tradition tells us that the monks used to walk over from Santa Clara and gather the Indians at San José around a cross which they had erected there, and tell them of God and the Bible: it is also said that the work of collecting and planting the trees was done by the converted Indians. By the kindness of Major George R. Vernon, formerly an officer in the army, who resigned to give his whole attention to his extensive farm, we were driven about the city, and over the Alameda, rendered historic by the old monks of the mission, who wended their way on foot over this very ground to carry 'good news' to the Indians. I care not what was their creed; to them belong honour and thanks for the self-sacrificing spirit which led them to the holy work of converting the savages, To this day the good they wrought remains, and through them this great section was opened for the advance of civilisation.

Our drive over this famous road prepared us to retrace our steps next day and visit the town and mission of Santa Clara. The town is old and dilapidated, without any appearance of business or even thrift. There are still remaining many old adobe houses, built by the Spaniards and Mexicans. In one which we visited we found some dirty, ignorant Mexicans, unable to speak English, and with only the rudest implements for housekeeping; in a shed adjoining the old house, enveloped in rags and filth, lay an old woman; and in another part of the house, in a room without windows or fireplace, was a woman with several children. These people are descendants from the proud Castilian and the native Indian— a deplorable race, and more hated by the few *pure-blood* Spaniards who still survive the misfortunes which have overtaken their rule in America than by the Americans themselves. Many of the men *live in the saddle,* and get their food and blankets from the occasional sale of a pony, or some odd property which they have secured in way of trade. They disdain all work and love a nomadic life. Even the young, boys show great expertness in the use of the lassoo.

Being tired of looking about the town, we called at the entrance-door of Santa Clara College, and were ushered into a neatly-furnished parlour. We had not waited long, when a priest called, whom we afterwards found to be the learned Rev. Prof A. Cichi, through whose untiring efforts this institution has now one of the most extensive collections of philosophical apparatus in the whole country. He said he was ready to show us around the college; and we visited the several recitation-rooms, the laboratory, the museums, in all of which every 'appliance of learning' was to be found. We were taken into the dormitories and the dining-halls, where the greatest neatness was apparent; into the rooms of the debating society, and the great hall fitted up with the accessories of the theatre, as well as into the various rooms for the teaching of special studies, as photography, mining, &c.; through the beautiful gardens, where now are growing the fig and olive trees planted by the early missionaries and under whose shade the 'brothers' were now walking as they recited to themselves the words of their prayers, and willed their thoughts from things temporal to those of 'the life to come.' From the garden we went into the old adobe church, built very narrow, but very long, as the early builders knew only how to lay beams across from wall to wall, instead of sustaining the roof upon a truss. The interior of the church is, of course, very rude; and the old altar is still there, around which the 'brothers' and their converts have often knelt. The old paintings brought from Spain still adorn the walls; and some of the painting and colouring upon the ceiling is just as it was originally. The sides of the buildings have been incased in wood to preserve them; and above the old tile-roof another has been placed to keep out the rain. This church is much better preserved than the old Mission Dolores in San Francisco, which we visited; for, while there much that is modern has been introduced, here all is *old,* nothing *new.* The same *three* bells—a Spanish custom—are still rung at morning and evening.

The mission is very old, older by far than the town but the college was not founded till 1855, by Rev. John Noblii. Since its birth it has been very prosperous, being patronised by all denominations, as the studies are so arranged that a Protestant is in no way debarred from the privileges of the school. The average number of scholars is about 200.

The New Almaden Mine.—Seven miles from San José this famous quicksilver mine is found. A stage runs to the mines, but it is far better to go by private carriage. The road is pleasant, and is lined with the most magnificent sycamore-trees which can be imagined, their great branches stretching 30 feet from the trunk, and resting themselves upon the ground, with gnarled forms which tell of antiquity. Every one of them is a study for an artist. We soon enter a defile in the Santa Cruz Mountains; and, as it narrows, we come within the property of the company. Passing the church, the residence of the superintendent and the neat cottages of the miners, we drew up in front of the hotel—a long one and a half story stone building, into the rooms of which you pass directly from the side-walk. In front of us are the offices and smelting furnaces of the company, together with shops and various buildings required in the production of quicksilver from the cinnabar ore. We are now in the part of the property called the 'Hacienda.'

The superintendent of the works offering us every facility for seeing the property, we proceeded first to one of the furnaces which was in operation. It is built of brick strapped with iron, and has five openings along its sides. From a platform above it is charged; that

is, the reddish ore called cinnabar is packed into the fires chamber: this is connected with the other chambers by long pipes, which gradually recede from the influence of the heat, and at last find an opening far up the sides of the hills in a chimney, out of which pour the poisonous vapours of arsenic.

The ore is heated above 480° Fahrenheit, when the quicksilver in it is *sublimed,* and passes along into the chambers and flues, and, as it is separated from the other substances, is gradually cooled, until it is precipitated, and runs from the chambers in little globules into a trough extending around the sides of the furnace, and which, by its inclination, carries the quicksilver into a large receptacle, which looks like an old-fashioned *set iron boiler,* and from this it is dipped, weighed, and poured into the flasks, which are made of cast iron, hold 56 pounds, and are closed by a thread-cut stopper. Having seen this part of the work, we next drove, by one of the finest mountain-roads that could be made, up to the mines and villages on the hill. The grade is so adjusted that heavy loads are drawn up the mountain-sides and the ore taken down to the shutes, through which it slides to the level of the furnaces. As we rode up we found two villages of mineers—one of Mexicans and one of Welsh and Cornish miners. The entrance to the mine is a great dark hole, through which you pass, and grope around for several thousand feet within the hill. A car brings up the ore; and under a long shed it is cleaned and assorted, and prepared for the furnaces. Down about 700 feet below the old mine another opening has been made; and very rich ore is now taken out. There is, of course, much ore which is very rich, but which is too fine to pack; this is mixed with clay, made into bricks, and in this shape they furnish a good lining for the furnace, and the quicksilver is saved.

The houses perched about on the steep mountain-sides looked as if they would tumble down from their elevated positions. Children were playing about the schoolhouse which the company had established, and where a good school is maintained. A well-stocked store supplies the miners; and those whom we saw at work, and going to take their turn in the mines, were a hardy set of fellows. The whole property told of *present* good management; and I could see no reason why some of the dreams of the early owners had not been realised; but large properties are the prey of those who work alone for their own interests, unmindful of the stockholders, who, as a rule in such companies, are only consulted or troubled when a new assessment is to be called for.

The property owned by the company is large, its landed estate is extensive, its machinery costly; and it would seem that they possessed every appliance for making the ore yield large returns in cash to be divided among the holders of the stock.

The Yo-Semite Valley

Yo-Semite.—'How shall we go?' is the question asked by the tourist as soon as he begins to talk of visiting this renowned Valley. There are agents for the different routes, who, of course, decry all save their own. For two weeks I canvassed the merits of the various routes, talking with those who were almost daily returning from the visit. The time of making the trip is very important; for, if you desire to see the waterfalls in their glory, you must go in flood-time—that is, just at the breaking-up of the snows, when everything seems turned to water; for, be it remembered, the waterfalls of the Yo-Semite are made from streams swollen by the melting snows, and later in the season many of them dry up entirely, while all become only a mere trickling compared with their volume at flood-time. If the waterfalls are a secondary consideration, then it is much more easy and pleasant to make the journey across the mountains in July or August after the roads have become free from snows.

The Yo-Semite is situated a little south of east from San Francisco, and, in a direct course, is distant 155 miles; but to reach the Valley we must travel at least 250 miles.

The three routes are denominated 'Merced and Mariposa,' 'Coulterville,' and 'Chinese Camp and Big-oak Flat.' By the first, we have the great Mariposa Grove of Big Trees within five miles of the line; by the second, the shortest saddle-ride; and, by the latter, we visit the Calaveras Grove.

Of one fact there can be no doubt—that is, that you should go into the valley on one side and out of it upon the other; for thus you have new and inspiring scenery and fine views while accomplishing a journey which, of necessity, is very hard and tiresome. To see the 'big trees' in the Mariposa Grove, we chose to enter the valley by way of Clark's, or the first route, and return by the way of Coulterville; although, if time had permitted, we should have taken the other route, and visited the Calaveras Grove upon our way.

On the afternoon of June 6 we left San Francisco for our journey, taking along with us only such luggage as seemed necessary, and arranging our dress 'to rough it.' The train leaves the city at 4 p.m., and reaches Lathrop, on the line of Sacramento, at about 8.30, where we change cars, and start up the San Joaquin Valley to Merced City, which lies some fifty miles to the south. After a slow and tedious ride we reached the unfinished city and the unfinished hotel, named 'El Capitan.' The genial landlord—Bloss by name— gave us the very best accommodation that he could under the circumstances, even sleeping cars being drawn up on the side-track to accommodate the guests. My unfurnished room, and the excessively hot, oppressive atmosphere, were not very inviting surroundings for the first night on the way; but I resolved not to complain of any *reasonable* hardship, leaving that to the young city belles, of whom you always meet more than a complement for comfort upon such expeditions.

The morning found us early looking about the settlement. Four months ago there was not a house in sight from the spot where the hotel now stands. This great house was erected by the Central Pacific Railroad Company to accommodate the tourists to the Yo-Semite. It is four stories high, 115 by 40 feet, with two wings and broad piazzas, and to be furnished with all modern improvements. Its cost will be over $75,000, and the furniture $40,000 more. The railroad offices are all in the building. Merced is made up of three large livery-stables, a dozen saloons, and any number of unoccupied city lots. It is the centre of many mining villages—as Mariposa, Bear Valley, Hopeton, and many others—to nearly all of which daily lines of stages start, which, together with the many carriages departing for and arriving from the Yo-Semite, make lively times at morning and evening about the hotel.1

1The hotel has since been completed, and is spoken of by tourists with much praise.

There are in the place, all told, about 300 people; and one good citizen who had taken up his residence here persisted in telling us of this 'pup of city,' and assured us that, when it got grown, it would astonish us with its 'barking and growling.'

I strongly advise tourists to arrange for a private conveyance from here, for the stages are often overcrowded, go by longer roads to leave the mail, and are not so comfortable in any respect.

At the appointed time, 7 o'clock, we are off for the foot-hills, which in the distance bound the great valley of the San Joaquin on the east. For about twenty miles we pass vast fields of wheat and barley, covering the earth on all sides as far as the eye reaches, only relieved here and there by the cabin of the rancher, or a little growth of timber along the banks of some creek. The grain, which is now ripened, or nearly so, looks fine; and the fields which have been 'headed' are yielding immense crops—by far greater than any previous year in this valley.

Beyond these grain-fields we strike into the gravelly country which lies at the entrance to the foot-hills—vast rolling fields, which Nature has made the home of the sheep and goat; and now these great pastures are well stocked with these wool-producing animals. This region gives us a good idea of the foot-hills of the Sierra Nevadas. During our ride our driver has grown familiar, aided, no doubt, by the contents of a small bottle which he occasionally takes from his pocket, and, drawing the cork with his teeth, manages to keep his team in motion and at the same time empty some of the liquid into his mouth. He tells his history—his life upon the 'box,' the ups and downs which have checkered his career, and describes the people who live at the ranches we are passing. Some of these stories are 'big;' but we are in the land of big things, no wonder a stage-driver's yarns (never lacking in wonders) should here partake of the general character of immense size. He with grave face informs us that the region is exceedingly healthy. 'Die!' he says, 'no one out here would ever die, if it wasn't for whisky and doctors.' He, not liking the last mode, had evidently adopted the first-mentioned course to end his days within the time appointed for mortals.

As we come in among the hills our attention is attracted by the great ledges of sandstone which project from the surface, and often rise in the form of spires or domes, or in fantastic shapes, giving to the landscape peculiar beauty. This change is very agreeable; for the fields of ripening grain become very tiresome to the eye, as do also the great sheep-pastures, relieved only by the moving herds. There is here a rock-formation which is worthy of note. The strata of slate stand at almost right angles to the underlying sandstone, and crop out of the ground in shape like grave-stones, covering the sides of the hills with a seeming 'city of the dead.' The rock-croppings are called 'buttes;' that is, according to colour of the rock—red buttes, white buttes, &c. A few trees are seen and acres of the chaparral. The most common tree is the *Pinus sabiniana*.

Our first stop was at Indian Gulch, a mining-camp, once quite a settlement; but as gold has become scarce, it has dwindled down to a little dilapidated village of a few Italians and a few negroes.

A mile or so beyond this village we enter the great Mariposa Estate, owned by a company bearing that name. The stock of this company, by its fluctuations, has ruined more men, and has especially been the cause of the fall of more bank-officers, than any other in the long list of those 'doubtful commodities' which they sell to the bulls and the bears who frequent Wall and Threadneedle streets.

We take our course over the road through the estate, and are very must interested in observing Chinamen mining in the gulches. They erect a little sluiceway into which they shovel the dirt, and wash away the coarser portion: that which is left is then put into a 'pan,' as they call it, which is filled with water; and, by a peculiar twisting of it, the contents are made to revolve, till gradually the specific gravity of the gold causes it to settle to the bottom, and the refuse dirt to go over the side of the pan. Here we also saw the rocker, one of the utensils used in mining which has never been improved upon, and is today just as it was in the early days of California placer-mining. It takes the place of a sluice, and is more economical in the use of water. The chief mining on the Mariposa Estate is, however, quartz. The stamp-mills are the largest and most costly of any in the State.

Our driver says presently, 'Do you see those grave-stones?' 'Yes.' 'W-a-a-l, now I tell you, you can always know you are coming to a town when you see them things; they always stand up first, to let you know they have got a grave-yard. I have seen the same thing East; and I tell you I have known 'um out here, when they lay out a new town, to kill a man to start a graveyard; for you see, here nobody dies of his own accord.' Soon after which odd announcement of our approach to it, we enter the old town of Mariposa—once a thriving city, now a crumbling, ruined place. All the people of standing have left here; and only a few shop and saloon keepers, and a large number of miners, and I was told some desperadoes, remain. It is a sad story which the city tells of hopes blasted, of fortunes lost, and of glory for ever gone.

Along the main street I saw brick and stone houses, with iron shutters and richly ornamented fronts, all now wholly deserted. On a hill at one end of the town is the jail, built of hewn stone, which must have cost a vast sum in the early days when it was erected, but it is evidently too large and too costly for the present town. There are two churches, but when I inquired of my friend about the creed to which they held, he carefully explained to me that 'they don't go now.' Mariposa is only one of many towns in California which depended wholly upon gold-mining, and when the placers had been worked out, their prosperity vanished and decay came upon them.

A stay of an hour, and we were off again, in a mountain wagon drawn by two horses, for White and Hatch's, where we are to stay over night. The ride in the cool evening air of the mountains was refreshing after the dust and heat of the plains. Three hours brought us to our destination. As soon as we stepped upon the piazza, we were assured of a good supper and a clean bed; for the marks of a Yankee housekeeper were 'hung upon the outer walls.' We were not long in finding out that these people came here from Maine some twelve years ago, erected a saw-mill, and went into the lumber business; they began by entertaining a few stray travellers at long intervals, but the tourists to the mountains increasing, they were forced to enlarge their little house; and by successive additions, they have now quite a 'tavern,' where you are so kindly received by Mrs. Hatch, who spreads for you such a table of good things that Yankees are satisfied; and when they are pleased, who in the world is left to find fault?

A refreshing sleep prepared us for an early start; and by a delightful drive among the hills, under the shade of huge pines, we are taken to Clark's. The road leaves White's and Hatch's at an elevation of 3,000 feet, ascends Chowchilla Creek, and crosses the divide at an elevation of 5,800 feet, between the waters of this creek and the Merced. When we reach Clark's, we are at an elevation of 4,100 feet, and on the banks of the South Merced River, which, with swift current, flows near the house. The river is now at flood between 75 to 80 feet wide, clear as crystal, and is tossed in foam by its rocky bed as it speeds along to join the north fork in the Yo-Semite Valley. Mr. Galen Clark, from whom this ranch is named, is one of the pioneers of the section, who came into the country as early as 1853, and in 1855 settled on this farm. His first tavern was a tent, the ground his table, and tin plates served for China. At night the camp-fire was lighted, and around it his guests wrapped themselves in blankets, and slept. In a year or two he built a log-cabin, had three-legged stools

and a pine table, with a tent for a dormitory, which in those days were luxuries indeed. The increase of travellers forced him to erect larger and more substantial buildings; now there are good accommodations, which the prolonged visits of tourists attest. Mr. Clark, in his early days, was a great hunter, and is still a dead-shot with his rifle. He is plain in his habits, a lover of nature, and keeps up the custom of nightly lighting the camp-fire, and gathering his friends about it to talk over 'the days that are gone.'

During the afternoon of the day of our arrival, there came galloping into the yard on a mustang an old Indian, with a white silk handkerchief about his head, pantaloons of great size and white in color, a flannel blouse, and a striped shirt. Dismounting, he walked with the gait of age directly to the piazza where we were sitting, and greeted Mr. Clark with the utmost cordiality. Mr. Clark addressed him as Capt. John, and spoke to him with great kindness. After a little conversation in broken English and Spanish, Mr. Clark told us that he was a chief of the once powerful tribe of Indians called 'Fresno,' was on his way for a visit across the mountains, and over to Mono Lake. After much difficulty, Capt. John was made to understand that we lived about three thousand miles away, and 'on the other ocean;' and, with a face full of animation, the old man said, 'Whew! too muchy far—old Injun.'

No, indeed! neither he nor any of his tribe will ever see that 'other ocean' of which the soothsayers had told them around the council fires. They are fast passing away, and soon they will be numbered with their brothers of the Atlantic, while the tribes in the great middle ground will survive but a few years longer the calamities which have overtaken the red-men, dwellers by either Ocean.

A singular interest attaches to him, as he was one of the Indians who guided the first white men into the valley. The Indians in 1850 being very troublesome, and having a stronghold far up the mountains, a company, under command of Capt. Boling, started in pursuit of them, and under the guidance of friendly Indians, with their chief, Te-na-ya, were taken into the wonderful valley; and for the first time white men looked upon some of the grandest scenery in the world. So long as I staid at Clark's, Capt. John and I were good friends; and he would often exclaim 'I sarva you,' meaning that he could understand me. At night, when the Indians of the little settlement near the house returned with their trout, and sold them to Mr. Clark, reserving only enough for supper, we visited their camp, and observed their mode of cooking them. A hole is dug in the ground, and a fire made therein; and, while the coals are glowing, they are raked away, the fish put in and covered with them, and thus cooked. From the meal made from dried acorns they make a kind of paste, which they call bread, and which, from a water-tight basket, they eat with their fingers. Capt. John so urged us to eat with them, that we tried the fish, and found them delicious; but the paste was beyond us. Our table was the earth; our knives and forks were our fingers; and we sat in a reclining position on our table, the whole lighted up by the fire, which was blazing near by. As the Indians ate, they grunted at each other—their language being a succession of grunts.

The Mariposa Grove of Big Trees.—The grove is reached over a trail of some four miles from Clark's; but the 'rounds,' in visiting both the upper and lower groups of trees, and in the return, make a horseback ride of a little more than twelve miles. Our horses and mules, bridled and saddled, were led up by eight o'clock; and the selecting and assigning of animals immediately began. The ladies were first mounted for the trip. For me, I preferred a mule, as being surer footed, and, looking among them, I selected one, not the best-looking, but well built. When I jumped upon his back, he turned a queer countenance towards me, and for some moments seemed to *consider*, then whirled round several times, and then looked at me again. Notwithstanding his suspicious conduct at first, he soon proved to be 'as good a mule as mule could be.' For my whole stay in the mountains I kept him, called him Aesculapius, treated him kindly, rested and fed him; and, were I to go again into that region, I should look for *that* mule, which I trust will ever be well used.

I noticed one thing — that those who bragged most of their horsemanship made the poorest show when they were upon the animals. One *poor child*, who talked loudly of his experience, and who tried to be very *nice*, came to grief, sprawled in the dirt; for his mule persisted in not being led in a *city way*. No one pitied him, for he had put away all pity by his course. The ladies also showed the same fact — that much bragging, or even Eastern horse*woman*ship, don't always succeed in conquering a mustang pony or a mountain mule.

But, all ready! and we are off over the trail for those wonders in the vegetable world. If we had not read of those *bigger* trees, we should have been satisfied with those about us—the hotel standing in a grove of trees from 6 to 12 feet in circumference, and from 125 to 175 feet high, mostly pines. The trail is a very pleasant one, being up the side of a hill, under the shade of those magnificent great pines and spruces which cover the Sierras far up their sides. About an hour and a half was occupied in reaching the 'Upper Grove,' as it is called. These groups of big trees are at an elevation of about 5,500 feet above sea level—in a little valley, a sort of depression in the side of a ridge.

Congress has made a reservation about two miles square, which includes the two distinct groves of these trees, and has declared this a national park. The Upper Grove contains just 365 trees of this species, over one foot in diameter; while in the Lower Grove, which is situated to the south-west of the first mentioned, the trees are more scattered, and less in number.

For a long time, a learned discussion was carried on both in France and England as to the name to be given this tree; but now, by consent of all, it is named *Sequoia gigantea.* It is undoubtedly a twin-brother of the redwood (*Sequoia sempervirens*), of which the major part of the trees in the great Sierra forests is composed.

The trees have signs placed upon them, giving each a name, as Grant, Lincoln, Lesseps, the Twins, the Sisters, Pluto's Chimney, &c., but which have not, and should not, become popular. The highest in this grove is 272 feet; the highest in the Calveras Grove is 325 feet; while the largest known tree in circumference in the world is here in the Lower Grove; and there are in all, in the two groups, 125 trees, each over 40 feet around. The trees which are found intermingled with the big trees are the pitch and sugar pines, the Douglas spruce and white fir, together with the bastard cedar, which nearly resembles the Sequoia.

The great tree in the southern portion of the grove is the one known as the 'Grisly Giant,' which is 93 feet 7 inches in circumference at the ground, and 11 feet above is 64 feet 3 inches. It is at the base over 31 feet in diameter. Its branches are as large as our largest elms, many being fully 6 feet in diameter. Desiring to take home something which would show the size of this tree, we stretched a cord around it as nearly as we could 5 feet from the ground, making no allowance for the decrease in size by the burning on one side; and this cord (which I now have, as well as the measurements of two others) measures just 92 feet 8 inches in length. The age of this tree is variously estimated; but it is safe to say (from the data of those which have fallen) that it is fifteen hundred years old. Through a fallen trunk, which was hollowed by decay and fire, we rode on mule-back; and into another tree, still growing, but into whose side the fire

had worked, I rode and turned my mule round. There was one where the fire had made a rent directly through the tree, large enough for us to ride through, and it was still growing, its top showing no signs of decay. These are great vegetable wonders; and probably no trees ever found have created so much comment as these, all the scientific journals of the world having given them full descriptions and reviews. We lunched amid these giants of the mountain forests, and let our thoughts contemplate the wonders of Nature, thankful that we had been privileged to behold them.

We returned somewhat tired with our first experience in mule-back riding over a mountain-trail; but, nevertheless, the lighting of the camp-fire found us with the ranchers, listening to their stories. Passing the door of the parlour later in the evening, a city belle said to me, 'I should not think you would like to stay with those rough men.' Surprised at first at the extreme ignorance shown by this lady—only a specimen of the great majority who make such trips—I could only tell her that Mr. Clark was a gentleman; that his son was a recent graduate of Yale College; that Mr. Moore (now the business partner with Mr. Clark) was a man of great information; that I had derived much knowledge from the conversation; and, by mingling with them, I had learned their mode of life. If a person can travel through our Great West, and associate as he ought with the people, and have any respect for *fashionable* pretensions afterwards, I deem him beyond hope; for here the Governor of the State dresses in home-spun, and the sturdy ranchers and men of business forget the colour of their shirt, if it be only clean.

The Wonders of the Yo-Semite Valley.—We made an early start from Clark's for a long saddle-ride into the Valley. There were many to go, and every horse and mule was brought into requisition. By a bridge we cross the South Fork of the Merced River; and by a trail, ascending very rapidly, we reach the plateau, which lies between the main river and the branch mentioned. A journey of six miles brings us to a creek named Alder, along which the trail leads to its source in a great mountain-meadow. We have now reached an altitude of 7,100 feet above the level of the sea, or nearly 1,000 feet higher than Mount Washington, 1 1/2 mile above tide-water. To know just what a mountain-trail is, you must follow one; but some idea can be had by imagining the roughest road you ever went over, and by far more crooked than any cow-path in the old pastures, and then narrow it down to a way just wide enough for one animal to pass, and then set this path at an inclination little less than perpendicular, then across it throw occasionally a snow-drift ten feet deep, and you can know something of the trail which we are going over to-day (June 10). Up here in the mountains it is early spring; the snows are melting; the streams are swollen; and, in the spots where the snows are gone, the grass is just springing up. There must have been an immense quantity of snow here; for the drifts, packed hard enough for us to pass over the crust, are from 6 to 10 feet in depth; and the ground in the shadows of rocks and trees is still 'clothed in the white.' A trail is peculiar; it follows the path first struck out, even though further, and takes great pains to go a long way around a fallen tree or a rock, when the labour of a few hours would open a new path; but still there is something fascinating in following the windings of our narrow road.

The character of the trees has changed; and now we have those which delight in these elevated places, as *Pinus contorta, Picea grandis, Picea amabilis:* of these the forests of the high Sierras are formed. The early flowers, too, are blossoming, and opening their bright eyes to the sun; but it is too early in the season for the floral beauties which later cover the ground, and make you forget the frosts and the snows.

By one o'clock we reached a place called 'Mountain View Meadow'—a great basin, as it were, in the mountains, whose lofty peaks rise on every side, covered with snow. We are now in the high Sierras, and are brought face to face with the grandest mountain-range on the continent. We lunch at the Mountain View House, a pretentious name for a log-cabin and one small frame house, with partitions made of cotton cloth. The property is owned by one Peragoy, who came from Baltimore to the Mariposa country to dig gold. Stock-raising takes him into this meadow during each summer; and Mrs. Peragoy takes charge of lunching travellers to and from the valley, and she does it well. For her the mountains have no charm, the great meadow in which she lives no beauty; but a well-set and well-loaded table, with well-paying guests around it, who call loudly for extras, is to her the grandest sight upon which her eyes can rest.

From Peragoy's the trails diverge; one entering the valley by Inspiration Point, and the other by Glacier Point. The country between is rolling; now rising in sharp ridges, and now settling back into a pretty meadow, where the grass is springing up, offering abundant food for cattle during the few weeks that they are free from snows. In crossing these meadows, now filled with surface water, often my mule would plunge to his knees; and in his efforts to get out, the mud would fly at a great rate; or, in crossing a creek which seemed shallow, down he would sink, and my feet would find water, to my discomfort. The highest point which we reach upon the trail is 7,400 feet above the sea; and at this altitude the air is so rarified it is impossible to walk or run at any speed; and until one has become accustomed to it, care should be taken not to exert one's self, as evil results often follow.

We will pause here to add a general description of the range of mountains up the sides of which for several days we have been climbing. It is known as 'Sierra Nevada,' and is limited to California, extending from Mount Shasta in the north to Tejon pass in the south—a length, as estimated, of 550 miles. Beyond Mount Shasta this range, with greatly diminished elevations, stretches away through Oregon and Washington Territory under the name of the 'Cascade Range,' while from Tejon pass they become assimilated with the Coast Range geographically., but still, to the geologist, the two ranges retain their respective characteristics. Eighty miles is given as the average width of this mountain range, the western slope of which, by a gradual descent, finds its level on the shores of the Pacific; while the eastern is more abrupt, rising from the great basin up to the lofty peaks, within a space of a few miles. Deep gorges have been ploughed through this range, which are denominated passes.

Inspiration Point.—We now catch glimpses of the huge walls and towering peaks which rise upon the farther side of the Valley; and a mile or so takes us to that famed spot, Inspiration Point. Here we get our first view of a portion of the Valley. Dismounting, we walk out upon the jutting rocks; and then opens to our view the enchanting, awe-inspiring scene. The sun is just sinking behind the granite hills which rise in the west; in front of us, seemingly but a little way off, but really more than a mile, the Bridal Veil throws its white, flowing robes over the face of Po-ho-no, and, falling 630 feet from the top of the rock to the river, breaks into a great cloud of spray. We are far above this fall. On our left rises the huge form of El Capitan, almost perpendicularly, 3,300 feet above the level of the Valley. This rock the Indians called Tu-tock-a-mu-la, which signifies the cry of the crane as it sweeps down into the Valley from the top of

this rock. In the distance, where the Valley seems to close up, we see the North and South Dome, the latter of which rises nearly 5,000 feet above the Valley; while away up among the very clouds we see the great peaks called Lyell and King, and Cloud's Rest, and many more, but which, from this point, appear like one great mountain, up the sides of which you can climb into and above the clouds, up to those shining orbs, the stars. Below us, a small part of the Valley level appears, dotted over with great trees, and through which a river flows, its waters sparkling in the sun.

To attempt to describe the grandeur of this scene would be folly; to tell of the feelings of awe, of humility, of reverence, which are here aroused, is all that can be done. Inspiration Point gives the most enchanting view of the Yo-Semite. While from other points we have a more extended view, from this the landscape is clothed in more beauty. Enraptured by the scene, we all lingered long after our guides told us that darkness would come on before we reached the hotel.

The Valley is about six miles long by from half a mile to a mile and a half in width; its area is nearly level, and its sides rise almost perpendicularly from the surface, the rock being solid granite of the finest grain. It is sunken almost a mile below the general level of the mountain region just around it; and the general direction of this depression is north-east by east, until near its upper end, where it makes a sharp turn, and divides into three cañons, up through which wild gorges we can climb to the higher Sierras beyond.

Prof. Whitney, State geologist of California, calls the Valley 'a gigantic trough,' and sums up its characteristics as follows: 'The principal features of the Yo-Semite, and those by which it is distinguished from all other known valleys, are: first, the near approach to verticality of its walls; second, their great height, not only absolutely, but as compared with the width of the Valley itself; and, finally, the very small amount of *talus* or *débris* at the base of these gigantic cliffs. These are the great characteristics of the Yo-Semite, throughout its whole length; but besides these, there are many other striking peculiarities and features, both of sublimity and beauty, which can hardly be surpassed, if equalled, by those of any mountain valleys in the world. Either the domes or the waterfalls of the Yo-Semite, or any single one of them even, would be sufficient in any European country to attract travellers from far and wide in all directions. Waterfalls in the vicinity of the Yo-Semite, surpassing in beauty many of those best known and most visited in Europe, are actually left entirely unnoticed by travellers, because there are so many other objects of interest to be visited that it is impossible to find time for them all.'1

1 Yo-Semite Guide Book, published by order of the Legislature of California; Whitney, State Geologist, pp. 53, 54.

We will start down the trail; and we must make a steep climb of 2,970 feet before reaching the bottom of the Valley. At each step of the way we have new and inspiring views presented to us. A little way down, we have the spot where Bierstadt made his sketches for his great picture; and, a little off the trail, the spot where Hill found the view which to him seemed grandest, and which he has transferred to canvas not only in outline, but in spirit. As we approach nearer El Capitan, we are impressed with its massiveness; and, as it stands out into the Valley, it seems to present a sharp edge of granite, but is really very wide. At points the trail is very steep, and of course some care must be taken to avoid accident; for although guides say there is no danger, still a misstep of your animal would surely cause serious trouble.

On our right is the Bridal Veil Falls, which we now begin to look up to, instead of down upon it, as we did at Inspiration Point. On our left we have a fall called Virgin's Tear, a little more than 1,000 feet high; but this fall dries up as the season advances. We pass in our journey Cathedral Rock, 2,660 feet high; the Spires, which are distinct granite columns, rising, as their names indicate, some 500 feet, and, as the sun brings out their lines and forms, they are of rare beauty. On the other side are those rocks, rising one over and above the other, called by the Indians *Pom-pom-pa-sus*, or 'Leaping Frog Rocks,' from their resemblance to three frogs, but which are named in the survey 'The Three Brothers.' The highest of these rises 3,830 feet. As we approached the Bridal Veil, its beauty increased; and as the wind swayed its mass of foaming spray, losing itself among the tall trees which grow at its base, it seemed like the flowing of a long white veil. There seemed to be a dozen streams running from this fall into the Merced. Leaving the rest of the party, some of us rode up among the trees, and got quite near the base of the fall, at least where the spray came over us like a shower of rain. It was a weird spot just as darkness came on; and the sound of the wind striking the column of water made it all the more awful. The Indians as they came here gave to the fall the name of 'The Spirit of the Night Wind,' in their language Po-ho-no.

A mile brought us to the first hotel, Leidig's; and a little further on we came to Black's, where we had determined to stay. The roar of the great Yo-Semite Fall was heard; and in the moonlight we could see the spray. To the back of the hotel the great tower-like rock rises, which is called 'The Sentinel Rock;' and the house where we are has the name 'New Sentinel Hotel.' Too tired to eat, and with minds crowded full of the incidents of the day, we soon retired, to be lulled to sleep by the roar of the 'Great Grisly Bear,' as the Indians called the great waterfall just on the opposite side of the valley.

CAP OF LIBERTY—YO-SEMITE VALLEY

Before the sun rose, we were out watching for its first beams in the Valley, and were amply repaid for our early start. In the Valley it was quite dark; but the spires and pinnacles of the surrounding mountains were gilded with the morning rays; and as the sun rose higher, his beams glided over the rocks, and gradually slid down their sides, bringing out in bold relief their forms marked and scarred by time, until at last his full rays burst in glory upon the whole Valley, causing rocks and trees and waterfalls to shine and sparkle in his light. Nothing could be more beautiful; and those who persisted in remaining in bed till the breakfast-bell rang lost one of the most beautiful views of Nature which we enjoyed in the Valley.

In the early morning, or just at sunset, we have the best view of the Yo-Semite Fall. This is probably the greatest attraction in all the Valley, and in height (2,634 feet) surpasses all other known waterfalls in the world with like volume of water. It is formed by a creek of the same name, which heads ten miles away, in Mount Hoffman, and is fed by melting snows. It has its bed in solid granite, and, where it pours over the rock, is from 20 to 40 feet in width, and from two to three feet in depth, with a current of a mile an hour. Where it pours over, the granite is polished so smooth, that it is dangerous to step upon it. The fall is divided into three parts; the first a vertical descent of 1,500 feet, where it strikes upon a shelf, which makes back nearly 2,000 feet from the front of the lower cliff; and, by a series of cascades, it finds its way down (the descent being, in a perpendicular, 626 feet) to the edge of the cliff, where it makes a final plunge

upon a pile of *débris*, and by rivulets is carried into the Merced. The volume of water is too great to be broken by the fall; and the wind has such an effect upon it, that it sways the foaming mass, so that it widens out, before it reaches the shelf, to some 300 feet in breadth, at flood-time. As it tumbles from the cliff, it falls in rocket-like masses, which whirl around in their course. By this motion air is collected, and as the great mass of water and air falls upon the flattened shelf of granite, a sound like the report of a cannon is heard through the Valley. The view of this fall varies very much in different positions; in some it appears like one continuous fall without break; in another the cascades appear between the two perpendicular falls; and from any point, whether near, or across the valley (here more than a mile in width), the sight is amazing, and far more enchanting than Niagara.

We next set out for Mirror Lake. The trail brings us soon to a centre of business—Hutchings's Hotel, Smith's Cosmopolitan Saloon, a store, the photographic gallery of Hazeltine, the telegraph office, &c. These structures are somewhat rude. All elaboration is omitted, as the materials of which they are built, and with which they are furnished, were brought over the mountains from Coulterville upon pack-mules. Near Hutchings's we cross the Merced upon a bridge which ought to span the river; but the water is so high, that, when we get at the end of the bridge, we are only across the main channel, and our animals go leg-deep in the water over a great meadow. Soon the Valley narrows between lofty mountains. On the left we have the Royal Arches, Washington Column, and that great dome-shaped mass of granite rock called the North Dome. At this point the Valley divides into three cañons—Tenaya, through which a branch of the Merced of that name flows; the Nevada, or middle one, through which the main Merced flows; and the right hand, or that to the south-west, the Illilouette, through which the South Fork flows.

A little way up the Tenaya we come to a great mass of broken granite rock, evidently the *moraine* of a glacier; and, climbing over this, we find that it has dammed up some of the waters of the river; and this they call 'Mirror Lake.' At the proper time of the day, the reflexions in the water are undoubtedly fine; but to call it a lake is a misnomer, and the great number of mosquitoes make it a very uncomfortable place. Mirror Lake is a humbug, and does not pay for the time and trouble of getting to it. To our right we have South or Half Dome, which is the loftiest and most imposing rock which belongs to the Yo-Semite. It rises 4,737 feet above the river. It is perfectly inaccessible to man. On the side towards Tenaya Cañon, for more than 2,000 feet down its side, it presents a perpendicular face of smoothly cut granite. This rock and the North Dome consist of concentric layers, a form not uncommon in the Sierra Nevada, where Professor Whitney tells us that the dome-shaped formation is developed upon a grander scale than in any other granite region with which geologists are familiar.

On our way we visited a ranchero of Merced Indians, and had a chance to see the squaws pounding acorns into meal; and some of the men, who deem it a disgrace to work, but are willing to be supported by others.

I will add a story which has credence in the Valley.

A tall, gaunt-looking Yankee, is said to have made his appearance here one day, and offered his services to the proprietor of the mule-trains. Although he had never been in the Valley, he declared that his experience in the mountains would enable him to follow the trail, and his study of the map of the Yo-Semite would make him familiar with the points of interest. Pete—for that is his name—talked so plausibly, that at length a bargain was struck; and he started off with a party. Good judgment took them safely into the Valley, and Pete had a ready answer to all questions. Coming to those three great rocks which I have described as looking like three frogs, some of the party inquired their name. 'Them are the Missouri Sisters,' said Pete, with an air of confidence; and ain't them handsome ones?' The party reached Hutchings's all right; and, after tea, Mr. Hutchings, while discoursing upon the beauties of the grand scenery, alluded to 'Those three huge rocks which lie one upon another, which we call the Three Brothers.' At this, one of the party suddenly looked up in amazement, and cried, 'Why, Pete, you told us they were the *Missouri Sisters.*' Pete, ever ready, answered, 'Hang it! no one can keep track of Hutchings's names, for he changes them every week.'

And these popular names do change, and often have no significance at all. How much better it would have been to have preserved the old Indian names which have been handed down from generation to generation, and each of which had some appropriateness! And even the word 'Yo-Semite,' which is retained, is Anglicized; for the Indian pronounces it '*Yo-ham-e-ta,*' and it signifies the most awful thing to him—a great grizzly bear.

Nevada Cañon.—Vernal and Nevada Falls are among the most pleasing of all the waterfalls. To reach them, we leave the Valley proper at the point where the three cañons begin. Our way lies up the middle one, Nevada Cañon, where flows the main river. The Merced, in coming from the high mountain-plateau down into the Yo-Semite, makes a descent of more than 2,000 feet in two miles; and, besides the roaring cascades, we have the two falls mentioned. We follow up the river, and, after a ride of a mile or more, cross the Illilouette, which is a stream about 20 feet in width, but shallow. Here we go over an immense deposit of huge angular granite blocks, which, undoubtedly, have been torn from the mountains by some great ice-floe. The trail rises very rapidly, and follows the tearing and surging river, which you perceive, from the inclination of its bed, must flow at a fearful rate. We soon arrived at the first fall, which has received the popular name of Vernal, but which the Indians called *Pi-wy-ack,* or Sparkling Water —a name which has some appropriateness. The height of the fall is 400 feet, as nearly as can be measured; for the great body of water which flows over this squarely-cut 'step,' as it were in the cañon, is broken into spray, which rises nearly half as high as the fall. As the sun shines upon this fall, beautiful rainbows are produced. One loves to linger about this spot, climbing up the rocks within the spray which is thrown by the fall on every side. Around the falls, where the moisture covers the rocks, cryptogamous plants thrive; and here a collection of mosses could be made, which would be very valuable.

In a little more than two miles, by a very steep trail, along a sharp ridge, we reach Nevada Fall. This is a grand sight, the volume of water being very large; and by a projecting rock, just at the edge of the lip of the fall, a whirling motion is given to the central volume of water. At the foot, the spray is thrown in all directions, upon and among the great trees which grow near. This fall is 600 feet high; and the river between the falls descends 300 feet.

To our left rises a mass of rock, which stands alone in its grandeur. It is about 2,000 feet high, and has several names, but the one generally adopted is 'Cap of Liberty.' Two days before we visited the spot, a large slide took place, which levelled great trees, filled up gorges, and,

for many rods around, filled the air with flying stones; and to-day we have everything covered with granite-dust. Those who chanced to be here at the time described the scene as grand, yet producing extreme fear; for the very rock where they were shook under their feet.

While in Nevada cañon, we lunched at the little house kept by Albert Snow and his wife, Yankees from Vermont. Although there were more than 100 at the little inn, Mrs. Snow gave all enough, and won great praise for excellent care of her guests.

Grace Greenwood (Mrs. Lippincott) was here, and many other people from the east; and all seemed to drink in the beauties and sublimity of the scenes about them.

Whoever visits the Yo-Semite Valley should find and become acquainted with John Muir, the scholar and enthusiast, who has seen more of the Valley and adjacent country than any other white man. Visiting the Valley about four years ago, he became so much impressed with its grandeur and sublimity, that he returned home, closed up his business, and then took up his permanent residence here; and for three years, now, he has 'been reading this great book of nature,' as he says. Our evenings we spent in his little cabin; and one night the clock struck three in the morning before we ended what to me was a most instructive discussion, upon the different theories which have been advanced to account for the formation of the Yo-Semite.

The theory advanced by Whitney never did satisfy me; and the more I observed, the more doubts arose; and from Mr. Muir facts enough were obtained to lead me to believe with Agassiz, that all such deep-ploughed gorges have been made by immense ice-floes. It seems strange that so few of our scientific men have visited the Valley, and made a *thorough* examination; for, so far, only superficial glances have been made, and crude theories are the result. This Valley is upon so much grander a scale than any other yet found, that geologists have shrunk from advancing a theory grand enough to explain it. Until we can describe an ice-floe broader and deeper by a thousand times than any now known, and shall find its terminal moraine in the great valleys of the Sacramento and San Joaquin, we shall fail to discern in the Yo-Semite, one of Nature's grandest works.

Another person who must be seen is Mr. John Lamon, who was the first white man to take up a permanent residence in the Valley. He came into it and selected a few acres as early as 1860; and, for a number of years, he has staid during the winter in the Yo-Semite. He has set out and cultivated a fine orchard of apple-trees, has a strawberry-patch, and raises some vegetables.

Mr. J. M. Hutchings has lived in the Valley since 1858; during the summer he keeps his hotel, and seems bound to make money. As is well known, Congress ceded this Valley, and the territory back from the line of the rocks (one mile all around), to the State of California, to be for ever preserved as a park. Commissioners were appointed, who began their work of making a plan of the valley-level and hills around, and issuing instructions to those who had already settled, or proposed to settle in the Yo-Semite; but nothing has ever been done, as through the efforts, principally of Mr. Hutchings, all their plans have been thwarted; and he is continually urging the legislature and Congress to recognise his private claims, and give him in fee 160 acres of that which is manifestly intended for a nation's park. Remissness on the part of some one exists; for there should be a good carriage-road, at least, into the Valley; good hotel accommodation should be had, and the prices to be paid should be regulated. The State should take the matter in hand, that many of the inconveniences which now attend a journey to the Valley may be removed.1

1By the efforts of the Union and Central Pacific Railroad Companies, a carriage-road has been made into the Valley on the Mariposa side, and which, as we go to press, is opened for use.

There is a new trail opened this year up to Glacier Point, from which position a more extended view is obtained of the Valley than from any spot now accessible with any reasonable exertion. Year by year new paths will be made; and it is impossible to go upon any trail, or upon any of the mountains, without finding new views, and each with its own elements of beauty.

We were disappointed in not being able to reach Cloud's Rest and the higher Sierras, but the snows prevented us and those who had attempted the ascents were of opinion that another week would pass before the snows would be packed hard enough to allow a passage over the crusts. It must be borne in mind that, as the summer's sun rises over these mountains, the snow becomes an icy mass so firmly packed that it will sustain the weight of a mule and its rider. In this way, during late July and August, they go over beds of snow from 10 to 20 feet in depth, and often even deeper, in both the Sierra Nevadas and the Rocky Mountains.

During our stay in the Valley, we were every hour filled with a sense of the grandeur of the scenery; and we could only regret when at last the morning came for our departure; and we promised ourselves that, should life and health permit, we would again visit this enchanting spot, and satiate ourselves with its glories.

Flora of Yo-Semite.—The most pleasing flower was the great masses of what we call swamp-cheese (*Azalia occidentalis*), whose blossoms were both superb and deliciously fragrant. On the banks of the river we find *Hellenium grandiflorum*, whose flowers are yellow, and very showy. In a little pond, yellow pond-lilies are seen, and ferns in great variety, and, in the swampy meadows, some very peculiar and rare sedges, or coarse grasses. The principal trees are alder (*Alnus viridis*), Douglas spruce (*Abies Douglasii*), Balm of Gilead poplar (*Populus balsamifera*), yellow pine (*Pinus ponderosa*), the cedar (*Libocedrus decurrens*). Among the shrubs are the *Cornus Nuttallii, Rubus Nutkanus,* the manzanita (*Arctostaphylos glauca*), the wild rose (*Rosa blanda*). In sandy places we have several varieties of pentestemon, the *Fraugula Californica,* the brake (*Pteris aquilina*), the *Spraguea umbellata,* together with many smaller and less characteristic flowers and shrubs, covering the ground in patches.

To get out of the Valley as we had proposed, we had to cross the river in a flat-bottomed boat, called 'The Ferry,' and pass directly around the face of old El Capitan. By a very sharp grade we make our way to the top of the hill; the trail being about four miles and a half from Black's to the foot of the hill, and two miles and a half to the top, and the ascent equivalent to a vertical rise of more than 3,000 feet. At a sharp turn in the path we meet a party coming down into the Valley. Here is a case for a compromise, for one of the parties has to turn back. After some parleying, it is left for the guides to decide; and all, save *a woman or two,* acquiesce. To add further to our difficulties, a little further on we meet a drove of four wild cattle, being driven into the Valley; and here is danger, which is averted

by the quick movements of the Mexican lad who is driving them. Spurring his horse out of the trail, he gets in ahead of the cattle, and drives them on the rocks above us, allowing us all to pass in safety. At length the top of the hill is reached, and we are at the house well known as Gentry's Station. But they have christened a new addition 'Altamont Hotel,' which will do for tourists and strangers; but it will always be called Gentry's by the old ranchers and hunters of the region, as well as by the drivers who bring their stages to this point.

This is the end of the carriage-road on this side of the mountain, whether you come by way of Coulterville or Big Oak Flat. After a good dinner, we were off upon our return trip.

Seven miles brought us to Crane Flat. The village consists of a large barn, two frame houses, and a saloon; the latter being the popular resort of travellers. As our team was tired out by their drive the day before, we were obliged to stay over night; and Mrs. Ann Gobin, who keeps the inn while her husband looks after his 15,000 sheep, took good care of us with the accommodations which she had. Enough to eat there was; but, as the buildings have few partitions, there was some difficulty in arranging beds for a large company.

We were told that the South Tuolumne Grove of Big Trees was within three miles from this place, and we resolved to see them. Arranging with Master Gobin to conduct us in the morning, we retired early; for breakfast was announced to be ready at six, and the stage to be off at seven. An uncommonly early start; and we were soon among the tall sugar-pines, which, in the gray light of morning, seemed like sentinels keeping watch of the surrounding hills. To add to the interest of our walk, just as we entered the forest where the Sequoia were, our guide sang out, 'Keep this way for there's a grizzly's hole;' and, not caring to encounter one of these fellows, we did 'keep this way' in good earnest. The trees stand upon the northerly slope of the hill, in a sheltered position; and, although not so large as those at Mariposa, still there are some specimens which, for beauty of form, are unsurpassed by any others. There is a stump left of a partly-burned tree, which must have been 23 feet in diameter.

The trees are scattered, but the grove is worthy of a more extended examination than we could give it. We made our way out to the carriage-road which has recently been completed through this section, which we followed back to the house, where we arrived rather late for breakfast, and only in time for the stage which was to take us on to Merced.

Our road hence is a narrow way, built around the sides of the hills, and, by a steep grade, takes us down to the San Joaquin Valley. Our continual fear is that we may meet a carriage coming in the opposite direction, and, as a rule, our fears become facts. A few miles on, in seemingly the worst place, we met an up-stage. 'What will they do?' cried the ladies; and the men, unused to such incidents, looked troubled. A few words between the drivers seemed to put things to rights; for the driver of the up-stage began to unhitch his horses, accomplishing which, he drove the horses by our stage, and gave them in charge of one of the passengers; then he made the people in his wagon get out, and pass on; then they drew the carriage along with two of the wheels down the bank, and a half-dozen of us holding it up to prevent it tumbling down into the valley several hundred feet. In this position, our stage passed slowly by; the up-stage was drawn up again upon the road, the horses attached, the people seated, and went on. Along all the mountain-paths here and there is seen the wreck of a stage or some vehicle, sometimes many hundred feet below in the valley, sometimes overturned by the roadside; and very frequently is seen a carcass of a horse or mule, which, falling by the way, has been killed, its whitening skeleton telling of the toilsome journeys.

About noon we reached Pechart's Ranch, upon which is Bower Cave. This cave is in a limestone formation. The rock, having been worn away by subterranean streams until it was too slight to hold up the super-incumbent mass, has fallen in, carrying with it the trees and earth, so that now, in the bottom of this great hole, are four large trees which fell with the earth. Some little crevices in the rock can be explored; a little pool of very transparent water is there, upon which a little boat floats; and this is the 'Cave.' Lady Franklin visited it in 1862, and we in 1872; but, notwithstanding this, I cannot recommend anyone to make much exertion or delay to visit Bower Cave.

At about six o'clock we reached Coulterville, distant from Crane Flat thirty-three miles. This place was named after a man who was an early miner, amassed a great fortune, which he spent in gambling, and at last died poor. It is a *dead* place, and decay and stagnation are seen on every side. It lies on the great quartz vein of the State; and some fine stamp-mills have been erected in the vicinity, but to-day they are all still. We are at an elevation of 1,800 feet, and on the middle ground between foot-hills and mountains. We visited in the evening Mr. Adolph Sinning, who in 1850 left Germany, and came to the Mariposa country. Unsuccessful as a miner, he again turned his attention to his trade as a worker in nice woods; and, in his little shop and house (for he lives entirely alone), we saw some of the finest work in wood which we ever found. Specimens of his handiwork have been sent over Europe and this country. He remains here to be near to the trees which give him his finest woods, which he fashions into exquisite forms of boxes, tables, canes, &c.

To insure our reaching Merced in time for the train in the afternoon, it was arranged to start by 5 a.m. We had a meagre breakfast; and, from our experience at Coulterville, I would advise everyone to arrange *not* to remain here over night until a better house is opened, for the treatment which guests receive is a general complaint. The early start got us well on our way before the sun was high enough to trouble us with heat; but the latter part of our way was hot, dusty, and tedious. We came out of the foot-hills a few miles south of the point where we entered them.

About one o'clock we drove into the lively village of Snelling, the seat of Merced County, situated on the Merced River, which is here a beautiful stream, and would furnish good water-power if there was any demand for it. We found the Galt House a good place to get a dinner. A few miles out, crossed the river upon a ferry. It was such a ferry as is seldom seen in America, and is called a 'tidal ferry.' A stout cable is stretched across the river; and the boat, by means of ropes and hawsers, is held to the cable, attached by a tackle-block in which is a large pulley which rolls along the cable. The boat is pushed into the stream, headed just right, the hawsers secured; and the current pushing down the boat which is held, carries it swiftly towards the opposite bank. The apparatus was crude; the boat was managed by two men, one a Chinaman. As the boatman was not at his post when we drove up, but in his house, a long distance away from the river, it took a deal of noise from our driver to rouse the fellow up, who, when he came, complained of being taken from his dinner. This delay nearly lost us our train at Merced.

By urging our horses, and especially the driver, by the promise of an allowance over regular wages, we were enabled to reach the city of Merced just as the train was starting; and without delay we changed our coach for the cars, and were soon on our way towards the main line from Sacramento to San Francisco, which this road (the Visalia Division) leaves at Lathrop.

As we again looked over the vast San Joaquin plain, so level, and so different in character from the country in which, for two weeks, we had lived, we could not but exclaim—

Level leagues forsaken lie—
A grassy waste extending to the sky.

A few weeks ago, the land was covered with ripened wheat, from which now the heads had been cut, leaving the straw standing on either side as far as the eye could reach.

Wheat Farming in the San Joaquin Valley.—The soil of the San Joaquin Valley looks like sand, and is, in fact, a pulverized and decomposed granite, ground into dust by the ice-floe which made the Yo-Semite. The custom is to begin to plough as soon as the autumn rains begin. Gang-ploughs having seven blades are used, and immediately behind them follow the seeders, also drawn by horses, which drop the seed, cover, and roll, at the same time. Nothing more is done to the field till the grain is ready for the harvest. They plough and plant almost to the ripening of the first sowing; and this plan, year after year, is followed. When the grain is ripe, they run a *header* through the field. This is a great cutting-machine, which simply clips off the heads of the grain. The horses push it along, instead of dragging it; the grain is carried upon an apron into the wagon, which follows alongside of the *header;* the heads are carried to convenient piles, where a steam-engine is driving a threshing machine, which leaves the grain perfectly clean and ready to be put at once into bags and sent to market. Here no rains interfere with the harvest. The straw is all burned off; and, by the time the ground is cleared, the rains begin (early in October), and the ploughs are started.

Mr. John Mitchell, the largest farmer in California, owns between 50,000 and 60,000 acres in this valley, and, this year, had above 30,000 acres in wheat alone. His ranch is divided into sections of different sizes; and upon each he has houses and barns, and a *rancher,* to whom he furnishes seed, and takes one-half the crop. Of these sections, or small ranchos, he has about 100, and spends his time in riding in his buggy, drawn by a team of fine bays, from house to house, and directing the work on his vast domain. His income from his lands this year will be not less than $250,000 or 50,000*l*.

The average yield of wheat in this valley will be but little more than ten bushels per acre; although those ranchos which were well ploughed and seeded will yield twenty bushels per acre, and in a few instances more. The price of wheat, at the time of which I speak, was two cents per pound at the ranch.

Our excursion to the Yo-Semite region terminates in our approach by way of Merced to Stockton. The pleasant party of tourists who have casually come together prepare to separate for their various destinations, and manifold regrets are expressed. Long shall I remember the trip, and my desire is now far greater than before to go and spend a summer among the wonders of the Yo-Semite.

It would be a pleasing task to describe the beautiful flowers which are seen in this journey. In going to such an elevation, all the seasons are found. In the San Joaquin Valley, it was autumn; the plants had blossomed, produced their seed, and were at rest. Up the mountains a short distance, it was midsummer, and the earth was covered with bright flowers. At an elevation of, say, 5,000 feet, it was early spring; the plants were just pushing out of the ground; and, at 7,000 feet, it was winter, the snow still covering the earth. All these gradations in plant-life are seen in a ride of, say, two days. The flowers of the mountains of California are very brilliant in colour, the yellow prevailing to a great extent, seemingly, as Grace Greenwood prettily said, ‘to let us know that *yellow* gold is under them.’

Stockton.—We re-enter the San Joaquin Valley, and shortly find ourselves at this ‘city of windmills.’ It is a port of entry; has a line of steamers to San Francisco, which come up the San Joaquin River and into the slough (always pronounced here s-l-u), upon which the city is situated. Among steamboat men this place is always called ‘Slu-city.’ Imagine a kind of channel making up from the main river, with a dozen sloughs emptying their (usually stagnant) waters into it, with long wooden bridges (often only for foot-passengers) over them in all directions, with buildings erected upon the ridges of dry land between these sloughs, with a short line of wharf along the main channel, a place which seems to be all under water, with stagnant pools breeding miasma, a few good buildings, but mostly poor old structures, and upon each a fantastic windmill, and you have the city of Stockton. It contains about 10,000 people; is the outlet of the great San Joaquin Valley, but has been greatly injured by the railroad, which goes by, instead of through, the city, as it ought to have done. Once its trade was large; but now it has dwindled away, and the city seems ‘under a cloud,’ as well as under water. It is so badly situated, so injured by the railroads, and so unhealthy in summer, that I cannot see any good reasons to anticipate a large future growth. It is too near Sacramento, the State capital, and has not in itself any elements which will command prosperity. As a winter residence, Stockton is peculiarly favourable to invalids who are injuriously affected by sea air, even although always mild. The climate is singularly like that of Naples, with few extremes, and is especially dry. Its accessibility, its good hotels, and good society, commend it as a winter home to those seeking a mild climate.

At the western extremity of the city begin the *tule*-lands, which stretch away to the West to the very horizon. These are formed by the overflow of the great rivers called San Joaquin and Sacramento, and consist of soft, porous soil, thoroughly saturated with water. There are bayous which make far into these lands, many of them quite deep, but all of which have the title ‘slu.’ Covering the country for miles, and growing in the porous soil, is the rush called *tule* (*tui-l#*), which attains a height of from 5 to 8 feet. In August, when the river has become low, and has drained these vast areas, and the plants have become somewhat dry, the steamboat-hands have a custom of firing them along the banks of the river; producing fires rivalling those of the Western prairies. Experiments are being tried for reclaiming these lands, under the patronage of the State. An immense dike is made around a number of acres, keeping out the water; and one season dries the soil sufficiently to allow of its being ploughed, and in the next season it is fit for planting. I was told that satisfactory crops of wheat had been raised; but the farms seem better adapted for raising vegetables for the San Francisco market. The work is done by

Chinamen; and I know of no other class of labourers who could be found to go into such a country, and survive the dangers of disease to which they are exposed; but they seem to be destined to be the power which shall reclaim these vast acres, and fit them for cultivation.

We lingered on the tule-lands one day until the sun went down, and beheld the most gorgeous sunset we ever looked upon. Talk of the Italian sunsets! of those in New England in the Indian summer-time!— they cannot be compared with those which are seen upon the banks of these rivers. The moisture which rises from the lands offers its innumerable particles as so many reflectors, all increasing the brilliancy of the scene. As the sun sank in this sea of mist, his parting beams were shot far up towards the zenith, seemingly striving to catch the rising beams which the morning brings from the east.

During our stay we visited the Insane Asylum, where were collected a larger number of patients than in any similar institution in the world. On the day of our visit there were more than 1,300 at the institution. By the politeness of Dr. Titus, physician in charge, we were enabled to make an extended examination of the asylum; and, in company with Dr. Langdon, we visited all the various wards, and beheld insanity in all its forms of development.

The great excitement under which the people live— especially those who gamble in stocks—produces terrible wrecks of the nervous system. That there is a climatic tendency to over-excitement, and consequent waste of nerve-power, is very evident. The physicians give the causes which lead to insanity in the State, as—1st, Dissipation; 2nd, Business losses; 3rd, Homesickness; and all aggravated by the climate, and, of course, developing more readily in persons with an hereditary tendency towards the disease than in others. The institution is greatly overcrowded, and it is a very serious question how the insane poor are to be cared for in the State. When it is considered how great is the floating population, it can be understood how great is the responsibility resting upon California to take adequate care of this class of unfortunates. Having visited all the wards in both the male and female asylums, and all the departments of administration, I must bear witness to the general order, neatness, and attention to the comfort of the patients, shown throughout; and this, too, when the buildings are so overcrowded, that cots are nightly placed in the halls, transforming them into dormitories. As we went from ward to ward entirely unannounced, and when not expected, if, on the part of the various attendants, there had been any serious neglect in their duties, I should have discovered it without doubt; but I must say that I saw little of which to complain, save what was too evident—that there were more patients than could be properly and conveniently cared for.

A steamer leaves Stockton daily for San Francisco; and I resolved to enjoy a sail down the San Joaquin on our return to the ‘Golden Gate.’ For six miles we go down the slough, which is narrow, and, at low water, unnavigable; and then, by a turn so sharp that the stern of the steamer goes ‘high and dry’ upon the mud bank, we shoot out into a wider stream, the main river; and by the most crooked of all crooked streams—often so narrow that you could step from the steamer upon the banks, then so shallow that the keel would drag in the mud— we make our way through the great ‘*grass*’ fields; for seemingly the vessels which we see all around us, the river being crooked, and the sloughs so numerous, were sailing through the grass. The steamers are propelled by double horizontal engines, driving side-wheels; for often it would be an impossibility to turn, unless they could work one wheel, while the other acted as pivot.

We made several stops at places where the work of reclaiming these lands was being carried on. At sundown we came out into Suisun Bay, into which flow the two great rivers Sacramento and San Joaquin, which, for several miles back, are separated only by a narrow strip of land so low that you see plainly from one river the sloops and steamers in the other. We make a landing here, and take in coals from the lately discovered deposits of Monte Diablo. From Suisun Bay our course lies down through San Pablo Bay to San Francisco, and soon I am again comfortably quartered at the Lick House.

Advice.—I commend to visitors to the Yo-Semite these rules, based upon my experience, in travelling among the mountains:—Dress warmly, but in clothes which you are not afraid to have soiled. A woollen shirt is desirable; and wear English walking-shoes, rather than boots. Over your shoulders, and tied quite tightly about your neck, wear a white silk handkerchief; for, although the air is cool, the rays of the sun at high altitudes often produce very injurious effects. Avoid drinking much snow-water, and allay thirst with a bit of biscuit until a spring is found. Do not descend from a high altitude to a low one suddenly, as congestion of the lungs is the effect. Always choose a mule instead of a horse, as they are surer footed. Above all, never complain because you do not have city comforts, but be contented wherever you may be, assured that nothing is had without some work and hardships. And by all means let me urge you to map out well your journey before starting; understand where you are going, and what ought to be seen; arrange for your whole trip, with reference to cost of conveyances, guides, horses, mules, tolls, and all charges as far as can be, and thus you will be saved many inconveniences and annoyances. Many were the disappointments which I saw occasioned by not considering the journey before it was undertaken.

The Overland Tour Reviewed.

The Overland Tour Reviewed.—*Its Cost.*—Either through ignorance, or to influence people to undertake the journey, estimates have been made which were so far from the facts, that I cannot well understand how they were computed. I did not follow those which I had seen, and that, too, in respectable journals; for I found, when I inquired about the mere cost of car-fare and living on the way, that the estimates were wrong. I may as well state here the results of my experience. The figures which I shall give will be liberal, for I did not refuse myself any comfort, but will not include *extras* or *sundries.* It must be borne in mind that after you enter California your payments are made in gold; and, while I was in the State, the value of greenbacks fluctuated from 88 1/4 to 92 1/2; but, as a rule in trade, they are taken at ninety cents on a dollar. Actual experience is the best teacher; and my figures will be a safe guide to one whose wants are simple, but who believes that a first-class hotel is the cheapest place to stop at, and wants the best of the market, although he never ‘calls a hack’ to ride a block, and never has an item upon his hotel bill denominated ‘extras’ or ‘sundries.’ The amounts are reduced to currency.

Expenses.

For car-tickets from Boston to San Francisco, and return,	$28600

For sleeping-berths (Pullman-cars)	3200
For meals	4000
For Salt Lake City, and return to Ogden	600
For three days' board, at $4	1200
For two weeks in San Francisco, $3 per day (in gold), and for porters, hacks, and horse-car rides, $1 more (parlours and fires extra)	6500
For the Geysers, and return (4 clays)	3500
For San José and Santa Clara (3 days)	2000
For the Yo-Semite. and return (2 weeks), including all charges	15000
For travel upon the railroads of California per mile	05
For hack-rides the charges are five times our own for same service, and payable in gold. For the short excursions to Oakland, Alameda, Mare Island, Vallejo, San Raphael, &c	2500
For trips in Southern California (Los Angeles)	15000
For Lakes Donner and Tahoe	5000
For Virginia city (Nevada)	3000
For Colorado, Denver, Golden, Idaho Springs, and the mining-country at Black Hawk and Central, allowing two weeks	20000

By allowing 4*s. for one dollar and then adding ten per cent. for exchange, the cost can readily be computed in English coin.*

From which data it is seen that a round trip, including the chief points of interest in California, will cost about $800; and $1,200 can be profitably spent by including Nevada, Colorado, and Utah; and these places ought not to be omitted.

Weather.—We had been enjoying the usual cool weather of summer at San Francisco, when on Wednesday morning, June 19, the thermometer suddenly rose to 92° Fahrenheit, which, for this city, was extreme; and, dressed in winter-clothing, one suffered much: but all advised no change of dress, for they said a sudden change would soon come. By noon telegrams came pouring in from all parts of the State of great heat, as at Napa City 107°, and San José 104°. That day over, the next was warmer, and 96° was reached—a higher figure than a record of eleven years showed, and many said higher than ever before. So you see, the great wave of heat which swept over the East, overpowering so many in our great cities, also swept over the West in unprecedented fierceness. On Friday, about noon, the change did come, and indeed suddenly; for, seemingly in an hour, an overcoat was needed, and by sundown we required a fire in the hotel parlour.

This is their summer weather; in the winter, it is more equable, with no fogs.

The Season to visit California.—The rains begin about October 1, and, with an intermission of a few weeks in January and February, continue till March; from which time, to October again, they have no rain at all: hence this is a state of either mud or dust, with short seasons of extremely delightful weather. The plants and trees, instead of resting in winter by means of frosts, rest here in late summer by means of drought. Before I left the State (late in June), many plants, and some of the trees, had already completed their growth, and having ripened their seed and wood, were at rest. On most of the deciduous trees, the old leaves remain until pushed off, as it were, by the new ones. So many months of drought, as can be imagined, from the lack of rain in England for even two weeks, make everything extremely dry, and to see a green thing is delightful; so that, in the small gardens, constant irrigation is resorted to, to keep a little grass green, and the trees and the shrubs in leaf.

The roads, during the rainy season, are almost impassable by reason of the mud, and, in the summer, by the dust, which, I apprehend, is far more disagreeable than mud, if my experience with it gives any data for a judgment. It is of the utmost importance, then, that the journey to California be made at the proper season. And this is my advice:—Leave the Atlantic coast about the first of April, as then the snow-storms of the Rocky Mountains are over, and go direct to San Francisco, which make, as a Frenchman would say, your *point d'appui.* Spend at least two weeks in looking about the city and immediate vicinity; and, if you propose a trip to Los Angeles and Southern California, go there first, and then return to the city. Make your excursion through the Santa Clara Valley, and to the Geysers. By this time the trails will be open to the Yo-Semite; and to this famed place it is best to go early, that those wonderful waterfalls may be seen in their majesty. From a month to six weeks (as you go to Southern California, or not) will thus be fully employed.

Returning over the Central Pacific, from Truckee, visit Lakes Donner and Tahoe; and from Reno go to Virginia City and the great silver mines of Nevada. Either of these excursions will occupy three days fully. From Ogden, go down to Salt Lake City, which will be in her lovely Spring dress, and the Wahsatch range still snow-clad, where two or three days ought to be spent, and more if the mines are visited.

At Cheyenne, on the Union Pacific, leave the main line for the journey through Colorado; make a stay of a few days at Denver, and then go to Golden; from which point start by private carriage for the great mines and smelting-works and stamp-mills at Central, Georgetown, Blackhawk, and Nevada City. A narrow-guage railroad is now completed up Clear-creek Cañon, to Central, so that the whole distance can be made in the cars. The cañon abounds in beautiful scenery throughout its entire length. But either in going to or returning from

Central City, the journey ought to be made over the carriage-road, it being one of such unusual interest. If time permits, the ‘Parks’ in the mountains can be visited, and many other interesting points. Two weeks, at least, should be spent in Colorado.

At Omaha a stop should be made to look over the city, and also to examine the great iron bridge over the Missouri River at this point. There are several places in Iowa and other Western States, where a little time can be spent very profitably on your way back to the east; or, say, to Niagara Falls, where you arrive just as the season begins, and where I have many times found the ‘International’ one of the choice houses, where to take a good rest.

To citizens of the United States a trip to California is far more pleasing than one to Europe: they are all the while in their own country, and with people speaking their own language; and the places visited are of far more beauty and interest. The round trip cannot be made any more cheaply than a trip to London and Paris in the summer; but if, of the many thousands who every year go to Europe, more would go to California, or even to Colorado and the Rocky Mountains, they would be far better pleased and much more instructed. To enjoy Europe properly, a certain knowledge of languages is required; but almost every one can find enjoyment in our Great West. To some, her vast resources will be most pleasing; to others, her grand scenery will be a full enjoyment. Travelling is made as comfortable as can be, saving only a few inconveniences on the longer roads; and many of these will be remedied during the year.

These words were written especially for American readers, but they contain good advice to my English friends. In visiting the United States they are all the time among English speaking people, and under the protection of a Government allied to their own by every tie of sympathy and International policy. The passage of the Atlantic is now made quite a pleasure-trip, and when they journey in the States, from what I have said they must be assured of comfort and as interesting scenery as can be found on the European Continent, and on a scale incomparably grander and more magnificent.

Californian Hospitality

Californian Hospitality.—Sunday morning, June 23, came in with a warm and genial atmosphere, entirely free of fog. Such a day is rather uncommon in San Francisco during the summer months; and, to find a *warm* climate, the people are accustomed to go to the valleys, as up through Napa to Calistoga and White Sulphur Springs, or down through the Santa Clara, to the various charming villages and towns, or the palatial homes which are scattered all through San Mateo County. At one of these homes we are to spend the day, and enjoy the hospitality of its genial host. Eight o’clock found us all on board the train, which traverses the Santa Clara Valley, and over a road which they are pushing on as fast as possible to be one link in a Southern line which is to cross the continent. The Central Pacific Company have named this one of their many lines the Southern Pacific. We are to go to a station named Menlo Park, where Mr. Ralston is to meet us. On our trip down I had an opportunity to chat with Mr. James Lick, one of the richest and largest real-estate owners in California, who built the famous Lick House. Mr. Lick early went to Mexico, and during the years 1848-49 wended his way north, and reached San Francisco. He at once began to purchase lands, and year by year found himself growing rich beyond the dreams of the greatest enthusiast of the newly-founded city. He is a widower, of excessively plain habits and dress; lives in his log-cabin on a rancho near the city of San José; carries a dilapidated carpet-bag, and wears a dilapidated hat; walks instead of rides; and, when he visits the city, finds his wants supplied in the poorest room, and with the simplest fare, in his great hotel. By trade he is a cabinet-maker; has a fine mill, where he works a little, but finds his chief enjoyment in cultivating his garden, where he collects trees from all parts of the world, plants them, and cares for them tenderly. In speech he is not fluent, but talks with intelligence; in carriage he is awkward, and there is nothing to indicate a man of talent. His wealth is counted by millions; yet he leaves the management of his property mostly to others, and does not seem to be conscious of his vast possessions. He is not what you would call a miser, yet he prefers not to spend any of his money for what most of us deem comforts in this world. He has one son, a farmer in one of the great States east of the Rocky Mountains, who will inherit his vast wealth.

A ride of about an hour brings us to the station, where Mr. Ralston receives us kindly, and asks us to a seat in his carriage. Our party consisted of Superintendent Sickels, his wife and two daughters, Grace Greenwood, Mrs. Mitchell, and myself. Mr. William C. Ralston is a man rising forty, of stout build, with a countenance and air which tell of the hospitality and cheer which he loves so well to bestow. He is free from all affectation; and you at once forget the money-king, and see only the genial gentleman.

The carriage was built upon the English style, with seats lengthwise, a raised seat in front, and with the usual attachments of a brake, which is indispensable for the hills. To it were harnessed four bays of perfect form, and full of spirit. As soon as we were all seated, Mr. Ralston himself took the reins, and at a word the horses started at a lively pace.

We were in a beautiful country — a great park, by Nature formed and planted. The roads, although dusty, were wide, and as we passed by we could see the houses among the low-branching live oaks, which are the pride of the county.

It was too late for the flowers; the grain, too, had ripened, and, in most parts had been cut. After a short ride, we were drawn into the grounds of Milton S. Latham, where no expense had been spared to make the place attractive. We visited the stable, which, for size and splendour of finish, we never saw surpassed. The beautiful woods of California had been used, and these had been finely polished; while all the fittings and appurtenances were in keeping. It seemed to be just completed; and, in unpacking the furniture which was to be placed in the servants' quarters above, the men had set the small mirrors in the stalls, one in each; upon which one of the ladies remarked: 'Yes, indeed, this is the finest stable I ever saw; for don't you see they have furnished each horse with a mirror to make his morning toilet by?' The new mansion house here is not yet completed; the former one having been, I believe, destroyed by fire.

From here we were driven to the fine estate named 'Valparaiso Park,' owned by F. D. Atherton, Esq. Mr. Atherton met us upon the piazza; and, having given the ladies over to those of the house, conducted the gentlemen through his fine grounds, where orchards of almond, nectarine, English walnut, apple, cherry, and fig, were growing, having been planted only three years. The cactuses (*cactaceae*) seemed to delight in this situation; and one plant had attained the height of fifteen feet, and was stout enough to sustain itself. The finest tree not indigenous to the place was the pepper-tree, near the house, the feathery foliage of which was swayed by the slightest breath of air. The great oaks, with their extended branches, from which hung the moss in graceful tassels, dotted the extensive grounds; and flowers, magnificent in colour, and in a profusion unknown to our New-England gardens, made the air fragrant, and gave to the place exquisite beauty.

It was too lovely a spot to leave so hurriedly; but Mr. Ralston summoned us for a ride towards his own mansion. Our party had now been increased by Mr. and Mrs. Samuel Lawrence of Boston, and Stephen Masset, Esq., well known as 'Jeemes Pipes of Pipesville,' whose pleasant bon mots gave a zest to our other pleasures during the rest of the day.

A Day with Ralston.—It was a delightful drive which took us towards the village of Belmont—the neatest railroad point to Ralston's home. Passing over a well-built road, through the town, which is regularly laid out, and where are many pretty cottages, we reach 'Glenwood,' our destination. The first object which meets our view is the neat building where gas is produced for lighting the house, out-buildings, and grounds. Mr. Ralston shows us his stables, where twenty-one horses await their master's summons, with grooms sufficient to care for them. One thing was noticeable about the stables, which told something of the character of its owner—that, while the utmost neatness prevailed, it was not *over-nice*, as was the first stable we visited to-day. The inside is kept freshly whitewashed; and the carriages seem arranged for instant use, instead of show.

At the house, the party was welcomed by Mrs. Ralston, whose gracious manners soon taught us to feel at home, and that the house was made to live in, and all the splendid and costly things surrounding us to be not only looked at, but handled. I should judge that the house was not built at once, upon a matured plan, but was the outgrowth of required accommodation. A dining-room, drawing-room, and library, surrounded on three sides by a gallery, with windows extending from floor to ceiling, with the kitchen and laundry in the rear, and built directly into the hill, with a beautiful corridor at the top of the main staircase, from which the chambers open, while over the kitchen is a large but as yet unfinished banquet-hall, comprise the main house. It is of wood, painted white, and is placed in a very sheltered position among the foot-hills of the coast-range of mountains, on the side towards the bay. Fine pictures, costly bronzes, and other works of vertu, are scattered about in defiance of all conventional taste; but their very freedom gives a pleasing and hospitable air to the house.

At twelve, breakfast was announced; and, for nearly two hours, the courses of delicately-prepared food were brought in, while conversation and gaiety filled up the intervals. After breakfast particular pains were taken to conduct us to the kitchen, and show us the Chinese cooks, who prepared the food of which we had partaken. Here a chief cook with two assistants presides, while Chinamen do all the general housework. The steward is a coloured man; the waiters are white men, probably Frenchmen; and these, together with the help employed out of doors, make some twenty-five. Such an establishment, conducted in an orderly manner, would be a wonder in the East, and with our present service system quite impossible. The same order and conduct on the part of the servants prevail here daily, as I am assured by those who have spent several days together at the mansion. I was strongly reminded of an English country house.

To me the most beautiful development of English life and character are the country homes scattered over the smiling land where reign so much peace, plenty, and virtue. England has a stronger bulwark of national life and prosperity in these, than in all her navies and all her armies. Would that in America we had more such homes! Our cities are growing at the expense of the country. Home ties are forgotten in the rush for wealth, and our people are finding themselves with riches but without health and cultivated tastes to enjoy them. I must end this digression, and continue my narrative.

We were next taken to view the estate. From the eminences we had beautiful views of the surrounding country. Leaving Ralston's at three o'clock, we passed from one fine estate to another, charmed with the beautiful gardens and parks around the houses. We also drove through the place where lives Hayward, the ruler in the stock-board, who, by the recent *fall* in stocks, found himself *raised* by millions—almost the only one who profited by that terrible calamity which overtook the 'dwellers in California Street.'

When the Boston Board of Trade and their friends returned from San Francisco, all we heard of for some time was the praises of their entertainment by Mr. Ralston; and I must own that they could not *over*-praise the elegant manner in which the hospitality of Glenwood was dispensed. I have described our visit thus minutely, that my readers might gain an idea of the mode in which rich Californians

entertain their friends; for, although Mr. Ralston's receptions are more princely, still there are many others who outdo our Eastern magnates.

Homeward Bound.

Homeward Bound.—Finally leaving San Francisco on June 23, we are soon under full speed towards Sacramento. Having disposed of our traps, we look around to see if all our friends are here. Superintendent Sickels has Grace Greenwood (Mrs. Lippincott), and Joaquin Miller the poet, as guests for the journey. Our car is the directors' car of the Union Pacific Railroad. It is very large and heavily built, probably weighing more than three ordinary passenger-cars. In one end is a complete kitchen, a range, racks for dishes, an ice-box, a sink, &c.; next, and separated from the kitchen, are sections, two on each side, like the Pullman, which can be transformed into beds at night; next—another partition dividing, and occupying, say, one-third of the car —is the drawing-room, dining-room, and by night a sleeping-room. An extension-table occupies one corner; and on either side is a sofa; and a sideboard upon each side of the door towards the kitchen, above each of which is placed a mirror. Beyond this is another room as large as the kitchen, where is placed the heating apparatus; and on the side is a rack of six rifles, and drawers for ammunition—probably added as a defence against the Indians,—now only required for *game* of other sorts. There are small and well-appointed toilet-rooms partitioned off; and all the sections are covered with a heavy Brussels carpet. The rear platform is surrounded by a railing, making it a safe place where to sit and observe the country. At night the car is well lighted; and the windows are double, to keep out dust as well as the cold. It rests on many springs; and the trucks have six wheels each, so that ease and comfort are secured. Our stores are ample. Tom Cornish is to act as general manager, while Henry Fouré is to preside in the kitchen; and, as they are well trained in the management of a hotel-car, no doubt we shall be well cared for.

We are again in Sacramento, which has arisen from the devastation of floods and fires, and is to-day probably the handsomest city in the State. As all the railroad grandees live here, of course much has been done by them to make this a centre of various railroad lines, and add material wealth by the establishment of the workshops and car-shops of the Central Company. The streets are wide, the buildings in many instances very fine, the trees and herbage magnificent in their almost tropical luxuriance; and the energy and business enterprise of its citizens very notable. The capitol is to be a grand edifice, a pride of the whole State. The city is growing very fast both in population and wealth; and none of those evidences of overgrowth are seen here, which are so lamentably shown in San Francisco.

Along our journey over the Central we found no new interest, save to notice how successfully the trees and plants had been grown in the lands just about the stations in the great desert, which had been subjected to irrigation. Facts and experience are fast proving that the lands which a few years ago were thought entirely incapable of cultivation can be made to grow many of the usual vegetable products of the West. There were some apple-trees which were growing very finely indeed at Battle-Mountain Station, in soil which had heretofore been pronounced entirely incapable of sustaining plant or tree.

We found good company in a 'Pullman' with our train. The second night on the road we arranged a little entertainment in our car, and invited the ladies and gentlemen from the other cars into our improvised music-hall. The exercises consisted principally of recitations, with delineations of the characters by Grace Greenwood; and the name assures the success of the renderings. The young ladies sang for us.

The next morning, at Ogden, we make the usual change of cars, and began our journey on the Union Pacific. It requires some time to make up the train for the East, as all the baggage is changed, as well as the mails and express matter. It would seem that the cars ought to be run *through;* but I am told that the distance between Omaha and San Francisco is too great to keep a car in continued motion,

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The Central Pacific Railroad

The Story of the Central Pacific.—Having finished our round trip over the Central Pacific; now let us tell the story of the building of this road, and say a few words about its management. Those who have told this story heretofore have selected one of the few men who were the promoters of the enterprise, and eulogized him, often to the disparagement of the others; but I will try to do all justice, and state the part which each took in the great scheme, out of which was evolved the railroad, which, in its passage of the Sierras, stands to-day a triumph of engineering skill.

Five men, entire strangers to the building of railroads, promulgated, fostered, and carried to a successful issue, this important enterprise. Stanford was the governor of the State, but before that was a wholesale grocer; the two Crockers were dealers in dry goods; and Huntington and Hopkins were hardware merchants. They all lived in Sacramento, then a small inland town, which had a precarious existence between fire and flood. In that city, at No. 54 K Street, may be seen to-day the sign 'Huntington and Hopkins.' It is a store for the sale of hardware, and the business is still pursued in about the same style as in the early days of the enterprise. It was in a back room of this store, where the gentlemen named used to meet to pass away their evenings, that they organized their company. They early perceived the necessity for a road, talked it over night after night, till they became so 'filled with the faith,' that even though they had small means and few friends, they thought they could build the road. They resolved to act; and they began in earnest, although upon a small scale, to develope a plan. The time of which we speak was 1856–58; and the road only existed in the dreams of these enthusiasts, who, in the far-off future, saw the iron horse snorting over the snow-clad Sierra. Engineers of repute had said that the mountains could not be passed; and, whenever a Pacific Railroad bill was presented to Congress, these reports were conned over; and the very idea of a road amid these almost everlasting snows was ridiculed by grave senators.

Probably what gave the greatest impetus to the enterprise was the bold assertion of the engineer, Theodore Judah, who was engaged to build the Sacramento Valley Road, and who was so earnest in his declarations that a track could be laid across the mountains, that he was called 'Pacific-Railroad Crazy.' He at last so gained the confidence of the people directly about him, that, by much solicitation, he raised a subscription of fifty dollars to enable him to make a survey. This was the real beginning of the work. Having made a partial examination, he became more fully convinced of the correctness of his declaration; and, by a little more aid, he proceeded with his surveys, until he proclaimed, that, by way of 'Dutch Flat,' he had found a long and easy ascent of the mountains. He called public meetings of citizens of the mining villages along the route; and gradually the inhabitants became convinced of the practicability of the

road, although the scheme seemed so unlikely to succeed, that all the banks and bankers, as well as the moneyed men, kept aloof from it; for they had little faith in the 'Dutch Flat Swindle,' as it was called, the five men first mentioned being about the only ones who were ready to give their money and stake their fortunes in the enterprise.

We can imagine all kinds of difficulties to be met and overcome; and by no means the least was the ridicule heaped upon the enterprise, especially by the bankers. In the city of San Francisco there was not a dollar raised; and the great express company (Wells, Fargo, and Company), the steamship lines, and all the various stage lines and river steamship companies, vied with each other in their opposition to building a railroad. The laws of the State of California, under which any company must act, were very illiberal towards corporations and the stockholders; and the people stood aloof from the scheme, leaving a few bold spirits to work out the problem, and reap the rewards which have followed from the completion of the line—large, surely, but only just.

Another turning-point in the life of the enterprise was when, at a meeting of gentlemen at Governor Stanford's house, in 1860, after much and earnest discussion, and all seemed upon the point of flagging, Mr. Huntington rose and said, 'I will be one of eight or ten to carry out this scheme.' New life was infused; new purposes were awakened; and seven bold spirits put their names to a compact to pay all expenses for three years, to complete surveys, estimates, plans, &c.

Of these seven, Judah, who had been the prophet sent from afar to show the people of California the way over their mountains towards the Atlantic, had no money, and soon afterwards died. To Judah must be awarded much praise; for it was a bold spirit which could, in the face of such ridicule, still proclaim what to him seemed not only possible, but easy of accomplishment. He was a pioneer—a mind which perceived before others; one who lived outside of the circumstances which surrounded him. He took a grand step forward in railroad engineering, like Brunel in steamships, or Lesseps in canals. Another of the little band became disheartened, and fell by the way; leaving only the five whom I have mentioned—Stanford, Huntington, Hopkins, and the two Crockers.

They organised their company with the first-named as president, the second as vice-president, and the third as secretary and treasurer—positions which they still hold, managing with marked ability the affairs of the company. This was in 1860. The passage of the Pacific Railroad Bill by Congress gave this little company an assured life and each fell naturally to work in his particular sphere. The usual fortune of railroad enterprises was apparent: they resolved to reap *themselves* the advantages of their early planning and patient toil. They established their offices at 54 K Street, where they are to-day, and began work *in detail,* considering well each step, and surmounting the difficulties as they arose. Stanford—full of genuine good sense, a man of vigour and determination—was at the head, and did valiant service in the State. Hopkins —the man of figures and calculations, who had made his business successful by calculating every cost—now applied the same careful calculations to this larger scheme; and Huntington—intrepid, with innate honesty, of good address—went to Washington, New York, and other cities, to negotiate bonds, buy material, and make the people of the East know that the road *was to be built,* and that they must lend their money to do it. He succeeded; and, for materials for construction, he exchanged bonds, which were guaranteed by the personal endorsements of the promoters of this grand, yet, at that time, hazardous enterprise. All the iron, and a large portion of all the material, had to be brought from the Atlantic cities, round Cape Horn, by a long and tedious voyage; the prices were fluctuating by the war; the bonds which the government issued to them fell to a low figure in gold; and thus circumstances seemed to frown upon this plan for a railroad over the mountains which would serve to supply a new trade which had arisen between Sacramento and Nevada, as well as for a link in a grand transcontinental line.

Several times their money was all used up; and then individual pluck was shown, and a few men were paid by each; and so the work was kept on. Each contract was looked to closely, and its terms were scanned; for these men were daily pledging every dollar they were worth, as well as their honour and reputation. These facts I state thus minutely, that they may be compared with the circumstances attending the building of the other road which forms the Pacific line. Many were the obstacles which they encountered; and much credit is due to Grey and Montague, the engineers who made the plan and laid the grades, as well as found the way to take huge locomotives over the mountains by ox-teams, and make a road-bed with snow-banks from ten to twenty feet deep around them. Upon the Alkali Plains they were obliged to bring water and fuel many miles, and to find men to do all this work. Chinese were brought over, and, to the number of several thousand, lent their toil to this great undertaking.

The Central Company, of course, as they made *success sure,* found many friends; and, after all the great difficulties were passed, many were ready to aid them with money. This company pushed east as far as it could, and, as it approached the westward marching line of the Union, shot by it, on towards the Atlantic; and here came a warfare to determine where the two roads should meet. Congress had to interfere, and fix upon Union Junction, five miles west of Ogden, as the place of union. At length the year 1869 saw the road completed.

The Central Company are now the owners of the whole railroad system of California, and are pushing their lines in all directions. The California and Oregon line is being pushed north through the great Sacramento Valley, around Mount Shasta, on towards Portland, there to join the railroad system of Oregon. To the south, through the Santa Clara and San Joaquin Valleys, they have the Southern Pacific, which is to reach Los Angeles, and thence on to the Colorado River. The California Pacific has pierced the Napa Valley; and the Sacramento Valley Road is pushing east into the mountains.

In the prosecution of these various enterprises, the Company is spending some half-million of dollars per month; and the whole machinery of this vast corporation is so nicely adjusted, and works so smoothly, that all these plans are being successfully carried out at once. Montague is still the chief engineer; Grey has charge of the Southern Pacific; while the same officers who were long ago first elected to their positions retain their places. Mr. Towne, the general superintendent, is a gentleman who admirably fills his place—one of the most responsible and important of the many.

I was told that the company had in its employ within the State of California over 7,000 men, which seemed at first a large number; but when we consider how many lines of road are under construction, and how vast is the business of the through line, I am not so surprised. The road-bed is in good order; the snow-sheds are all permanent structures; the rolling-stock is of a fair grade, but not as comfortable as the Union Pacific; and what was painfully noticeable was, that the conductors were not so obliging and gentlemanly as they should have been. An air of arrogance was shown, which seemed to say, 'that, until a southern road is built, this is the *only train* for San Francisco, and we graciously allow you to ride in our cars.' Competition will no doubt remedy this, but it is an evil which should sooner be removed; for some day in this country, as it has been in England, it will be decided that railroads are to be worked for the

public, and for their benefit and accommodation. Corporations and monopolies, cliques and combinations, may, for a time, oppress and hinder the people; but there always comes a day when the public assert—and asserting, maintain—their rights.

The Union Pacific.

The Union Pacific.—As we leave Ogden; we begin our journey upon the Union Pacific Railway, whose history lacks all romance, and is only distinguished in the vastness of the undertaking, the great amount of capital required, and the energy which the managers showed in surmounting obstacles and carrying their road over a mountain range which the Engineers had declared impassible. The road was completed, and trains were running seven years before the law required, and before the best friends of the enterprise had dared to hope. Although the road was a Government necessity, still it never would have been accomplished within the time allowed by the Act (1876), had not individuals given to it their energies and their lives. In riding over the road we were struck with the seemingly unnecessary turns and twists upon some of the plains, where a straight course could have been taken. An engineer who laid many of these grades told me, that, in many places, the line might have been shortened. At least one is forced to the conclusion that the road was built upon the principle that 'one good turn deserves another;' for, if there was a necessary curve, another was made, even if of no seeming use. With the large amount in bonds and lands which the government gave this company, it is not surprising that they should make the road-bed as long as convenience would allow.

We were struck with the smoothness of the track since the repairs, always made in Spring, had been completed; and the vast amount of work which had been done since Spring was apparent. The rolling-stock is in good order, and the cars are far more comfortable than those on the Central Road. The dépôts and station-buildings are commodious; and, in some instances, they seem to be built upon expectation of what *will be* required. We, of course, should expect many blunders to have been made, the wrong locations selected for repair-shops and round-houses, sidings not where they should be, &c.; but, upon the whole, we are surprised and amazed that the work could have been done so nearly right for the requirements of the road.

The snow blockade in the winter of 1871 caused serious trouble; but the almost incredible exertions of Superintendent Sickels and his assistants saved the lives of those in the trains, and supplied the passengers, so that they suffered only delay. The winter was exceptional; and, if there had been only snow on the track, they could have cleared it away; but the snow and sleet together formed a mass which was nearly as solid as ice, weighing, in many places, thirty-six pounds to the cubic foot—a mass against which the powerful engines contended in vain. This year they were fully prepared to contend with the snows; and, although they have been very deep and badly drifted, no delay or serious trouble has been occasioned; and it is probable that a blockade for any considerable time will not again occur.

We were very agreeably surprised at the uniform courtesy and kindness of the conductors and their men; and, from lady-passengers especially, I heard remarks of admiration of the gentlemen who passed through the trains, as well to see that all were comfortable as to collect tickets.

Now that I have spoken of the good points, let me note some of the failings. In the first place, some arrangement must be made to check the baggage through from Chicago to San Francisco. We Americans demand that the companies look out for our baggage. In England your baggage is never *checked;* such a thing is unknown. There you place your portmanteau in a car which they call the luggage-van; and, when you arrive at your destination, it is thrown out, and you must 'go for it,' or some one else will.

Next, the inconvenience of dealing with that Transfer Company at Omaha must be remedied. The passage of that treacherous stream, the Missouri, caused more hard words to be spoken than can be erased from the *big book* for many a day.

Some of the proprietors of the eating-stations ought to be promoted to higher callings, for they are evidently above hotel-keeping. The best table was found at Evanston, and it was kept by a coloured man; and the next were at Laramie City and Sidney.

The Union Pacific Company own 149 powerful locomotives, 40 passenger-cars, and some 2,000 freight-cars, the number of which is being increased as business demands. In every passenger-train which is made up to run through, there are from two to four 'Pullmans,' which relieve the company from owning a large number of passenger-cars.

Daily new discoveries of resources are made along the line: coal and iron exist in great abundance, and useful minerals in large quantities. The great variety and extent of these discoveries excite the wonder even of those who have often passed over the road.

I will add, by way of recalling the history of this 'grand thought' of laying a track across the continent, a list of the different surveys which were made for a route, but none of which were followed as the exact line. These surveys furnished the groundwork of all the plans, and were the means through which we became acquainted with our 'western country.'

Transcontinental Routes.—The Preliminary Surveys.— Mr. Asa Whitney was the first man to call public attention to a railroad to connect the Mississippi with the Pacific Ocean. Between the years 1846–50 he addressed meetings of citizens, sent memorials to State legislatures, and petitioned Congress. The first plan was to begin at Prairie du Chien on the great river, cross the Rocky Mountains by South Pass, and reach the ocean at Vancouver's Sound. The first incentive for the road was, of course, to furnish the government with transportation; next to make a highway for Asiatic commerce. The rapid settlement of California furnished another strong argument in 1850 and succeeding years. Benton of Missouri was a zealous advocate of the scheme, both in the senate and before the people. After much labour and many defeats, the friends of a railroad obtained, in March 1853, an appropriation of $150,000 to defray the expenses of surveys; and accordingly six companies were formed, and began the work. As from these exploring parties all the information was obtained upon which all future plans were matured, it is well to recall the routes taken by each, and note the results attained. In the thirteen quarto volumes published by Congress all the reports are found, and elaborate illustrations of scenery, flora, and animals.

The first expedition was led by Governor Isaac I. Stevens, formerly of the army, on the line of the forty-seventh and thirty-ninth parallels of north latitude. It consisted of four separate parties. One, under Governor Steven's personal supervision, penetrated from St. Paul westward towards the mouth of White Earth River, thence by the prairies lying along the Missouri River, to the Rocky Mountains, and

among the passes of that region. Another, under Capt. McClellan, U.S.A., began at Fort Vancouver on the Columbia, explored to the north-eastward, examining the passes of the Cascade Range, and then eastward to join Governor Stevens. Another party, under Lieut. Donalson, U.S.A., examined the Missouri from its mouth to the Yellowstone, where a junction was made with that under Governor Stephens. The fourth party, under Lieut. Saxton, U.S.A., conducted a reconnaissance from Fort Walla-Walla to the Bitter Root Valley. The second expedition was on the line of the thirty-eighth and thirty ninth parallels, and was commanded by Capt. Gunnison, U.S.A. It started from Westport, Mo., and followed the valleys of the Kansas and Arkansas Rivers to the Rocky Mountains. After carefully exploring the savage region between the Sangre del Cristo Pass and Sevier Lake, a portion of the party, including Capt. Gunnison, was massacred by Indians. The command devolved upon Lieut. Beckwith, who proceeded to Salt Lake City, where he received instructions to extend the exploration westward upon the line of the forty-first parallel. This he did in the following spring, crossing the Sierra Nevadas near Fort Reading, and thence following the valley of the Sacramento to San Francisco. The third expedition, commanded by Capt. Whipple, U.S.A., was on the line of the thirty-fifth parallel. It started from Fort Smith, and took the route by the valley of the Canadian River and Auton Chico to Albuquerque; thence it proceeded westward by Zuni, the valley of the Colorado Chiquito, the valley of Bill William's Fork, the valley of the Mohave and the Cajon Pass, to San Pedro on the Pacific. The fourth expedition, under Lieut. Williamson, U.S.A., was fitted out at San Francisco, and passing up the San Joaquin and Tulare Valley, explored the region about Walker's, the Tejon and other passes, and portions of the Mohave and Colorado Rivers. The fifth expedition was over the western half of the line of the thirty-second parallel, and was commanded by Lieut. Parke, U.S.A., who was detached from Lieut. Williamson's party for the purpose. It proceeded by way of Warner's rancho to Fort Yuma, and up the Gila to the Pimo and Maricopa villages, thence by way of Tuscon and Dona Anato El Paso. The sixth expedition was on the eastern half of the line of the thirty-second parallel, and was commanded by Capt. Pope, U.S.A. It started from El Paso, and proceeded in almost a straight line eastward to Preston, on Red River, passing through Gaudaloupe Mountains, crossing the Pecos at the mouth of Delaware Creek, and traversing the Llano Estacado for a distance of 125 miles.

These explorations fully demonstrated the practicability of a road, save over the Sierra Nevada Mountains. Additional appropriations were urged, and in 1854 $190,000 were voted. Other parties were organized; and two of them more fully explored the Sierra and Coast ranges, while the third examined the means of obtaining water for railroad purposes.

However unsatisfactory these various reports were in details, they furnished the groundwork upon which to build the plans which were to be matured, and afterwards carried to a successful completion—the union of the Atlantic and the Pacific by a band of iron, over which the locomotive should whirl, carrying along its precious freights.

California for Settlers

California for Settlers.—*The Agricultural Lands.* —I append the following extracts from Mr. Nordhoff's book, which gives the best general view of the country which I have ever met with.

The greater part of the farming lands of California lies in the two large valleys of the Sacramento and the San Joaquin, including the Tulare. The Sacramento Valley is forty miles wide, bounded on the West by the Coast Range, and on the East by the Sierra Nevada. It is an immense fertile plain, containing about 5,000,000 of acres, becoming mountainous in its Northern part, but having a vast area of fertile land, much of which never needs irrigation, and produces fine crops in the driest years. In the spring of 1871, when a drought prevailed all over California, I saw a field of oats of 1,000 acres at Chico on the California and Oregon Railroad, so high that I could and did tie the oats over my head.

Northern California—namely, the Sacramento Valley and the counties which lie on the same parallel with it—has a climate mild compared with that of our Eastern States; but it has frosts and some light snows, and the semi-tropical fruits do not flourish there, except in certain favoured localities. Southern California, which includes the San Joaquin Valley and its extensions, the Tulare and Kern Valleys, as well as the sea-coast counties parallel with these, is the real garden of the State.

At Stockton begins the San Joaquin Valley, which has an area of about 7,000,000 of acres. This stretches from Stockton to the Tejon Pass, a length North and South of 300 miles. It has, without including the foot-hills, an average width of 40 miles, or, with the foot-hills, which contain excellent land, 50 miles. With the foot-hills on each side and the smaller mountain valleys, this region has over 18,000,000 of acres of land, of which not less than 10,000,000 are susceptible of highly profitable cultivation. The plains alone contain nearly 7,000,000 acres of land, of which less than 700,000 were cultivated last year.

. . . The San Joaquin, Tulare and Kern Valleys, included in the general term of San Joaquin, form the 'new country' of the State. Its soil is the richest, its plains are the broadest, its climate is semi-tropical; and in it already the orange, cotton, ramie, the sugar-beet, as well as corn and wheat, and the other cereals, have been grown.

What is needed in Southern California especially is a system of irrigation, and already capitalists are making investments in ditches and canals, from which they will receive a profit, as well as the farmer who takes the water from them upon his lands.

The merits of California for any other purpose than mining, even its own people have been slow to discover. As placer-mining has slowly given out, the people apparently believed that the State was again to be abandoned to wild cattle and horses. Now they are slowly being convinced that agriculture will pay. Plains, which were treeless and almost bare of any vegetation, have been made to yield fifty to eighty bushels of wheat, and the same persons are now as amazed at the agricultural wealth of California as they were at her richness in gold and silver. The State can to-day be said to be a country where mining has been exhausted and agriculture has not become general. The true wealth of California is in her

YO-SEMITE FALLS, FROM GLACIER POINT—YO SEMITE VALLEY

productive soil. She only wants people to come within her borders and win the prizes from her soil, as golden as those which her mines formerly gave.

Southern California.—This designation is rather indefinite, but it seems to include all that part of the State which lies to the south of Stockton, but for the purposes of this paragraph I refer more particularly to the country south of Visalia, Los Angeles, San Diego, Santa Barbara, and San Bernardino, are the principal cities, and their names indicate their Spanish origin and character. This part of the State is especially interesting to the invalid, but is also attracting the actual settler, as the processes of farming, especially irrigation, and growing of tropical fruits as well as the vine, are becoming better understood. San Diego is the most promising city, more especially since it has been made the terminus of the Southern Pacific Railroad. Its climate is the mildest and the sunniest in winter of any of the coast towns. The scenery for thirty miles around has some attractions, but is very monotonous. The streets are bare of trees, although broad; the shops are well supplied with merchandise, and the hotel and private boarding-houses are uncommonly good. The society is high-toned, and as a residence for the months of December and January cannot be surpassed, hardly equalled, on either continent. It is reached by steamer

from San Francisco. San Bernardino is situated seventy miles from the sea, is highly esteemed as a residence by many who have tried the place, but unfortunately is without ample accommodation for visitors. It lies in a great plain, surrounded on three sides by mountains. It is reached by stage or carriage in sixty miles from Los Angeles. By an examination of a map of California it will be seen that the coast line at Point Conception makes a sharp turn to the east, and Santa Barbara lies beyond this trend of the coast, facing directly south, and completely protected from all the cold sea breezes. The position can only be described by the word 'charming,' and all tourists ought to visit the old town. The climate is amazingly equable and mild. Los Angeles is the largest of the Southern cities; it lies twenty-three miles from San Pedro, which is its sea-port, and with which it is connected by a railroad. The city will soon be connected with San Francisco by rail, but at present it is reached by steamer. The old Spanish town lies at one end of the city around the old Mission church, founded in 1781; then the business streets, and beyond these the new section occupied by the Americans. It is noted for its fair climate, sweet oranges, and excellent wine. A week spent in the city will be enjoyed to the full.

I make the following extracts from the diary of Bishop Kip, of his visit to San Diego in February 1873, as published in the 'Spirit of Missions,' a magazine of the Protestant Episcopal Church of the United States for May last.

. . . We sailed in the steamer *Mohongo.* The bar was rough as we went out of the Golden Gate, and most of the passengers disappeared. But at noon the next day the sea was perfectly smooth, the rolling of our steamer had ceased, and the weather continued calm and beautiful till we reached San Diego. Most of our passengers are going to San Diego. Of those in the cabin thirty-two are to land here, and only fourteen go on to Panama. The beauty of the climate is becoming known, and the place is a resort for invalids. Of these we had a number on board, whose fearful coughing suggested a doubt whether they had not waited too long for this change of climate. We reached the wharf on Sunday morning at seven o'clock, where we were met by the Rev. Mr. Chetwood and Mr. Evans, a kind friend, whose guests we were to be at the hotel where he resided. This place has one great advantage in the Horton House, admirably adapted to the wants of invalids. With its broad airy halls and sunny rooms, it furnishes exactly what they need, and might adopt for its name one of the queer titles which the Chinese in their own country, bestow upon some of their hotels—the 'Hotel of Accomplished Wishes.'

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This is every year becoming a more important point. The number of those who resort here for health or to escape the Eastern winter will be each year increasing. They come from every State on the Atlantic coast and in the West.

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Monday.—The climate is perfectly delightful, reminding me of that at Sorrento, in the neighbourhood of Naples. We are sitting to-day with our windows open.

. . . It was at Old San Diego, four miles distant, that I performed my first service in this diocese, in January 1854 Our steamer had been wrecked opposite this port, and after going on shore in a tornado, and crashing there for a whole night, during which we expected her to go to pieces every time she struck, as soon as the boats could live in the breakers we were landed. I went up to the old Spanish town of San Diego, where for a week my family were the guests of Don Juan Bandini. The following Sunday a room was procured, and I held service. Three years ago I held service there again, when Rev. Mr. Wilbur was Missionary, and a Sunday-school was organised by him, the Superintendent of which came every Sunday from New Town. But the American population was so small that they found there was too little material to keep it up.

Tuesday.—We drove over to Old San Diego. It is within sixteen miles of the Mexican line, most of the houses being adobe—sun-dried brick—one story high, and built, as all Spanish towns here are, about a plaza or square. This answers, on Sunday afternoons, for the place in which to hold the bull-fights, which are still kept up. The American population, always small, has been diminished since New Town was founded, until scarcely any are left.

We drove on, seven miles, to the old Franciscan Mission, founded just a century ago. It is a beautiful drive up the valley, until at its end we find the Mission buildings on a rising ground. Like all places selected by the old Padres, it is remarkable for the beauty of its situation. There is a wide view for miles down the whole length of the valley, while directly in front the grove of old olive-trees planted by the Fathers, by their silvery whiteness of foliage, contrast beautifully with the green of the palm-trees dispersed among them, which give so tropical an air to the scene.

The buildings, with adobe walls 4 or 5 feet thick, present a front of about 250 feet, at the end of which is the church. When I first visited the place, in 1854, the buildings were entirely uninjured. The church, particularly, seemed just as it was left by the Padres. The pulpit was standing, and it might at once have been used for service. Afterwards, Government took it as a military station, and of course everything was altered by the troops. Now that it has been again abandoned, it is almost in ruins. The stately old church has had a floor built through it, making it two stories, until you can hardly trace its original form. The uncovered adobe walls melt away by degrees in every rainy season, and, in a few years more little will be left but a pile of ruins. This was the first Mission established by the Franciscans in California. . . .

Every time I visit Southern California, I am impressed more deeply with the idea of its future importance. In a few years, when the Southern Pacific Railroad, through Texas to San Diego, is finished, there will be a perfect rush of people from the South-western States. The advantages of soil and climate will be every year more fully recognised. Already

We hear the tread of pioneers—
  Of nations yet to be—
The first low wash of waves where soon
  Shall roll a human sea.

The part of California which I have thus described contains the only tropical climate of which the United States can boast, and it is a tropical climate without the usual penalties attached thereto. Persons seeking such conditions will find Southern California the most

favoured spot upon this earth, for here the English race find a congenial home, surrounded by all the wealth of the tropics, and where they enjoy the robust health of the North.

Wine-growing.—It is often said that in a few years California will produce wine and brandy for the world. The area on which the vine can be grown is very large— thirty-five out of the forty-four counties having successfully produced wine. The larger part of the wine is, however, produced in Sonoma, Napa, Los Angeles, El Dorado, Yuba, Solana, Santa Cruz, Santa Clara, Tulare, and Sacramento counties. With the perfect climate of California which ensures the ripening of good crops every year, it is not surprising that even within a few years a great business should have been established. Its magnitude is not conceived by those who have not been in the State, and journeyed through the counties mentioned.

On a pleasant June afternoon a number of gentlemen, who had taken up their homes in San Francisco as music-teachers, started upon an excursion to the cliffs around the Golden Gate. As they walked on, they picked by the roadside some fully-ripened grapes, which they took along with them to add to the completeness of their luncheon. Afterwards one of the party, as they sat upon the cliff partaking of the grapes, called the attention of the others to the similarity in appearance of the Mission grapes which they were eating, to some of the varieties which grew in Germany, and from which they themselves had assisted in making wine. This little circumstance turned Kühler and Flohling from musicians into wine-makers. They began their experiments with the Mission grape, and in 1854 they had a few barrels of wine. As an evidence of the rapid increase of this enterprise, we find the great house of Kühler and Flohling now occupying extensive premises, and sending out hock, claret, sherry, muscatel, and port wines and brandy, of such qualities as have made them well known in the trade.

How the Mission grape was introduced in California has been a subject of much discussion; but it seems to have come from Spain, among the raisins brought by the old Padres, and to have taken kindly to the soil, and either by propagation from cuttings, or by natural seeding, to have spread itself over the central part of the State. Other than a reasonable theory, nothing can be said with exactness about the Mission grape and its introduction.

Colonel Agoston Haraszthy early took a great interest in the introduction of foreign varieties of the vine into California; and having proved beyond a doubt that the barren hills of Sonoma would grow the grape, the State of California commissioned him to go to Europe, make examination of the vineyards there, collect cuttings and seedlings of the best varieties, and report the results. During the years 1856 and 1857 he introduced nearly 300 distinct varieties into California. As was expected, not all of these proved successes, although I was told that so far not a variety had been found which would not flourish in Sonoma Valley; but as to fruiting, there was great difference.

Spreading over the State we have now a large number of acres given up to the vine, but only a very small percentage of the land adapted for their growth has as yet been planted. The elder Haraszthy did not live to see the enterprise, to which he had given his fostering care and the best days of his life, become an established business; but his sons are reaping the reward of their father's zeal and knowledge. One son is a member of the house of Landsberger & Co., who are carrying on the most extensive business in the production of champagne and sparkling wines. By the politeness of Mr. Haraszthy we were shown the various processes, and were amazed to see such vast quantities of wine stored away for future use. The demand upon this house far exceeds their capacity to supply, and but little of their wine finds its way east of St. Louis.

At first it was thought that wine-growing would be overdone, and, as a business, would not be remunerative; but, year by year, it is proven that the demand increases much faster than the supply. True, there are many things to be learned—the hitherto wasteful mode of obtaining the juice, the care of the receptacles, and even much in the treatment of the vines, must be reformed. The wine product of 7,000,000 of gallons for 1872 will be increased within a few years to double that quantity, by the fruiting of vineyards already planted.

Land suitable for grape culture can be purchased at from 1*l*. to 5*l*. per acre, according to location and state of the land. The number of acres usually taken up are twenty-five to thirty-five,, unless the vineyardist desires to have steady help; then he can increase his number of acres according to his capital.

At the end of the third year, the vineyard will have cost for ploughing, planting, the cost of the vines, fencing and cultivation, 10*l*. per acre. This year, a small return from the vines may be expected, say 2*l*. per acre. After this, each year the vines will pay an increased profit. A very bad feature, as it seems to me, and one to be remedied as soon as possible, is, that each vineyardist is expected to make his own wine; and to do this he must have a cellar and all the appurtenances, which, for a thirty-acre vineyard, will cost at least 600*l*. I learn from trustworthy sources that some capitalists are about to erect cellars at convenient points, where they will receive the wine on storage, in casks furnished by the company. But when the business becomes systematised, no doubt the grape-grower will be able to sell his fruit direct to large wine-makers, and thus save himself the outlay for a cellar, &c. &c. I was informed that a fair estimate of profit on the investment in a vineyard, in a good location in California, would be, at the end of five years, 12*l*. per acre, from which must be deducted interest upon the money invested.

The Chinese do the work 'in the vineyards. Without them wine-growing could not be carried on.

The raising of grapes, and making them into raisins, will no doubt increase from its infancy to-day, into an assured success, and add another to the many sources of wealth in California. It is not, then, too visionary to assert that within a decade this State will grow the wine for the whole world.

General Views. —On every side in California are evidences of hopes blasted, and many, very many, of those who seek the West would do better in the East; but, on the other hand, in every city and town, and all through the fertile valleys, were men who had braved the hardships of a new settlement, and were at ease in handsome properties. Of all the vast throng who early pushed across the plains, only those of the greatest physical strength succeeded in reaching their destination. Along the whole way are seen the graves of those who fell in their struggles to reach the land of gold. The cities and larger towns of California are overcrowded; the mining-camps are filled to repletion; and those who depend upon mining have a precarious living; for Chinamen, who can fare luxuriantly on ten cents a day,

have come in to reduce wages, and even to dig over again the earth from which the American has extracted the gold as cleanly as he could afford to do. The agricultural lands are still open, and Mother-earth, year by year, yields her abundant harvests; but *ranching* is so different from Eastern farming, that it is only through many failures that the agriculturist has learned how to win her favours. The vineyard offers more inducements, and lands seemingly unfit for planting have been found well adapted for growing grapes. The wine interest has now become a very important industry. In this department it has only been after many years of trials and failures that success has been achieved, and Chinamen have come in to do all the work in the vineyard; indeed, they can fairly be said to have saved the wine-growing interests from irretrievable ruin.

I would not draw a picture which would induce anyone to expect that anywhere in California he could command success by the asking. If he goes to the shores of the Pacific, he must work; and working will anywhere bring its rewards. To the man of leisure, made independent by invested property, no portion of this earth has more attractions than California, wonderful in her scenery, unparalleled in her trees and plants, pleasing in her varied climates, and with a people noble in their hospitality. The great ease and comfort with which the journey is made over the Union and Central Pacific Roads warrants us in advising all, even those in delicate health, to make a visit to the Golden State. If there was nothing of interest at the end of their journey, they would be fully repaid by the pleasure and instruction gained by a ride over these two railroads, across vast prairies, over a great desert, and along the 'gold diggings.' Beyond these roads, you have the Yo-Semite, with the sublilnest scenery which man has yet beheld—of waterfalls higher and grander than all others, a valley unique in all its surroundings, and in its huge granite hills, rugged and isolated; all furnishing a series of pictures which should be seen by everyone who can spare the time and has the means.

Colorado

Colorado.—The way into Colorado from the Union Pacific is through Cheyenne by the Denver Pacific Railway. The length of this road is 106 miles, and the first steps towards the building of it were taken in 1867. The capitalists of Denver, and, in fact, the whole Territory of Colorado, gave to this important enterprise their hearty support; and so liberally did they subscribe for the stock, that, with the aid of Eastern capital and influence, on December 16, 1869, 58 miles from Cheyenne to Evans were opened; and on June 22, 1870, the first passenger-train went over the whole length of the road.

It was a pleasant June afternoon that we coupled our car to the train on this road, and started for Denver. As Cheyenne is in the extreme south of Wyoming, and our course lies almost due south, we are not long in running out of that Territory and into Colorado. Soon after leaving Wyoming, the Rocky Mountains come into view, stretching away to the west and south as far as the eye can reach. Long's Peak, a majestic mountain, rises prominently before us, with snow-clad summit.

Colorado is bounded on the north by the Territory of Wyoming and the State of Nebraska; on the east, the State of Kansas; on the south, New Mexico; and on the west, by the Territory of Utah. In shape, it is nearly square, embracing an area of 105,708 square miles, or 67,653,120 acres.

Colonies.—A ride of 56 miles from Cheyenne brings us to Greeley—a thriving settlement, which, although not yet two years old, gives evidences of substantial growth, and an assured increase. It is the centre of the 'Union Colony,' which purchased lands in the valley of the Cache à la Poudre River, and on the Denver Pacific Railway, half way between Denver and Cheyenne, in 1870. The population is not far from 2,000; number of buildings, 500; and there are about 50,000 acres of land. Number of acres now under irrigating canals, 30,000 (said canals being respectively 12 and 27 miles long); number of acres under plough at present, about 5,000; water-power canal two miles long and 30 feet wide, The soil is unsurpassed for fertility, and all kinds of crops are grown. There are five churches, two lyceums, one Masonic lodge, one Odd Fellows' lodge, one Good Templars' lodge, four schools, and a large graded school-building of brick, in process of erection. There are about twenty stores and shops, a grist-mill, and other mechanical industries. The trade with the valleys is large, and constantly increasing, while the town and country are rapidly growing. There will, undoubtedly, soon be other railroads centring at this place, bringing it into closer communication with other cities and towns. One peculiar feature is, that there is no liquor sold in Greeley; and in all the deeds of land given, a covenant is inserted forever forbidding its sale. As a natural consequence, there are no billiard or other saloons along the streets.

A few miles on, we come to Evans, the central town of the St. Louis Western Colony, planted here March 15, 1871, where the railroad crosses the South Platte River. The character of this place is very different from that of Greeley. The thrift and neatness so conspicuous there is wanting here, Liquor is sold at Evans; and, if that is the cause, temperance lecturers would only have to take their hearers over the Denver Pacific Railroad to make them all converts. The colony has 60,000 acres; and, so far as prosperity goes, it stands well with the other settlements.

Denver.—But we push on, and just after six o'clock we reach Denver, 'queen city of the plain.' It is the county-seat of Arapahoe County, and the capital of Colorado; is situated on the Platte River, at a point where Cherry Creek forms a confluence with that stream. It is the most important city West of the Missouri River, East of the mountains, and has already a population of well-nigh 20,000. A stroll about the town on the evening of our arrival gave us the impression of a lively place, quiet and orderly, and a June atmosphere that was delightful. Our car has been switched upon a siding, and we shall make it *our hotel* while we stay in Denver.

The following details as to the history and situation of Denver may be of interest. In 1858 a few emigrants named the place Auraria, from the fact that gold was found a few miles east—on Cherry Creek. This early settlement comprised what is now called West Denver. As the settlement increased, it was called St. Charles, afterwards Denver. The city government was organised Dec. 19, 1859. In 1863, on April 19, a fire swept through the city, destroying property valued at a quarter of a million. Again, in 1864, on May 19, the city was destroyed, but this time by a flood. The next year the Indians so blockaded the city that the inhabitants were nearly starved; but it has survived all these early catastrophes, the men who had settled there seeming only the more resolute and determined as the hardships increased. Within the last five years she has taken mighty strides forward, and is a centre of a great and increasing trade. The streets

are broad and well kept; the private dwellings are neat and comfortable; and churches and school-houses are scattered through the city. There is here a seminary for young ladies, which has a reputation beyond the Territory.

The city lies on the Platte River, at the junction of Cherry Creek, thirteen miles from the base of the mountains, which offer great protection against the fierce winds. Raised 5,250 feet above the sea, in a delightfully mild climate, it is near the western border of that great plain which, from the Missouri River, stretches westward for 600 miles to the base of the Rocky Mountains. Larimer is the principal street; and upon it are many fine blocks of stores, built of brick, stone, and iron. There are several hotels in the city which offer pleasant homes to the tourist.

Standing in the main street of the city, and turning to the west, we have a mountain-view which is unsurpassed on the continent. To the North we have Long's Peak, and the hills stretching away to Cheyenne; in front of us we have Gray's Peak; and away to the South we have Pike's Peak, and the hills towards the Arkansas River. The length of this range of mountains is more than 200 miles; and when you bear in mind that many of them are more than 14,000 feet above the sea, are snow-clad the whole year, and that the clouds rest far down their sides, you can gain some idea of the grandeur of the scene.

We lingered long, looking at these mountains. They were enchanting, as the morning sun in his journey from the Atlantic reached their snowy sides, and made them sparkle in his beams: they were even more enchanting when—

Came still evening on, and twilight gray
Had in her sober livery all things clad.

The people of Denver, as a class, are intelligent and thrifty; and there is much wealth accumulated among the citizens. No city of its size is better supplied with newspapers; and their character is high-toned and cultivated, which cannot be said of the papers published in many a Western hamlet. We found the citizens hospitable and kind, and from many we received especial favours.

William N. Byers, editor of 'The Rocky Mountain News,' the leading paper of Colorado, took the first printing-press into the Territory during the Pike's Peak excitement. He has now one of the most complete printing-offices in the West. Spending an evening at his hospitable home, we were greatly interested in the descriptions which he gave of the Pike's Peak excitement, when so many thousands toiled across the plains to this section in search of that ever-luring but ever-vanishing phantom—a fortune. Such struggles as were then made to find and hold ground which covered the golden treasure seem now almost superhuman. The crowd which gathered was estimated at from 15,000 to 20,000; and how few of that company found their fortunes! The late Horace Greeley visited this scene of excitement early in 1859, and upon a pleasant Sunday addressed the crowd assembled, where is now built the city of Black Hawk. There were probably gathered 10,000 people within sight of the spot where he stood. This excitement which had become so intense gradually died away, partly by new 'diggings' being found in other sections, and partly by the people who had come to dig gold turning to agriculture, and scattering themselves through the territory.

Golden.—Seventeen miles almost due west of Denver lies the pretty town of Golden, nestled among the foot-hills of the main range of the Rocky Mountains. It is the county-seat of Jefferson County, and contains a population of some 2,000 souls. There are two huge mountains of basaltic rock, called North and South Table Mountains, so situated as completely to shelter the thriving hamlet from the winter winds. It is one of the oldest settlements made in the Territory, and lies upon both sides of Clear Creek—a position determined by gulch miners, who for a long time found gold in paying quantities along the banks of the creek. We reached this town over the Colorado Central Road, by its eastern division; and our *hotel* has been opened on a high bank east of the town, of which, from the car-windows, we have a fine view.

The Colorado Central Railroad leaves the Kansas Pacific about a mile from Denver, and runs 16 miles west to Golden and the entrance to the cañon, down which rushes Clear Creek; which cañon is found to be the only route by which the great mining section which embraces the cities of Black Hawk, Central, Idaho, and Georgetown, can be reached by rail. The road is already graded several miles up the cañon, and the work is pushed on as fast as possible. The Union Pacific has taken this company under its fostering care, and it must become a very important line. Much credit for its success is also due to the officers of the company and the chief engineer, Capt. Edward Berthoud.

Our walk about the town has given us great pleasure; it is so prettily located, the scenery so fine, the people so hospitable. The place is a good one for the tourist to make his *point d'appui,* for here carriages and saddle-horses can be had for the various trips into the mountains. There is a good hotel, called the Golden House; and the way in which the proprietors keep it entitles them to larger and more extended accommodation.

From Denver to the Mines.—The stages leave Golden every morning, upon the arrival of the train, for the mining-towns. We are now at an elevation of 6,200 feet. When we reach Central, which is the principal point in the mining district of Clear Creek Cañon, we shall be 8,300 feet above the sea-level. The distance by carriage-road is 24 miles; so you can see we are to go up hill by a pretty steep grade.

On leaving the city we soon entered a narrow defile in the mountain, following a road which lay along the bank of a little brook. The June days had covered the hill-sides with beautiful flowers; and, as we rode by, many familiar blossoms seen in our own gardens appeared here and there. By a toilsome journey we reached the summit called Gray's Hill, from whence a peculiarly charming view is had, and thence down to the banks of North Clear Creek, up which we wended our way to Black Hawk City. We were much charmed with the mountain meadows, and the majestic growths of timber through which our road lay. There was a kind of romance in the ride; for up Clear Creek Cañon they were just completing the laying the track of a narrow-gauge railroad, alongside a roaring stream— an event which was to change the mode of going from the plain up to the mining-camps—now very toilsome and slow.

It had always been considered impossible to construct a railroad up to the mines; and in the earlier days of the Territory, the legislature, as is the wont of such august bodies on the last day of the session, used to pass annually a bill constituting all the clever spirits of the capital a company to build a railroad up Clear Creek Cañon. What they then deemed impossible is to-day an accomplished fact; and the

steam-engine is puffing up the steep grade into the heart of the mountains. To no one man is this enterprise so much indebted for its success as to Superintendent Sickels of the Union Pacific, who has directed all the vast undertaking.

Black Hawk is the first reached of the towns which lie closely joined in the cañon. Here is the office of the Boston and Colorado Smelting Works, over which Professor Hill, formerly of Brown University, presides with great ability. These extensive works are more generally known as 'Hill's Smelting Works.' The professor, besides knowing how to make the ore give up its gold, is said to know how to rule a people—hence he is the mayor of the city. We spent an hour with Professor Hill in looking over his works.

We rode through the city, and presently were told we were in Central. I have no doubt the mayor knows exactly where the line between the two cities is; but I would wager all the gold in Colorado, if I had it, that even he, in a *dark night,* could not find it. This settlement is known by the names of Black Hawk and Central City.

To form an idea of the place, you must imagine two huge mountains with almost perpendicular sides; a rushing mountain stream, the bed of which had been dug over and over, and thrown into irregular heaps; a narrow street, with a walk on one side wide enough for a single file (if all are going in the same direction), the houses set along either side of this highway, close together, and their doors opening directly into the streets; little shops and little stores; little banking-offices and lawyers' signs, with smelting-works and stamp-mills just behind these houses (all now still); up the sides of these mountains, houses perched one above the other, with long steps to reach them, where dwell the miners; and, further up, the little sheds which cover the entrances to the mines, with this cañon widening out a little at its upper end, where there are several cross streets lined with buildings, and a huge brick hotel, the 'Teller House,' looking down upon you from the shelf of solid rock upon which it stands, and which was made by blasting, with no trees or shade—then people the towns with from 5,000 to 7,000 persons, and you have the *cities* of Central and Black Hawk. It is a peculiar settlement —the love of gold alone keeping people up in this high mountain region—and is by far the largest community in the world dwelling at so high an altitude.

By walking up the hillsides, you can find places where the ore has been taken out from between walls of solid granite—small seams which have been entirely excavated, and down which you can look, and observe the peculiar formation. The opening would perhaps start as wide as your hand; then it would widen out to several feet; then again, narrow, and so on until the vein was entirely lost. This last condition the miners call '*petering-out;*' when a mine peters out, it is done for. And my notion is, that a great deal of the *stock* owned in the East must be in *petered-out* mines; for I never heard of a dividend having been seen in these parts.

The mines are very numerous, and many of them exceedingly rich. Mining is a very attractive business; and so long as there is fair probability of working mines to advantage, there will be found plenty of men to engage in that industry. Colorado yields now from 5,000,000 to 7,000,000 dollars in gold and silver per year; and the rate of production will in a very few years be increased to 25,000,000 or 30,000,000 and grow from that to an indefinite figure. That result only awaits better and more general means of transportation throughout the mountain-districts, more abundant labour, and cheaper supplies. Gold and silver are her principal articles of export; and the amount has been sufficient, from the first settlement of the country, to keep the balance of exchange always in her favour. The better means of transportation are now at hand; and I was assured by Professor Hill that many mines which now were unworked would pay well when the railroad could be used to transport the ores to some place where fuel could be had cheaply.

We arranged to return to Golden by way of Idaho Springs, which lie upon the South Fork of Clear Creek. We had to climb up over the 'divide' separating these streams; but the grand and magnificent views which we obtained amply compensated our trouble and labour. Several points reached by us were more than 10,000 feet above the sea-level. When we had gained an elevated point, from which we saw those mountains which Bierstadt had painted in his famous picture, entitled 'A Storm in the Rocky Mountains,' we could see the road which led to the 'springs,' just at the foot of the hill, to reach which by carriage we must go a long way back, and, by a circuitous route, get down to that level.

On our way we came to a spring, and near by a little log-cabin, from which came an old gray-haired man, with whom we at once began a talk. Said he, 'Haven't you heard my name mentioned in these parts?' We assured him that we had not been long in the mountains; he quickly caught at this, and said, 'Ah! I see. Looking for claims. Now, I tell ye I have got some of the richest leads you ever saw, and I will sell 'em cheap.' We assured him that we were not in search of mining properties—a fact which seemed to little suit him. Here lives this old man alone, protecting his various claims, and patiently waiting for some one to come and buy his property—a possessory right—for this is all he has to sell. All through these mountains you see many such characters, who are eking out their lives in dreams of wealth.

Idaho Springs, which we now reached, were known to the early miners, and were a favourite place of resort long after all the gold had been dug from the bed of the creek which flows near. There is still standing the great pine, its branches still offering refreshing shade, under which, for many months, was the great tent, the popular saloon of the section, and over the entrance to which was painted in large letters, 'Saints' Rest.' By all means go to Idaho Springs, and at the Beebe House you will find pleasant accommodation. Many Eastern people find their way up into these mountains during the summer.

A few miles from this point the enterprising community of Georgetown finds a home, sheltered on all sides by high mountain peaks. Here are extensive smelting-works. And a pleasant and profitable excursion is made to the town, over a mountain-road.

Our ride back lay along the creek for many miles, the bed and banks of which have been dug over and over for the gold. After leaving the creek we struck into the mountain-meadows, and through rich farms and pastures. Fresh and green were the fields, luxuriant the trees, pure and crystal-like the streams. As we enter Golden from this side, we pass by the great coal-deposits, from some of which they are now digging fuel; also great beds of fire-clay, from which bricks are made, and sent as far away as Utah; and high ledges of a peculiar limestone, which makes a good building-material. Truly Nature has favoured this spot. It seems that here must be erected the great reduction-works which shall receive the ore from the hills above, and separate the pure gold from foreign substances.

We were much pleased with a visit to the pioneer paper-mill of the Territory, where various kinds of wrapping paper are produced, and where have been made extensive experiments with the soap-weed (*Yucca angustifolia*), which covers the hill-sides. This plant resembles the threaded yucca (*Yucca filamentosa*) of our gardens. So far, the manufacture has not proved a success; although we brought away with us a specimen of fair paper, which was made wholly from this weed.

It was arranged that a large party should go up Clear Creek Cañon to examine the grading which had been already done for the road-bed. The cañon is narrow, and the river is a raging torrent, pouring over a steep and rocky bed. The walls are high, and the rocks often fantastic in appearance. The formation is volcanic, the strata being thrown into confusion. The trees are tall and thrifty, the June flowers magnificent. The road seems taken from the river-bed by walling its waters into a narrower channel. In some places a great amount of heavy blasting has been done; and to get around the mountains, and up the tortuous cañon, the road is, of course, very crooked. The work so far has been a success; the road-bed has stood the spring freshet, and the iron will be laid at once. Before we left Golden, the iron began to arrive; and, since our return East, the track has been pushed forward, until now you can take the cars at Golden, and be landed at Central City. By another season Idaho Springs and Georgetown will be accessible by rail.

During one of our walks about Golden, passing a little church, we inquired the denomination. The answer was, 'Hydraulic Presbyterian.' It was some time before we could make out that it was a Baptist chapel. There are other peculiar expressions current here. You often hear a man say, 'I'll put a *caribou* head on you,' which is equivalent to saying that you will give a man a beating. 'Plumb' is a word which is always used to intensify, as 'plumb sure,' 'plumb good,' &c. If a man fails in business, 'he has gone up the flume,' or 'he has petered out.' When they catch a thief, they 'corral' him. When a person dies, 'he passes in his checks.' I was shown the tree to which, in earlier days, they used to hang the offenders; and my friend said: 'You see that tree yonder? well, I have seen many a rascal pass in his checks there.' If while a man is absent from his land or his mine, another comes in and takes possession, he 'jumps the claim,' as they say. 'You bet,' is on everyone's tongue; and it seems to take the place, to some extent, of the too common oaths. I might go on, but these specimens may suffice, of the peculiar speech of the people living in these mining-camps.

There is a narrow-gauge road called 'The Denver and Rio Grande Railway,' which runs south, and is now completed as far as Pueblo on the Arkansas River.

It opens up a magnificent region of the Rocky Mountains. Fertile plains and productive valleys are opened by this road, which, before many years, will reach Santa Fè in New Mexico, and thence on to the city of Mexico.

The project of its construction was first started in the autumn of 1870, and in November of the same year a company was formed. The parties interested went to their work with much vigour. The President of the Company, General W. J. Palmer, had by frequent and extensive surveys of the mountains become thoroughly acquainted with the routes, and comprehended the difficulties which must be met and surmounted in the construction of a road upon the proposed route. He was led to examine the system of narrow-gauge roads, and, in company with others visited England, and made examination into the working of such roads, as well as the cost of their construction and equipment. Becoming fully convinced of the advantages of this narrow-gauge system for mountain regions, they decided on a three-foot gauge. The next autumn witnessed the completion of 76 miles, and now more than 100 miles are finished, and the work is going on. The wisdom of the decision has been amply proved in the diminished cost of the work and economy in running. It is found that just as the disadvantages for the construction of a broad-gauge road increase, in a like proportion do the advantages of this system become manifest. This line of road crosses a summit or 'divide,' which is exceeded in elevation only by Sherman on the Union Pacific Railroad.

An excursion from Denver over this road, making stops along at the points of interest, especially Colorado Springs, will amply repay the time required. This road goes by the title of 'Baby Railroad' in Denver and along the line. From Denver there is also a line east (the Kansas Pacific) to Kansas City, and thence across Missouri to St. Louis. This route is a favourite with tourists from St. Louis and the south-east. It passes through a country famed as the home of the buffalo; and in the spring and early summer large herds are seen from the cars —a sight which compensates for a journey of many miles.

From what I have thus stated, it will be seen that Denver is an important railroad centre, and before many years, Golden also will be a city from which will diverge many important lines.

The climate of Colorado is proverbial for its mildness and remarkable healthfulness. There is no steady and intense cold. Almost every day in winter, in the middle of the day, the most delicate can be out of doors. On many days you may sit by an open window, and look upon the mountains to the West covered in snow far down their sides.

Parks.— A peculiar feature in the topography of Colorado is its great mountain-locked parks. They are wide basins, or depressions, with surface and soil more or less similar to that of the plains, but entirely surrounded by lofty mountains. Their elevation is from 7,000 to 8,000 feet above the sea. They are well watered and abundantly timbered, have a delightful climate throughout most of the year, and are exceptionally healthful. All abound in mineral springs and minerals in great variety. Owing to their great altitude, they are adapted to the culture of the hardier agricultural products only.

Beginning in the south, the first is San Luis Park, drained by the Rio Grande del Norte, which flows south, and then south-east, into the Gulf of Mexico. The San Luis is the lowest and the largest of the parks. It has been settled for many years by Mexicans, and has a population of 8,000 or 10,000 people.

South Park (Valla Salada of the Spaniards) comes next. It gives rise to the South or main Platte, which flows into the Missouri. The park is crescent-shaped, with the outer curve to the west. It is 20 to 40 miles wide, and 60 or 70 miles long—a vast meadow, which supports thousands upon thousands of cattle. Its rim abounds in gold and silver mines, and rich gold placers are worked in many parts of it.

Middle Park is the next, equally divided by the fortieth degree of latitude. It is drained to the west by Grand River, and thence, by the Great Colorado, to the Gulf of California. The exit of the Grand is by a cañon of sublime depth and awful grandeur. The outline of the park is irregular, but nearly circular; and it is about 50 miles in diameter. Projecting spurs of the lofty mountains enclosing it shoot far out toward its centre. It is yet unsettled, and the most delightful summer resort imaginable for those who want to go beyond the restraints of civilisation.

North Park is near the north boundary of the Territory, and gives rise to the North Platte, which flows first towards the north, and then east to the Missouri. It is a little circular basin, 20 or 30 miles in diameter, the most timbered and loftiest of them. It has no settlements, and but few visitors; but its natural attractions are not excelled.

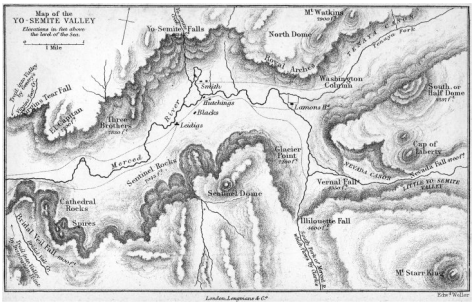
The parks are separated from one another by narrow but lofty ranges of mountains. The entire chain can be easily traversed from north to south, or from south to north, and presents the most varied, romantic, and beautiful scenery.

Society in Colorado.—It was an agreeable surprise to find a highly cultivated society in these remote communities. The mining-towns have a mixed population—a set of hardy fellows, whose mission seems to be to level the great mountains. They all hold ‘claims,’ or ‘leads,’ and to hear them talk, you would think them rich beyond the dreams of Croesus. Indeed, in these communities, I would like to see a resident who did not own a ‘claim.’ He would indeed be a man uncontaminated with gold. In the larger communities—like Denver, Golden, and a few others—there is an air of New-England cultivation and thrift, rarely found in Western cities. In Denver there is a class of retired miners who have become rich, and sought the capital to enjoy their well-earned repose. They are apt to be somewhat rough in their ways, clumsily striving, however, to adapt themselves to the customs of the civilised life to which they were so long disused. The reply said to have been made by one of them to a Presbyterian minister, who applied for patronage for a private school which he had opened, was: ‘I don’t know much about religion anyhow; but I tell you I’m orthodox to the backbone, and my children must go to an orthodox school. I can’t buy your claim to-day. Good morning, sir!’

Quartz Mining in California and Colorado.

Quartz Mining in California and Colorado.—In Colorado quartz mining has almost entirely superseded placer and hydraulic mining. In California however, hydraulic-mining is still carried on upon a gigantic scale in some sections, where vast sums of money have been expended in bringing a supply of water to the claim. Placer-mining was the earliest mode in which the loose gold was removed from the surface-soil by means of the inexpensive rocker, pan, &c. Hydraulic-mining is placer-mining on a gigantic scale; and, while the first mode is but little practised now, the latter is carried on, in many localities, at a profit. On the road to the Yo-Semite, you will find Chinamen at work with those early inplements, rocker, pan, &c.; and from the Central Pacific Railroad, at Gold Run, you can see an example of hydraulic-mining in the valley below the road. Quartz-mining is now, however, the general mode of obtaining gold. Many veins or leads where former owners have lost vast sums of money are now, under new and more economical management, paying largely. All through the mountains of California, and in Colorado, Nevada, Utah, Montana, &c., are great stamp-mills *pounding out* the gold from the rock. The rock, in these States—pure quartz, through which is mingled gold and silver—is blasted out, and is run through a crusher, which reduces it to small pieces. Then it goes to the ‘stamps.’ For these water must be had in abundance, and is generally brought in a flume into the mill, where it empties into the *ore-trough*, and is conducted out through a race. There is a heavy frame-work of timber, and long, upright sticks, to the end of which a heavy iron face is attached; which sticks are made to work up and down in guides. A shaft—upon which are cam-pulleys, or, generally, merely a bar inserted through the shaft—is made to revolve by means of steam or water power, and, by the cam-motion, raises the stamps; and, letting go, the stamp falls with force to the bottom of the box. The box extends the whole width of the framework, and into it is shovelled the crushed ore and the stamps pound away upon the stone and dirt in the water, which is made thick and muddy. On the side of the box towards the race are holes along the whole length, out of which the muddy water flows into a gutter, which carries it to a spout in the middle, from which it runs into the race. There are large copper plates which cover the bottom of the race. Upon them is spread a thin coating of quicksilver, which takes up the gold as the water flows over it. There are several of these plates, which are placed one after the other down the race; and at the end of the last is a blanket, made of wool, and through which the water flows. When it is thought that the quicksilver has absorbed all the gold that it will take, the plate is removed, and the *amalgam* is scraped off, and a fresh coating of quicksilver is put on. Occasionally the blanket is rinsed out in a tub of water, which is poured back again into the box. The gold is taken from the amalgam by subliming the quicksilver, as before described.

There are some stamps where the quicksilver is



PLAN OF YO-SEMITE VALLEY

placed in the box in liquid form, and the whole mass of ore, water, and quicksilver, is agitated until an amalgam is formed. By this process water is saved—a *desideratum* in some localities.

I saw a stamp-mill just like the one above described at Black Hawk, in operation upon ore composed of quartz and gold and silver. But a majority of the Colorado ores cannot be worked in this manner at all; for if the sulphides of iron or copper are present, then a very different process must be resorted to. Here lay the cause of failure of so many mining enterprises in Colorado. In California, they say that professors and students have always failed as miners, and that only *practical* miners have been successful. But here it was a professor, trained in a college laboratory, who found out by patient toil and study just what was required, and brought success out of a seeming ruin. At the Boston and Colorado Smelting Works, at the head of which is Professor Hill, you can see the ores of Colorado successfully reduced. The ores from the mines are purchased by samples, which are nicely assayed, and the value per ton thus determined. The ores

are then placed in large heaps, in form of a pyramid, over a loose pile of fire-wood. A match is applied; and, as the mass becomes heated, the sulphur is set free and burns out. This process is called roasting; and the sulphur supplies fuel for some three months in piles of the usual size. In making up a pile, the coarse is packed first, and over the outside the fine ore is covered. When the ore is freed from the sulphur, it is crushed, and is smelted in a furnace in a similar manner to iron ore. The product is a *matte*, which is composed of iron, copper, gold, and silver. In this form it is transported to Swansea, Wales, where the final reduction takes place.

Large works are being built at Georgetown, and others projected at Golden, to deal with these ores; and if they succeed, the mining-interests of Colorado will brighten, and those Eastern people, who now have only a stock-certificate to show, may not, after all, have made so poor an investment when they *invested in a gold-mine.*

Here ends the story of my journeyings. I trust my writing has not been amiss; for I have had before me continually one aim—to give only correct information that would aid my readers in planning a trip from the Atlantic to the Pacific, that they might know what to see, and how to see it.

APPENDIX

THE ROUTES TO THE YO-SEMITE

I.—VIÂ MARIPOSA.

From San Fransisco, by rail, over the Central Pacific Railroad, to Merced City.

Thence by stage or carriage to Mariposa, forty-two miles, to White and Hatch's, eleven miles, to Clark's fourteen miles.

Thence on horseback, to Alder Creek, six miles and a half; to Empire Camp, three miles; to Inspiration Point, five miles, or to Glacier Point, seven miles; from Inspiration Point to the Hotels, seven miles and a half to eight miles, or from Glacier Point, six miles and a half to seven miles and a half.

Note.—A carriage road having this Spring been completed into the Valley, this part of the journey by a longer route can be made on wheels.

II.—VIÂ BIG OAK FLAT.

By rail to Stockton, and on to Copperopolis, thence by stage or carriage, *viâ* Chinese Camp and Big Oak Flat, to Gentry's; thence by horseback down a steep trail to the Valley, seven miles and a half.

III.—VIÂ COULTERVILLE.

By rail to Merced City; thence by carriage, *viâ* Snelling's to Coulterville; thence *viâ* Crane Flat to Gentry's, and by horseback into the Valley, seven miles and a half.

Notes.—From Clark's, the Mariposa Grove of Big Trees is reached on horseback by a journey, in going and returning, of fourteen miles.

The whole distance from San Francisco is not far from 250 miles.

Deal only with principals, or their authorised agents. Do not let the drivers carry you out of the way to serve hotel-keepers. A private carriage is generally more agreeable than the mail-stages. Go into the Valley by way of Mariposa, and out by one of the other routes.

TABLE OF THE ELEVATION OF PEAKS AND PASSES IN THE SIERRA NEVADA MOUNTAINS.

	Feet
Bono Pass	10,765
Sonora Pass	10,115
Silver Mountain Pass	8,793
Carson Pass	8,759
Johnson Pass	7,339
Georgetown Pass	7,119
Donner Pass	7,056
Henness	6,996
Yuba Gap	6,642
Mount Whitney	15,000
Red State Peak	13,400
Mount Pass	13,227
Castle Peak	12,500
Silver Mountain	10,934
Wood's Peak	10,552
Pyramid Peak	10,120
Downieville Buttes	8,400
Onjumi	8,378

Note.—These elevations are taken from the Reports of the Geological Survey of the State of California.

The Central Pacific Railroad crosses the Sierras by Donner Pass, and the road-bed at the summit is 7,042 feet; so that the original level of the pass was lowered only 14 feet, and the actual cutting-away was probably even less than that.

MOUNTAINS AROUND THE YO-SEMITE.

Popular Name	Indian Name	Signification	Height, feet
El Capitan	Tu-tock-a-mu-la,	The Cry of the Crane	3,300
Cathedral Rocks	Poo-see-nah Chuck-ka	A large Acorn Cache	2,660
Three Brothers	Pom-pom-pa-sus,	Mountains playing Leap-Frog	3,830
Sentinel Rock	Lo-ya	A Signal Station	3,043
Royal Arches	To-coy-ae	An Indian Baby-Basket	1,800
Washington Column	Hunto	The Watching Eye	1,875
South Dome	Te-sai-yak	The Goddess of the Valley	4,737
Rocks near Yo-Semite Fall	Um-mo	The Lost Arrow	3,000
Glacier Point,	Pa-til-li-ma		3,200
Mount Watkins			3,900
Cloud's Rest			6,034
Cap of Liberty,			4,000
Mount Starr King			5,600

Note.—The Valley level is 4,000 feet above the ocean, which add to elevations given of the mountains to find their altitude.

THE WATERFALLS.

The Bridal Veil	Po-ho-no	Spirit of Night-Wind	630
Yo-Semite	Yo-ham-e-ta	Great Grizzly Bear	2,634
Vernal	Pi-wy-ack	Sparkling Water	350
Nevada	Yo-wy-ye	Twisting Water	700
South Fork Fall	Il-lil-ou-ette	The Beautiful	600

Note.—For comparison—Niagara Falls are 164 feet on the American side and 150 on the Canadian side. Mount Washington, 6,224 feet. A mile, 5,280 feet.

THE YO-SEMITE DECLARED A NATIONAL PARK.

In 1864 Congress enacted, that the 'cleft, or gorge,' in the Granite Peak of the Sierras—estimated in length fifteen miles, with its various spurs and cañons, and one mile back from the edge of the precipice on all sides—be granted to the State of California; 'that the said State shall accept this grant upon express conditions that the premises shall be held for public use, resort, and recreation; shall be inalienable for all time; but leases not exceeding ten years may be granted for portions of said premises.' Under this act, and that of California confirming and accepting the trust, commissioners were appointed, who took possession of the valley.

Mr. J. M. Hutchings has resisted their right to take possession, and resorted to the law courts, as well as to legislature and Congress. Upon a final hearing of this cause before the Supreme Court of the United States, and after full consideration, the Court has made its decision, confirming the grant to California, and declaring the title of Hutchings void. They lay down the following law, which, applied to the facts relative to all the settlements now made there, settles the matter beyond all question, and thus makes this Valley a national park.

SUPREME COURT, U.S.

No. 435. December Term, 1872.

J. M. HUTCHINGS, *Plaintiff in Error* } *In Erro*

v. *Court o*

F. F. Low and others, *Commissioners,* &c. *Califor*

1. A party, by settlement upon lands of the United States with a declared intention to obtain a title to the same under the pre-emption laws, does not thereby acquire such a vested interest in the premises as to deprive Congress of the power to divest it, by a grant, to another party.

2. The power of regulation and disposition over the lands of the United States, conferred upon Congress by the Constitution, only ceases, under the pre-emption laws, when all the preliminary acts prescribed by those laws for the acquisition of the title, including the payment of the price of the land, have been performed by the settler. When these prerequisites have been complied with, the settler, for the first time, acquires a vested interest in the premises occupied by him, of which he cannot be subsequently deprived. He then is entitled to a certificate of entry from the local land-officers, and ultimately to a patent for the land from the United States. Until such payment and entry, the pre-emption laws give to the settler only a privilege of pre-emption in case the lands are offered for sale in the usual manner; that is, the privilege to purchase them, in that event, in preference to others..

3. The United States, by the pre-emption laws, do not enter into any contract with the settler, or incur any obligations, that the land occupied by him shall ever be put up for sale.

They simply declare by those laws, that, in case any of their lands are thrown open for sale, the privilege to purchase them in limited quantities, at fixed prices, shall be first given to parties who have settled upon and improved them. The legislation thus adopted for the benefit of settlers was not intended to deprive Congress of the power to make any other disposition of the lands before they are offered for sale, or to appropriate them to any public uses.

. . . . . .

6. The act of Congress of June 30, 1864, granting the Yo-Semite Valley and the Mariposa Big-Tree Grove to the State of California, passed the title of these premises to the State, subject to the trust specified therein, that they should be held for public use, resort, and recreation, and be inalienable for all time.

HETCH-HETCHY VALLEY.

For the benefit of those tourists who desire to extend their journey, and behold more of the beautiful scenery of the Sierras, I will mention Hetch-Hetchy Valley. It is reached by a good mountain-trail from Hardin's Ranch, which is situated on the route to the Yo-Semite by way of Big-Oak Flat. A visit to this valley will amply repay the time and fatigue, and show that, out of the usual routes of travel, there is scenery grand and imposing—another valley which is almost another Yo-Semite.

Mr. John Muir thus describes it, as seen in his visit there in November last:—

'This valley is situated on the Main Tuolumne River, just as Yo-Semite is on the Merced. It is about three miles in length, with a width varying from an eighth to half a mile. Most of its surface is level as a lake, and lies at an elevation of 3,800 feet above the sea. Its course is mostly from East to West; but it is bent northward in the middle, like Yo-Semite. At the end of the valley, the river enters a narrow cañon, which cannot devour the spring floods sufficiently fast to prevent the lower half of the valley from becoming a lake. Beginning at the west end of the valley, where Hardin trail comes in, the first conspicuous rocks on the right are a group like the Cathedral Rocks in Yo-Semite, and occupying the same relative position to the valley. The lowest member of the group; which stands out well isolated above, exactly like the corresponding rock of the Yo-Semite group, is, according to State Geological Survey, about 2,270 feet in height. The two highest members are not so separate as those of Yo-Semite. They are best seen from the top of the wall, a mile or two further east. On the north side of the valley there is a vast perpendicular rock-fron 1,800 feet high, which resembles El Capitan of Yo-Semite. In spring a large stream pours over its brow, with a clear fall of at least 1,000 feet. East of this, on the same side, is the Hetch-Hetchy Fall, occupying a position relative to the valley like that of Yo-Semite Fall. It is about 1,700 feet in height, but not in one unbroken fall. . . . The wall of the valley above this fall has two benches fringed with live-oak, which correspond with astonishing minuteness to the benches of the same relative portion of the Yo-Semite wall. . . . The surface of Hetch-Hetchy is diversified with groves and meadows in the same manner as Yo-Semite; and the trees are identical in species. . . . We have no room here to discuss the formation of this valley: we will only state as our opinion that it is an inseparable portion of the great Glacier Cañon of the Tuolumne, and that its level bottom is one of a chain of lake-basins extending through-out the cañon, which have been, no great time ago, filled up with glacial drift. The Yo-Semite is a cañon of exactly the same origin.'

TREES AND PLANTS GROWING IN AND AROUND THE YO-SEMITE VALLEY.

Adiantum pedatum.
Aspidium argutum.
Acer macrophyllum.
A. glabrum.
Aconitum nasubum.
Alnus viridis.
Abies Douglasii — The Do
Azalea occidentalis — The sw
Arctostaphylos glauca — Manza
Adenostema fasciculata.
Boykinia occidentalis.
Bahia confertiflora.
Calamagrostis canadensis.
Cheilanthes gracillima.
Comandra umbellata.
Chaenactis achilloefolia.
Cystopteris fragilis.
Cornus Nuttallii.
Ceanothus integerrimus.
C. divaricatus.
Epilobium angustifolium.
Frangula Californica.
Glyceria nervata.
Hulsia brevifolia.
Hellenium grandiflorum.
Hosackia andiflora.
Lilii — any va
Libocedrus decurrens.

Nuphar advena	The co
Philadelphus Californicus.	
Pinus ponderosa	The ye
P. contorta	The pi
P. aristata.	
P. Jeffreyi.	
P. Sabiniani	Sugar p
P. Lambertiana.	
P. Coulteri	The pi
Picea grandis.	
Populus balsamifera	Balsam
Phragmites communis.	
Pellcea densa.	
P. Bridgesii.	
P. mucronata.	
Polypodium Californicum.	
Pentstemon laetus.	
Pteris aquilina	The br
Quercus lobata	The bu
Q. Garryana	White-
Q. densiflora	Narrow
Q. sonomensis	The bl
Q. chrysolepsis.	
Q. vaccinifolia.	
Rudbeckia Californica.	
Rhamnus Menziesii.	
Rubus Nutkanus	The ra
Rosa blanda	The wi
Rhus diversaloba.	
Sequoia gigantea	The bi
S. sempervirens	The re
Sidalcea malvaeflora.	
Sphagnum	Peat m
Spraguea umbellata.	
Silene compacta.	
Tetranthera Californica	The la
Veratrum Californicum.	

Notes.—It will be observed that most of the trees and plants named are not found east of the Mississippi. In the flowers, yellow will be found to be a prevailing colour. There are many poisonous plants and shrubs, especially a shrub-oak; and care must be taken to wear gloves when collecting specimens. The guides know little of botany; and the popular names vary so in different localities, that it is hard work to identify the plants.

I trust my readers will not lose their collections as I did. I had brought together many specimens, and had arranged them very carefully in the bureau in my room at the hotel, placing them nicely for preservation. One day soon after, when going to my room, I met the chambermaid on the stairs, and she said: ‘I gave your room a good cleaning to-day, sir; and I took all the dry leaves and things out of your bureau.’ ‘Where are they?’ I exclaimed, a feeling of pain coming over me. ‘I threw, them away, sir!’ I tried to explain to her their value to me; but no doubt that chambermaid is to-day at a loss to know why ‘the man in No. —’ filled up his bureau ‘with dry leaves and things.’

The attempts to introduce California plants into the gardens East of the Rocky Mountains have been for the most part failures; and, even in flower-houses, they do not seem to thrive.

HISTORY OF THE DISCOVERY AND SETTLEMENT OF THE YO-SEMITE VALLEY.

After the first excitement of gold-mining was over, the men who had come into the State with the intention of remaining, turned to the pursuit of farming. A landed estate was termed a rancho, which has become now *ranch* by corruption, and the owner a *rancher*. Some of these settlers took up lands in the great valleys in which flow the two great rivers of the State, the Sacramento and the San Joaquin, along the banks of their tributaries, the Tuolumne, the Merced, and the Fresno. Above the foot hills which bound these valleys on the East, on the sides of the Sierra Nevadas are many meadows. These are situated in valleys, and are so protected by the surrounding hills, that during the summer months they are covered with a rank growing grass, which is a sweet food for cattle and sheep.

As early as 1850 many pioneers had settled in the San Joaquin valley, and having collected their herds of cattle, they sought for them food during the dry summer. Thus early they began to drive them up into the mountains and into the pastures as the grass in the plains became dry and dead. Trouble soon came from the Indians, who, scattered about among the mountains, began their depredations. The losses and trouble became so great that the ranchers formed themselves into a company—a guard for common safety.

As a natural result, there grew out of this organisation a military company. It was composed of the hardy ranchers and sturdy miners from the near-by diggings, who avowed their purpose to be, either to drive the Indians from the country or themselves die in the attempt. In the country around were many tribes—the Monos, the Merceds, the Yo-Semites, and others,1 the latter probably not a distinct tribe,

but composed of defeated parties from several tribes who had taken refuge in the great valley. These gave the settlers the most trouble, and against them their power was chiefly used.

1Chook-chan-cie, Po-to-en-cie, Noot-cho, Po-ho-ne-chee, Ho-na-chee, Chow-chilla.

Skirmishing and fighting became general along this part of the Sierras. The whites would drive the Indians far up into the mountains, but they would always lose track of them, the Indians taking refuge in some fastness the entrance to which they could not discover. Thus for some time these skirmishes went on between the parties contending for the mastery. The whites became more emboldened, and pushing further into the mountains, discovered that the retreat into which the Indians took themselves was a vast gorge, a sight of which they obtained from a near-by peak. Those who had seen this place of retreat told wonderful stories about it upon their return to the plains. Undoubtedly this was the first time white men had ever obtained even a glimpse of this wonderful scenery, and it is not surprising that those who composed the company should have given such a description of the gorge as to lead others to desire to see it. This was late in the summer of 1850. During the rainy or winter season the ranchers talked over the discovery, and talking only magnified the stories, which spread into the mining camps, and at night around the camp-fires many were the wonderful tales related, and many were the plans formed for exploring the 'mountain retreat' the next season. A great excitement was raised in the adjacent settlements, so that when spring came it was no difficult task for Capt. Boling to organise his company of picked men, to make an expedition into the mountains both for the purpose of exploring the valley or gorge, and to exterminate the Indians, so that they would not trouble the settlers during the coming planting-time. March 1851 saw the company fully organised and equipped, and ready to start. They called to their aid Te-nei-ya, an old chief, who had always been friendly to the whites. He led the band of explorers, and knowing the trail, a few days' march brought them into that valley which we now know as 'Yo-Semite.' Imagination can only paint the scene, as those hardy ranchers, led by the old and friendly Te-nei-ya, stood upon the edge of the mountains which form the sides of this wonderful valley. The romantic wildness and sublime grandeur of the scene spread out before them must have overpowered them, even though made of 'stern stuff.'

It is related that at one time on the way Te-nei-ya failed the whites, and they were forced to call to their aid another friendly Indian, Cow-chit-ty by name, who led them on and has to this day remained friendly.

A few days of imprisonment brought Te-nei-ya and his followers to terms, and as he was chief of the most powerful tribe, the whites kept good watch that he did not betray them again. He, ever after his humiliation, remained friendly, and conducted the company to the edge of the valley.

It is related that the Indians were terribly disheartened by this to them unceremonious invasion, and, after a little skirmishing, made peace with the men who had found the way into this retreat which had for so long been their secure hiding-place.

The story of the visit of the Indian chief, Josè Jerez, a name more Spanish than Indian, under charge of James D. Savage, to San Francisco, the offence given the chief, and the manner in which he and his people avenged it, is told quite graphically by Mr. Hutchings.1 To these incidents he gives, I apprehend, too much prominence in the train of circumstances which led to the discovery of the valley.

1See 'Scenes of Wonder and Curiosity in California,' &c. J. M. Hutchings, of Yo-Semite, 1870. N. Y.

As the Indians kept their peace, there was no occasion for the whites to push farther into the mountains, and for a year or more little was done towards exploring the Valley. Little seems to have been said about the discovery outside of the country immediately around. To the renewed excitement in the finding of gold all turned their attention, and for a time forgot the wonderful scenery, which had been viewed only in part.

The killing of two miners in or near the Valley in the summer of 1852, led to the fitting out of a second expedition. This time the miners from the Mariposa country furnished the men, and they styled themselves the 'Mariposa Battalion.' They pushed into the Valley, attacked the Indians without mercy, killed many, and drove out the rest. These last took refuge with the Monos, who dwelt by the lake of the same name upon the Eastern side of the Sierras. We are told that the tribes afterwards fought among themselves, and that the Monos almost entirely exterminated the Yo-Semites, Upon the return of the soldiers, each had his story to tell, some of which obtained quite a circulation through the State, but were generally discredited, being looked upon as the 'yarns of a traveller.' They were not given to exaggeration if they were as moderate in all their estimates as in giving the height of the Yo-Semite Fall, which they reported as being 'more than 1,000 feet high.' That of the mountain peaks they gave at about half their real altitude.

To find a good reason for the tardiness with which the stories of the towering cliffs, the magnificent waterfalls, the great trees and the wonderful scenery in and around this Valley, spread through the State and found their way into the Eastern press, is difficult. It can only be explained by the extraordinary excitement which existed about gold, the restlessness of the people, who rushed from place to place as the stories of newly-found 'diggings' reached them, and the general distrust with which all the more sober part of the people there, and all Eastern people, accepted the stories which were told of California. At all events several years passed away before much was known of the Yo-Semite.

What little had become known with any accuracy was communicated by Dr. L. H. Bunnel, who had been a member of the celebrated 'Mariposa Battalion.' He had looked upon the scenery with artist-eye, and was a true lover of Nature. He was a gentleman of extended knowledge, and succeeding in winning the confidence of the Indians who accompanied them, and whom he met on the way, he obtained from them all the information which he could respecting names of the waterfalls, the mountains, and the valley itself. To him is due the name given to the valley. His accounts of what he had seen gradually attracted attention, and few names are so closely connected with the history of the valley.

In 1855 Mr. J. M. Hutchings, with a small party, made the first excursion into the valley. He was led to the place by the stories of the wonderful scenery which had reached him, and to obtain material for his series of papers illustrating the scenery of California. A second party of sixteen persons from the town of Mariposa made a visit the same year to the valley. The reports made by these tourists, and the descriptions which now found their way into the press, made the year 1856 memorable in opening the travel to the Yo-Semite. A trail was cut on the Mariposa side, and it may be said that by the next year pleasure travel was fairly began.

Of course these early visitors were forced to carry with them a full set of camp equipage, and the condition of the roads and the trails up the mountains made the journey one of hardship, and in many places very dangerous. As tourists began to turn their steps towards

the valley, persons, whose aim was to turn a penny into their pockets, began to try to meet the wants of these travellers. In the autumn of 1856 the first house was built, and was for many years known as the Lower Hotel. The building is still standing, and forms a part of the hotel now known as the New Sentinel. In the Spring of 1857 one Hite erected a canvas house some half a mile further up the valley from the Lower Hotel. In the Spring of 1858 was erected the building which now forms Hutchings' Hotel. Messrs. Hite and Beardsley were the owners, and for a season they kept it as a hotel. It was continued by different parties—Peck, Longhurst and others—till 1864, when Mr. Hutchings assumed the business which has since been continued by him. The Lower Hotel was kept successively by John Reed in 1857, by one Cunningham from 1858 to 1861. In 1863 G. F. Leidig took it and kept it till 1870. In 1871 Leidig erected a new hotel an eighth of a mile further down than this, which he is now keeping. In 1817 a small building was erected to be used as a store-house above the site of the present Hutchings' Hotel. All these, save the Leidig's new hotel, which I have mentioned, were rude structures made from rough boards, without plastering, and with partitions made of cloth. Everything at this time had to be brought upon the backs of mules or horses from fifty to sixty miles, and over the roughest of rough mountain trails. In 1871 Mr. John Smith erected a building in which he opened a saloon, bath-rooms, a barber's shop, &c., for the accommodation of guests. In 1872 Mr. Hutchings added a new building to his hotel, which is used as a dormitory. Several small unfinished buildings are scattered through the Valley, used for various purposes, as photographic galleries, telegraph office, a store, &c. The houses and buildings of J. C. Lamon are situated at the upper end of the Valley. These comprise the buildings so far erected in the Valley, and all of them are rude structures, affording only a poor protection against storms.

The first white man who took up his residence in the valley was Mr. J. C. Lamon. From his own lips I learned the following facts of his life. He was led to the Valley from hearing the wonderful stories about it while at work in the mines in the Mariposa country. In 1859 he made his first journey into the Yo-Semite. He was perfectly enraptured by the place, and his first impulses were to make it his home. He staid during the summer, and made some considerable progress in exploring different parts of the Valley and the country immediately around. He fixes the day that he reached the Valley as either the 18th or 20th of April, 1859. The next year he returned to the Valley with the full determination to make it his permanent abode, and began to clear up a piece of land, erect a log cabin, set out trees, &c. In the winter he lived among the various towns down among the foot-hills, as Mariposa, Coulterville, and the mining camps. He returned the next season, and having completed his house he has since resided there during Winter as well as Summer. For several years he spent the long Winter alone in this vast solitude, with little of animate life around him. Even the Indians seek other places to pass the Winter—the birds fly away to the lower valleys—the deer go down nearer the dwelling-places of man. He told me that the scenery was so grand, so ever-changing, that he could not feel lonesome. Occasionally as he would think of himself alone in this Valley, with impassable barriers of snow between him and the settlements, he would offer up a prayer that he might be protected against sickness and suffering, for with health he found ample resources of happiness. For two years he had an occasional companion in the person of James Wilmer, and as he was an early inhabitant of the valley, a record of his life ought to be preserved.

Coming down the Mariposa trail, just as you reach the level of the valley, you pass a large tree, around the trunk of which are some rough boards, standing with inclined sides. This rude structure of boards covers a great opening in the tree which fire has made. The space within scarcely allows a man to lie with extended limbs. The guide tells you that the hermit lived here, and that he died in the valley, and was buried near the banks of the swift-flowing Merced. This is all he can tell. Of his name, his history, his motives, he can say nothing. Wilmer was from New York. There terrible and unrelenting adversities and domestic troubles coming upon him, he sought in the great mountain solitude escape from his cares. He lived in this rudely-constructed shelter and spent his time in fishing and hunting. All the solicitations of Mr. Lamon that he would come. and share his cabin with him were politely refused; 'for,' said Mr. Lamon, 'Wilmer showed his good bringing up, and I think he was born a gentleman.' At long intervals he would spend a day at Lamon's cabin, and then talk of his past life. Letters came to him from his friends, and then he would become very low-spirited. He grew more and more dejected and sad, ceased to find any oblivion in his fishing-rod and rifle, and often told Lamon that he had fully resolved to take his own life. He had not been seen for a longer time than usual; the Indians as they came to the cabin said, 'White man gone, we no see him;' and so Lamon started for the rude shelter at the tree, with a sad heart. There was no one there, and nothing to indicate where Wilmer had gone. Next day, while searching the river, he found the body thrown upon the rocky bank. Thus ended the life of James Wilmer, whose grave made that day was the first for a white man in that weird solitude. There is, however, a tradition that the two miners killed in 1852 were buried at the foot of the Bridal Veil Fall, but I could not learn that this was well authenticated.

Thus is narrated the story of the discovery and settlement of the Yo-Semite. So far little has been done to mar the beauty of the scenery. The decision of the court, giving to the commissioners power over the lands granted as a park, will cause many changes to be at once made which will improve the accommodation for tourists. The opening of the carriage road into the valley, while it robs the journey of much romance and adventure, also saves much fatigue and delay. No doubt modern improvements will soon find their way into Yo-Semite.

ORIGIN OF THE NAME YO-SEMITE.

[Editor's note: For the correct origin of the word *Yosemite* see "Origin of the Word Yosemite."—dea.]

Before dismissing the Yo-Semite, I must refer to the orthography of this name as well as its signification. The discussion has been extended, and some of the points brought out are of much interest. The Indians know the place as Ah-wah-nee, and it is strange that this was not adopted. The Indian name for the Falls spelled as nearly after their pronunciation as possible would be Yo-ham-#-t# or Yo hem-#-t#. The present name seems to have gained currency during the Summer of 1851 and is retained, though several attempts were early made to change it. Dr. L. H. Bunnell is probably the first man who recorded the name of the Valley, and his orthography is that now in use. In vain I have searched among the books upon California and the Valley for some solution of this problem, but all leave it by saying it is impossible to tell how the name came into use. All inquiries into the adoption of names of places bring to light certain historical facts, and to the student it is of much interest as well as profit to pursue such investigations. The following seems to me a solution of this vexed question.

It has been suggested that this name was that of the most powerful tribe of Indians, who had given to the country about their name, but this has been disapproved by historians of the early wars with the natives, and, in fact, the Yo-Semites were not a distinct tribe,1 but

the Indians who dwelt in the valley were composed of defeated parties from several tribes, and this name has rather been in later days given this band of outcast warriors than theirs to the valley.

1See Dr. Bunnell's 'Indian 'Wars,' Hutchings' Magazine, &c.

It is well known that the Indian sees in every mountain, and tree, in the waterfall, and in every weird spot, a *spirit* or *nymph,* whose life is enwrapped in this outward form. In the waterfall at the entrance to the Valley he saw the spirit of the night wind; in the mountain called South Dome he saw the goddess of the Valley; in the trees he found nymphs who exercised a certain power over him. The whole race is very imaginative, and given to the contemplation of things supernatural. Those who have lived among them till they have learned their traditions, their customs and habits of thought, tell us that certain of them travel from tribe to tribe, and around a council fire tell the most wonderful stories of their origin, the visits of the great spirit to earth, the great battles of their tribe, in which the *genii* which preside over their fortune took part. They point you to Mount Shasta, as the wigwam where the great spirit dwells, to little Mount Shasta where lives the grizzly bear, the father of all Indians, with his *god*-wife. He imagines smoke rising from the wigwam fires within these mountains, and on their side he sees plainly the print of the feet of the great spirit, made when he came down the mountain.

It was perfectly natural, then, that the Indian should find a pervading *spirit* in the Valley That which struck him as the development, as it were, of this spirit, was the great fall, which seemed grand and awful to his untutored mind; and this he called Yo-ham-#-t#, and as this spirit of the grand and awful pervaded all the Valley, he found Yo-ham-#-t# at every step, for mountains and waterfalls all were grand and imposing. It was also in perfect accord with his nature that this spirit should be that which to him is the most awful thing known—a great and full-grown grizzly bear. He has implicit belief that every Indian who leads a wicked life is to become a grizzly bear, doomed to live among the snowy mountains, where there is no deer for his food. His heaven is a place where he can lie all day in his wigwam, and deer will come to his door to be made into venison. It was then, I repeat, in accord with his nature to find the spirit of the great grizzly bear in the valley—to him Yo-ham-#-t#. The name of the *locus* or the place, then, was Ah-wah-nee, and the spirit of Ah-wah-nee was Yo-ham-#-t#.

For the orthography it is more difficult to account. We know that the Spaniards, as they gradually spread themselves over the country, mingled with the native tribes, and that there grew up a race in California called Mexicans. Their language is mostly Spanish, but somewhat modified by the Indian. Long intercourse with the Spaniards also had taught the Indians many new words. The children of the mingling of these races speak to-day peculiar dialects. Since settlements were made by Americans, this race has died out or been driven out of most of the towns. You can see that all these circumstances had much influence upon the language of the several peoples. The s and z sounds are quite wanting in the Indian dialects, and in the words now used by the Indians which have these sounds, they have been modified by or taken entire from the Spanish. It is one of the most difficult tasks to put into English letters the words and names of the Indians, for among the members of a single tribe each individual has a pronunciation different from the other. This influence of the Spanish upon the speech of the natives is very apparent, and the difficulty in spelling Indian words is forcibly proven by a single trial.

It is said that when the Americans made their way over into the valley, the Indians in their despair cried out what seemed like Yo-sem-i-te. Dr. Bunnell first gave this orthography, and he supposed it to be the Indian name of the Valley. Later investigations showed it to be not the name of the Valley, but of one of the waterfalls, or rather a corruption of that name. All through the State we see the laboured attempts on the part of the whites to get rid of the Indian names. They early began to hate the natives, and this hatred became so fierce that they would not even allow a name to remain to remind them of the Indian or any of his race. All that was Spanish they retained and cherished, and even if any Indian name became early attached to a place, later years would see the word so changed that little of the original would be left. The Indian name Yo-hem-#-t# may have been thus treated, although the early date at which we find the present orthography given indicates that it had its origin in an attempt to put into English letters the spoken word of the Indians.

The very thing that those natives of the forests, who for so long had found a secure retreat in this, to them Ah-wah-nee, where the spirit Yo-ham-#-t# found its home, would do when, with ruthless march, the invaders came upon them, would be to cry to that *spirit* to protect them and the place where they dwelt. The white men caught the word and put it as nearly as they could into English letters, so that upon their return to the settlements they gave the name, each pronouncing it, as nearly as he could, as they had heard it. All have now acquiesced in this orthography, and there would be little use to try to make current another name, if, indeed, any other would be better. Let it remain and perpetuate the traditions of the poor Indian who saw in this awful and sublime scenery that mighty spirit which was ever before him—the dread grizzly bear!

THE DISCOVERY OF GOLD IN CALIFORNIA.

The origin of the name California and its signification have been the subject of much discussion.1 To the curious it presents a field of investigation full of interest and profit. The history of the Spanish Settlements in North America, and the accounts given by the early English navigators of the Pacific, will be brought into requisition.2 For myself, while thus engaged, I chanced upon an ancient record of the finding of gold in California, earlier indeed by many years than any which I had before read. The name of John A. Sutter will always be mentioned in connexion with finding gold on American River, as the first discoverer. He was an early pioneer to the Pacific country, took up a large tract of land, and built a fort as protection against Indians. He erected a mill, and in the race which conducted the water upon the wheel, the gold was found, and hence, from his ownership of the property, his name is commonly given as the discoverer. There was in his employ a man by name James W. Marshall, who attended to the working of this mill. One day he was at work clearing out the race, and came upon a deposit of what appeared to be gold. He was several days in satisfying himself of its purity, and having done so he showed it to Sutter, whose property was thus made of fabulous value. They agreed to keep the matter secret, but such fortune was too good to be kept quiet, and soon a great army of men were on their way across the plains to California. As the news spread over the Atlantic, from every city and town in Europe sturdy men set out for this new El Dorado of the West. The old miller who so soon became a miner long ago died, but his discovery was followed by the astonishingly rapid growth of the State which has been described in these pages.

1See 'Annals of San Francisco,' &c., p. 23. Soule, 1855. N.Y.

2See ‘History of California.’ Robert Greenhow, Translator and Librarian to the Department of State, Washington; also ‘Memoirs, Historical,’ &c., by same. 1840.

By examining the old record we shall observe how quaintly is told a much earlier discovery of the metal, although it was not so thoroughly tested as to make the facts certain. I will copy first the title to the old book. It is a very rare volume, and was found in Colorado, where it was taken by a French gentleman who many years ago emigrated to that territory.

“A Voyage Round the World by the way of the Great South Sea. Performed in the year 1719-20-21-22 in the Speedwell of London, of 24 guns and 100 men (under His Majesty’s Commission to cruise on the Spaniards in the late war with the Spanish Crown), till she was cast away on the Island of Juan Fernandez in May 1720; and afterwards continued in the Recovery, the Jesus Maria, and Sacra Familia, &c. By Capt. George Shelvocke, Commander of the Speedwell, Recovery, &c., in this expedition. MDCCXXVI.”

The author then makes the following record:

“As to the bounds and extent of California our geographers have never yet been able to determine either by their own observations or information from others, whether it is an island, or a part of the continent of North America.”

He gives his reasons for not trying to determine the above facts thus, and speaks of what he thought was gold.

“It would be perhaps more a satisfaction to the curious than any real advantage to us; since it would be much the same to us whether it be an island, or a part of the continent if we had any advantageous views of making any settlements there.

“The eastern coast of that part of California, which I had a sight of, appears to be mountainous, barren, and sandy and very like some parts of Peru; but nevertheless the soil about Puerto Seguro, and (very likely in most of the valleys) is a rich black mould, which as you turn it fresh up to the sun appears as if intermingled with gold-dust, some of which we endeavoured to wash and purify from the dirt; but though we were a little prejudiced against the thoughts that it would be possible that this metal should be so promiscuously and universally mingled with common earth, yet we endeavoured to cleanse and wash the earth from some of it, and the more we did the more it appeared like gold; but in order to be further satisfied, I brought away some of it, which we lost in our confusions in China. But be that as it will, it is very probable that this country abounds in metals of all sorts, though the inhabitants had no utensils or ornaments of any metal whatsoever, which is no wonder, since they are so perfectly ignorant in all arts.”

We might speculate upon the changes which would have come over this country, had the fact become settled. The ‘confusions’ may have lost to England the State of California; for if her people had learnt that treasure was to be found there they would have soon made their way across the seas, driven out the Spaniards, and unfurled their flag in token of government.

THE PACIFIC RAILROADS AND THE LAND GRANTS.

For the better protection of settlers over the ‘West’—a word used to designate all the territory between the Mississippi River and the Pacific Ocean—Government had for many years been establishing a system of Military Posts and Forts. The trouble, expense and delay in transporting the troops to these various stations, first impressed upon the officers of the Government the necessity for a railroad, and time only increasing this need, it became absolute. The precipitation upon the country of the civil war only augmented, indeed made conclusive, the arguments which had been advanced in favor of a highway which should connect the States upon the Atlantic with those upon the Pacific. With the doubts which existed in the minds of eminent engineers as to the possibility of crossing the Rocky Mountains and the Sierra Nevada, with the vast wastes of plain and desert, with hostile Indians on every hand, it is no wonder that even energetic people should hesitate. No wonder that grave senators and eloquent representatives should oppose a bill which should sanction by law so hazardous an undertaking. Urgent, absolute necessity alone overcame the objections which were offered.

In 1862 and the 37th Congress, an Act was passed entitled *‘An Act to aid in the Construction of a Railroad and Telegraah Line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military and other purposes.’* This Act was approved by President Lincoln July 1, 1862—an Act which, although the dark clouds of war hung thick over the country, was hailed with delight by the people.

After several amendments a Bill was at last passed making land grants of every alternate section of land for twenty miles on each side of the line. This would give 20 sections of 640 acres each, or 12,800 acres for each mile.

The length of the road from Omaha to Sacramento is 1776.18 miles, making the whole land grant in number of acres 22,735,104, of which the Union Pacific have 13,295,104 and the Central Pacific 9,440,000.

The United States gave the Companies the right of way though all the public lands besides, and in aid of the work issued 30-year 6 per cent. bonds, for which the Government took a lien upon the road-bed and property. The bonds were divided and apportioned as follows:—

Union Pacific,	525.78	miles,	bonds at	$16,000	per mile.
Central,	7.18		”	”	”
Union,	363.602		”	$32,000	”
Central,	580.32		”	”	”
Union,	150.		”	$48,000	”
Central,	150.		”	”	”

Total, amount of bonds $53,121,632: Union Pacific, $27,236,512; Central Pacific, $25,885,120.

Government also guaranteed the interest on a like amount of first mortgage bonds issued by the Companies.

The total cost of the two roads was in gross $190,000,000, or 38,000,000*l*.

Note.—I refer those who would like to investigate this subject further to—

Reports upon Railroad Routes to the Pacific, 13 vols. 4to. issued by the Secretary of War U.S. Washington, D.C.

Volumes of the Congressional Globe, 37th Congress, 1862, et seq.

The Reports of the Congressional Committees on the Pacific Railroads in the same, from 1862 to the present.

New Tracks in North America. Bell, London, 1869, pp. 237-281.

THE MINING TOWNS OF CALIFORNIA.

Tourists will naturally desire to visit some of the towns, where they can observe closely the various operations connected with gold-mining, which is such an important industry of California. This can be done by leaving the main line of railroad at any station in the mining-region and going a little way into the country. Indeed, on the main line of the Central Pacific are several towns, where almost the only occupation of the people is gold-digging.

A short description of some of these towns, and suggestions as to the routes to be taken, will not be out of place. Dutch Flat, which lies in a hollow near the station, of same name on the main line of Central Pacific, is an important town of 2,000 inhabitants, where the chief pursuit is mining. Three miles to the north-west is Little York, a mining-camp of 500 people; and six miles on You Bet, of about same size; and eight miles further Red Dog, another camp. These are all located in what is called the Blue Lead section, and are easily accessible points, where to study both the operations of mining and the life of the miners. Near the station, Gold Run, two miles west of Dutch Flat, can be witnessed hydraulic mining. Even as you ride along the railroad the numerous flumes for conducting the water to the mines are seen. Thirteen miles north of the station called Colfax, and which is thirteen miles to the west of Dutch Flat, is Grass Valley, which is to-day the most important mining-town in the State. It contains about 6,500 people. Quartz-mining is the mode, and the numerous ‘stamps’ at work, and the richness of the rock in gold, have given the town the importance of having produced more gold than any other. In 1850 it was first discovered that the rock was gold-bearing, and next year the first mill was set up, and increasing from that time, they are now numbered by scores. The most approved and costly machinery and appliances in mining have been introduced. The town is fortunate in having good hotels, and the tourist will find here much that will interest and instruct him. Four miles from Grass Valley on Deer Creek lies the old settlement called Nevada City, and which is the seat of Nevada County. The town has 4,000 inhabitants, good hotels and good society. As within a few miles of the town in any direction may be seen extensive mining operations, both hydraulic and quartz, I doubt if there is a more advantageous spot from which to set out upon excursions among the towns of this section of the State.

An excursion of much interest can be made from Sacramento to the North as far as Marysville, over the Oregon division of the Central Pacific, which is in course of construction through the Sacramento Valley. Marysville, the county seat of Yuba county, which takes its name from Yuba river, is one of the most prosperous towns in the State, and is ranked fourth in commercial importance. It contains a population of 8,000, and is growing rapidly. In the county around Marysville there are twelve quartz mills and twenty-six companies owning water-rights for hydraulic-mining. By the same road you go to Yuba city, on the eastern bank of Feather River, an interesting old town and the seat of Sutter County. From the hills adjoining the site of the city is had one of the most magnificent views of mountain scenery in the whole State. Away to, the North rises Mount Shasta, to the height of 14,440 feet, and although 220 miles away stands in full view, its dark sides crowned with a wreath of white snow; to the West the peaks of the Coast Range come in sight; to the South the Contra Costa mountains, and Mount Diablo overtopping all, while from the North to the extreme South stretches the snowy line of the Sierra Nevada.

A trip over the Sacramento Valley Railroad cannot well be omitted. This line pierces the Sierra Nevada, and was the first railroad built in California. A journey of twenty-five miles brings us to Folsom, on the South bank of the American River, and where may be observed placer-mining still carried on to some extent. The railroad terminates at Shingle Springs, and from here a stage ride of 12 miles brings us to Placerville, the seat of El Dorado county. This town has uncommon interest, for it was only eight miles from here that gold was first discovered in January 1848. From Placerville, by stage or carriage, the old town of Sonora is reached. This town was once a prosperous city, but now its glory has departed, and it is called a decayed town. Its beautiful climate remains, and so do the old lovers of the place. They say at Sonora, ‘If you visit the town you will want to stay, and if you stay two weeks you will stay all your life.’ The people here seem contented with the delicious climate, and the cheap and easy living which they obtain. The great brick and stone stores and warehouses are no longer used, the grass is growing in streets which once were busy marts of trade, property is depreciated to five per cent. of its former value, and still there are people who prefer to remain in the old town with all its misfortunes than move to a more prosperous place. Sonora is only one of many Californian towns which have fallen into decay when the gold was gone. The people have not as yet learned to cultivate the soil, and those who remain obtain a precarious living by panning over again the ‘tailings,’ and thinking of the days which have gone.

On the journey to the Calavaras Grove of Big Trees a short visit ought to be made to Mokelumne Hill (accent on second syllable), which is the seat of Calavaras county, and was one of the earliest mining settlements, having had its birth in 1848. Many historical incidents are connected with this town, and much that is old and primitive in mining can still be seen in the vicinity.

Mariposa, another decayed mining town, is on the road from Merced to the Yo-Semite, and is full of interest in making observation of mining operations. Bear Valley, seven miles from Mariposa, is another town of importance as the headquarters of the Mariposa Company. At the office of this Company information as to visiting different parts of the property can always be obtained.

I might add more, but the points which I have mentioned are sufficient to direct the tourist, who will find at any of the places referred to, people who will gladly give him the local history of the town and aid him in making excursions into the country. These old towns are all full of interest. Customs and habits of the old mining days, when what was said at a miners’ meeting was the law, have been preserved. Spots will be pointed out where gold enough in a few months was taken out for a nation’s ransom, and he will find remaining some of the old settlers who seem to be living still in those prosperous days.

TREES AND PLANTS OF THE ROCKY MOUNTAINS.

The following list contains the principal trees and plants found in these mountains; and for its completeness I am indebted to Capt. Berthoud, Chief Engineer of the Colorado Central Railroad.

Abronia fragrans.	
Acer circinatum	Vine m
A. negundo	Box el
Achillea millefolium	Comm
Aconitum reclinatum	Monk’
Actaea rubra	Red ba
Aira pallens	Red-gr
Allium triflorum	Onion,
Alnus incana	Speckl
Amelanchier alnifolia	June be
Amphicarpaea monoica	Wild-h
Anemone multifida	Many-
A. Virginiana	Wind-f
Aquilegia cerulea	Blue co
Arabis falcata	Rock-c
Arctostaphylos uva-ursi	Trailin
Arenaria	Sandw
Argemone Mexicana	Mexica
Arnica Montana	Arnica
Artemisia canadensis	Wormw
Aster Novae-Angliae	Comm
Astragalus caryocarpus	Milk-v
A. filifolius.	
A. hypoglottis.	
A. mollissimus.	
A. Plattensis.	
Berberis aquifolium	Mahon
Betula glandulosa	Rocky-
Ceanothus ovalis	New-Je
Cerastium arvense	Field c
Cheiranthus Cheiri	Wall-fl
Chimaphilla maculata	Princes
Clematis Viorna	Leathe
C. Virginiana	Comm
Convolvulus arvensis	Bindwe
Corallorhiza multiflora	Coral-r
Corydalis aurea	Golden
Cypripedium candidum	White
Delphinium album	White
D. menziessi	Larksp
Dodecatheon meadia	Americ
Draba verna	Whitlo
Echinospernum Lappula	Stick-s
Ellisia Nyctelea.	
Epilobium spicatum	Willow
Erigeron compositum.	
Erysimum cheiranthoides	Worm-
Euphorbia corollata	Flower
Frasera Carolinensis	Americ
Gilia fragrans.	
G. pulchella.	
G. rosea.	
Glyceria.	
Ipomoea leptophylla.	
Jamesia Americana	Mounta
Lilium Canadense	Wild y
Linnaea borealis	Twin fl
Linum Boottii	Yellow
L. percum	Blue fl
Lippia cuneafolia	Fog-fru
Lithospermum longiflorum.	
Lupinus perennis	Wild lu
Malva moschata	Musk r

Mentha borealis	Horsen
M. piperita	Pepper
M. viridis	Spearm
Mertensia	Lungw
Mimulus Jamesii	Monke
Moneses unifiora	A very
Nasturtium palustre	Marsh-
Nycterum lobatum	Yellow
Oenothera	In varie
Obione canescens.	
Pentstemon ceruleum	Beard-t
Phlox Drummondii	A show
P. Subulata	Moss p
Polemonium ceruleum	Valeria
Populus angulata	Bitter p
P. grandidentata	Cotton
P. tremuloides	Americ
Primula farinosa	Primro
P. rosea.	
Ranunculus	Butterc
Rhus aromatica	Fragra
R. typhina	Stagho
Ribes aureum	Buffalo
Rubus Nutkanus	White
Sedum luteum	Stone r
Silene acaulis	Moss c
Sida coccinea	Red-flo
Spiraea opulifolia	Meado
Spiranthes cernua	Ladies'
Thermopsis Montana	Yellow
Tradescantia Virginica	Spiderw
Verbena Aubletia	Verben
V. bracteosa.	
Viola cucullata	Violet-
V. palmata.	
V. pubescens.	
V. rotundifolia.	
Yucca angustifolia	Soap-w
	garden

Note.—Many of the above plants will be recognised as favourites in Eastern gardens. There are many plants not as yet identified and named, as there has been no complete flora made of the United States West of the Mississippi. Tourists will observe how much more brilliant the blossoms of the same plant are up on the mountains than in the valleys. In the higher belts of vegetation, Nature has constructed her plants and trees to adapt them to their situation.

TABLE OF ALTITUDES IN COLORADO

Taken from the most Accurate Surveys.

	Feet
Denver	5,250
Golden	6,200
Central City	8,300
Idaho	7,800
Georgetown	8,450
Caribou	9,200
Boulder	5,550
Greeley	4,750
Cheyenne	6,041
Colorado City	6,350
Pueblo	4,400
Trinidad	5,800
Tarryall	9,900
Fairplay	10,000
Twin Lakes	9,000
Hot Springs in Middle Park	7,700
Boulder Pass	11,700
Berthoud Pass	11,020

Argentine Pass	13,000
Breckinridge Pass	11,000
Long’s Peak	14,300
Gray’s Peak	14,251
Mount Lincoln	14,300
Mount Harvard	14,270
Mount Yale	14,078
Pike’s Peak	14,216
Summit of Divide where Rio Grande Railway crosses	7,040

The extreme limit of timber-growth in this region is usually about 11,000 feet above the sea, though, upon favourable exposures, it occasionally extends some hundreds of feet higher. Elevations above that altitude all come under the common term of ‘snowy range,’ or ‘snowy peaks;’ and they hold more or less snow upon them all the year round. They number, in Colorado, thousands of peaks, and hundreds of them are of about the average height of the highest enumerated. It is doubtful whether the loftiest have ever yet been measured. Lakelets for ever covered with ice are common among their craggy summits.

ORES PURCHASED AT BOSTON AND COLORADO SMELTING WORKS.

The Boston and Colorado Smelting Company—better known as Prof. Hill’s—at Black Hawk, during 1872, purchased the following amounts of ore: From Clear Creek County, 2,100 tons, for which $320,000 were paid; from Gilpin County, 6,950 tons, for which $178,000 were paid; and from Park County, 600 tons, for which $88,000 were paid; making a total of 9,650 tons, and $586,000. This amount of ore was reduced to 640 tons of matte, which was shipped to Swansea, Wales. The average yield of the ore treated in 1871 was $80 per ton; and, estimating it at the same this year, the product of the works for 1872 have been $788,000. This would give an average value to the matte of about $1,230 per ton.

COLORADO.—WEATHER RECORD AT DENVER 1872.

	Highest	Lowest	Mean	Rain and Melted Snow
January	58	-26	22.7	.84
February	64	-9	34.7	.29
March	78	4	39.4	2.44
April	83	25	49	2.38
May	89	35	61.3	3.21
June	97	49	69	.58
July	93	54	71	2.42
August	94	52	72	1.71
September	90	35	62	1.47
October	88	19	53.6	1.30
November	69	-5	35.8	.81
December	60	-8	28	.32

The rainfall in 1870 was 12.65 inches; in 1871, 12.53 inches; and, in 1872, 18.77 inches.

NORTHERN PACIFIC RAILROAD.

My readers must be aware of the existence of this Company and informed of its object to connect the great Lakes with the Pacific Ocean. Their plans for the future; the work already done; their land grants and the resources and characteristics of the country through which the line passes, are all set forth in the publications of the Company, which are easily obtained in London, of Jay Cooke, McCullough Company.

TEXAS AND PACIFIC RAILWAY.

This Company propose to connect the great Southern cities of the United States with the Pacific Ocean at San Diego in California. The line passes through Texas, New Mexico, Arizona, and Southern California, opening for settlement a vast area of favourable country. This Company has for its President Thomas A. Scott, of the Pennsylvania Central, under whose leadership success is assured. Parts of the line are already under construction.

HISTORY OF MINING IN COLORADO.

The General Features of the Mining Region, its Situation and Extent.

The region now embraced within the limits of Colorado first began to attract public attention in 1858. A party of miners from Georgia, under the leadership of Green Russell, are credited with the first gold discovery in what was then known as the ‘Pike’s Peak Country.’

This discovery was made on Dry Creek, a few miles south of the present site of Denver, and was followed by others on Cherry Creek, and at different points along the Platte River above the confluence of these two streams. Reports of these discoveries, of course greatly exaggerated, were not long in reaching the Missouri River; and, immediately thereafter, excited gold-hunters began to wend their way towards the new Eldorado. The trials, vicissitudes, and sufferings of these early pioneers, have furnished abundant material for most thrilling history.

The progress and development of the mining-interests of this region are thus described by a resident in the mining-districts.

The first important gold discoveries were followed by a large influx of population to the mining-region. During the first two years operations were confined to the placers in various localities, and to the washing of surface dirt of a few gold lodes near what is now Central City.

During the succeeding year, explorations were rapidly and widely extended; and discoveries were made, at intervals, throughout the whole foot-hill region, from Wyoming (then Nebraska) on the north, to New Mexico on the south—a distance of more than 300 miles. This mining-region has a width varying from 40 to 60 miles, hence including about 15,000 square miles. Subsequent explorations and developments have established the following facts relative to this great mining-region of Colorado, viz.,—

First, that the plain country adjacent to and along the entire length of the Eastern base of the mountains is underlaid with inexhaustible beds of coal, of the lignite class, which is of such superior quality as to adapt it for all requisite uses, whether for steam, smelting, or domestic purposes. Some of these coal-deposits are found in horizontal, others in vertical beds, varying in thickness from 15 inches to 15 feet. Bordering these coal-measures are deposits of fire-clay, equal in quality to any in the world, and in quantities sufficient to supply the wants of the nation. The same belt furnishes supplies of limestone, sandstone, gypsum, and iron ore. This is the outlying belt of the mineral region.

Second, that the lower foot-hills, for a distance of 10 or 20 miles from the plains are traversed by copper-bearing veins, in nearly all of which a trace of gold or silver, or of both, is found, and in paying quantities in some of them; and,

Third, that at the back of these, extending to the Snowy Range, and including some districts beyond the range, are found the great gold and silver-bearing veins, which, together with the placers, have hitherto constituted the bullion-producing source of Colorado. These veins extend East and West, showing many changes of character in different localities, and are believed to exist along the range, with possibly some interruptions, from the Northern to the Southern boundary of Colorado. Previous to 1865, the region of country immediately surrounding Central City was the great gold-producing section, by its placer and lode-mines. The only other sections of Colorado which produced gold were Park, Lake, and Summit Counties, where rich placer-mines were and are yet worked successfully. The mines worked in these sections were gold-mines, producing gold containing but little silver. In 1865, however, rich silver lodes were discovered in Summit County; and in 1866 others in Clear Creek County, more particularly in the vicinity of Georgetown. The latter have so steadily increased in production as to make them the great rival of the gold-mines of Gilpin County in the production of the precious metals. In 1870, in Boulder County, silver-lodes were discovered, and are worked to this day successfully. In the autumn of 1871 extensive deposits of silver-ore were opened up in Park County; also gold and silver mines in Conejos County.

Nearly all the gold veins carry a large amount of silver; many of the silver veins carry some gold; and others carry copper, lead, and zinc. A large area of the mineral region has not yet been explored, and new discoveries are made every year.

Lack of an economical and intelligent system of mining, lack of reasonable and adequate reduction-works, excess of prodigal and unscientific experiments, and lack of railroad facilities, have, in times past, militated against the profits of mining in Colorado. All these impediments have either disappeared, or are rapidly disappearing. Mining has been systematized, and is conducted far more economically than hitherto. The cost of reducing refractory ores has declined from $75 to $25, or 15*l*. to 5*l*. per ton. The completion of extensive smelting-works, already projected at. the base of the mountains, will make a still further improvement in this particular. Railways are completed, and in operation, to and along the base of the mountains, and are in process of construction to the very heart of the mining centres.

Finally, unlike many other mining regions, this entire belt is well wooded and watered. Situated under the shadow of the Snowy Range, it is refreshed by summer showers; and the streams are constantly swollen during the summer by the melting snows. The thousand little valleys among the foot-hills up to the Range are fertile; and the grassy glades afford the finest pasturage in the world. The season is short for the cultivation of cereals; but soil and climate are unexcelled in adaptation to the dairy. the growth of vegetables, and culture of small fruits.

Gilpin County, the smallest in extent of all the counties, and, perhaps, least adapted to agriculture, had, during the past season, 1,320 acres of land under successful cultivation; this apart from the grazing-lands.

Aside from this belt, which has been briefly outlined, there are known to be deposits of gold and silver in the parks and beyond the Snowy Range. There may be mines as rich, perhaps richer, to the West of the region described than any yet discovered within it. That region is yet to be explored and prospected.

In addition to the mines above noted, there are, in various parts of the Territory, soda and salt springs, from which an almost unlimited yield might be derived, and some of which have already been made available. As soda and salt are both used in the reduction of ores, their presence in the Territory is of great importance in connexion with the mining-interest. When it is taken into consideration that Colorado has had no other exportation than from her mines, since the settlement of the Territory, it cannot fail to impress the reader with their immense wealth, and how important an influence their present highly-successful developments are having on her rapid and unexampled growth and prosperity. Their present yield has been nearly doubled in the past two years.

INDEX

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