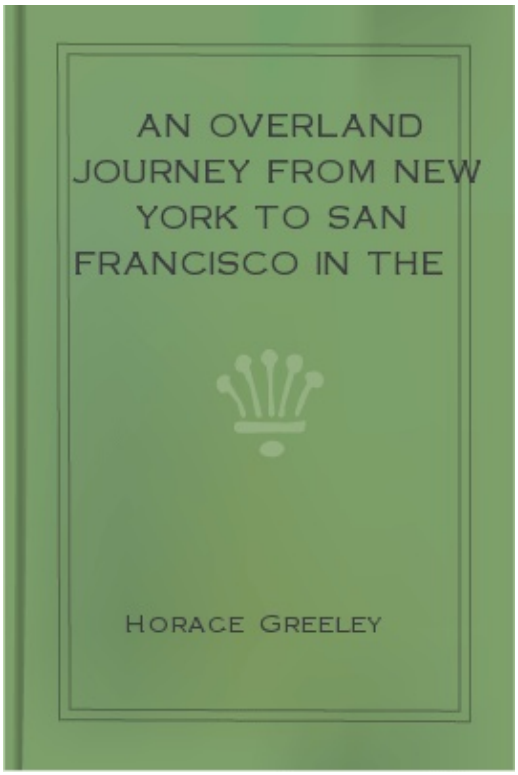

An Overland Journey from New York to San Francisco in the Summer of 1859

by Horace Greeley

(1860)

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AN OVERLAND JOURNEY, NEW YORK TO SAN FRANCISCO, THE SUMMER OF 1859.

BY HORACE GREELEY.

NEW YORK:

C. M. SAXTON, BARKER & CO.

SAN FRANCISCO: H. H. BANCROFT & CO.

1860.

Entered, according to the Act of Congress, in the year 1860, by

HORACE GREELEY,

along and buy out his "claim" and let him move on to repeat the operation somewhere else--this is enough to

comfortable after his first year or two, and henceforth take the world as easily as need be. He who comes in with but $2,000, $1,000 or $500, must of course be much longer in working his way to a position of comfort and independence; but if he will work right ahead, wasting neither days nor dollars, and keeping clear of speculation and office-seeking, he can hardly fail to do well.

As to the infernal spirit of land speculation and monopoly, I think no state ever suffered from it more severely than this. The speculators in broadcloth are not one whit more rapacious or pernicious than the speculators in rags, while the latter are forty times the more numerous. Land speculation here is about the only business in which a man can embark with no other capital than an easy conscience. For example: I rode up the bluffs back of Atchison, and out three or four miles on the high rolling prairie, so as to have some fifteen to twenty square miles in view at one glance. On all this inviting area, there were perhaps half a dozen poor or middling habitations, while not one acre in each hundred was fenced or broken. My friend informed me that every rood I saw was "preëmpted," and held at thirty up to a hundred dollars or more per acre. "Preëmpted!" I exclaimed; how preëmpted? by living or lying?" "Well," he responded, "they live a little and lie a little." I could see abundant evidence of the lying, none at all of the living. To obtain a preëmption, the squatter must swear that he actually resides on the quarter-section he applies for, has built a habitation and made other improvements there, and wants the land for his own use and that of his family. The squatters who took possession of these lands must every one have committed gross perjury in obtaining preëmption--and so it is all over the territory, wherever a lot is supposed likely to sell soon for more than the minimum price. I hoard of one case in which a squatter carried a martin-box on to a quarter-section, and on the strength of that martin-box, swore that he had a house there "eighteen by twenty"--he left the officer to presume the feet. So it is all over; the wretched little slab shanty which has sufficed to swear by on one "claim," is now moved off and serves to swear by on another, when the first swearing is done. I am confident there is not at this hour any kind of a house or other sign of improvement on one-fourth of the quarter-sections throughout Kansas which have been secured by preëmption. The squatter who thus establishes a "claim" sells it out, so soon as practicable, to some speculator, who follows in his wake, getting from $50 to $300 for that which the future bonafide settler will be required to pay $250 to $1,500 for. Such, in practical operation, is the system designed and ostensibly calculated to shield the poor and industrious settlers from rapacity and extortion; but which, in fact, operates to oppress and plunder the real settler--to pay a premium on perjury--to foster and extend speculation --to demoralize the people, paralyze industry and impoverish the country.

But the fierce. chilly gale has blown away the tempest of last night*--the clouds fly scattered and brassy--it is time to look for the Leavenworth Express, whereof two stages west from this point will bear me beyond the bounds of settlement and civilized life. Adieu to friendly greetings and speakings! Adieu for a time to pen and paper! Adieu to bed-rooms and wash-bowls! Adieu (let me hope) to cold rains and flooded rivers! Hurrah for Pike's Peak!

[* There was a heavy snow storm that night at Denver, and throughout its vicinity.]

VI.

ON THE PLAINS.

Station 9, Pike's Peak Express Co., }

Pipe creek, *May* 28, 1859. }

I was detained at Manhattan nearly a day longer than I had expected to be by high water. Wildcat, five miles west, and Rock Creek, seventeen miles east, were both impassable on Thursday, so that an express-wagon from Pike's Peak was stopped behind the former, while five mail-coaches and express-wagons faced each other through part of Thursday and all of Thursday night across the latter. Next morning, however, each stream had run out, so that they could be forded, and at one p. m. I took my seat in the Pike's Peak express,

and again moved westward.

Our way was still along the United States military road. crossing Wildcat, now a reasonable stream, and winding for some miles over-rugged, thin-soiled limestone hills, then striking down south-westward into the prairie bottom of the Kansas, which is as rich as land need be. A few miles of this brought us to Ogden, a land-office city of thirty or forty houses, some of them well built of stone. Just beyond this begins the Fort Riley reservation, a beautiful tract of prairie and timber stretching for four or five miles along the northern bank of the Kansas, and including the sad remains of Pawnee City, at which Gov. Reeder summoned the first (bogus) legislature of Kansas to meet--then fifty to one hundred miles westward of anywhere. They obeyed the summons, but forthwith adjourned to Shawnee Mission, a pro-slavery stronghold on the Missouri border. Pawnee City is now of the things that were.

Fort Riley is a position which does credit to the taste of whoever selected it. It is on high, rolling prairie, with the Kansas on the south, the Republican on the west, heavy limestone bluffs on the north, and the best timber in middle or western Kansas all around. The barracks are comfortable, the hospital large and well placed, the officers' quarters spacious and elegant, and the stables most extensive and admirable. I hear that two millions of Uncle Sam's money have been expended in making these snug arrangements, and that the oats largely consumed here have often cost three dollars per bushel. I have seen nothing else at all comparable to this in the way of preparations for passing life agreeably since I left the Missouri.

We here crossed by a rope ferry the Republican or northern fork of the Kansas, which, like the Big Blue, twenty-five miles back, seems nearly as large as the Kansas at its mouth, though the Smoky Hill, or southern fork at this point, is said to be the largest of the three. We met at the ferry a number of families, with a large herd of cattle, migrating from south-western Missouri to California, and crossing here to take the road up the right bank of the Republican to Fort Kearney and so to Laramie. They had exhausted their patience in trying to swim their cattle, and would hardly be able to get them all ferried over till next day. All day, as on preceding days, we had been meeting ox-wagons loaded with disheartened Pike's Peakers, returning to their homes, but some of them going down into southern Kansas in search of "claims." Most of those we interrogated said they had been out as far as Fort Kearney (some two hundred miles further, I believe), before they were turned back by assurances that Pike's Peak is a humbug.

Across the Republican, between it and the Smoky Hill, is Junction City, as yet the most western village in Kansas, save that another has been started some fifty miles up the Smoky Hill. We stopped here for the night, and I talked republicanism in the church for an hour or so. Junction has a store, two hotels, and some thirty or forty dwellings, one of which is distinguished for its age, having been erected so long ago as 1858. A patriotic Junctioner excused his city for not possessing something which I inquired for, but which its rival, Manhattan, was supposed to have; "for said he, "Manhattan is three years old." As Junction is hardly a year old yet, the relative antiquity of Manhattan, and the responsibilities therein involved, were indisputable. Junction is the center of a fine agricultural region, though timber is not so abundant here as I wish it were. This region is being rapidly shingled with "claims;" I hope it is likewise to be filled with settlers-though that does not always follow. Our landlord (a German) had tried California; then Texas; and now he is trying Kansas, which seems to agree with him.

We started again at six this morning, making a little north of west, and keeping the narrow belts of timber along the Republican and the Smoky Hill respectively in full view for several miles on either side, until the streams diverged so far that we lost them in the boundless sea of grass. A mile or two of progress carried us beyond any road but that traced only this spring for the Pike's Peak expresses; for ten miles onward, no house, no, field, no sign of human agency, this road and a few United States surveyors' stakes excepted, was visible; at length we came to where a wretched cabin and an acre or so of broken and fenced prairie showed what a pioneer had been doing through the last two or three years, and beside it was a tavern--the last, I presume, this side of Pike's Peak. It consisted of a crotched stake which, with the squatter's fence aforesaid, supported a ridge-pole, across which some old sail-cloth was drawn, hanging down on either side, and forming a cabin

summer. We have crossed many streams to-day, all making south for Solomon's Fork, which has throughout been from two to six miles from us on our left, its narrow belt of timber constantly sending out longer or shorter spurs up the creeks which feed it on either side. The route has been from fifty to two hundred feet above the bed of the Fork, keeping out of all bottoms and marshes, but continually cut by water-courses, often with abrupt banks and miry beds, in one of which only were we stalled until an extra span of mules was sent from the other wagon to our aid. (The express-wagons always go in pairs, for reciprocal aid and security.) I presume all the timber we have passed through since we left the Republican at Junction (and we are now one hundred and ten miles from it by our route, and perhaps one hundred in a straight line), would not form a belt half a mile wide, with but a few white-oaks to render it of any value except for fuel. A low, long-limbed, twisty elm, forms three-fourths of all the wood we have seen this side of Junction; the residue is mainly cotton-wood. The streams are usually clear, except where riled by recent showers, and springs are not infrequent. If well timbered, this country would be rather inviting. It is largely covered with the dead stalks of the wild sunflower, which is said to indicate a good soil for corn. The sunflower plant has not started this season.

On rising our first ridge this morning, a herd of buffalo was seen grazing on the prairie some three miles toward the Solomon; soon, more were visible; then others. At length, a herd of perhaps a hundred appeared on the north--the only one we saw on that side of our road during the day. Having been observed, they were heading down the valley of a small creek toward the Solomon. Just then, the tents and wagons of a body of encamped Pike's Peakers appeared right across a little creek; two men were running across the prairie on foot to get a shot at the buffalo; another was mounting a horse with like intent. The herd passed on a long, awkward gallop north of the tents and struck southwest across our road some forty rods ahead of us. A Sharp's rifle was leveled and fired at them by one of our party, but seemed rather to hasten than arrest their progress. But one old bull shambled along behind in a knock-kneed fashion (having probably been lamed by some former party); and he was fired at twice by our marksmen as he attempted to cross the road--once when only fifteen rods distant. They thought they wounded him fatally, but he vanished from our sight behind a low hill, and their hasty search for him proved unsuccessful.

Thence nearly all day, the buffalo in greater or less numbers were visible among the bottoms of the Solomon on our right--usually two to three miles distant. At length, about 5 p. m., we reached the crest of a "divide," whence we looked down on the valley of a creek running to the Solomon some three miles distant, and saw the whole region from half a mile to three miles south of our road, and for an extent of at least four miles east and west, fairly alive with buffalo. There certainly were not less than ten thousand of them; I believe there were many more. Some were feeding, others lying down, others pawing up the earth, rolling on it. etc. The novel spectacle was too tempting for our sportsmen. The wagons were stopped, and two men walked quietly toward the center of the front of the herd. Favored by a water-course, they crept up to within fifty rods of the buffalo, and fired eight or ten shots into the herd, with no visible effect. The animals nearest the hunters retreated as they advanced, but the great body of the herd was no more disturbed or conscious of danger than if a couple of mosquitos had alighted among them. After an hour of this fruitless effort, the hunters gave it up, alleging that their rifle was so foul and badly sighted as to be worthless. They rejoined us, and we came away, leaving nine-tenths of the vast herd exactly where we found them. And there they doubtless are sleeping at this moment, about three miles from us.

We are near the heart of the buffalo region. The stages from the west that met us here this evening report the sight of millions within the last two days. Their trails chequer the prairie in every direction. A company of Pike's Peakers killed thirteen near this point a few days since. Eight were killed yesterday at the next station west of this by simply stampeding a herd and driving them over a high creek-bank, where so many broke their necks. Buffalo-meat is hanging or lying all around us, and a calf two or three months old is tied to a stake just beside our wagons. He was taken by rushing a herd up a steep creek-bank; which so many could not possibly climb at once; this one was picked out in the melee as most worth having, and taken with a rope. Though fast tied and with but a short tether, he is true game, and makes at whoever goes near him with desperate intent to butt the intruder over. We met or passed to-day two parties of Pike's Peakers who had respectively lost three

We traveled some two miles along the crest of this mountain, then descended, by a pitch equally sharp with the ascent, but shorter, to a ravine, in which we rested our weary animals and dined. That dinner--of cold ham, bread and cheese--was one of the best relished of any I ever shared. Re-saddling, we climbed another precipice a little less steep--and so up and down for ten miles, when we descended into the narrow valley of a little branch of Clear Creek, and thenceforward had ten miles of relatively smooth going, crossing from one valley to another over hills of moderate elevation and easy ascent.

A wilderness of mountains rose all around us, some higher, some lower, but generally very steep, with sharp, narrow ridges for their summits. Some of them are thinly grassed, between widely scattered trees up their sides and on their tops; but they are generally timbered, and mainly with yellow-pine, some of it quite large, but more of it small and apparently young. High on the mountains, this pine is short and scraggy, while in the ravines it grows tall and shapely, but averages not more than a foot in diameter. Hurricanes have frequently swept these mountains, prostrating the pines by scores; fires have ravaged and decimated them; still, pines on the summits, pines on the hill sides, pines even in the ravines, are all but universal. The balsam-fir grows sparingly in the ravines; hemlock, also, is reported, though I have not seen it: but the quaking-asp or aspen--which seems but a more delicate species of cotton-wood--is thick-set in the ravines, and sometimes appears on the more moderate acclivities, as do gooseberry bushes in the glens. Brooks of the purest water murmur and sing in every ravine; springs abound; the air is singularly pure and bracing; the elk, black-tailed deer and mountain-sheep are plentiful, except where disturbed by the in-rush of emigration; grouse are common and bold: the solitude was sylvan and perfect until a few weeks ago. All is now being rapidly changed, and not entirely for the better.

We had a smart shower, with thunder and lightning, during the afternoon, which compelled us to halt a few minutes. Another such this afternoon, indicates that it is a habit of the country. I am told, however, that though thunder is common, rain is generally withheld at this season, or confined to a mere sprinkle.

Night fell upon us, while yet six or seven miles from the diggings, and we camped in the edge of the pines, on the brow of a gentle acclivity, with a prospect of grass as well as water for our weary, hungry beasts down the slope south of us. Mine had fallen to her knees in the last water-course we had passed, very nearly throwing me over her head; had she done it, I am sure I had not the strength left to rise and remount, and hardly to walk the remaining half mile. As it was, I had to be lifted tenderly from my saddle and laid on a blanket, with two more above me, where I lay while the fire was built, supper prepared, and a lodge of dry poles and green pine boughs hastily erected. I was too tired to eat, but the bright, leaping flame from the dry pines heaped on our fire gradually overcame the shivering, which was about the only sign of vitality I showed when first laid down, and I at length resumed the perpendicular by an effort, and took my place in our booth, where sleep but fitfully visited me during that bright, cool, short summer night. But this left me more time to rub my chafed and stiffened limbs, so that, when breakfast was called in the morning, I was ready, appetite included, and prepared to dispel the apprehensions of those who had predicted, on seeing me taken off my mule, that I must be left there for at least a day. By six o'clock, we were again in the saddle, and pushing on, over a stony but rather level table-land, which extended for two or three miles, thickly covered with young pines and aspens, to the next ravine, whence the road leads up a short, steep hill, then down a very long, equally steep one, to Ralston's fork of Clear Creek--being as rapid and rock-bottomed as where we had crossed the main creek the day before thirty miles below, but with only one-third the volume of water, so that we forded it easily without a wet foot. A little runnel coming in from the west directly at the ford, with its natural translucency changed to milky whiteness by the running of its waters through sluices in which the process of gold-washing was going forward, gave us assurance that we were in immediate proximity to the new but already famous workings called, after their discoverer, "Gregory's Diggings."* [* Now (October) known as "Mountain City."]

I shall not here speak of their pecuniary success or promise, though I have visited, during the day, a majority of those which have sluices already in operation, and received reports from my fellow-visitors from nearly all the others: Having united with them in a statement --to be herewith forwarded--of what we saw and learned, I refer those who feel any interest in the matter to that statement. What I propose here to do is to give the reader

some idea of the place and its general aspects.

The little brook which here joins Clear Creek from the west starts at the foot of mountains three or four miles distant, and runs in a usually narrow ravine between generally steep hills from five hundred to fifteen hundred feet high. Gregory's lead is very near its mouth; half a mile above seems the heart of the present mining region, though there are already sluices in operation at intervals for at least two miles up the runnel, and others are soon to be started at intervals above them. Three or four miles south-west from its mouth, are Russell's Diggings, where coarse gold is procured, but I was unable to visit them. Prospecting is actively going forward in every direction, and vague reports of lucky hits or brilliant prospects are started on this side or on that, but I have not been able to verify them. It is no disparagement to the others to say that, though mining is carried on at various points within a radius of thirty miles from this spot, "Gregory's Diggings" are to-day the chief hope of gold-mining in the Rocky Mountains.

Six weeks ago, this ravine was a solitude, the favorite haunt of the elk, the deer, and other shy denizens of the profoundest wildernesses, seldom invaded by the foot steps of man. I believe this strip of country has long been debatable land between the Utes and the Arapahoes, which circumstance combined with its rarely accessible situation to secure its wild tenants against human intrusion and persecution. I hear that the Arapahoes say that a good "lodge-pole trail"--that is, one which a pony may traverse with one end of the lodge-poles on his back, the other trailing behind him--exists from this point to the open prairie where Clear Creek debouches from the mountains--a trail which doubtless winds along the steep sides of the ravines and avoids the rugged heights necessarily traversed by the miner's wagon-road. Should these diggings justify their present promise, I doubt not a road will in time be made, reducing by one-half--say five thousand feet--the present aggregate of ascent and descent between this and Denver. But an unworked wagon-road must avoid the sides of these steep-banked ravines, running square up the fixes and along the crests of the mountains, so that this spot is destined to remain barely accessible for at least another year.

This narrow valley is densely wooded, mainly with the inevitable yellow-pine, which, sheltered from the fierce winds which steep the mountain-tops, here grows to a height of sixty or eighty feet, though usually but a foot to eighteen inches in diameter. Of these pines, log-cabins are constructed with extreme facility, and probably one hundred are now being built while three or four hundred more are in immediate contemplation. They are covered with the green boughs of the pines, then with earth, and bid fair to be commodious and comfortable. As yet, the entire population of the valley --which cannot number less than four thousand, including five white women and seven squaws living with white men--sleep in tents, or under booths of pine boughs, cooking and eating in the open air. I doubt that there is as yet a table or chair in these diggings, eating being done around a cloth spread on the ground, while each one sits or reclines on mother earth. The food, like that of the plains, is restricted to a few staples --pork, hot bread, beans and coffee forming the almost exclusive diet of the mountains; but a meat-shop has just been established, on whose altar are offered up the ill-fed and well-whipped oxen who are just in from a fifty days' journey across the plains, and one or two cows have been driven in, as more would be if they could here been subsisted. But these mountains are mainly wooded, while the open hill-sides are so dry during summer that their grass is very scanty. It is melancholy to see so many over-worked and half-starved cattle as one meets or passes in this ravine and on the way hither. Corn is four dollars per bushel in Denver, and scarce at that; oats are not to be had; there is not a ton of hay within two hundred miles, and none can ever be brought hither over the present road at a cost below forty dollars per ton. The present shift of humane owners is to herd their oxen or mules on the rich grass of the nearest prairies for a week or so, then bring then in here and keep them at work for a week or more, letting them subsist on browse and a very little grass, and then send them down the mountain again. This, bad as it is, seems the best that can be done. Living of all kinds will always be dear at these mines, where American flour is now selling at the rate of forty-four dollars per barrel, and bacon is worth fifty cents per pound; sugar ditto.

I presume less than half the four or five thousand people now in this ravine have been here a week; he who has been here three weeks is regarded as quite an old settler. The influx cannot fall short of five hundred per day, balanced by an efflux of about one hundred. Many of the latter go away convinced that Rocky Mountain

gold-mining is one grand humbug. Some of them have prospected two or three weeks, eating up their provisions, wearing out their boots--and finding nothing. Others have worked for the more fortunate for one dollar per day and their board and lodging--certainly not high wages when the quality of the living is considered. And I feel certain that, while some--perhaps many--will realize their dreams of wealth here, a far greater number will expend their scanty means, tax their powers of endurance, and then leave, soured, heart-sick, spirit-broken. Twenty thousand people will have rushed into this ravine before the 1st of September, while I do not see how half of them are to find profitable employment here. Unless, therefore, the area of the diggings shall meantime be greatly enlarged--of which there is no assurance--I cannot imagine how half the number are to subsist here, even up to that early setting in of winter which must cause a general paralysis of mining, and consequently of all other Rocky Mountain industry. With the gold just wrested from the earth still glittering in my eyes--and one company has taken out to-day, at a cost of not more than twenty-five dollars a lump (condensed by the use of quicksilver) which looks like a steel-yard-poise and is estimated as worth five hundred and ten dollars--I adhere to my long-settled conviction that, next to outright and indisputable gambling, the hardest (though sometimes the quickest) way to obtain gold is to mine for it--that a good farmer or mechanic will usually make money faster--and of course immeasurably easier--by sticking to his own business than by deserting it for gold-digging --and that the man who, having flailed in some other pursuit, calculates on retrieving, his fortunes by gold-mining, makes a mistake which he will be likely to rue to the end of his days.

We had a famous gathering a few rods from this tent this evening. The estimate of safe men puts the number present at fifteen hundred to two thousand. Though my name was made the excuse for it, brief and forcible addresses were made by several others, wherein mining, postal, and express facilities, the Pacific railroad, the proposed new Rocky Mountain state, temperance, gambling, etc., etc., were discussed with force and freedom. Such a gathering of men suddenly drawn; hither from every section, and nearly every state, in a glen where the first axe was raised, the first tent pitched by white men, less than six weeks ago, should have inspired the dullest speaker with earnestness, if not with eloquence.

Mining quickens almost every department of useful industry. Two coal-pits are burning close at hand. A blacksmith has set up his forge here, and is making a good thing of sharpening picks at fifty cents each. A volunteer post-office is just established, to which an express-office will soon attach itself. A provision store will soon follow; then groceries; then dry goods; then a hotel, etc., until within ten years the tourist of the continent will be whirled up to these diggings over a longer but far easier road winding around the mountain-tops rather than passing over them, and will sip his chocolate and read his New York paper --not yet five days old--at the "Gregory House," in utter unconsciouisness that this region was wrested from the elk and the mountain-sheep so recently as 1859.

Denver, *June* 10, 1859.

We left the diggings yesterday morning, and came down to the foot of the mountains, in spite of a drizzling rain from noon to three or four o'clock, which at one time threatened a heavy shower. We made a poor shelter of a buffalo-skin and a rubber blanket, stretched across a fallen tree, and there waited half an hour; but, finding the rain neither stopped nor grew violent, we saddled up and came on. Two accidents, which might have proved serious happened to members of our party--the first to Mr. Villard, of Cincinnati, who, riding at some distance from all others, was thrown by his mule's saddle slipping forward and turning under him, so that he fell heavily on his left arm, which was badly bruised, and thence was dragged a rod with his heel fast in the stirrup. His mule then stopped; but when I rode up behind him, I dared not approach him lest I should start her, and waited a moment for the friend who, having heard his call for help, was coming up in front. Mr. V. was released without further injury, but his arm is temporarily useless. The other casualty happened to Mr. Kershaw, of New York, who, riding to my assistance at Clear Creek crossing at nightfall, was thrown by his mule's starting at the rush of a savage dog, and considerably injured, though he is nearly well to-day. It would have been to me a source of lasting sorrow had his fall resulted in more serious damage.

He is doubtless richer here than in Massachusetts, but I cannot realize that his family are happier or more favorably situated for mental and moral improvement, there being no school within reach, and the children depending for instruction on their New-England mother alone. But *their* children will not have New-England mothers--and what then? I fear this cattle ranching, with long intervals between the ranches, is destined to half barbarize many thousands of the next generation, whom schools can scarcely reach, and to whom "the sound of the church-going bell" will be a stranger. Most of the agriculturists of this region, however, came here from Missouri, Arkansas, or Texas--many of them from Missouri or Arkansas by way of Texas--and do not seem to regard common schools as essential to civilized life.

We crossed the Merced sixty miles from Stockton (all these rivers are crossed by toll-bridges, or ferries--charges, one dollar each per wagon) just before sunset; and now our road became rugged and bad, as we rose the first of the foot-hills of the Sierra. Thus far we had seen few traces of mining, save the muddy-colored waters of the rivers; but seven miles further brought us to Quartzburg, in the center of a nearly washed-out valley of gold-bearing gravel; and thence our way led seven miles further, over a far higher foot-hill, into Bear Valley, where we found friends and grateful rest. The next day I devoted to an examination of Colonel Fremont's mines and works, of which I may speak hereafter, but must now hurry on to the Yosemite.

I left Bear Valley, two hours later than was fit, at 6, a. m., on Thursday, resolved to push through to my immediate destination that night. My friend had preceded me betimes to Mariposas, twelve miles on our way, to complete preparations for the trip; but we were unluckily delayed here again by misapprehensions and the preëngagement of animals for attendance on a camp-meeting, so that it was high noon when we reached the end of the wagon-road, twelve miles below Mariposa, where the saddle is the only resource, while it is still nearly forty miles (many of them steep ones) to the Yosemite fall. Every one assured us that to get through that day was impossible; yet I had no more time to give to the journey, and must try. My friend is a good rider, while I can barely ride at all, not having spent five hours on horseback, save in my visit to the Kansas gold mines, within the last thirty years. But the two gentlemen from Mariposas who accompanied and guided us, knew all about the journey that we didn't--which is saying a great deal--so we pressed buoyantly, confidently on.

Hussey's steam saw-mill, where we mounted (or rather I did, for the rest had done so before), marks pretty fairly the division between the oaks of the lower, and the firs of the higher elevations, though the two of course melt into each other. As we rose gradually but steadily, the white soon faded out, then the black, and last the live-oak, though the genuineness of this last is disputed, while the yellow, pitch, and sugar-pines, cedars, and balsam-firs became more numerous and stately, till they at length had the ground almost wholly to themselves, save that the manzanito and other shrubs (mostly evergreens also) clustered on nearly every opening among the trees. There is little or no precipice or bare rock for miles, and we rose along the southern face of the ridge overlooking the Cholchilla Valley, until we seemed to have half California spread out before us like a map. Our range of vision extended south to the *tulé* lake, or immense morass, in which the San Joaquin has its source, and west to the Coast Range, which alone barred the Pacific Ocean from our view. Still rising, we wound gradually around the peak of our first mountain through a slight depression or pass, and soon looked off upon the valley of the South Fork of the Merced, which opened for miles north and east of us. On this side, the descent is far steeper, and we traversed for miles a mere trace along the side of the mountain, where a misstep must have landed us at least a thousand feet below. In time, this too was left behind, and we descended fitfully and tortuously the east end of the mountain to the South Fork, whereon, sixteen miles from Hussey's and but five from the Big Trees of Mariposas, we halted for rest and food. Before six, we were again in the saddle, crossing the fork and winding up over another mountain northward, with a precipitous descent of at least two thousand feet beside us for a mile or so. A steep ascent of half a mile carried us over the divide, whence we descended very rapidly to Alder Creek, at the northern base. Following up this creek over a succession of steep pitches, interleaved with more level patches, we bade adieu to daylight at "Grizzly Flat," a spot noted for encounters with the monarch of our American forests, and thence crossed a ridge to "Summit Meadows," a succession of mainly narrow grassy levels, which wind in and out among the promontories of

more or less shattered granite which make down from the mountain peaks on either side, but pursue a generally eastward direction to pour their tiny tribute into the Great Chasm. Our route led us six or eight times across these meadows--which were often so boggy as to require a very nice choice of footing--and, intermediately, across the generally wooded promontories which deflected the probably continuous meadow into what seemed to us many, until we stood at length, about ten p. m., on the brink of the awful abyss, and halted a moment to tighten girths and take breath for the descent.

And here let me renew my tribute to the marvelous bounty and beauty of the forests of this whole mountain region. The Sierra Nevadas lack the glorious glaciers, the frequent rains, the rich verdure, the abundant cataracts of the Alps; but they far surpass them--they surpass any other mountains I ever saw--in the wealth and grace of their trees. Look down from almost any of their peaks, and your range of vision is filled, bounded, satisfied, by what might be termed a tempest-tossed sea of evergreens, filling every upland valley, covering every hillside, crowning every peak but the highest, with their unfading luxuriance. That I saw during this day's travel many hundreds of pines eight feet in diameter, with cedars at least six feet, I am confident; and there were miles after miles of such and smaller trees of like genus standing as thick as they could grow. Steep mountain-sides, allowing them to grow, rank above rank, without obstructing each other's sunshine, seem peculiarly favorable to the production of these serviceable giants. But the Summit Meadows are peculiar in their heavy fringe of balsam-fir of all sizes, from those barely one foot high to those hardly less than two hundred, their branches surrounding them in collars, their extremities gracefully bent down by the weight of winter snows, making them here, I am confident, the most beautiful trees on earth. The dry promontories which separate these meadows are also covered with a species of spruce, which is only less graceful than the fir aforesaid. I never before enjoyed such a tree-feast as on this wearing, difficult ride.

Descent into the Yosemite is only practicable at three points--one near the head of the valley, where a small stream makes in from the direction of the main ridge of the Sierra, down which there is a trail from the vicinity of Water River, Utah--a trail practicable, I believe, for men on foot only. The other two lead in near the outlet, from Mariposas and Coulterville respectively, on opposite banks of the Merced, and are practicable for sure-footed mules or horses. We, of course, made our descent by the Mariposas trail, on the south side of the little river which here escapes from the famous valley by a cañon which water alone can safely, if at all, traverse, being shut in by lofty precipices, and broken by successive falls.

My friends insisted that I should look over the brink into the profound abyss before clambering down its side; but I, apprehending giddiness, and feeling the need of steady nerves, firmly declined. So we formed line again, and moved on.

The night was clear and bright, as all summer nights in this region are; the atmosphere cool, but not really cold; the moon had risen before 7 o'clock, and was shedding so much light as to bother us in our forest-path, where the shadow of a standing pine looked exceedingly like the substance of a fallen one, and many semblances were unreal and misleading. It was often hard to realize that the dark, narrow current-like passage to the left was our trail, and not the winding, broader, moonlighted-opening on the right. The safest course was to give your horse a free rein, and trust to his sagacity, or self-love for keeping the trail. As we descended by zigzags the north face of the all but perpendicular mountain our moonlight soon left us, or was present only by reflection from the opposite cliff. Soon, the trail became at once so steep, so rough, and so tortuous, that we all dismounted; but my attempt at walking proved a miserable failure. I had been riding with a bad Mexican stirrup, which barely admitted the toes of my left foot; and continual pressure on these had sprained and swelled them, so that walking was positive torture. I persevered in the attempt, till my companions insisted on my remounting, and thus floundering slowly to the bottom. By steady effort, we descended the three miles (four thousand feet perpendicular) in two hours, and stood at night by the rushing, roaring waters of the Merced.

That first full, deliberate gaze up the opposite height! can I ever forget it? The valley is here scarcely half a mile wide, while its northern wall of mainly naked, perpendicular granite is at least four thousand feet

high--probably more. But the modicnumn of moonlight that fell into this awful gorge gave to that precipice a vagueness of outline, an indefinite vastness, a ghostly and weird spirituality. Had the mountain spoken to me in audible voice, or began to lean over with the purpose of burying me beneath its crushing mass, I should hardly have been surprised. Its whiteness, thrown into bold relief by the patches of trees or shrubs which fringed or flecked it wherever a few handfuls of its moss, slowly decomposed to earth, could contrive to hold on, continually suggested the presence of snow, which suggestion, with difficulty refuted, was at once renewed. And, looking up the valley, we saw just such mountain precipices, barely separated by intervening water-courses (mainly dry at this season) of-inconsiderable depth, and only receding sufficiently to make room for a very narrow meadow inclosing the river, to the furthest limit of vision.

We discussed the propriety of camping directly at the foot of the pass, but decided against it, because of the inadequacy of the grass at this point for our tired, hungry beasts, and resolved to push on to the nearest of the two houses in the valley, which was said to be four miles distant. To my dying day, I shall remember that weary, interminable ride up the valley. We had been on foot since daylight; it was now past midnight; all were nearly used up, and I in torture from over twelve hours' steady riding on the hardest trotting horse in America. Yet we pressed on, and on, through clumps of trees, and bits of forest, and patches of meadow, and over hillocks of mountain *debris,* mainly granite bowlders of every size, often nearly as round as cannon balls, forming all but perpendicular banks to the capricious torrent that brought them hither--those stupendous precipices on either side glaring down upon us all the while. How many times our heavy eyes--I mean those of my San Francisco friend and my own--were lighted up by visions of that intensely desired cabin--visions which seemed distinct and unmistakable, but, which, alas! a nearer view proved to be made up of moonlight and shadow, rock and trees, into which they faded one after another. It seemed at length that we should never reach the cabin; and my wavering mind recalled elfish German stories of the Wild Huntsman, and of men who, having accepted invitations to a midnight chase, found on their return that said chase had been prolonged till all their relatives and friends were dead, and no one could be induced to recognize or recollect them. Gladly could I have thrown myself recklessly from the saddle, and lain where I fell till morning, but this would never answer, and we kept steadily on.

"Time and the hour wear out the longest day."

At length the *real* cabin--one made of posts and beams and whip-sawed boards, instead of rock, and shadow, and moonshine--was reached, and we all eagerly dismounted, turning out our weary steeds into abundant grass, and stirring up the astonished landlord, who had never before received guests at that unseemingly hour. (It was after one a. m.) He made us welcome, however, to his best accommodations, which would have found us lenient critics even had they been worse; and I crept into my rude but clean bed so soon as possible, while the rest awaited the preparation of some refreshment for the inner man. There was never a dainty that could have tempted me to eat at that hour. I am told that none ever before traveled from Bear Valley to the Yosemite in one day--I am confident no green-horns ever did. The distance can hardly exceed thirty miles by an air line; but only a bird could traverse that line, while, by way of Mariposas and the South Fork, it must be fully sixty miles, with a rise and fall of not less than twenty thousand feet.

The *fall* of the Yosemite, so called, is a humbug. It is not the Merced River that makes this fall, but a mere tributary trout brook, which pitches in from the north by a barely once-broken descent of two thousand six hundred feet, while the Merced enters the valley at its eastern extremity, over falls of six hundred and two hundred and fifty feet. But a river thrice as large as the Merced, at this season, would be utterly dwarfed by all the other accessories of this prodigious chasm. Only a Mississippi or a Niagara could be adequate to their exactions. I readily concede that a hundred times the present amount of water may roll down the Yosemite Fall in the months of May and June, when the snows are melting from the central ranges of the Sierra Nevada, which bound this abyss on the east; but this would not add a fraction to the wonder of this vivid exemplification of the divine power and majesty. At present, the little stream that leaps down the Yosemite, and is all but shattered to mist by the amazing descent, looks like a tape-line let down from the cloud-capped height to measure the depth of the abyss. The Yosemite Valley (or Gorge) is the most unique and majestic of

nature's marvels, but the Yosemite Fall is of little account. Were it absent, the valley would not be perceptibly less worthy of a fatiguing visit.

We traversed the valley from end to end the next day, but an accumulation of details on such a subject only serve to confuse and blunt the observer's powers of perception and appreciation. Perhaps the visitor who should be content with a long look into the abyss from the most convenient height, without braving the toil of a descent, would be wiser than all of us; and yet that first glance upward from the foot will long haunt me as more impressive than any look downward from the summit could be.

I shall not multiply details, nor waste paper in noting all the foolish names which foolish people have given to different peaks or turrets. Just think of two giant stone-towers, or pillars, which rise a thousand feet above the towering cliff which form their base, being styled the "Two Sisters!" [Editor's note: Cathedral Spires] Could anything be more maladroit and lackadaisical? "The Dome" [Editor's note: Half Dome] is a high, round, naked peak, which rises between the Merced and its little tributary from the inmost recesses of the Sierra Nevada already instanced, and which towers to an altitude of over five thousand feet above the waters at its base. Picture to yourself a perpendicular wall of bare granite nearly or quite one mile high! Yet there are some dozen or score of peaks in all, ranging from three thousand to five thousand feet above the valley; and a biscuit tossed from any of them would strike very near its base, and its fragments go bounding and falling still further. I certainly miss here the glaciers of Chamonix, but I know no single wonder of nature on earth which can claim superiority over the Yosemite. Just dream yourself for one hour in a chasm nearly ten miles long, with egress, save for birds and water, but at three points, up the face of precipices from three thousand to four thousand feet high, the chasm scarcely more than a mile wide at any point, and tapering to a mere gorge, or canyon, at either end, with walls of mainly naked and perpendicular white granite, from three thousand to five thousand feet high, so that looking up to the sky from it is like looking out of an unfathomable profound--and you will have some conception of the Yosemite.

We dined at two o'clock, and then rode leisurely down the valley, gazing by daylight at the wonders we had previously passed in the night. The spectacle was immense; but I still think the moonlight view the more impressive.

Our faithful beasts climbed the steep acclivity at a little more than the rate of a mile per hour, so that we had still an hour or two of sunshine before us as we stood at last on the summit. I took a last long look into and up the valley, with the sun still lighting up the greater portion of the opposite cliffs, and then turned my horse's head westward. We reached, at 10½ p. m., the ranche on the South Fork, kept by a solitary man, who has no neighbor nearer than sixteen miles, and there halted for the night.

XXIX.

California--The Big Trees.

Steamboat Cornelia, on the

San Joaquin, *Aug.* 15, '59.

On reaching Clark's ranche, we were so happy as to meet the Reverend O. C. Wheeler, secretary of the state agricultural society, and his associates on the visiting committee of that society, now on a tour of official observation through various districts of the state. We had agreed at Sacramento to make the trip to the Yosemite together; but some mishap had detained them fourteen miles back of Bear Valley during the night of Wednesday last; and when at length they reached Mariposas, my party had been some hours on our way, while not a horse nor mule could be hired that day, to replace their jaded nags, whose immediate proceeding on so rough a trip was out of the question. So they halted, perforce, till next morning, and were only going up to the Yosemite when we were coming down, as aforesaid.

of Mariposas, the county, or the state of California, does not immediately provide for the safety of these trees, I shall deeply deplore the infatuation, and believe that these giants might have been more happily located.

The big trees are usually accounted red-wood, but bear a strong resemblance to the cedar family, so that my intelligent guide plausibly insisted that they are identical in species with their probable co[n]temporaries, the famous cedars of Lebanon. The larger cedars in their vicinity bear a decided resemblance to the smallest of them; and yet there are quite obvious differences between them. The cedar's limbs are by far the more numerous, and come far down the trunk; they are also relatively smaller. The cedar's bark is the more deeply creased up and down the trunk, while the foliage of the big trees is nearer allied to that of certain pines than to the cedar's. The bark of the big trees is very thick--in some instances, over two feet--and is of a dry, light quality, resembling cork: hence the fatal facility of damage by running fires. The wood of the big trees is of a light red color, seeming devoid alike of sap and resin, and to burn about as freely while the tree lives as a year or more after its death. Unless in the cedars of Lebanon, I suspect these mammoths of the vegetable world have no counterparts out of California.

They are of course not all of extraordinary size, yet I cannot remember one that would girth so little as twenty feet at a height of two yards from the earth's surface, which is the proper point for horizontal measurement. Hardly one is entirely free from the marks of fire at its root, while several have been burned at least half through, and are so hollowed by fire that a tree eight feet in diameter would probably find ample room in the cavity. And, while many are still hale and thrifty, I did not perceive a single young one coming forward to take the place of the decaying patriarchs. I believe these trees now bear* [* I am assured that this was a mistake, and that young trees of this species, propagated from seed-cones, are now growing in several nurseries. I am sure I saw no cones on any of the giants, though they were in season; and I still suspect that the seeds from which young trees have been started, grew on the younger and smaller trees of the species, not on the mammoths.] no seed-cone or nut, whatever they may have done in Scipio's or in Alexander's time, and there is no known means of propagating their kind; and I deeply regret that there is not, though starting a tree that would come to its maturity in not less than four thousand years would seem rather slow business to the fast age in which it is our fortune to live. Possibly, the big trees are a relic of some bygone world--some past geologic period--cotemporaries of the gigantic, luxuriant ferns whereof our mineral coal is the residuum. I am sure they will be more prized and treasured a thousand years hence than now, should they, by extreme care and caution, be preserved so long, and that thousands will then visit them, over smooth and spacious roads, for every one who now toils over the rugged bridle-path by which I reached them. Meantime, it is a comfort to know that the Vandals who bored down with pump-augers, the largest of the Calaveras trees, in order to make their fortunes by exhibiting a section of its bark at the east, have been heavy losers by their villainous speculation.

We left the big trees a little after ten a. m., returned to Clark's and fed, and then struck for Mariposas, where we arrived a little before six p. m.--I alone so covered with boils, caused immediately by horseback exercise, as to make riding in any way a torture. My friend who had taken me up to Hussey's in his carriage was promptly on hand on my return, though he had been a hundred times assured that I could not possibly be back at the time appointed. We had a gathering and a talk at Mariposas in the evening, and I then rode over to Bear Valley, which we reached a little before midnight. Next evening, we ran down so far as the Tuolumne on our return, and to-day came on to Stockton, where we took the steamboat for San Francisco, which we hope to reach a little after midnight.

COL. FREMONT'S MINES.

I have already stated that I spent most of Wednesday in an examination, under Col. Fremont's guidance, of the mines he is working in Bear Valley, and of the mills in which he reduces the rock and separates the gold. I usually observe carefully the rule which enjoins reserve, when addressing the public, respecting matters of purely personal and private concern; but there are circumstances in the case of Col. F. which seem to justify a departure from the general usage. Chosen three or four years since the standard-bearer of a new political

organization in an exciting contest, and exposed, because of that choice, to a torrent of personal defamation which not merely impeached his integrity as a man and his fidelity as a public servant, but sought to divest him at once of his name, his religious faith, and even of his native land, I believe there are many thousands who cherish for Col. Fremont a personal regard and affection which render them profoundly solicitous with respect to his good or evil fortune. It is for this class only that I write the following:

The public are generally aware that Colonel Fremont purchased from a Mexican at an early day a large tract or grant of wild mountain land lying among the foothills of the Sierra Nevada, called by the Mexicans, Los Mariposas (the Butterfly), after a wild flower known to abound here. It is known also that this tract was, some years after, discovered or presumed to be rich in gold--the first piece of rich vein--stone having been taken out by the proprietor's own hand. It is further known that all manner of difficulties and obstructions were interposed to defeat the confirmation of the grant under which Colonel Fremont holds his title, and that a protracted and most expensive litigation was thus forced upon him. Meantime, the property was wholly unproductive--that is to its owner--and the most inviting portions of it were clutched by squatters, who claimed, as they still claim, a right to dig its soil into utterly worthless chasms and heaps in quest of gold, to cut down its timber and feed off its grass at their own discretion, leaving to the fortunate owner only the privilege of paying the taxes, which, under the management of public affairs by officers politically and personally hostile to him, have been swelled to no less than sixteen thousand dollars per annum--his taxes, remember, on an estate which every body used or wasted as they saw fit, and which was yielding him no income whatever. For the feeble efforts at quartz-mining made in his be half in his years of absence--in the absence, too, of all successful experience in such mining--only served to involve him still more deeply in debt, which was further swelled by unfortunate agencies and business connections, until the aggregate of his liabilities on account of this property can hardly have fallen short of half a million dollars.

Such were the circumstances, under which he determined, in 1857, to return to his California estate, and here, surrounded by his family, devote all his time and energies to its improvement and renovation. In the spirit of that determination he has since lived and labored, rising with the lark, and striving to obtain a complete knowledge and master of the entire business, taking more and more labor and responsibility on his own shoulders as he felt himself able to bear them, until he is now manager, chief engineer, cashier, accountant, and at the head of every other department but that of law, for which he finds it necessary still to rely on professional aid. And his mines are at length becoming productive and profitable. His first (steam) mill, near his dwelling, runs eight stamps night and day; his second (water) mill, three miles distant, on the Merced, at the north end of his estate, runs twelve stamps, also constantly; and the two are producing gold at the rate of at least two hundred and fifty thousand dollars per annum, at an absolute cost, I am confident, of not more than one hundred and fifty thousand dollars. Of course he needs all the profits, if not more, to extend and perfect his works, having already a much larger water-mill nearly ready to go into operation beside that on the Merced, in which he expects, I believe, to run fifty-six stamps, and he hopes to have one hundred in all running before the close of 1860. With that number, I presume, he would be able, by giving his constant personal attention to the business, aided by faithful and capable assistants, to realize a net profit of at least ten thousand dollars per week, which would very soon clear him of debt and leave him unincumbered in the ownership of perhaps the finest mining property in the world.

Still, the Spanish proverb, "It takes a mine to work a mine" is exemplified in his case, as in others. A large additional investment is needed to render his property as productive as it might be. For instance: he has just contracted for the transportation of thirty thousand tons of vein-stone from his great mine to his mill on the Merced (barely a mile and a half down hill) for sixty thousand dollars. One half of this sum would construct a railroad from the heart of the mine down to the floor of the mill, and take down this amount of rock, leaving the railroad and thirty thousand clear gain. But he must have the rock at once, while the railroad would require time, and a heavy outlay of ready cash. A Rothschild would build the road forthwith, and save forty thousand dollars; but Colonel F., not being yet a Rothschild, whatever he may in time become, must bide his time.

His great vein, though not the richest, is probably the most capacious of any in California. Its thickness varies

from eight to thirty-eight feet--I believe it is in one place sixty feet wide. It is, in fact, a cliff or pyramid of gold-bearing quartz inclosed in a mountain of slate--a mountain deeply gashed and seamed in various directions by the water-courses which run down it to the Merced. These ravines, this river, aided by proper engineering, obviate all the usually heavy, often ruinous, expense of pumping; the mine, properly opened, will not only clear itself of water, but the vein-stone may be easily run out on inclined tram-roads, instead of being hoisted to the surface through shafts by an enormous outlay of power. Then the width of the vein obviates all necessity for dead-work, save in sinking shafts and running up adits; the principal work is rather quarrying than mining; and there can be no apprehension that the vein will give out or grow poor, because it has already been tested at its various outcrops to a depth of fifteen hundred feet, and is richer at the bottom than near the top, where it has mainly been worked to this time. I have no doubt that there are ten millions of dollars in this mine above water-level--that is, the level of the Merced--and that, though the yield of gold thus far has fallen rather below twenty dollars per ton, it may, even at that rate, be mined at a net profit of at least one-fourth of the gross product. Colonel F. is confident that his present works do not separate half the gold contained in the rock, and that, by the use of the new amalgamators he is about to apply, he will double his weekly product without any increase of cost. This conviction is founded on chemical experiments and tests, which seem to leave no doubt of the fact that the additional gold is in the rock; but whether the means of extracting it have yet been discovered, remains to be seen. At all events, I feel sure that the productiveness of these works will increase much faster than their expenses, so long as Colonel Fremont shall devote himself to their management so entirely as he is now doing. In the hands of agents and attorneys, they would probably become again what they once were, and what all quartz-mining works, managed at second hand, have been.

XXX.

CALIFORNIA--PHYSICALLY CONSIDERED.

San Jose, Cal., *Aug.* 27, 1859.

The state of California may be roughly characterized as two ranges of mountains--a large and a small one--with a great valley between them, and a narrow, irregular counterpart separating the smaller from the Pacific ocean. If we add to these a small strip of arid, but fertile coast, and a broad sandy desert behind it, lying south-west of California proper, and likely one day to be politically severed from it, we have a sufficiently accurate outline of the topography of the golden state.

Such a region, stretching from north latitude 32° 30' up to latitude 42°, and rising from the Pacific ocean up to perpetually snow-covered peaks fifteen thousand feet high, can hardly be said to have a climate. Aside from the Alpine crests of the Sierra, and the sultry deserts below the Mohave and Santa Barbara, California embodies almost every gradation of climate, from the semi-arctic to the semi-tropical. There are green, fertile valleys in the Sierra which only begin to be well grassed when the herbage of the great valley is drying up, and from which the cattle are driven by snows as early as the first of October--long before grass begins to start afresh on the banks of the Sacramento. There are other valleys upon and near the sea-coast, wherein frost and snow are strangers, rarely seen, and vanishing, with the night that gave them being. Generally, however, we may say of the state, that it has a mild, dry, breezy, healthy climate, better than that of Italy; in that the sultry, scorching blasts from African deserts have here no counterpart. Save in the higher mountains, or in the extreme north-east, snow never lies, the earth never freezes, and winter is but a milder, greener, longer spring, throughout which cattle pick up their own living far more easily and safely than in summer.

The climate of the valleys may be said to be created, as that of the mountains is modified, by the influence of the Pacific ocean. Sea-breezes from the south-west in winter, from the north-west in summer, maintain an equilibrium of temperature amazing to New Englanders. San Francisco--situated on the great bay formed by the passage of tie blended waters of the Sacramento and the San Joaquin--the former draining the western slope of the Sierra Nevada from the north, as the latter does from the south--is thus, as it were, in the throat of the bellows through which the damp gales from the Pacific are constantly rushing to cool the parched slopes,

or warm the snow-clad heights of the interior. I presume there was never a day without a breeze at San Francisco--generally, a pretty stiff one. The sea-breeze is always damp, often chilly, and rolls up clouds which hide the sun for a part, at least, of most days. Though ice seldom forms, and snow never lies in her streets, San Francisco must be regarded as a cold place by most of her visitors and unacclimated summer denizens. I presume a hot day was never known there, and no night in which a pair of good woollen blankets were not esteemed a shelter and a comfort by all but extremely hot-blooded people. Thick flannels and warm woollen outer-garments are worn throughout the year by all who have, or can get them. In short, San Francisco is in climate what London would be with her summer rains transformed into stiff and almost constant breezes.

The soil of California is almost uniformly good. The valleys and ravines rejoice in a generous depth of dark, vegetable mould, usually mingled with, or resting on clay; while the less precipitous hill-sides are covered by a light reddish clayey loam of good quality, asking only adequate moisture to render it amply productive. Bring a stream of water almost anywhere, save on the naked granite, and you incite a luxuriant vegetation.

Yet the traveler who first looks down on the valleys and lower hill-sides of California in mid-summer is generally disappointed by the all but universal deadness. Some hardy weeds, a little sour, coarse grass along the few still living water-courses, some small, far between gardens and orchards rendered green and thrifty by irrigation, form striking exceptions to the general paralysis of all the less inspiring manifestations of vegetable life. High up in the mountains, he has found green valleys whereon the snow doubtless lingered till late in June, leaving the soil saturated like a wet sponge for a month later; and there are swampy meadows whereon the coarse grass grows thick to a height of several feet; while beds of delicate flowering-plants, sheltered by the tall forests, maintain their vitality on the mountain-slopes till late in August; but he passes out of the region of evergreens into that of oaks as he descends to a level of some three thousand feet above the ocean, and green valleys, luxuriant meadows, and mountain-glades of flowering-plants still living, salute him no longer. The oaks gradually become sparse and scattered; their dark foliage contrasts strongly with the dun, dead, herbage beneath and between them; as he descends to the plains, the oaks vanish or become like angels' visits, while a broad expanse of dried-up pasture-range vies with occasional strips of wheat or barley stubble in evincing the protracted fierceness of the summer drouth. His vision sweeps over miles after miles of stubble and range whereon no sign of vegetable life--not even a green weed--is presented; he sees seven-eighths of the water-courses absolutely, intensely dry; while the residue are reduced from rivers to scanty brooks, from brooks to tiny rivulets; and he murmurs to himself--"Is this the American Italy? It looks more like a Sahara or Gobi."

Yet this, like most hasty judgments, is a very unsound one. These slopes, these vales, now so dead and cheerless, are but resting from their annual and ever successful efforts to contribute bountifully to the sustenance and comfort of man. Summer is their season of torpor, as winter is our's. Dead as these wheat-fields now appear, the stubble is thick and stout, and its indications are more than justified by the harvest they have this year yielded. *The California State Register* gives the following as the officially returned wheat-yield of the state for the last three years:

Years.	Total Acres in Wheat.	Total Product.
1856	171,869	3,879,032
1857	164,642	3,205,484
1858	186,464	3,568,669

Giving as the aggregate of three years' growth of wheat, 10,653,185 bushels from 522,975 acres, or more than twenty bushels per acre. I am confident that the aggregate yield of the Atlantic states for those same three years did not exceed ten bushels per seeded acre. The average yield of barley throughout the state, according to these returns, is about twenty-five bushels, and of oats something over thirty bushels, per seeded acre. I

know the majority will say "These are but moderate crops;" and so they may be, if compared with what might be grown, and in particular instances are grown; but if compared with the actual average yield of small grain throughout the Atlantic states, they are large indeed.

California--though very little of her soil produces good crops of* [* Yet the returns of 1858 give a yield of 620,323 bushels from 12,978 acres, or forty-eight bushels per acre where grown. But it can only be grown to profit in limited localities.] Indian corn, owing to the coolness of her summer nights and the want of seasonable rains-- now grows her own bread, and may easily grow far more. Estimating her population at half a million, her last year's crop exceeded seven bushels per head, which is an ample allowance; and this year's crop is still better, with a larger area sown.

But, while only 756,734 acres in all of the soil of this state were cultivated last year (which still shows an in crease on any former year), there were 1,159,813 acres of *inclosed* land--with of course a much larger area of uninclosed-devoted to grazing. Cattle-growing was the chief employment of the Californians of other days; and cattle-growing next after mining, is the chief business of the Californians of 1859. There are comparatively few farms yet established, while *ranches* abound on every side. A *corral,* into which to drive his wild herd when use or security is in question, and a field or two in which to pasture his milch cows and working cattle, are often all of the *ranche* that is inclosed; the herd is simply branded with the owner's mark and turned out to range where they will, being looked after occasionally by a mounted *ranchero,* whose horse is trained to dexterity in running among or around them. Stables for horses I have seen; but such a thing as an honest, straight-out barn has not blessed my eyes in connection with any farm since I left civilized Kansas--if even there. A Californian would as soon think of cutting hay for the sustenance of his family as for that of his herd. In fact, winter is, after spring, his cattle's best season--that in which they can best take care of themselves with regard to food. From August to November is their hardest time. But the herbage which rendered the hills and plains one vast flower-garden in spring is, though dead and dry as tinder, still nutritious; its myriad flowers have given place to seeds which have the qualities of grain; and, if the range be broad enough, cattle which have nought to do but forage, contrive to eke out a pretty fair living. But it were absurd to suppose that a single crop of dead herbage can afford, acre for acre, equal nourishment with the constantly renewed grasses of an eastern pasture; and many herds suffer from want of consideration of this fact. As *ranches* are multiplied and herds increased, a change of system becomes inevitable. The cattle-grower must fence off a portion of his range and sow it to Indian corn, to sorghum, to turnips, beets, and carrots, wherewith to supply the deficiency of his summer and fall feed. Then he can keep a much larger herd than is now profitable if possible, and may double his annual product of cheese or butter. At present, I judge this product to be smaller per cow or per acre in California than in almost any other s'Late, except what is made in the high valleys of the Sierra Nevada.

Fruit, however, is destined to be the ultimate glory of California. Nowhere else on earth is it produced so readily or so bountifully. Such pears, peaches, apricots, nectarines, etc., as load the trees of this valley, and of nearly every valley in the state which has had any chance to produce them, would stagger the faith of nine-tenths of my readers. Peach-trees only six years set, which have borne four large burdens of fruit while growing luxuriantly each year, are quite common. Apple-trees, but three years set, yet showing at least a bushel of large, fair fruit, are abundant. I have seen peach-trees four or five years from the states which have all the fruit they can stagger under, yet have grown three feet of new wood over this load during the current season. Dwarf-pears, just stuck into the black loam, and nowise fertilized or cultivated, but covered with fruit the year after they were set, and thenceforward bearing larger and larger yields with each succeeding summer, are seen in almost every tolerably cared-for fruit-patch. I cannot discover an instance in which any fruit-tree, having borne largely one year, consults its dignity or its ease by standing still or growing wood only the next year, as is common our way. I have seen green-gages and other plum-trees so thickly set with fruit that I am sure the plums would far outweigh the trees, leaves and all. And not one borer, curculio, caterpillar, apple-worm, or other nuisance of that large and undelightful family, appears to be known in all this region. Under a hundred fruit-trees, you will not see one bulb which has prematurely fallen--a victim to this destructive brood.

Of grapes, it is hardly yet time to speak so sanguinely as many do; for years will be required to render certain their exemption from the diseases and the devastators known to other lands of the vine. But it is certain that some kinds of grapes have been grown around the old Jesuit Missions for generations, with little care and much success; while it does not appear that the more delicate varieties recently introduced are less thrifty or more subject to attack than their Spanish predecessors, and vine-yards are being multiplied and expanded in almost every farming neighborhood; single vines and patches of choice varieties are shooting up in almost every garden throughout the mining regions; and there can be little doubt that California is already better supplied with the grape than any other state of the Union. That she is destined soon to become largely and profitably engaged in the manufacture and exportation of wine, is a current belief here, which I am at once unable and disinclined to controvert.

That California is richest of all the American states in timber, as well as in minerals, I consider certain, though the forests of Oregon are doubtless stately and vast. Even the Coast Range between this valley and Santa Cruz on the south-west, is covered by magnificent red-wood--some of the trees sixteen feet through, and fifty in circumference. In soil, I cannot consider her equal to Illinois, Iowa, Kansas, or Minnesota; though the ready markets afforded by her mines to her farms probably render this one of the most inviting states to the enterprising, energetic husbandman. But it must be considered that not half the soil of California can ever be deemed arable; the larger area being covered by mountains, ravines, deserts, etc. In fact, when one-fourth of the entire state shall have been plowed and reduced to tillage, I judge that the residue might better be left to grow timber and grass. Steep, rocky hill-sides on which no rain falls from June to November, can never be tilled to much profit.

This persistent summer drouth is not an unmixed evil. It is a guaranty against many insects, and against rust, even in the heaviest grain. Grain and hay are got in at far less cost and in much better average condition here than they can be where the summers are not cloudless and rainless. Weeds are far less persistent and pestilent here than at the east; while the air is so uniformly dry and bracing, and the days so generally tempered by a fresh breeze, that the human frame maintains its elasticity in spite of severe and continued exertion. I was never before in a region where so much could be accomplished to the hand in summer as just here.

And yet--and yet--my early prejudices in favor of a refreshing shower occasionally are not fully overcome. I dislike to look for miles across so rich and beautiful a valley as this of San José, and see paralysis and death the rule, greenness and life the exception. I dislike to see cattle picking at the dry, brown herbage, and can't help thinking they would like a field of sweet, green clover, or thick blue grass, a good deal better. This may be a mistake on my part; but, if so, it is one that does credit to their discernment and taste. And I like to see a garden planted in well-grounded reliance on the rains of heaven--not dependent for its very existence on the "saki," or artificial brook, which I am always glad to see flowing into a field, no matter on which side of the Rocky Mountains. I believe firmly in irrigation; but I prefer land that there is some credit in irrigating, to that which must be irrigated, or it might better have lain unplowed and unsown.

Of course it is understood that irrigation is exceptional, even here. All the grains are grown here without irrigation; but the small grains are hurried up quite sharply by drouth, and in some instances blighted by it, and, at best, are doubtless, much lighter than they would be with a good, soaking rain early in June; while Indian corn, and most roots and vegetables are only, in favored localities, grown to perfection without artificial watering. Hence, it is supposed that every garden throughout the state, save a part of those near the coast, and within the immediate influence of the damp sea-breeze, must have its stream of water, or it comes to nothing, and various devices are employed to procure the needful fluid. Of these, I like Artesian wells far best; and they are already numerous, especially in this valley. But ordinary wells, surmounted by windmills, which press every casual breeze into the service, and are often pumping up a good stream of water while the owner and all hands are asleep, are much more common, and are found to answer very well; while some keep their little gardens in fair condition by simply drawing water, bucket after bucket, in the old, hard way. In the valleys, and perhaps in the hill-sides as well, it is generally held that the vine requires no irrigation, after being set two years; and the better opinion seems to be, that fruit-trees, after two years' watering, do better without. I

The valleys of the rivers first named are exceedingly deep and fertile, and their productiveness in this vicinity almost surpasses belief, I visited in the suburbs this morning, gardens, vineyards, orchards, of rarely equaled fruitfulness. The orchard of Mr. Briggs, for example, covers a hundred and sixty acres, all in young fruit, probably one-half peaches. He has had a squad of thirty or forty men picking and boxing peaches for the last month, yet his fruit by the cart-load ripens and rots ungathered. The wagons which convey it to the mines have their regular stations and relays of horses like mail-stages, and are thus pulled sixty miles up rough mountain-passes, per day, where twenty-five miles would be a heavy day's work for any one team. But he is not sending to the mines only, but by steamboat to Sacramento and San Francisco as well. His sales last year, I am told, amounted to $90,000; his net income was not less than $40,000. And this was realized mainly from peaches, apricots and nectarines; his apples and pears have barely begun to bear; his cherries will yield their first crop next year. There are of course heavier fruit-growers in California than Mr. Briggs, but he may be taken as a fair sample of the class. Their sales will doubtless be made at lower and still lower prices; they are now a little higher than those realized for similar fruit grown in New-Jersey; they were once many times higher than now; but, though their prices steadily decrease, their incomes do not, because their harvests continued to be augmented by at least twenty-five per cent. per annum.

Let me give one other instance of successful fruit-growing, in another district: Mr. Fallon, the Mayor of San José, has a fine garden, in which are some ten or twelve old pear-trees--relies of the Spanish era and of the Jesuit missions. The trees being thrifty but the fruit indifferent, Mr. F. had them pretty thoroughly grafted with the Bartlett variety, and the *second* year thereafter gathered from one tree, one thousand pounds of Bartlett pears, which he sold for two hundred dollars, or twenty cents per pound. The other trees similarly treated, bore him six to seven hundred pounds each of that large, delicious fruit, which he sold at the same price. And, every year since, these trees have borne large yields of these capital pears. I dare not hope for equal success in the east, but surely the expedient of grafting fine, large varieties on our now worthless pears, at the same time bounteously enriching the soil beneath them, ought to be more generally adopted than it has yet been.

Just a word now on grain. California is still a young state, whose industry and enterprise are largely devoted to mining; yet she grows the bread of her half a million well-fed inhabitants on less than a fortieth part of her arable soil, and will this year have some to spare. I am confident her wheat-crop of 1859 is over four millions of bushels, and I think it exceeds twenty-five bushels for each acre sown. To-day, its price in San Francisco is below a dollar per bushel, and it is not likely to rise very soon. Though grown, harvested and threshed by the help of labor which costs her farmers from thirty to forty dollars per month, beside board, it is still mainly grown at a profit; and so of a very large breadth of barley, grown here instead of oats as food for working horses and cattle. Though wheat is probably the fullest, I judge that barley is the surest of any grain-crop grown in the state. It has never failed to any serious extent.

Indian corn is not extensively grown; only the Russian River and one or two other small valleys are generally supposed well adapted to it. And yet, I never saw larger nor better corn growing than stands to-day right here on the Yuba--not a few acres merely, but hundreds of acres in a body. I judge that nearly all the intervales throughout the state would produce good corn, if well treated. On the hill-sides, irrigation may be necessary, but not in the valleys. None has been resorted to here; yet the yield of shelled grain will range between seventy-five and a hundred bushels per acre. And this is no solitary instance. Back of Oakland, across the bay from San Francisco, Mr. Hobart, a good farmer from Massachusetts, showed me acres of heavy corn which he planted last May, after the rains had ceased and the dry season fairly set in, since which no hoe nor plow has been put into the field; yet the soil remains light and porous, while there are very few weeds. Not one drop of water has been applied to this farm; yet here are not only corn, but potatoes, beets, etc., with any number of young fruit-trees, all green and thriving, by virtue of subsoiling and repeated plowings last spring. The ground (sward) was broken up early in the winter, and cross-plowed whenever weeds showed their heads, until planting-time; and this discipline, aided by the drouth, has prevented their starting during the summer. Such thorough preparation for a crop costs something; but, this once made, the crop needs here only to be planted and harvested. Such farming pays.

The fig-tree grows in these valleys side by side with the apple; ripe figs are now gathered daily from nearly all the old Mexican gardens. The olive grows finely in Southern California, and I believe the orange and lemon as well. But the grape bids fair to become a staple throughout the state. Almost every farmer, who feels sure of his foot-hold on the land he cultivates, either has his vineyard already planted, or is preparing to plant one, while most of those who have planted are extending from year to year. I have looked through many of these vineyards, without finding one that is not thrifty--one that, if two years planted, is not now loaded with fruit. The profusion and weight of the clusters is marvelous to the fresh beholder. I will not attempt to give figures; but it is my deliberate judgment that grapes may be grown here as cheaply as wheat or corn, pound for pound, and that wine will ultimately be made here at a cost per gallon not exceeding that of whisky in Illinois or Ohio. Wine will, doubtless, constitute a heavy export of California within a very few years. So, I think, will choice timber, should the wages of labor even fall here so as to approximate our Eastern standards. At present, I estimate the average cost of labor in California at just about double the rates paid for such labor in the Middle states; which, with wheat and beef at New York prices, or lower, and clothing little higher in a climate which requires little fuel, ought to make the condition of the effective worker here a very fair one. Such I consider it to be; while I am assured by practical men that a fall of even twenty-five per cent. in wages would incite a large and prompt extension of mining, farming, etc., affording employment to additional thousands of laborers. Should fair, average day-labor ever fall here to a dollar per day, I think the demand for it in mining would very speedily be doubled, and soon quadrupled. I do not imply that such reduction is either desirable or probable; but I can see why the owners of large estates or of mining claims should strongly desire an ample and incessant immigration. This is plain enough; while it is not so obvious, though I deem it equally true, that an immigration of one hundred thousand effective workers per annum, would be readily absorbed by California, and would add steadily and immensely to her prosperity and wealth.

Yet I cannot conclude this survey without alluding once more to the deplorable confusion and uncertainty of land titles, which has been, and still is the master-scourge of this state. The vicious Spanish-Mexican system of granting lands by the mere will of some provincial governor or municipal chief without limitation as to area, or precise delineation of boundaries, here develops and matures its most pernicious fruits. Your title may be ever so good, and yet your farm be taken from under you by a new survey, proving that said title does not cover your tract, or covers it but partially. Hence, many refuse or neglect to improve the lands they occupy, lest some title adverse to theirs be established, and they legally ousted, or compelled to pay heavily for their own improvements. And, in addition to the genuine Spanish or Mexican grants, which the government and courts must confirm and uphold, there are fictitious and fraudulent grants--some of them only trumped up to be bought off, and often operating to create anarchy, and protract litigation between settlers and the real owners. Then there are, doubtless, squatters, who refuse to recognize and respect valid titles, and waste in futile litigation the money that might make the lands they occupy indisputably their own. I blame no party exclusively, while I entreat the state and federal governments and courts to do their utmost to settle the titles to lands in this state beyond controversy, at the earliest possible day. Were the titles to lands in California to-day as clear as in Ohio or Iowa, nothing could check the impetus with which California would bound forward in a career of unparalleled thrift and growth. It were far better for the state and her people that those titles were wrongly settled, than that they should remain as now. I met to-day an intelligent farmer, who has had three different farms in this state, and has lost them successively by adjudication adverse to his title. I would earnestly implore grantees and squatters to avoid litigation wherever that is possible, and arrest it as soon as possible, eschewing appeals, save in flagrant cases, and meeting each other half-way in settlement as often as may be. The present cost of litigation, enormous as it is, is among the lesser evil consequences of this general anarchy as to land-titles.

Should these ever be settled, it will probably be found advisable to legislate for the speedy breaking up and distribution of the great estates now held under good titles by a few individuals. There will never be good common schools on, nor about these great domains, which will mainly be inhabited by needy and thriftless tenants, or dependents of the landlords. An annual tax of a few cents per acre, the proceeds to be devoted to the erection of school-houses, and the opening of roads through these princely estates, would go far to effect the desired end. But, whether by this, or by some other means, the beneficent end of making the cultivators of

the soil their own landlords must somehow be attained--the sooner the better, so that it be done justly and legally. In the course of several hundred miles's travel through the best settled portions of this state, I remember having seen but two school-houses outside of the cities and villages, while the churches are still more uniformly restricted to the centers of population. Whenever the land-titles shall have been settled, and the arable lands have become legally and fairly the property of their cultivators, all this will be speedily and happily changed.

I believe, too, that the time is at hand when some modification of the present mining laws will be demanded and conceded. Hitherto, the operators will pick and pan have been masters of the state, and have ruled it, like other aristocracies, with a sharp eye to their own supposed interests. To dig up a man's fenced garden, or dig down his house, in quest of gold, is the legal privilege of any miner who does not even pretend to have any rights in the premises but such as the presumed existence of gold thereon gives him. Of course, the law contemplates payment for damages sustained; but suppose the digger is pecuniarily irresponsible, and digs down your house without finding any more gold than he spends in the quest, what are you to do about it? Such laws, I trust, cannot stand. I am sure they should not.

XXXII.

CALIFORNIA--SUMMING UP.

San Francisco, *Sept.* 4-5, 1859.

The entire area of this state is officially estimated as containing a fraction less than one hundred millions of acres; but, as this total includes bays as well as lakes, rivers, etc., the actual extent of unsubmerged land can hardly exceed ninety millions of acres, or rather more than nine times the area of New Hampshire or Vermont--perhaps twice the area of the state of New York. It is only a guess on my part, but one founded on considerable travel and observation, which makes not more than one-third of this extent-say thirty millions of acres-properly arable; the residue being either ruggedly mountainous, hopelessly desert, or absorbed in the *tulé* marshes which line the San Joaquin and perhaps some other rivers. The arable thirty millions of acres --nearly the area of all New England, except Maine are scarcely equaled in capacity of production by any like area on earth. They embrace the best vine-lands on this continent, to an extent of many millions of acres --an area capable of producing all the wine and all the raisins annually consumed on the globe. All the fruits of the temperate zone are grown here in great luxuriance and perfection, together with the fig, olive, etc., to which the lemon and orange may be added in the south. No other land on earth produces wheat, rye, and barley so largely with so little labor as the great majority of these thirty million acres; a portion of them are well adapted also to Indian corn. To stock-growing in an easy, slovenly, reckless way, this mild climate and fertile soil also lend themselves readily; yet I must believe that many more acres are required here to graze a thousand head of cattle than in New York or Kentucky, and that the capacities of California to furnish beef and milk in this poor fashion have been taxed very nearly to the utmost. Doubtless, four, six, or even ten times the present number of cattle will be fed here at some future day, but not wholly on the spontaneous growth of the valleys and hill-sides. Nay, I hear already that, as the wild oats and natural grasses are closely fed year after year, so as to preclude their seeding or prevent the seed falling to the earth and germinating, they gradually die out, and are supplanted by coarse, worthless weeds. Evidently--and I rejoice over the fact--the day of ranches, or broad unfenced domains over which the cattle of the owner range at will, protected only by his brand from indiscriminate appropriation, is passing away for ever. And it is high time. Though the range is yet many acres per head, and the feed ample for the greater part of the year, yet the cows of California give less milk to-day than a like number kept for milk on any other portion of the globe. The dry grass and stubble on which they subsist keep them in fair flesh, but furnish a scanty overplus for butter and cheese. Good butter is worth fifty cents and over per pound, and has generally at this season a white, insipid look, like that made in winter at the east. Cheese commands twenty-five cents per pound, and is seldom seen on hotel or private tables. Yet the production, though meager, is rapidly increasing; the little valleys opening directly on the Pacific, and thus kept green by its fogs and damp winds, in spite of the six months' absence of rain, yielding it most abundantly.

A cheese weighing seven hundred and fifty pounds, the product of a single dairy, is now here, on its way to the State Fair at Sacramento; the large store in which I saw it is full, from basement to attic, of California-made cheese. Yet California does not nearly supply her own wants, whether of cheese or butter, and never will until her dairymen shall dean it profitable to shelter their stock in winter and supply them with green fodder in later summer and fall. Whenever they shall generally devote one-quarter of their lands to growing Chilian clover, sowed corn, beets, parsnips and carrots, where-with to feed their cows from August to February, they will make twice or thrice their present product of butter and cheese, and prove theirs one of the best dairy regions on earth. But habits, especially bad ones, are stubborn things, and they will only come to this wisdom by degrees.

Whether California would be a better country if it had rain in Summer, I have already somewhat considered. That it would be more inviting and attractive in aspect, especially to those unaccustomed to such sterility through the latter half of each year, cannot be doubted. With such rain, its natural pasturage would suffice for twice its present number of cattle, while cultivation could be extended far up into the mountains, on lands now deemed arable only when irrigated. Yet, on the other hand, these dry summers have their advantages. By their aid, the most bountiful harvests of hay and grain are secured in the best order, and by means of the least possible labor. Weeds are not half so inveterate and troublesome here as in rainy countries. A given amount of labor accomplishes far more in any direction than at the east. The wise man may start on a journey, of business or pleasure, without consulting his barometer, and the fool without looking into his almanac. Nobody, save in winter or early spring, ever casts an apprehensive look at the skies; it may be cloudy or foggy, as it often is; but you know it cannot rain till next November, and lay your plans accordingly. I have passed large fields of standing wheat that have been dead-ripe for at least a month; they will shell some when cut, but the grain will be bright and plump as ever. All through the grain region, you see wheat that has been threshed and sacked, and piled up in the open field where it grew, to await the farmer's convenience in taking it to market; and it may lie so for months without damage, unless from squirrels or gophers. Wheat is sown throughout the winter, though the earlier sown is the surer. Plowing commences with the rains, and sowing should follow as closely as may be. Very decent crops of "volunteer" grain are often grown, by simply harrowing in the seed shelled out and lost in the process of harvesting--sometimes even though the harrowing is omitted. But the ground squirrels are apt to intercept this process by filling the grain-fields with their holes, and eating up all the scattered grain and a good deal more. They are a great pest in many localities, and strychnine is freely and effectively employed to diminish their numbers.

THE MOUNTAINS AND MINES.

I have estimated that barely one-third of the total area of unsubmerged California is perfectly arable: but it would be a great mistake to suppose the residue worthless. At least thirty millions of acres more are covered by rugged hills and mountains, mainly timbered--much of the timber being large and of the best quality. Yellow, pitch and sugar-pine--the pitch-pine being scarcely akin to its stunted and scrubby New-England namesake, but a tall and valuable tree--the sugar being nearly identical with our white-pine, save that its sap is saccharine --white-cedar, red-wood, spruce, balsam-fir--all these averaging at least twice the size of the trees in any forest I ever saw elsewhere, while the balsam is just the most shapely and graceful tree on earth--such are the forests which cover all but the snowy peaks of the mountains of California. Trees six to eight feet in diameter, are as common in the Sierra Nevada, and I hear in the coast range also, as those three to four feet in diameter are (or were) in the pine forests of New-York and New-England. Consider that these giants look down on the gold mines wherein a very large proportion of the most active population of this state must for ages be employed, while the agricultural districts lie just below them, and even the seaboard cities are but a day's ride further, and the value of these forests becomes apparent. The day is not distant-- there are those living who will see it--when what is now California will have a population of three to six millions; then eligible timber-lands in the Sierra will be worth more per acre than would now be paid for farms in the richest valleys near San Francisco.

The timber of the lower hills and plains is generally oak--short-bodied, wide-spreading, and of poor quality,

save for fuel, being brush (easily broken, like a clay pipe-stem), and not durable. The more common variety looks like the white-oak found in New England pastures, but resembles it in looks only. Live-oak is next in abundance, and also a poor article. It has a smooth, dark bark, a short, crooked trunk, a profusion of good-for-nothing limbs, and small, deep green leaves, which defy the frosts of winter. The trunk is often barked by vandals for tanning, leaving the tree standing alive, but certain to die. Black and rock-oak are found in some of the mountain valleys, and seem to be of fair quality. Large cotton-wood and sycamore line some of the streams, but very sparingly. Her evergreens are the pride of California.

The gold mines are generally found among the foothills of the Sierra, or in the beds of the streams which traverse those hills. In many instances, hills now tower where rivers once ran--how long since, who may tell? Trees in a state of semi-petrifaction are dug out from under hundreds of feet of solid earth, which seems to have lain undisturbed for thousands of years. The beds of ancient lakes are covered by rugged heights; and, these beds being often anriferous, it is one of the arts of the miner to know just where to tunnel through the "rim rock" so as to strike what was the bottom of the lake, and thus extract its gold as cheaply as may be. Washing the beds of modern streams, which was the earliest and most profitable field of mining adventure, is now nearly at an end, or turned over to the Chinese, who are willing to work hard and steadily for much less than will satisfy the aspirations of a Yankee. There are still some creek-beds that will pay in winter, when water is abundant, that remain to be washed out; but, in the main, river-mining is at its last gasp. Very few dams are being or have recently been constructed to turn rivers from their beds and permit those beds to be sluiced out; and I doubt that this special department of mining ever paid its aggregate cost. The expense is serious; the product often moderate, and subject to many contingencies. Henceforth, dams will be constructed mainly to feed the canals or "ditches" whereby water is supplied to works that must otherwise be abandoned. Of these ditches, *The State Register* for 1859, has a list of several hundreds in number, amounting in the aggregate to five thousand seven hundred and twenty-six miles of artificial water-courses constructed wholly for mining purposes, at a total cost of $13,575,400, or about twice that of the original Erie Canal. The largest of these ditches is that of the Eureka Canal Company, leading water from the north fork of the Cosumnes River to Diamond Springs, two hundred and ninety miles, at a cost of eighty thousand dollars; but there are many far more expensive and important, being far larger and carried over a more difficult country. At the head of these stand the Mokelumne-Hill Canal, in Calaveras County, only sixty miles long, but costing six hundred thousand dollars, the Columbia and Stanislaus, in Tuolumne County, eighty miles long, which also cost six hundred thousand dollars, and the South Yuba Canal, in Nevada County, costing five hundred thousand dollars. Many larger enterprises than even these have been projected, but not yet carried out, because capitalists cannot be found willing to supply the needful cash. Thus, in Mariposas alone it has been estimated that an annual rental of ten millions of dollars would be paid for water, could enough of it be had at living rates. I merely guess that it could not be paid many years.

I do not suppose that the gold mines of California will ever be thorougly worked out--certainly not in the next thousand years; yet I do not anticipate any considerable increase in their annual production, because I deem fifty millions of dollars per annum as much as can be taken out at a profit, under existing circumstances. The early miners of California reaped what nature had been quietly sowing through countless thousands of years. Through the action of frost and fire, growth and decay, air and water, she had been slowly wearing down the primitive rocks in which the gold was originally deposited, washing away the lighter matter, and concentrating the gold thus gleaned from cubic miles of stubborn quartz and granite into a few cubic feet of earth at the bottom of her water-courses. Many a miner has thus taken out in a day gold which could not in weeks have been extracted from the rock where it first grew. Even the hills, in which it is now mainly found, can be washed down at one dollar or less per cubic yard, by the best hydraulic appliances. But when the miner is brought face to face with the rough granite, which he must drill, and blast, and tunnel for all the gold he gets, the case is bravely altered. He may make money here; he sometimes does; but I am sure that, up to this hour, not one quartz-mining enterprize in every four has paid its bare expenses; and, though there will be brilliant exceptions, I am confident that quartz-mining, as a whole, will not pay for many years to come. Either labor must be cheaper, or the process of quartz-mining far more economical and efficient, or the yield per ton much greater, before one undeniably auriferous quartz-vein in ten will pay the cost of working it. And,

there probably was never before a community of half a million people capable of doing so much good work in a year as this population of California. The facts that they mine gold to the extent of fifty millions of dollars annually, while growing four millions of bushels of wheat, five millions of bushels of barley, with large amounts of other grains and an ample supply of vegetables and fruits for home consumption, would go far toward establishing the fact. But the industry of California produces important results which are not exhibited above. No part of the union is making more rapid strides in building, fencing, opening farms, setting fruit-trees, breeding stock, etc. The number of grape-vines alone was increased from 1,540,134 in 1856 to 3,954,548 last year, (of which 1,650,000 were in the southern county of Los Angeles alone.) The aggregate will be carried this year above 6,000,000. Los Angeles in 1857 produced 350,000 gallons of wine. Probably no other market on earth is so well supplied with fruit throughout the year as that of San Francisco--a city hardly yet ten years old. Strawberries are abundant here to-day, and are in season from April to December. Raspberries are ripe in May, and are now plentiful and perfect. Peaches are fresh from June to November. Grapes come in July, and are sold till December. All these and other fruits require preparation and outlay before they begin to make returns. The orchards and vineyards of California have cost millions of dollars, which are destined to return to their proprietors with interest in the course of a few years. As yet, there are probably more apple-trees in the state than there have been gathered bushels of apples up to this day.

The following are the latest school statistics of the state that I have been able to find:

Year.

Com. Schools.

Teachers

*Pupils.

1853

53

56

11,242

1856

313

417

30,019

1857

367

486

36,222

_____

** This number of pupils was not in actual attendance on the schools, but is a return of all the children between four and eighteen years living in the cities or towns which had organized schools. The number who actually attended school for even a part of a term was of course much smaller.*

Next after the deficiency of women shown to exist in the population of California, this "beggarly account" of schools is the darkest shade in the picture. I believe I have seen but two *school-houses outside of cities or considerable villages in the course of my travels through the state. And, so long as* ranches, *of five hundred to many thousand acres each, stand in place of small, neat, well-cultivated farms, this deficiency, though it may be modified, will continue.*

I have visited several of the common schools of San Francisco, and found them admirable in their appointments, under intelligent and vigilant supervision, and in a high state of efficiency. There may somewhere be better managed Seminaries than the High School, but I never entered their doors. Most of the smaller cities are taking hold of the subject in the right spirit, but under many disadvantages. Youth are too often kept away from school to earn money which their parents could do without, and many parents wait till they have improved their circumstances essentially before they think of educating their children. I was told in Marysville that many of the pupils of fourteen years and upward, in her schools, were just learning to read. There ought to be two thousand good common schools in operation this winter in California; but I fear there will not be six hundred. I entreat the early and earnest attention of her better citizens to her lamentable lack of schools. In no way can her energy and wealth be better employed than in multiplying and improving them.

WHAT IS THE INDUCEMENT FOR FURTHER IMMIGRATION?

I have endeavored so to arrange the facts embodied in my letters from this state as to furnish an answer to this question. I will here only sum up my conclusions:

1. California has still a great need of virtuous, educated, energetic women. One hundred thousand more of these would find homes and be useful here. Certainly, I would advise no woman to pitch into such a community devoid of the protection of relatives or trusted friends; but women who can teach, manage a dairy, keep house, etc., and do not fancy any useful work degrading, are still greatly needed here. House servants command twenty to thirty dollars per month; capable female workers in other capacities are paid in proportion. For a resolute, capable young woman, who has a married sister or trusted friend here, and who is not detained elsewhere by strong natural ties, I believe, there is no better country than this.

Good farmers, who have considerable means, but especially those who understand the dairy business, and have families who can and will tender them efficient help in it, can also do well here. The naked facts that, while wheat now sells for one dollar per bushel, butter brings fifty and cheese twenty-five cents per pound, are enough to show that dairy-farming is profitable. The best grazing country is found along the coast; but it is all good for those who understand it, and are willing to grow feed for a part of each year. Bees do far better here than elsewhere, are worth one hundred dollars per hive, and good property at that. Fruit-growing is still profitable; vine-growing will always be. I believe a young, energetic, intelligent farmer, with a good wife and two thousand dollars or over, can do as well in California as elsewhere, in spite of the horrible confusion of land-titles. Buy no tract of which the title is at all doubtful, unless you can buy all the conflicting claims, but pay higher for good land well located, and as to the ownership of which there is no dispute. Such may at all times be found; if settlers were willing to pay for this rather than buy uncertainties at lower rates, it would be far better for them.

I do not think it advisable for young men, or ally others, to come here expecting to "make their pile," and return to the east. The chances for doing this, always doubtful, have nearly ceased to exist. No more merchants or clerks are wanted; and of those who come hereafter, nine-tenths will go back disappointed and impoverished, or stay here paupers. Goods are sold in California at as reasonable rates, all things considered, as in New England or New York, and there are quite sellers enough. The chances for "big strikes"

in the mines are few, and greenhorns cannot share them. Mining is reduced to a business, and one, at best, no better, in the average, than other business. The men who dig the gold carry away but a small share of it. Better leave the chances of gold-digging to those who understand it.

As to labor for wages, it is generally well paid here --say from twenty-five to forty dollars per month, be side board, and for mechanics still higher. But employment is precarious, whether in the cities, or the mines, while the farmers are shy of hiring at high wages when wheat brings but one dollar per bushel. I cannot consider it worth any man's while to risk the price of a passage hither for the chance of getting employment by the month. The experiment will usually cost all it comes to. If you come to California at all, come to stay; and nowhere else will you find a little money more desirable than here. Even one thousand dollars, well applied, may, with resolute industry and frugality. place you soon on the high road to independence.

But the steamship's shrill pipe gives warning that I must be up and away. I had ardently hoped and expected to return by the Butterfield Overland Mail, via Los Angeles, Fort Yumas, Tucson, El Paso, etc., but this was not to be. These pestilent boils, which are the scourge of many overland comers to California, forbid it. I have no choice but to return by way of the Isthmus, for I can wait no longer. And so, as the good steamer Golden Age swings from her moorings, I wave to my many and generous friends in California--whose number I trust my visit has not tended to diminish--a fervent and hearty adieu!

XXXII[I].

CALIFORNIA--FINAL GLEANINGS.

Steamship Golden Age, Pacific Ocean, Sept. *9. 1859.*

Though my overland journey is ended, some facts gathered in its last stages remain to be noted. They relate exclusively to the moral and intellectual well-being and prospects of the golden state.

RELIGION.

The last State Register *gives a tabular view of religious denominations, making two hundred and sixteen Christian, and five Jewish congregations in the state, with two hundred and eighty-nine Christian, and three Hebrew clergymen. Of the Christian, one hundred and thirty-three--nearly one half--are Methodists, and seventy-one--nearly one-fourth--are Roman Catholics. I hear from different quarters that the Methodists and Catholics manifest generally far more energy and vitality than the other churches. The Catholics enjoy certain marked advantages over all others. Theirs is the church of the old Californians--that is, of the Spanish-Mexican population without exception--also a part of the Indians. The Catholic inhabitants are estimated to exceed one hundred thousand. But the old church is strong in position and wealth, as well as numbers. Much of the most valuable land in the state was lone since conceded by Spanish or Mexican officials to the Catholic missions; and, though a good deal of this has been clutched by squatters, a very valuable property still remains. Santa Clara College, near San José, is probably the best literary institution in the state, and attracts many sons of non-Catholic parents, though a Catholic seminary. It has by far the largest theological library to be found on this coast. Oakland College, opposite San Francisco, is a young, but thriving seminary, under Orthodox direction. There is to be a San Francisco University, I believe, but is not yet. Whatever colleges of a high grade may be established in the state, for many years will owe their existence to religion.*

As yet, the great majority of the non-Catholic Californians have no habit of attendance on religious worship--no proclaimed attachment to any church whatever. Estimating their number, (not including Chinese or Indians) at three hundred and fifty thousand, I judge that less than one-tenth of them statedly attend church, or make any religious profession. I simply state the facts as they appear to me, without drawing therefrom any deduction beyond this: an unsettled, homeless population rarely or never build churches, or

habitually frequent them.

THE PRESS.

*There are between ninety and one hundred periodicals published in California. Thirty-one of the forty-five counties have each one or more journals. Of these, twenty are issued daily--six of them of the Buchanan-Lecompton stripe in politics, three anti-Lecompton, and only one (*The San Francisco Times*) decidedly republican. The remainder are independent --most of them with strong anti-Leconmpton proclivities. At the head of these stands* The Sacramento Union *(daily and weekly), which, by means of extensive and systematic reporting, presents the fullest and fairest account of whatever is said or done in California of any journal, and which has, very naturally, the largest and widest circulation. Next in importance and influence stands* The Alta California, *the oldest paper in the state, and I believe the first ever issued in San Francisco.* The Bulletin *is the only evening paper issued in that city, and is distinguished for the fullness of its correspondence.* The California Farmer, *by Colonel Warren, is the pioneer work in its line, and has hardly been exceeded in usefulness to California by any other. I trust it has a long and prosperous career before it.*

Of the weekly newspapers issued in the state, twenty-five support Lecompton democracy, fourteen are anti-Lecompton, only two or three republican; the residue independent--several of them with strong and outspoken anti-Lecompton tendencies. It will thus be seen that the influence of the local press leans strongly to the side of whatever may for the time being be commended as regular democracy. No state is more intensely scourged by office-seeking than California; offices being here numerous and salaries and pickings very fat; hence each county has its powerful junto of office-seekers who understand (if little else) that the way to their goal lies through "sticking to the party," right or wrong--in fact, if it be wrong, the merit of sticking to it is, in the party sense, so much greater, and the reward is likely to be larger. Intelligent as a majority of the people of this state are known to be, it is still deplorably true that the great mass of the facts which impelled and necessitated the republican movement and organization have never been made known through their journals--not even through those of the independent order. To this hour, California, otherwise well informed imagines that there was no serious struggle in Kansas--or if there was that one side was about as much in fault as the other--that Kansas was invaded, her people driven from the polls, her ballot-boxes stuffed, and the verdict of her settlers falsified (if at all,) as much by republicans (whence?) as by the Missouri border ruffians! One democrat with whom I discussed the matter supposed they came over from Iowa! Had the independent press done its simple duty in the premises, such monstrous fabrications could neither be credited nor profitably coined. But I rejoice in the hope that the break on Lecompton insures a more ample and truthful presentment of the current history of the great struggle hereafter. I trust that the people of this state are not much longer to be held in the leading-strings of slavery and sham-democracy.

*Of the ninety-odd periodicals in California, three are printed in the French language, two in Spanish, one in German; and at least one in Chinese. (Whoever would subscribe to "*The Chinese News*" should address its editor, Hung Tai, at Sacramento.) Six are devoted to religion; two to agriculture; nine or ten to literature, mining, medicine, etc. About one-third of the whole number are issued from San Francisco alone.*

SAN FRANCISCO.

The city of San Francisco is built along the eastern base and up the side of a row of high sand-hills, which stretch southwardly from the Golden Gate, between the Pacific ocean on the west and the bay of San Francisco on the east. The city has been built out into the bay some fifty to a hundred rods by carting in sand from the eastern slope of the hills, which are thus left more abrupt than they originally were. The compactly built district seems rather more than two miles north and south, by somewhat less east and west. I judge that the city is destined to expand in the main southwardly, or along the bay, avoiding the steep ascent toward the west. The county covers 26,000 acres, of which one-half will probably be covered in time by buildings or country-seats. I estimate the present population at about 80,000. [* The S. F. Directory for 1859 makes it*

78,083, including 3,150 Chinese and 1,605 Africans.] It seems not to have increased very rapidly for some years past; and this is as it should be. San Francisco has the largest trade of any city on the Pacific; but as yet she is the emporium of California and Oregon only. A railroad communication with the Atlantic states would make her the New-York of this mighty ocean--the focus of the trade of all America west of the Andes and Rocky Mountains, and of Polynesia as well, with an active and increasing Australian commerce. Without an inter-oceanic railroad, she must grow slowly, because the elements of her trade have been measured and their limits nearly reached. The gold product of this region has for years averaged about fifty millions per annum, and is not likely soon to rise much above that amount. That sum does not require, and will not create, a larger mart than San Francisco now is. The horrible anarchy of land titles forbids any rapid expansion of agricultural industry hereabouts; but if it were to expand, where is its market? Wheat is cheaper here to-day than in New-York or Liverpool; yet whither can any considerable amount of it be exported at a profit? I do not know.

With an efficient protective tariff, San Francisco would become, what she ought now to be, a great manufacturing center--the united Manchester and Birmingham of the South Seas. She ought to make half the wares she now merely buys and sells. Under our present tariff, with the high rates of labor prevailing in this state, this cannot be. She is evidently destined to become a great city, but not yet.

Some of the elements of greatness she certainly has--a spacious, secure, magnificent harbor, with easy access to the ocean, and a noble river communication inland; a temperate and equable climate--one very favorable to the highest efficiency in industry, though I do not deem it a pleasant one; an inexhaustible supply of the finest timber close at hand; the richest mines of the precious metals; and a fertile, beautiful, but not unlimited agricultural region filling up the interval between her and those mines, and stretching hundreds of miles north and south. She has a population rarely surpassed in intelligence, enterprise, and energy. Add to these a railroad and telegraph to the Atlantic, and she could hardly fail to grow in population, trade, industry, and wealth, with a rapidity for which there have been few precedents.

San Francisco has some fine buildings, but is not a well-built city--as, indeed, how could she be? She is hardly yet ten years old, has been three or four times in good part laid in ashes, and is the work mainly of men of moderate means, who have paid higher for the labor they required than was ever paid elsewhere for putting so much wood, stone, brick and mortar into habitations or stores. Her growth for the first five years of her existence was very rapid; but Pottsville, Chicago, Liverpool, have also had rapid growths, and St. Louis is now expanding faster than this city has done since 1852. Cities are created and enlarged by the wants of populations outside of their own limits; San Francisco will take another start when she shall have become beneficent if not indispensable to a much larger radius than that now buying and selling mainly through her. In the hope that the time for this is not far distant, I bid her God speed.

XXXIV.

RAILROAD TO THE PACIFIC.

New York, Oct. *20, 1859.*

I propose in this letter to present such considerations as seem to me pertinent and feasible, in favor of the speedy construction of a railroad, connecting at some point our eastern network of railways with the waters of the Pacific ocean.

Let facts be submitted to, and pondered by considerate, reflecting men. There are thousands of usually intelligent citizens, who have decided that a Pacific railroad is a humbug-the fantasy of demagogues and visionaries--without having ever given an hour's earnest consideration to the facts in the case. Let me have a patient hearing while I set forth some of the more material of those facts: and first, in answer to the question, I there a national need of a railroad from the Missouri to the Pacific? *Let us study the records:*

The number of passengers arriving at, and departing from San Francisco by water, so far as we have official returns of them, is as follows:

Years. Arrivals.

Departures.

1849 91,415

No returns.

1850 36,462

No returns.

1851 27,182

No returns.

1852 66,988

22,946

1853 33,232

30,001

1854 47,531

23,508

1855 29,198

22,898

1856 28,119

22,747

1857 22,990

16,902

Total 381,107

139,002

Of course, these were not all from the Atlantic slope, via the Isthmus, or Nicaragua; but the great mass of them were. Probably most of those brought by small vessels from the Pacific ports were not reported to, or recorded at the custom-house at all. There were some immigrants to California, who did not land at San Francisco; though the great mass undoubtedly did. Then there was a heavy, though capricious overland emigration. Governor Bigler stated the number in 1854 alone at sixty-one thousand four hundred and

sixty-two; and there was a very large migration across the Plains in 1852. In 1857, the number was estimated at twelve thousand five hundred. This year, my estimate of the number, founded on personal observation, is thirty thousand; but others make it forty thousand to sixty thousand. There was, also, a very considerable emigrant movement across the Plains in an easterly direction. So far, I have taken no account of the emigration to, and travel from Oregon and Washington. I know I am within bounds in estimating the number who have passed from the Atlantic slope to California and Oregon or Washington at an average of fifty thousand, while the average number who have annually returned thence cannot have fallen below thirty thousand.

Can there be any doubt that nine-tenths of these would have traveled by railroad, had such a road stretched from the Missouri or Mississippi to the Pacific, the fare being moderate, and the passage made within ten days? I estimate that twice to thrice the number who actually did go to California would have gone, had there been such a means of conveyance, and that the present Anglo-American population of the Pacific slope would have been little less than two millions--say California, one million five hundred thousand; Oregon, three hundred thousand; Washington, one hundred thousand; Sonora and Mexican California, one hundred thousand.

Now as to the gold crop of California: The custom-house returns of San Francisco show the following shipments of gold from that city.

Year.

Amount.

1849

$4,921,250

1850

27,676,346

1851

42,582,695

1852

46,586,134

1853

57,331,024

1854

51,328,653

1855

43,080,211

1856

48,887,543

1857

$48,592,743

The returns for the last two years, and the first three quarters of the present are not before me; but they are known to have varied little from the rate of fifty millions of dollars per annum, making the total amount entered at the custom-house of San Francisco, as shipped at that port up to this date, rather over five hundred millions of dollars. How many more millions have been brought away in the trunks or belts of returning emigrants, or mercantile passengers, I will not attempt to guess; but the amount is certainly large. On my recent trip homeward, one of the steerage passengers was currently reported as having thirty thousand dollars in gold in his carpet-bag, which he kept in his hands or under his head; others were said to have their thousands each, to a very large aggregate amount. Manifestly, the export of gold from California, the current produce of her mines, has exceeded fifty millions of dollars per annum, while a considerable amount is retained in the country.

Now all this gold is sent away to pay for goods--many of them very costly in proportion to their bulk and weight--silks and other dear textile fabrics; jewelry; rare wines; expensive wares; drugs, spices, etc. Experience has amply proved that all such products take the quickest rather than the cheapest route. I believe that twenty million dollars of costly or perishable merchandise would annually seek California overland if there were a continuous line of railway from the Atlantic to the Pacific seaboard; and that this amount would steadily and rapidly increase. When the Erie Railroad earns over three million dollars per annum by freight, it certainly must be moderate to hope that ten million dollars would be paid as freight on all the merchandise sent from this side to the Pacific by railroad, and that the larger share of this freight must be earned by and paid to the Pacific road.

Now let us see how far the government would necessarily patronize such a road:

The Post-Office Department is now paying at least one million and a quarter for the conveyance of mails between the Atlantic and Gulf states and California, and was recently paying one million and a half. For this, it gets a semi-monthly mail by way of the Isthmus (six thousand miles, or more than double the distance direct), and a semi-weekly mail by the Butterfield route (also very circuitous), which carries letters only. There are two or three slow mails on other routes, but they cannot be said to add anything of moment to the facilities enjoyed by California and the older states for the interchange of messages or ideas.

As to military transportation, I cannot say what is its amount, nor how far a single line of railway could reduce its proper cost. I believe, however, that the government is now paying at least six millions of dollars for the transportation of men, munitions and provisions to our various military posts between Kansas proper and California, and that fully half of this would necessarily be saved and earned by a railroad to the Pacific.

Utah is now receiving accessions of population (mainly from Europe) over the Plains, though very much of their household stuff has to be sacrificed to the exigencies of the long, hard, tedious journey in wagons drawn by weary, thirsty, famishing cattle. Her people generally live poorly, yet they have to eat and drink, while most of them like to smoke or chew also. At present, most of them abstain from the use of tea, coffee, etc., because these are very dear while the Saints are mostly poor. If there were a good railroad through Utah from Missouri to California, I believe the Saints would patronize it to the amount of at least half a million per annum, and that this amount would rapidly grow to one million. It would of course not stop there. The Rocky Mountain gold mines are no longer a matter of speculation. They just as surely exist as we live; and I believe they are destined to increase in importance and productiveness. I advise no man to dig gold or start for

"Pike's Peak." I presume ten of those who go thither will come back ragged and penniless, for every one that they make rich. I expect to hear many times yet that the Kansas gold mines are a humbug--that they have exploded--that every one has left or is leaving them, etc., etc.--and I expect further to hear of new discoveries in this direction or in that, and to record the receipts of millions thence in each of the years from 1861 to 1871 inclusive. Meantime, those who prospect or mine there must live--a point to which eating is rather essential in that keen mountain air. Everything that can be eaten or drank is selling in the Kansas mines at far more than California prices. A railroad from the Missouri to the heads of the Platte or Arkansas would reduce, in those mines, the average cost of food at least half, and would thereby diminish sensibly the cost, and increase the profit of digging gold. If one hundred thousand persons can manage to live in the Rocky Mountain gold region as it stands, three hundred thousand could do better there with a railroad up from the Missouri. And that number, if located there, could not supply less than three million dollars per annum of travel and transportation to a Pacific railroad.

Let us sum up, now, and see what elements of support for such a railroad may be presumed to already exist:

I. Fifty thousand passengers from the Missouri to California and thirty thousand the other way, half first-class at $100, and the residue, second-class at $50 each: Total passage-money

6,000,000

II. Fifty millions of gold brought from California, now paying 1 1/4 per cent. freight and insurance, if charged 1 per cent. for conveyance over the railroad would pay

500,000

III. Freight on merchandise sent overland to California, say $20,000,000 worth, paying at least $5,000,000 freight, of which the Pacific Road could not receive less than

3,000,000

IV. Conveyance of troops, with freight on arms, munitions, and provisions forwarded to the various military posts between the Missouri and California

3,000,000

V. Conveyance of a daily mail each way in ten days between the Missouri and California, at least

1,000,000

VI. Freight and passage for the Mormons

500,000

VII. Ditto for the Kansas and Rocky Mountain gold region

3,000,000

Total yearly earnings of the Road

$17,000,000

In this statement, I have made no account whatever of India, China, Australia, Polynesia, etc., as taking this

road in their way to and from either shore of the Atlantic. I do not doubt that they would make some use of it as first, and more and more annually thereafter; but this is not a resource to be relied on. I count on no transportation of aught but passengers and gold from California eastward; though I am sure that much grain would flow thence into the placers *and settlements of the Great Basin, especially the rich mines newly discovered in Carson Valley. I know that California would soon begin to send wines, fruits, etc., eastward, and that her wool, hides, etc., would soon follow in their path. I can have no doubt that a railroad from the Missouri to the Pacific would earn seventeen millions of dollars the year after its completion, and that its income would increase thenceforth at the rate of at least one million per annum for ten or fifteen years.*

Let us now consider the political or national necessity and use for a railroad from the Missouri to the Pacific:

1. The Federal government is now paying some twenty-five millions per annum for military service, mainly west of the Mississippi. Nearly half of this heavy sum is paid for transportation in its various shapes--for the conveyance of provisions, munitions, etc., to the army in Utah, and to the various posts scattered through the Indian country; for horses, mules, and wagons, required to facilitate the conveyance of soldiers, arms, munitions, and baggage from post to post, etc., etc. Every regiment employed in the Indian country, or on the Pacific, costs the treasury at least one thousand dollars per man per annum, of which I estimate that nearly half would be saved by a Pacific railroad. Certainly, the saving from this source could not fall short of five millions per annum.

2. But the efficacy, the power of an armed force, in the defense and protection of a vast empire, depend less on its numbers than on its mobility--on the facility with which it can be conveyed to the point at which it may at any time be wanted. For instance, our government has now some six to eight thousand regulars scattered over Nebraska, Kansas, New Mexico, Northern Texas, Utah, California, Oregon, and Washington. These six or eight thousand are not as efficient as two thousand would be, if it were in the power of the government instantly to transfer those two thousand, by a mere order, to the point at which they might at any time be wanted. A Pacific railroad would not, indeed, fully effect this; but it would go far toward it.

3. Suppose our little army, now largely concentrated in Utah, were urgently needed to repel some sudden danger, whether on the Pacific or the Atlantic coast: It would be a good three month's work to provide the needful animals, and remove that force to either sea board. But with a Pacific railroad, the whole might be in New York, Charleston, New Orleans, or San Francisco, within a fortnight after the order was dispatched by telegraph from the War department, at Washington. The value of this facility of movement can hardly be over-estimated.

4. At present, the regiments employed on the Pacific are almost or quite wholly raised and recruited in the Atlantic States. Their removal thence to their destination costs largely, heavily, in direct expense, and in that time which is money. Suppose a regiment to cost half a million per annum, and that six months are now consumed in sending it from Baltimore to Puget's Sound, while one month would suffice with a Pacific railroad. In addition to the saving on the present cost of its transportation, the saving in the time of that regiment would be two hundred thousand dollars directly, and practically much more; as a part of the cost of recruiting, drilling, etc., now lost in the tedious transportation, would be saved by the accelerated movement.

5. In case of war with any great maritime power, in the absence of a Pacific railroad, we should be compelled either to surrender the Pacific states to subjugation and spoliation, or maintain a double armament at enormous cost. Our army on this side of the Rocky Mountains would be utterly ineffective as against an expedition launched against the Pacific coast, and vice versa._ But, with a Pacific railroad, and the telegraph which would inevitably accompany it, it would be morally impossible that an expedition directed against either seaboard, should not be anticipated in its arrival by the concentration, to oppose its landing, of our soldiers, drawn from every part of the country. Our government, in aiding the construction of such road, would inevitably stipulate for its use--exclusive, if required--in times of public peril; and would thus be enabled to transfer fifty thousand men from either coast to the other in the course of twenty or thirty days.

6. We have already expended some scores of millions of dollars on fortifications, and are urgently required to expend as many more. Especially on the Pacific is their construction pressingly demanded. I do not decide how fast nor how far this demand may or should be responded to; but I do say that a Pacific railroad, whereby the riflemen of the mountains could be brought to the Pacific within three days, and those of the Missouri within ten, would afford more security to San Francisco than ever so many gigantic and costly fortifications.

But enough on this head.

The social, moral, and intellectual blessings of a Pacific railroad can hardly be glanced at within the limits of an article. Suffice it for the present that I merely suggest them.

1. Our mails are now carried to and from California by steamships, via Panama, in twenty to thirty days, starting once a fortnight. The average time of transit from writers throughout the Atlantic states to their correspondents on the Pacific exceeds thirty days. With a Pacific railroad, this would be reduced to ten; for the letters written in Illinois or Michigan would reach their destinations in the mining counties of California quicker than letters sent from New York or Philadelphia would reach San Francisco. With a daily mail by railroad from each of our Atlantic cities to and from California, it is hardly possible that the amount of both letters and printed matter transmitted, and consequently of postage, should not be speedily quadrupled.

2. The first need of California to-day is a large influx of intelligent, capable, virtuous women. With a railroad to the Pacific, avoiding the miseries and perils of six thousand miles of ocean transportation, and making the transit a pleasant and interesting overland journey of ten days, at a reduced cost, the migration of this class would be immensely accelerated and increased. With wages for all kinds of women's work at least thrice as high on the Pacific as in this quarter, and with larger opportunities for honorable and fit settlement in life, I cannot doubt that tens of thousands would annually cross the Plains, to the signal benefit of California and of the whole country, as well as the improvement of their own fortunes and the profit of the railroad.

3. Thousands now staying in California, expecting to "go home" so soon as they shall have somewhat improved their circumstances, would send or come for their families and settle on the Pacific for life, if a railroad were opened. Tens of thousands who have been to California and come back, unwilling either to live away from their families or to expose them to the present hardships of migration thither, would return with all they have, prepared to spend their remaining days in the land of gold, if there were a Pacific railroad.

4. Education is the vital want of California, second to its need of true women. School-books, and all the material of education, are now scarce and dear there. Almost all books sell there twice as high as here, and many of the best are scarcely attainable at any rate. With the Pacific railroad, all this would be changed for the better. The proportion of school-houses to grogshops would rapidly increase. All the elements of moral and religious melioration would be multiplied. Tens of thousands of our best citizens would visit the Pacific coast, receiving novel ideas and impressions, to their own profit and that of the people thus visited. Civilization, intelligence, refinement, on both sides of the mountain--still more, in the Great Basin inclosed by them--would receive a new and immense impulse, and the Union would acquire a greater accession of strength, power, endurance, and true glory, than it would from the acquisition of the whole continent down to Cape Horn.

The only points of view in which a railroad from the Missouri to the Pacific remains to be considered are those of its practicability, cost, location, and the ways and means. Let us look at them:

I. As to practicability, there is no room for hesitation or doubt. The Massachusetts Western, the Erie, the Pennsylvania, and the Baltimore and Ohio, have each encountered difficulties as formidable as any to be overcome by a Pacific railroad this side of the Sierra Nevada. Were the railroad simply to follow the principal emigrant trail up the Platte and down the Snake and Columbia to Oregon, or south-westwardly from the South Pass to the foot of the Sierra, it would encounter no serious obstacle.

II. The dearth of timber on the plains is the chief difficulty to be overcome; and this, with the prevalence of deep snows in and about the South Pass, will probably send the road considerably north or south of that famous and facile pass. I presume the shortest, most feasible, and best wooded route for a railroad from the Mississippi to the Pacific is one from Minnesota to Puget's Sound, leaving the Rocky Mountains, save some low spurs, on the south, and encountering less formidable snows than those of the North Platte, South Pass, and Green River. Another pretty well timbered and direct route, with but a moderate elevation at the pass of the Rocky Mountains, strikes westward from Dubuque to the Yellow Stone, follows one of the sources of that stream into and through the Rocky Mountains, and thence down a similar stream to the Columbia, and so through Oregon to Astoria. By taking this route, the timber of the Rocky Mountains could be cheaply rafted or floated to every part of the track on either side at which timber is naturally deficient. The routes which turn the Rocky Mountains and the Sierra Nevada by the south are necessarily longer than those above indicated (the earth's circumference being greater toward the equator than near the pole), traverse in good part a parched and sterile desert, and must encounter serious obstacles in the dearth of water and in crossing the Rio Del Norte and Colorado. They would, however, rarely or never be formidably obstructed by snow.

In my judgment, however, the preferable, though not the easiest route for a Pacific road traverses the valleys of the Kansas and its Smoky Hill fork, crossing thence to the more northerly sources of the Arkansas, and passing with one of them through the Rocky Mountains, not far from the South Park, thence winding down some tributary to the Colorado, thence up a western fork or valley and down the Timpanagos or some such stream into Utah, and through that territory on or near Capt. Simpson's new road to the valley of the Carson, Truckee, or whatever stream should be found to proffer the least difficult way across the Sierra Nevada, to San Francisco. A railroad on this route would at once command a large and lucrative traffic from the Kansas gold region, from Utah, and from the newly-discovered but rich and growing gold region of Carson Valley or western Utah--soon, I trust, to be the territory of Nevada. Thousands have recently been drawn to Carson Valley by the fame of these mines; and the fact being established that gold, silver, and other valuable metals are found in Carson Valley, it is at least strongly probable that they will be found elsewhere along the eastern base of the Sierra Nevada. A railroad on this route would have an immediate and large local traffic, both in passengers and goods, from California to Carson Valley, from Missouri and Kansas to the Rocky Mountain gold region, and from each to Utah. Its mails, too, would be heavier and far, far more beneficent, than if conveyed by any other route. I judge, therefore, that on this route the railroad is most likely to be built, unless future developments of mineral wealth north or south of it should change the whole aspect of affairs.

III. And now as to cost and the ways and means:

This road cannot be built cheaply; for provisions and all the necessaries of life must rule high along its line, and most of the laborers will have to be carried thither. Yet it is but fair to consider that many of the heaviest items of expense on most other railroads--land and land damages, timber, stone, etc.--will here cost nothing but the labor of preparing them for this use. Then the rock-cutting will, in the average, be light, and the bridging still lighter. For much of the distance, five thousand dollars per mile will grade and bridge a double track in the very best manner. Doubtless, there are miles that would cost $100,000; but these are comparatively few; while the Colorado is the only formidable stream to be crossed between the Missouri and the Sacramento. And, as the road would necessarily be commenced at each end and pushed toward the center, it would have a considerable traffic on the very first hundred miles that should be completed, and a large one on the first five hundred. Were it to be finished next April so far as Carson Valley from the west and "Pike's Peak" from the east, I firmly believe that those two sections would pay expenses and interest on cost forthwith. If so, what might not be hoped from the completed road?

Again; it is to be considered that, by building thus in sections, each portion, as finished, would be used to forward provisions, rails, timber, etc., for the next. If wheat be worth five dollars per bushel to-day at Denver, it by no means follows that it would cost half so much, with a railroad from the Missouri completed nearly or quite to that point.

I estimate that a railroad from the Missouri at Kansas City, Wyandot, Leavenworth, Atchison, or St. Joseph, to San Francisco, must be nearly or quite two thousand miles long, and that it would cost, with a double track and fully equipped, seventy-five thousand dollars per mile, or one hundred and fifty millions of dollars. A sanguine engineer would probably reduce this to fifty thousand dollars per mile, or one hundred millions of dollars; but, as most works cost more than they were expected to, it is as well to begin with large figures, so as not to be disappointed. More than a third of this road would build itself--that is, so much of it as lies in California, or within the boundaries assigned herself by the new state of Kansas, would readily be built by private enterprise, if the connecting link were certain to be perfected in due season. It seems advisable, however, to have a single road, under one direction, from the Missouri to the Pacific, and thus make the certain profits of the extremities contribute toward the construction and support of the less promising center.

But, supposing the cost of a Pacific railroad to be one hundred and fifty millions of dollars, or even one hundred millions of dollars, how is so large an amount to be procured?

I answer--not wholly by individual subscription, or voluntarily associated enterprise. The amount is too vast; the enterprise too formidable; the returns too remote and uncertain. In the present depression of railroad property and interests, an attempt to raise such a sum for any such purpose, would be madness. One railroad to the Pacific would probably pay; but what assurance could an association of private citizens have, that, having devoted their means and energies to the construction of such a road, it would not be rivaled and destroyed by a similar work on some other route? No hundred millions can be obtained for such an undertaking without assurance of government aid.

But neither will it answer to commit the government unqualifiedly to the construction of such a work. Its cost, in the hands of Federal functionaries, would be incalculable; it would be an infinite source of jobbing and partisan corruption; it would never be finished; and its net revenues would amount to nothing. And then the question of location--the conflict of rival interests--would alone suffice to prevent the construction of the work by the federal government.

But let that government simply resolve that the Pacific road shall be built--let Congress enact that sealed proposals for its construction shall be invited, and that whichever responsible company or corporation shall offer adequate security for that construction, to be completed within ten years, on the lowest terms, shall have public aid, provided the amount required do not exceed fifty millions of dollars, and the work will be done, certainly for fifty millions' bonus, probably for much less. The government on its part should concede to the company a mile in width, according to the section lines, of the public lands on either side of the road as built, with the right to take timber, stone and earth from any public lands without charge; and should require of said company that it carry a daily through-mail each way at the price paid other roads for conveying mails on first-class routes; and should moreover stipulate for the conveyance at all times of troops, arms, munitions, provisions, etc., for the public service, at the lowest rates, with a right to the exclusive possession and use of the road whenever a national exigency shall seem to require it. The government should leave the choice of route entirely to the company, only stipulating that it shall connect the navigable waters of the Mississippi with those of the Pacific Ocean, and that it shall be constructed wholly through our own territory. Payment of the national bonus to be made, say one-twentieth so soon as one-tenth of the road shall have been finished and approved, and at this rate until one-third of the road shall have been built, when the remainder of one-fourth of the bonus shall be paid; when half the road shall have been built, the payment of bonus shall be increased to one-third; when the work is three-fourths done, what remains of five-eighths of the bonus shall be paid; and when the work is done and accepted, all that remains unpaid of the bonus shall be handed over to those who will have so nobly earned it.

By adopting this plan, the rivalries of routes will be made to work for, instead of working against, the construction of the road. Strenuous efforts will be made by the friends of each to put themselves in position to bid low enough to secure the location; and the lowest rate at which the work can safely be undertaken will unquestionably be bid. The road will be the property of the company constructing it, subject only to the rights

of use, stipulated and paid for by the government. And, even were it to cost the latter a bonus of fully fifty millions, I feel certain that every farthing, of that large sum will have been reimbursed to the treasury within five years after the completion of the work in the proceeds of land sales, in increased postages, and in duties on goods imported, sold, and consumed because of this railroad--not to speak of the annual saving of millions in the cost of transporting and supplying troops.

Men and brethren! let us resolve to have a railroad to the Pacific--to have it soon. It will add more to the strength and wealth of our country than would the acquisition of a dozen Cubas. It will prove a bond of union not easily broken, and a new spring to our national industry, prosperity and wealth. It will call new manufactures into existence, and increase the demand for the products of those already existing. It will open new vistas to national and to individual aspiration, and crush out filibuster is in by giving a new and wholesome direction to the public mind. My long, fatiguing journey was undertaken in the hope that I might do something toward the early construction of the Pacific Railroad; and I trust that it has not been made wholly in vain.

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