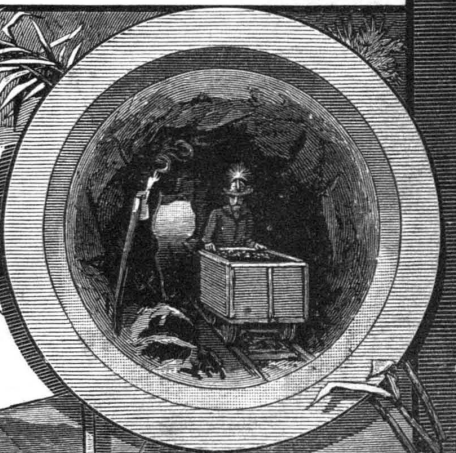


*J. I. McKenney*

OCTOBER, 1886.



AN ILLUSTRATED JOURNAL  
OF GENERAL INFORMATION  
DEVOTED TO THE  
DEVELOPMENT OF  
THE GREAT WEST



L. SAMUEL, PUBLISHER, PORTLAND, OREGON.

THE WEST SHORE!

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A literary journal circulating extensively throughout the Pacific Coast and the East. Its leading feature is the original illustrations and descriptions of the towns, cities and industries, resources and magnificent scenery of the Pacific Coast. A volume of it contains more information and handsomer engravings of the Northwest than can be secured in any other form at any price. Per year, postage paid, \$2.00; to foreign countries, \$2.25; sample copy, 25 cents.



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# THE WEST SHORE.

12th Year.

Portland, Oregon, October, 1886.

No. 10

ESTABLISHED 1873.

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THE success of the artesian well at Miles City has stimulated the boring of others in Eastern Montana. One recently bored on a ranch north of the Yellowstone flows eighty gallons per minute. This indicates that much of that vast upland region lying back from, and above the level of, the streams, which has been considered valueless for agriculture because beyond the reach of irrigation by ordinary methods, may be redeemed from sterility and rendered productive. The transformation created by irrigating canals in the arid regions of California, Nevada, Utah, Colorado and other Western states and territories has been so great that land lying within reach of irrigating canals is considered very valuable, while equally good land lying at a higher altitude above the running streams is considered worthless. If artesian wells can supply these highlands with sufficient water there is no reason why the productive agricultural area of Montana should not be largely increased in the next few years.

PRESIDENT HILL, of the Manitoba road, has definitely stated that his line will be extended from Devil's lake to Fort Buford, on the Missouri, in November. If this prove to be true, Northern Montana will have a new and shorter route to the East at once, as it will cut off four hundred miles of the river navigation now necessary to reach the Northern Pacific at Bismarck. The further extension of the road next season to Fort Benton, and via the Montana Central to Great Falls and Helena, will give transportation facilities to a region of magnificent resources, whose development has been retarded by the difficulties of reaching the markets of the world.

THE attention of immigrants should be drawn to land lying outside of the principal valleys. All along the foothills and up the lower slopes of the mountains lying on either side of the valleys, can be found desirable land that will make homes for thousands. No soil on the Pacific slope surpasses it in productiveness. It is not necessary that the land should be at once cleared of all, or even of any large portion, of the forest. There is an indigenous growth of fine grass, and all that is needed is to scatter red and white clover seed to insure a splendid range for stock. The early rains will start the seed, and e'er one is aware, the clover is half knee high. Afterwards, the clearing of brush and small trees may be carried forward. Far better occupy the low hill land, and secure a good home near the older settlements, than spend time and money in search of a place at a greater distance. Oregon, both sides of the Willamette, and Washington, from the Columbia, all along Skamania and Clarke counties, and to the north, have room in their low hills, for large settlements. They will be occupied and the families who are now securing permanent homes there are wise. Sheep and cattle should have shelter from snow and heavy rains, and when, for a short time, snow lies on the ground they should be fed; but it is the experience of many, that stock winter over and take good care of themselves during the rainy season. The healthfulness of the climate on these mountain slopes is too well known to require mention.

ON other pages of this issue are presented a number of sketches taken in the Chinese quarters of Portland, accompanied by a descriptive article which deals only with facts and relates only what are matters of common knowledge among those at all familiar with that portion of the city. The position taken on the Chinese question by the great majority of residents of the Pacific coast, is that, while the presence of that race here is undesirable and can be considered only in the light of an industrial invasion, yet, being here legally, they are entitled to protection in their lives, property and right to labor, and that all efforts to deprive them of any of these should be suppressed by the strong arm of the law. These sketches, however, have no political import, but are presented solely for the purpose of introducing the readers of THE WEST SHORE to scenes such as one would not expect to find within the confines of the United States.

THE Island railway, running from Esquimalt (near Victoria) to Nanaimo, B. C., has been completed, and begins operation the present month. Two trains will be run each way daily. Under the influence of this enterprise the eastern side of Vancouver island should advance rapidly in wealth, population and production.

## HOW IT HAPPENED.

She was a dainty creature  
 As ever you did see,  
 Her cheeks were like the peach-blow,  
 Eyes blue as blue could be—  
 Her hair like rippling sunshine  
 Fell almost to the knee.  
 I have not done her justice,  
 No artist could do that;  
 Depict the sweet, shy coyness  
 Beneath the rakish hat—  
 The tantalizing dimples  
 He never could get at.  
 They played in wild abandon,  
 They nestled in the chin,  
 And in among the peach-blow  
 A-creeping out and in—  
 Till all my heart was aching  
 To kiss where they had been.  
 We sat upon the door step,  
 The moon was hanging low,  
 The stars were leaning toward us,  
 And all the world below  
 Was still as parting lovers—  
 Seemed in a fervid glow.  
 Now what transpired I'm certain  
 I never could make clear,  
 But this—I felt a stinging  
 Sharp blow upon my ear—  
 She left me on the door step  
 With thoughts you shall not hear.  
 But that is how it happened,  
 [And you will all agree]  
 That cruising after dimples,  
 I said was not for me—  
 And so I took to Blackstone  
 And let the maidens be.

MEM LINTON.

## THE OREGON STATE FAIR.

One of the annual events of Oregon is the fair, held every September at Salem, known as the "State Fair." These exhibitions are largely attended, chiefly by residents of the Willamette valley, though numbers come from Eastern Oregon, Southern Oregon, Northern California, and even from more remote localities. Crowds come in wagons and camp near the grounds during the fair week, making this a holiday season in which they may enjoy a brief vacation and rest from the year's toil on the farm. The hotels and private houses of Salem are crowded with visitors, the streets thronged with pedestrians and vehicles, and the city presents for a week an exceedingly lively appearance. The grounds are located about two miles from the city, and are reached by a splendid drive and by the O. & C. railroad. During the progress of the fair local trains are run every few minutes, and a constant stream of hacks, 'busses, carriages, wagons and conveyances of all kinds, passes backward and forward on the drive. The grounds are large, enclosed by a high board fence, and are supplied with numerous large buildings for the various needs of the fair, a splendid race track, pens for the display of stock, and all the accessories necessary for a successful exhibition.

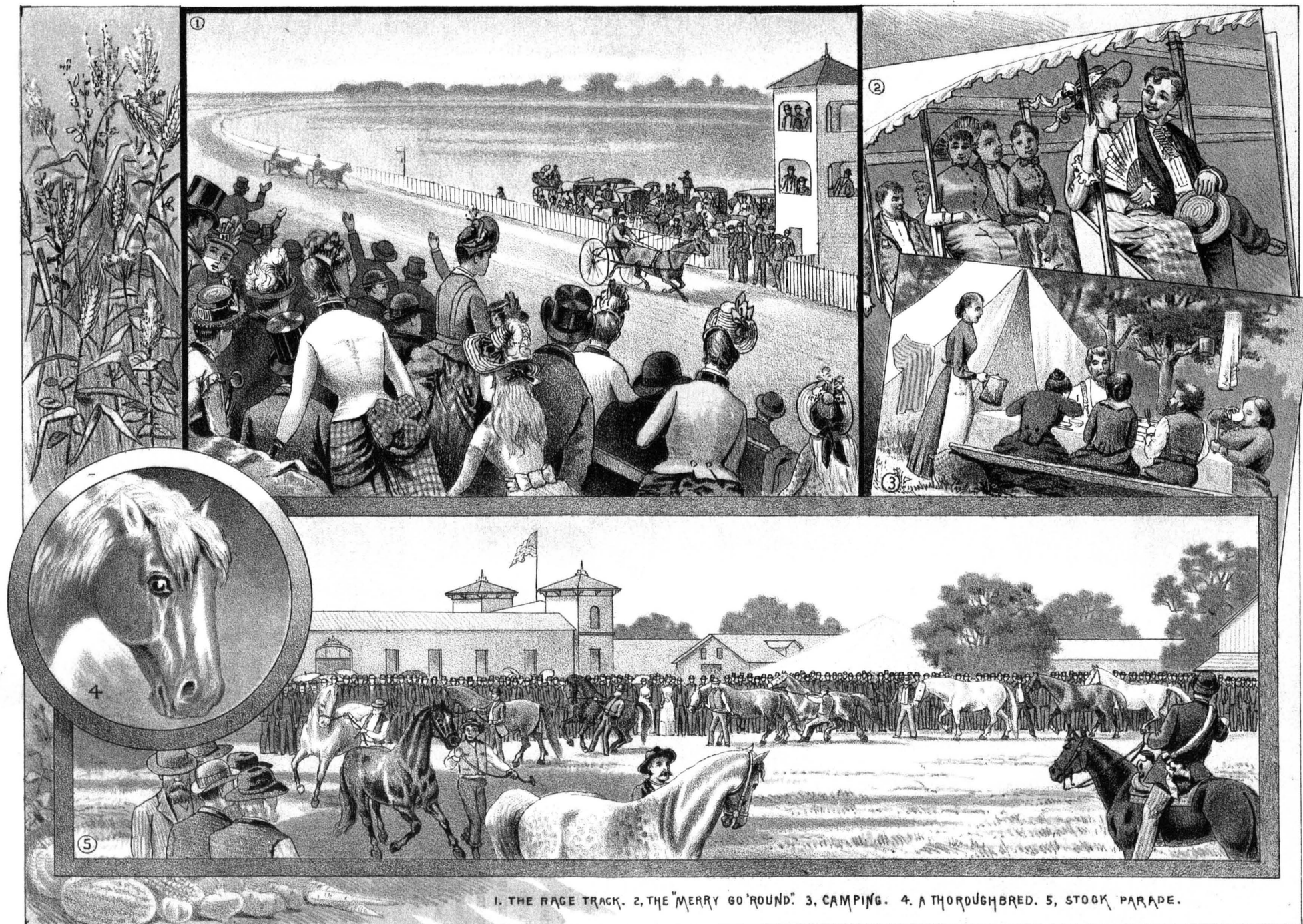
The fair recently held, extending from the thirteenth to the eighteenth of September, was a most successful one financially. Two years ago, the society having become involved in debt to the extent of about \$27,000.00, the legislature came to its relief with an appropriation of \$5,000.00 annually for two years. With this aid, and

more judicious management, \$7,000.00 of debts were cancelled last year. The surplus this year will be about the same amount, reducing the debt to that extent. When this load shall have been lifted from the society's shoulders, it will be in a condition to give Oregon an exhibit more representative of its varied interests, and more creditable to the state.

The directors of the fair realize that the display of stock, machinery, agricultural products, manufactures, minerals, natural resources, etc., has not in the past been as complete as it should be, and the state has never been fairly represented. They are anxious to correct this evil, and propose to use every possible means to induce a general display from every portion of the state. It is recognized by them that the feature of horse racing has been allowed too much prominence, and while they do not propose to reduce this attraction, which is no doubt one of the strongest the fair can have, they do intend to give more attention than formerly to the other elements which constitute a complete and successful exhibition. A number of good suggestions have been made, some or all of which will no doubt be adopted. It is first suggested that a man of capacity and experience be employed as superintendent, not only of the actual conduct of the fair, but of the preliminaries; that he begin his labors in sufficient season to visit every portion of the state and make arrangements for the presence of exhibits from all localities, and representing every branch of industry and every form of natural resources. Another suggestion is that a first premium of \$1,000.00 be offered for the best county exhibit, with second and third premiums of less amounts. This will not only stimulate rivalry and bring out more and better displays, but by the increased interest created will add largely to the attendance. A third idea is that of forming a military encampment of the militia of the state, at which there shall be competitive drills, sham battle, dress parades, battalion drills, etc; and that instead of offering a large cash prize, a suitable state championship gold medal be given to the best-drilled company, and the sum which would otherwise be given as a prize, say \$500.00, be devoted to aid in defraying the expenses of the encampment. This would also assist in drawing a large attendance from all over the state. There are numerous others, all of them tending to increase the attractions and create new interest in the fair in sections which now view it with indifference, and make it even more popular in that portion of the state which is now almost its whole support.

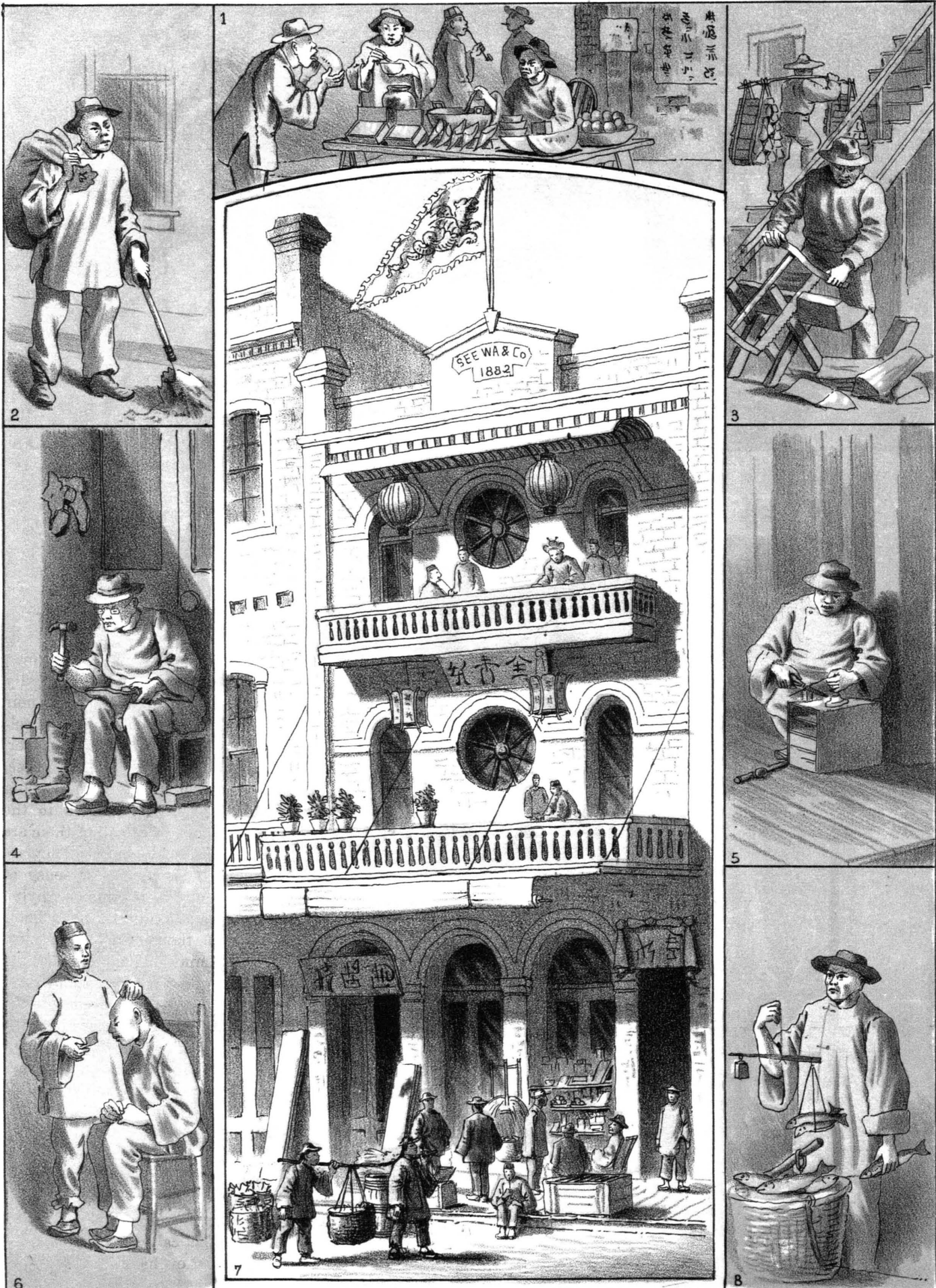
In discussing this question much has been said about changing the location of the fair to this city. It is eminently proper that a state fair should be held at the capital of the state, especially when that place is a city of the size of Salem, and possesses the needed facilities. All effort to remove it from its present location is unwise, and a discussion of the question has a tendency to do harm by creating a feeling of bitterness which can only be detrimental to the society. Harmony and a united effort to gather at Salem, in 1887, an exhibit of products, resources, manufactures and stock that will be fairly representative of Oregon, and present a list of attractions that will draw the people, will work a wonderful revolution in the fair itself and in its reputation among those upon whom it must depend for support.





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# THE WEST SHORE.



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PORTLAND, OR.-CHINATOWN.



## A NIGHT IN CHINATOWN.

WITH all the capacity to absorb and assimilate apparently incongruous elements possessed by the political, social and religious institutions of the United States, they seem powerless to digest the Mongolian. The representatives of nearly every nation under the sun have taken refuge in this land of freedom, and before the second generation have become completely Americanized, with one exception—the Chinese. For thirty-six years the “childlike and bland” countenance of the Chinaman has been seen on the streets of our western cities, and yet, as a class, with scarcely an individual exception, he is as much of a foreigner to-day as he was when he left the shores of the Flowery Kingdom a third of a century ago. The German, the Swede, the Russian, the Turk, and even the Japanese, adopt the costume, and to a large extent the customs, of our people immediately upon planting their feet upon our soil. Clannish, they are, to a certain extent, drawn together socially, and even politically, by those ties of common blood and birth which are among the strongest that find root in the hearts of men; but gradually these wear away by contact with the mass of people, and the children of these immigrants, reared in our public schools and associating with the youth of the country, become Americanized and relieved of every inclination towards such ideas and customs of the land of their fathers as are incongruous with those obtaining in this country. Not so the Chinese. They hold themselves aloof, and wherever they go huddle together and set up a miniature China in the midst of our antagonistic civilization. A third of a century on the Pacific coast still finds them in their peculiar native costume, their heads shaved and their pig-tails flapping about their legs. This precious appendage, originally a badge of servitude, is now held by them a crown of distinction, without which no true Chinaman can expect honor in this life or glory in the life to come. Even such of them as pretend to have become converted to Christianity under the faithful missionary labors of many good and noble men and women—chiefly the latter—still cling to their pigtails with all the superstitious fervor of their more benighted countrymen. No effort is made to teach their children the language and manners of this country, but the little ones are in every respect miniature counterparts of their fathers and mothers, and as much Chinese in every instinct and action as if they had been reared under the very shadow of the throne of the Pearly Emperor. The explanation of this is simple. Other nationalities come here to live, to mingle with our people and become a part of us, and their children are educated for a life among us; the Chinese come here for a temporary residence, to make money upon which they can eventually live at ease in their native land, and their children are consequently reared with a view to a future permanent residence in the land of their fathers. The one is an immigrant, the other a carpet-bagger—or, rather, a bamboo-poler, since his worldly possessions

are generally carried in bundles dangling from either end of a bamboo pole.

The great mass of Chinese in America are of the laboring class, unmarried and irresponsible. Bound to no locality by family or property ties, they go from place to place wherever employment can be secured. They huddle together in the “Chinatown” of our various cities, from which they go out singly in search of work, or are sent out in gangs to fill contracts for labor taken by some “boss Chinaman,” returning promptly to the city rendezvous whenever out of work. Only those of the better class, the merchants, bosses, etc., can afford the luxury of a wife and family. A wife represents an investment of from one hundred to five hundred dollars purchase money, and a steady outlay for current expenses. Consequently they are above the means of the ordinary coolie, and are a scarce article in America. The great majority of Chinese women brought to this country are of the disreputable class. They are not very numerous in comparison with the men, yet they amount to several thousands in the aggregate; and since they remain in the cities and are there seen in great numbers, they give the impression of being in greater force in proportion to the men than is actually the case. Every effort is made by our customs officials to exclude them under the terms of the restriction act, and of late years their numbers have not increased as rapidly as formerly.

There is one class of Chinese who acquire and maintain property interests here—the merchants. They are of a higher order than the mass of their countrymen who reach our shores, and the two are as distinct socially as the same classes are among our own people. Their property consists chiefly of merchandise, and it is seldom they acquire real estate. Some of them, however, have erected buildings upon land held under a lease, while a few have even gone to the extent of purchasing the land itself. Some of these are rich, even in the American acceptation of that word, while all of them are well-to-do according to the Chinese standard. They are shrewd business men, and possess as fine a sense of commercial honor as do the white merchants occupying more imposing quarters on the adjoining street. Their dealings are principally with their own countrymen, though our wholesale and commission merchants have quite extensive transactions with them, and find them desirable customers. They have a commercial system of their own, and it is seldom our courts are troubled with their business affairs. The majority of respectable women are wives of these merchants, and generally live in apartments in the rear of, or above, their husbands’ stores. They are seen but little on the street, are modest and retiring in their demeanor, and are usually dressed in the most expensive silk and velvet. They toil no more than the lillies that put the glory of Solomon to shame, but are considered by their husbands more as toys and ornaments than as companions and helpmeets. Their domestic duties are practically nothing, since all cooking is done by men, and they have but the care of

their children to occupy their time, when, indeed, these little almond eyed olive branches begin to spring up around them.

In every city of any size on the Pacific coast there exists a miniature China, with the exception only of the pagodas and other forms of native architecture. The quarters they occupy are generally in the heart of the city, comprising brick structures formerly used by our own merchants, or others which have since been erected by themselves, of the severest plainness in their exteriors. With this exception there is little in the appearance of Chinatown to convince the stranger that he is not actually traversing the streets of Hong Kong or Peking. The interiors of the old buildings have been remodeled to meet the Chinese idea of utility. Half stories have been put in, and the whole cut up into innumerable small apartments and passageways. Everywhere there is the utmost economy of space and prodigality of smell. In their new buildings little windows reach these half stories and let in the faint rays of light and the small breath of fresh air which seems to be all that Mongolian lungs require. Half a dozen of them will remain for hours in an inside apartment so contracted that they can hardly move about, with no ventilation save what creeps in through a small door from a dark and narrow passageway, and where the atmosphere is so foul and the conglomerated odors so rank that a white man finds it unendurable.

The ordinary observer beholds Chinatown only in its exterior aspects. He sees the walls plastered with red paper covered with the complicated marks which convey intelligence to the Mongolian, interspersed with the gaudy bills of some circus or dramatic troupe; he sees the stores, with their English and Chinese signs staring at each other with the apperance of hopeless estrangement; the roast pig, hanging tail upwards; the butcher clumsily cutting up pork, which seems to form almost their entire meat diet; the barber shaving the heads and braiding the queues of his customers, his paraphernalia consisting of a common chair, a bowl, a towel and a razor; the cobbler and tinker at work on the sidewalk for the purpose of saving rent; the vendors of vegetables, confections, cigars, etc., at their little stands on either side of the walk; the fish dealer, with his basket and scales, at the curbstone; the rag picker, with his gunny sack and stick, and scores shambling along at a dog-trot under the weight of loaded baskets suspended from the ends of bamboo poles. He may even enter the stores and see their varied stocks of Oriental goods, where he may find in progress a game of dominoes or see a party sipping tea and cramming their mouths full of rice with chopsticks; may visit the joss house, restaurant and theater—but without a qualified guide he will fail utterly to become acquainted with the interior and less known features of Chinese America.

Recently a party consisting of two courteous and well informed policemen and half a dozen members of THE WEST SHORE staff, paid the interior of Portland's Chinatown a visit, and the engravings on pages two hun-

dred and ninety-four and three hundred and five are the result. We commenced mildly by going to the joss house and gazing upon its array of bronze and tinsel, its candlesticks, its burning punk and paper prayers, and its hosts of gods arrayed for display in gorgeous apparel or tucked away on a shelf for future use. From there we invaded a restaurant and were piloted through the establishment from the kitchen to the apartments where customers who desire can take an after-dinner siesta and smoke a pipe of tobacco or opium. The chairs and tables were of solid ebony and of peculiar pattern, and the interior decorations were thoroughly oriental in every particular, as is clearly shown in the artist's sketch. The genial host invited us to partake of a cup of tea, which was the smallest in quantity and the most delicious in taste that ever passed the writer's lips. Your true Chinaman takes his tea clear, and laughs with lofty scorn at the American habit of killing the flavor with sugar and cream. He next brought out a musical instrument somewhat resembling a zither, the name of which he could not give us, and played upon it with considerable skill—but little music—with two thin strips of bamboo, held in the tips of the fingers. He even honored us with an introduction to his family, consisting of his wife and two other young women, all of them somewhat pretty after the Chinese standard of beauty, and a little boy apparently three years of age, who said "how d' do?" with so much promptness and frequency that it was evident this one phrase constituted his entire vocabulary of English. We were particularly amused with the antics of the pastry cook, who was rolling pie crust or cracker dough under a large bamboo stick fastened at one end to the table. A granite rice mill stood in the kitchen, its appearance indicating several centuries of past usefulness.

From the restaurant we went to the other extreme, and with our noses firmly grasped between thumb and finger, plunged into the interior of a building, and entered an apartment about seven by nine feet in size, in which were six Chinamen, four of them engaged in smoking opium, and a fifth only refraining from so doing because his money was exhausted and he was too stupefied to get up and go away. He was a gaunt and ghastly skeleton, with glassy, expressionless eyes, and seemed as if almost in the last stages of dissolution. Against the wall on three sides were plain wooden bunks on which patrons recline while smoking and sleep when overcome with the effects of the drug. The smoker pays twenty-five cents for a small jar of opium paste which will give him about a dozen pipes. Supplied with this, a pipe, a little nut-oil lamp and a piece of wire, he climbs into a bunk and is ready for business. The pipe is a hollow bamboo, about the size and length of a flute, having near one end an earthen piece attached to the side and shaped like an inverted cone, with the upper surface slightly convex, and having a fine hole in the center communicating with the interior of the pipe stem. The smoker takes up a quantity of the paste on the end of his wire and alternately cooks it in the flame



of the lamp and rolls it on the bowl of the pipe until he has made it into a thin and hard cylinder. He then places it over the hole in the pipe, letting the end of the wire pass into the hole, and when secured in place he deftly withdraws the wire, leaving the opium attached to the bowl and surrounding the hole. He then stretches out at nearly full length, puts the end of the pipe into his mouth, and holding the bowl close to the lamp draws the flame inward with his breath, the smoke of the burning opium coming through the pipe and into his mouth, to be discharged through the nostrils. A pipeful is exhausted in about ten breaths, and then the process of rolling is repeated. Two or three pipefuls are sufficient to completely upset a novice, but an old smoker can stand ten times that number before being overcome. We watched the operation repeated several times, and then the stench became so sickening and the atmosphere so foul and unbreathable, that we hastened out into the fresh air with all the dispatch possible.

Our next visit was to a lodging house, which was simply a brick building cut up into innumerable small rooms, making a perfect labyrinth of passages, doors, apartments and stairways. Bunks of wood are arranged in tiers against the walls and partitions like the berths on a steamer, and upon these the lodgers stow themselves away for the night, a dozen of them occupying a room so small, so foul of atmosphere and so permeated with vile odors, that a white man would deem it an unendurable prison. When they can find such lodgings as these for ten cents a night, and can supply themselves with food during the day for ten cents more, it is no wonder they can save money on seventy-five cents a day. We saw one street merchant whose sole stock in trade consisted of a little table with folding legs, a small butcher knife and a water melon. The latter cost him twenty cents, and was cut into ten slices and retailed at five cents a slice. If he sold it all he cleared thirty cents by the operation, giving him enough for his board and lodging, and ten cents surplus, which he could save or gamble away as he saw fit. If business was good enough to call for two melons during the day his profits were proportionately larger. While we were watching him, two young Chinamen came up, and one of them, fishing a nickel out from the depths of his raiment, purchased a slice of melon and divided it with his companion. It was evidently his treat, and showed that the reckless liberality of the American displayed in the social custom of treating has its imitators among our heathen visitors. It is by Chinamen who saw wood, pick up rags, do odd jobs of work, keep these little tinkering corners and stands, and the gangs from the country, that the lodging houses are patronized. If one has been sufficiently provident to save up ten dollars, he can subsist at least two months without employment. This question of board and lodging is one the Chinese have reduced to its finest limit, but Caucasian civilization will never be satisfied to adopt their solution of the problem.

From the lodging house we were conducted to a gambling den. It was necessary first for our guides to send word to the proprietor that visitors were coming. Had the policemen undertaken to enter without giving warning that their visit was a friendly one, they would have found it a work of at least two hours to break in with sledges and axes. Opening directly from the street and running back to the interior of a brick building, was a narrow passage, through which we went in single file. At the street entrance stood two sentinels, or look-outs. A few feet inside was another whose duty it was to adjust a set of upright bars upon receiving a signal of danger from without. Beyond these were three thick, wooden doors, each guarded by a lusty Chinaman who was alert to close it and secure it with a heavy crossbar when an alarm was given. In making a raid the police would have to batter down all these obstructions, only to find, upon gaining the interior, that no gambling was in progress, but that a lot of Chinamen had assembled to engage in social conversation and to enjoy the discordant music of a native orchestra perched upon a diminutive gallery at one end of the room. Under such circumstances it is impossible to make a successful raid, and none is attempted. The police are permitted to enter at any time when assurance is given that their visit is of a friendly nature, and this promise is never violated. This freedom of access to gambling dens, opium joints and lodging houses is of great assistance to the officers when searching for criminals, and this mutual understanding between them and the proprietors saves the officers infinite trouble and annoyance and the proprietors the expense of replacing battered doors and fastenings.

Once inside, we were met by one of the managers, who courteously explained the mystery of the only game in progress. We found a long table surrounded by players and spectators, while others occupied a little gallery just above and dictated their play to friends below. Near either end of the table was marked a black square about ten inches on each side, while at one end sat the dealer. The latter took a handful of small pieces of metal and threw them into a heap in front of him, covering them with a bowl. The result of the game depended upon the number left in the pile after the others had been taken away in sets of four. The players made their bets by laying their money or checks at the corners of the squares, one corner representing one, the next two, the next three, and the last four. When all bets had been made the dealer lifted the bowl and began drawing the counters away from the pile in sets of four, using a stick and not touching them with his hand. His motions were keenly watched by the players, and as the pile diminished in size they set up a chattering like a cage of monkeys. By the time the heap was reduced to fifteen or twenty they could all tell just what the result would be. If the pile divided into even fours, those who bet on the fourth corner won and the others lost; if there was a remainder of three the third corner won; if two, the second, and if there was

but one left, the first corner was the lucky one. There were complications of the game by which a bet could be divided or doubled, but in his efforts to explain these the proprietor got hopelessly astray in his English, and finally wound up by saying "you no sabbe." After watching the game for a few minutes, inspecting the barred cage in which the cashier enshrined himself before a huge iron safe, and taking up a collection to hire the orchestra to stop playing, we said good-night and passed through the many guarded portals into the street.

We were much interested in a pawn shop, and stopped to observe the Chinese method of "soaking" valuables. Within a wooden stall, accessible only by a stairway in the rear, reached through a securely bolted door, stood the pawnbroker. The stall was so high that he could not see over it, and was surmounted by an iron railing extending to the roof, but pierced in the center by an aperture about two feet square. The needy Mongolian advanced with a pipe and holding it up, thrust it through the hole above his head, the broker taking it from his hand. In a minute a slip of paper was passed back on which was written the amount the broker would advance on the pipe. This was apparently not sufficient, for the paper was returned and the pipe handed back to the customer, who took his departure. Neither party to this transaction saw the other. By pursuing this course the broker never knows who are the owners of the articles in his possession. Across the hall from the pawnbroker's stand was a counter where lottery tickets were being sold. Chinese lottery is indulged in extensively, not only by the Mongols, but by many whites, some of the latter developing into regular "lottery fiends." For twenty-five cents one can purchase a ticket upon which are printed about forty characters. He marks a certain number of these with ink, taking one ticket himself and leaving a duplicate with the seller. Every night there is a drawing, and if he has marked a sufficient number of the winning characters he is paid a sum of money in proportion to his success in guessing. For a larger sum he can mark a greater number of characters with the possibility of his winnings being proportionately increased. It sometimes happens that a small investment brings large returns; but like every other lottery game, where one wins a multitude lose, and the persistent player is certain to drop a great many quarters into the money box.

In the basement below a popular beer hall we found a saloon devoted exclusively to the Chinese. It contained a bar, seats, and an old pool table, and it was comical to see the awkward handling of the cues by these imitators of the gilded youth of America. In their potations they by no means confined themselves to beer, but indulged in mixed drinks as well. The favorite seemed to be a cocktail, which the bibulous Chinaman considers the very acme of liquids. They rested their elbows against the bar, spat upon the floor, tilted their hats upon the backs of their heads, and in other ways conducted themselves in the most regulation

style. In this particular, at least, they are becoming Americanized, but the direction their education has taken is not encouraging.

Our last experience was in the theater, whose orchestra had been giving us a noisy invitation the entire evening. One needs never to inquire the location of a Chinese temple of Thespis, for the odoriferous air of Chinatown is continually affrighted by the din of the never-tiring orchestra. No sooner does one reach the confines of that delectable neighborhood than his ears are saluted by the agonizing wail of the one-stringed fiddle, the gong's incessant clang, the rattle of the drum and the twang of the three-stringed banjo, supplemented by other nameless and equally harrowing instruments. We paused before a doorway from which these dulcet tones were issuing, and entered. The first thing we observed was a hole in the wall about two inches wide and four high, through which a Chinaman passed a quarter and received a piece of cardboard in return. It requires a great deal of faith to put twenty-five cents into a little hole where one can neither see what becomes of it nor anyone from whom he may reasonably expect anything in return, but the man appeared satisfied with the result. As for us, being representatives of that great free for all institution known as "the press," it was unnecessary for us to try the experiment. On the contrary were met on the stairs by the smiling manager and escorted through the entire establishment.

At the head of the stairs we observed two door keepers, a white man and a Chinaman, a peculiarity our escort endeavored to explain by saying, "One man come, Chinaman sabbe; nodder man come, Chinaman no sabbe, Melican man heap sabbe. You sabbe me?" He was assured that his explanation was remarkably lucid and conveyed in the choicest English, whereat he smiled with pleasure. We found the interior to be somewhat similar to that of the ordinary small American theater, consisting of an auditorium surrounded by a gallery, the sides of which were divided into apartments open to the front and partially to the side, the seats being innocent of any upholstering whatever. We mounted to the gallery to obtain a better view, and gazed down upon the audience. They were packed in rows upon long wooden benches, each with his soft black hat resting squarely upon his head and his pigtail hanging straight down the middle of his back, the whole presenting the lifeless uniformity of a group of tin soldiers in a Christmas box. In several of the gallery stalls were seated a number of gaily-dressed and gaudily-painted ladies, evidently of the better class, dividing their attention between the performance and a package of confections. The stage consisted of a raised platform at one end of the room, devoid of curtain, flies, scenery or stage settings of any kind, even being used for seats by a portion of the audience. At the rear were two doors, the one used for an entrance and the other for an exit. Between these was stationed the orchestra, whose perpetual muscularity found vent in agonizing solos, discordant duets and the deafening din of a general engagement. The stage

properties used were few and simple and were brought on and handed to the actors in full view of the audience. In the paucity of accessories, the actors resorted to pantomime to supply the deficiency, and a lively imagination only enabled us to understand whether an actor working his arms vigorously was rowing a boat or putting out a week's washing. The costumes of some of them were of the finest silk, velvet and broadcloth, but the colors were wonderfully and fearfully mixed. As we turned our attention to the stage, it was occupied by a coy maiden who was singing or reciting in an expressionless falsetto voice something which seemed to be highly pleasing to the audience. A man with a flowing robe of blue silk flapping about his limbs, and a long beard of yellow horse hair depending from his chin, entered with a stately stride and began making love to the maiden, apparently without making a favorable impression upon her. They soon retired, and a lusty fellow with his whitened face seamed and crossed with streaks of black, bounded in and pranced across the stage as though his shoes were swarming with red ants. He was evidently the "bad man" of the play. He disappeared, and the coy maiden again glided into view, this time accompanied by a comely youth whose amatory advances were evidently more pleasing than those of her more aged lover. Matters apparently soon came to a focus, for immediately after making their exit, they rushed upon the stage again, hotly pursued by the rejected suitor and the "bad man," the latter waving aloft a long paper sword whose flimsy blade flapped from side to side as it clove the air. Both parties disappeared and soon the fugitives made a breathless entrance at the other door, having apparently gained half a mile in the twenty seconds of their absence. In the center of the stage they stopped suddenly and started back with horror, having evidently almost fallen over the brink of a chasm which was visible only to the eye of the imagination. They began to construct a bridge, and with the aid of some assistants, two tables were placed about four feet apart, across which a plank was laid, and a chair set at either end for steps. While the bridge was being constructed the chasm obligingly disappeared so they could cross back and forth freely; but when all was ready the chasm was again in full force and effect. The fugitives then crept cautiously across the impromptu bridge and ran joyfully away. Then appeared in hot haste the "long beard" and "bad man," who also "viewed with alarm" the imaginary chasm and seemed greatly perplexed by the situation until they espied the bridge, against which they had been leaning while discussing the problem. They also crossed timorously and rushed away. As the plot thickened and the face of the moon was more and more tinged with gore, the writer became deeply interested. He suggested the propriety of remaining to see the end, and was plunged into confusion by the scornful laugh which broke from the lips of the entire party. The manager then explained that a Chinese play is built on the broad gauge plan, like a continued story, running day and night for many days,

and that the one we were now looking at began the week before and might possibly be concluded in another fortnight.

The obliging manager then conducted us through the audience and across the stage to the room in the rear, passing unscathed through a bloodless conflict between a parcel of gorgeously-appareled gods and a batch of hideously-painted devils, who were hacking each other with paper swords to the merciless clash of the orchestra. The one long room at the rear of the stage served for dressing, property and waiting room, and was crowded with actors and assistants. The first thing we noticed was that the coy maiden was no coy maiden at all, but only a horrid man, as were several other supposititious females, and we were informed that there are no women actors among the Chinese, all female characters being taken by men, who are considered the leaders of the "profesh." We found the actors to be socially inclined, especially the "bad man," who shook hands all round and smiled as benignly as his black streaks would permit. After watching for a time their "go as you please" manner of dressing and making their entrances and exits, and after examining and duly admiring their multitude of costumes and trappings, we descended a ladder into the dark space beneath the stage, which is not devoted to the purposes of the play, as in other theaters, but is cut up into numerous small apartments where the actors sleep. Between the stage and the ground we found three separate floors, none with the ceilings more than seven feet high, and one of them so low that we had to stoop in going from one side to the other. We glanced at the kitchen, which was an apartment against the interior brick wall, about ten feet long and four feet wide, and filled with a smell ample for a large hotel. Declining an invitation to partake of something the exact nature of which was involved in mystery, we murmured our thanks and groped our way along a narrow passage leading to a side door, issuing out upon the street, glad to fill our lungs with the fresh night air and give our olfactories a well-earned vacation.

HARRY L. WELLS.

THE expenses of railroading in Mexico are great. Wooden ties have but a short life, cracking in the dry season, and rotting during the rainy months; bridge timbers and piles also wear out rapidly. Freight cars must be painted frequently to prevent drying and cracking, and even the substantial Pullman cars shrivel under this exposure. Fuel constitutes a large item of outlay. Mesquit roots are burned on the Central road; pine cut along its route is used on the Interoceanic; and the Vera Cruz Company feed their engines coal blocks that are brought from Wales as ballast. The decay of ties will in time necessitate a serious outlay on the Central road, for wooden sleepers cost \$1.00 each. It is evident that iron ties are a necessity in Mexico, and they are just coming into use. The climate tends to preserve the rails and iron bridges.—*Springfield Republican*.



## MINOR METALS OF THE NORTHWEST.

HAVING considered the status of gold and silver mining, and given a slight account of the iron deposits of the Northwest, in previous numbers of THE WEST SHORE, a consideration of the minor metals naturally follows in order. The most important of these are nickel, chromium, copper and lead, all of which exist in this section, and all in large quantity. They may be considered separately.

## NICKEL.

Ores of this valuable metal are found in two localities in Oregon, one in Douglas county, the other in Baker county. The latter deposit is little known, but the former bids fair to become one of the most important sources of nickel in the world. The mine is located on Piney mountain, in the neighborhood of Riddle station, and lies at an altitude of perhaps three thousand feet above sea level. The property comprises several hundred acres of mineral bearing ground, and belongs to Messrs. Edson Adams and Robert Brown, of Oakland, California. The superintendent is William Q. Brown, an accomplished mining engineer. The ores consist of Garnierite and Noumeaite, which are double silicates of nickel and magnesia, disseminated throughout a gangue which is composed of skeletons of amorphous silica, which may be likened in form to an empty honey-comb. The ore lies in irregular cavities upon the surface of the serpentine country rocks. The serpentine, in the opinion of the writer, belongs to the cretaceous age, which, upon the Pacific coast, is characterized by containing deposits of copper and chromium, both of which occur at or near Piney mountain. It seems entirely certain that the nickel ore was deposited from solutions, as is shown by the existence of narrow seams of ore passing downward through the joints of the serpentine, sometimes to a depth of many feet. Were it not for the large superficial extent—sometimes many acres—of these deposits, they might not inaptly be called “pockets.” Their mode of occurrence is similar, on the whole, to that of lead ores in limestone, or copper in mica-schist. The greatest depth of ore, as far as explored, is thirty feet. There are no walls or appearance of any, nor any other likeness to a mineral vein. The silicate comprises perhaps one-fifth of the total weight of ore and gangue, and itself yields from twenty to twenty-five per cent. of nickel, making the total percentage of metal in the deposits some four or five per cent. on the average. As the metal is now selling at seventy-five cents per pound, the average value of the ore is from \$60.00 to \$75.00 per ton. There are, however, large masses which are worth at the rate of \$300.00 or more per ton. A fine specimen of the ore may be seen at the St. Charles hotel, in Portland. The rich apple-green color of the pure silicate forms an agreeable and striking contrast to the red veins of amorphous quartz, and there are few minerals more beautiful. The ore is taken mainly from open cuts, no underground work being considered necessary. Two thousand tons

of ore lie ready upon the dumps, but no preparation for its reduction has as yet been made. The total resources of this mine are enormous, and only one other deposit approaches it, this being the exactly similar mine at Noumea, New Caledonia, which is now being worked by French convict labor with great success. There the ores are said to average somewhat higher than in the Oregon mine, but otherwise are of the same description. Compared with these, all other sources of nickel fade into insignificance. Considering the ever-increasing uses of the metal it is certain that this mine's working will be of immense importance to the world. The sources of this metal are elsewhere of so uncertain and limited a character that it seems safe to assume that the nickel mines of Noumea and Southern Oregon will be called upon to produce the larger proportion of whatever nickel the world may for many decades demand. As to the general production, it appears that the United States produce annually about three hundred thousand pounds, the most of which comes from New Jersey and Pennsylvania, where the ore occurs chiefly in combination with sulphur, cobalt, arsenic and iron. The reduction of these compounds is carried on only at Camden, N. J. The world's production is estimated to be about one million two hundred thousand pounds per year. The price per pound for large lots of refined nickel in this country has diminished from \$2.60 in 1876 to \$1.00 in 1883, and \$0.75 in 1886, and a further decline is likely. Thus far some \$30,000.00 have been expended on the Piney mountain deposits, the quarry being opened at seventeen points, mainly by open cuts.

## CHROMIUM.

Chromium, as a metal, has no industrial uses, but several of its compounds are of great importance. The well known chemical substance, bichromate of potash, so much used in dyeing, and as the exciting agent in electrical batteries, is the most important, while the chromates of lead and other metals are valuable pigments. Chrome steel, an exceedingly hard alloy of iron and chromium, is attracting much attention for its supposed valuable qualities. The only source of the metal and its compounds is chrome iron, or chromite, a very heavy, black mineral, composed usually of about fifty per cent. sesquioxide of chromium, with a less quantity of protoxide of iron and some silica. This substance is tolerably abundant in Southern Oregon, being found in bedded deposits of variable extent, from a few pounds to thousands of tons, occurring in serpentine. Several bunches have been opened and the localities of others have been noted, but no important dealings in the mineral have occurred as yet, because the demand is not very heavy, while sources of supply are found elsewhere. The average price paid in San Francisco for ores of fair quality, containing from forty to fifty per cent. chromic oxide, may be \$15.00 per ton. Twenty-three localities in California furnish ore, while the Oregon deposits will be drawn upon with the extension of the demand. In the reduction of chrome ores lies an important interest, which it is worth while for Oregon capitalists to take

into account. The process is briefly thus: The finely powdered ore is mixed with an equal weight of nitre and a smaller proportion of lime, and heated strongly in a reverberatory furnace, whereby the chromic oxide becomes changed to chromic acid, and combines with the potash salt, forming chromate of potash, which is separated from the spent ore by leaching with water. By adding sulphuric acid to the solution, bichromate of potash is produced, which is the substance from which all the other chromates are made, by what chemists call double decomposition. The process is quick, and excepting the cost of the nitre, very cheap; and as ore is exceedingly plentiful here, there is no reason why a safe and permanent industry might not be built up in this state. The demand for the chromium compounds is large and increasing, and at present two American and one or two foreign manufactories have a monopoly of this lucrative business.

## COPPER.

The principal copper deposits of Oregon lie in Josephine and Baker counties. In the former they occur in bunches or chambers in metamorphic rocks, particularly in serpentine, and to some extent enter into the composition of the rocks. In the latter locality the ore is disseminated as sulphide throughout large quartz veins. The Josephine deposits are the most extensive and have attracted most attention. The ore is chalcopryrite and cubanite, the latter supposed to predominate. Cubanite contains twenty per cent. of copper, chalcopryrite about thirty-three per cent. The most noted mine is the "Queen of Bronze," in the Illinois valley, not far from the California boundary, which has been worked to some extent, though not successfully, as transportation is excessively high in that region, and with other causes conspires to check this important industry. The quantity of available ore is judged to be very large. A great many copper locations in various parts of the state have been made, but the extraction of the metal has not been extensively or successfully pursued. In the neighboring territories similar facts prevail, and a great many localities might be named where copper is supposed to exist in working quantities. For example, copper ore of a fine grade is found in the Cascade range in the eastern part of King county, Washington Territory, and in various parts of the Puget sound country.

The metallurgy of copper is comparatively difficult, whereby it is usually found advisable to ship the richer ores to other localities for reduction. Sometimes the low-grade ores are concentrated and then run into a "matte" which contains all the copper with sulphur and other impurities, and is shipped to some Eastern or European locality, oftenest to Swansea, where the treatment of such products has been longest pursued. Blast furnaces for copper reduction, which are largely used at Butte and in Arizona, contrary to public estimation do not yield a pure metal, their product containing usually under ninety-five per cent. of copper, and being sold brings less than three-fourths of the price of merchantable metal, which is now quoted at nine and one-half

cents per pound. At present the industry is in a depressed state, and there are those who fear a collapse of the market, which would entail immense distress upon important corporations, as well as incidentally upon large mining districts. The usual price of ingot copper has averaged eighteen cents per pound for quite a series of years until of late.

## LEAD.

The production of lead has been for a number of years, and especially since the discovery of the rich Leadville mines, dependent upon the production of silver. Some of the greatest mining camps of the United States owe their importance to vast deposits of ores of lead carrying the precious metals, whose extraction attends with equal steps the extraction of the containing metal; consequently the lead interest has removed westward from the mines of the "Galena district," in the Mississippi valley, to the summit of the Rocky mountains, and even further west, and at Leadville, Eureka, Nevada, Butte, M. T. and Wood river, Idaho, the greater proportion of that metal is now produced.

While Oregon possesses lead deposits which will, in time, be worked, all present interest in this line centers around the galena and carbonate mines of Wood river, Cœur d'Alene and Colville, which promise to be of immense importance. Work has as yet but fairly commenced in the second and third of these places, but Cœur d'Alene, or rather Wardner, is sending twenty-eight tons of argentiferous lead ore daily to Helena, Montana, while the value of ores thus far shipped from the Colville mines is roughly estimated at a quarter of a million dollars. Recent discoveries of galena on the Pend d'Oreille river give promise of large supplies of lead, and the extensive unprospected territory south of the British line will doubtless reveal much more, raising the available supply to an infinite extent. In the Kootenay country great mines of low-grade galena are found, and it is now some four years since the Ainsworths interested themselves in their development. Altogether it would seem quite probable that with the exhaustion of the Leadville and Eureka mines, which can not last forever, the head center of the lead-silver mining industry must be removed to the west of the Bitter Root mountains; and probably the time is not distant when camps as important as those named will be in existence along the Columbia's tributaries. The process by which lead is derived from its ores is invariably by smelting, whereby the metal is procured in large "pigs," containing, also, the silver and gold which belonged to the ore. The proper and successful carrying on of the smelting industry requires skill and capital, assisted by cheap and abundant supplies of ores and fluxes, and educated labor, neither of which requisites are often found in mining districts; consequently it is in large business centers that such operations are carried on, frequently at a distance of hundreds, or even thousands, of miles from the mines. For many years the more intricate reduction processes have only been practiced in a few foreign localities, such as Swansea and Freiberg,

where it was long popularly supposed that exclusive knowledge of the nature of metals resided. Such traditions have now lost a great deal of their force, and the merits of American processes and American metallurgists in contradistinction from the old and somewhat hide-bound German and English schools are now becoming recognized. Those enterprising men, who, like Professor Hill, and the proprietors of the Colorado smelters generally, have entered upon this branch of metallurgy, have profited millions, and the business is still lucrative, despite the fact that silver sells now at \$0.92 per ounce, and lead at \$0.049 per pound. The bulk of the galena which is now being mined in Northern Idaho is being shipped to an isolated smelting establishment at Wickes, Montana, there to be reduced in connection with the ores of that vicinity. Occasional small lots are sent to San Francisco, Omaha, Denver and other smelting points. In 1885 Idaho produced ores containing about six thousand tons of lead, worth, for that metal alone, \$639,058.00. Washington Territory, in the same year, produced five hundred tons, worth \$50,000.00. The former territory's production will be much increased this year by the output of the great mines on the south fork of the Cœur d'Alene, whose productive powers are almost limitless.

HERBERT LANG.

#### LIKES OREGON THE BEST.

Last winter a party of young men returned from Oregon to Illinois, and the following extract from a letter written by one of them shows what their experience has been. "We have traveled a great deal since leaving Portland, stopping in Salt Lake City, Denver, Kansas City, Chicago and other cities, but have found no place we like as well as Portland. The summer has been very dry in Illinois. Farmers have not harvested more than half a crop, and times are very dull, duller by far than they were in Portland. There is scarcely any fruit worth speaking of. We did not know how to appreciate a good climate till we left Oregon and tried other countries. The thermometer has been up to one hundred and fifteen degrees in the shade for five days at a time this summer. For myself, I would prefer living in Oregon a poor man, to being rich in any other country I have ever seen. Many a time we have thought of your advice, and wished that we had remained; but we are coming back again just as soon as possible. There are fifty farmers here (Rockford, Ill.) who are going to Oregon this fall and locate."

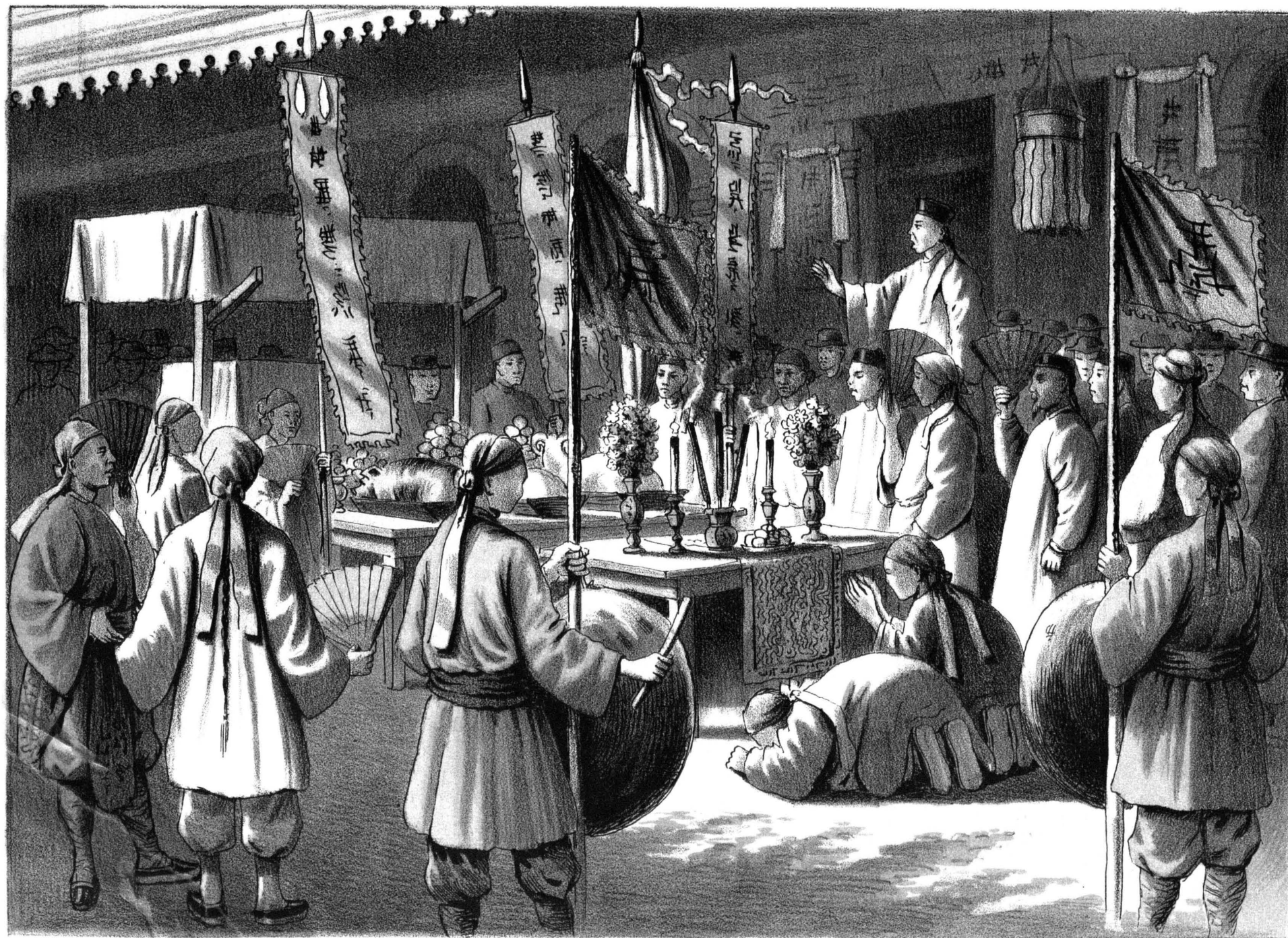
NEGOTIATIONS are in progress for the sale to the Canadian Pacific of the franchise of the Bellingham Bay Railway and Navigation Co., from Seattle north to Whatcom and the international line. The object is to secure a Puget sound feeder for the Canadian Pacific and make Seattle one of the terminal points of that great transcontinental line.

#### RUBY MINES OF BURMAH.

For ages this district, situated sixty or seventy miles northeast of Mandalay, and extending over an area of one hundred square miles, has been regarded with something approaching to veneration. No stranger has ever been permitted to approach the spots where the precious stones are dug, and, except that they are obtained by sinking pits in the gemmiferous soil, very little is known concerning this portion of the kingdom. It is, however, certain that vast quantities of blue sapphires, red (or oriental) rubies, purple amethysts and yellow topazes, besides different varieties of crysoberyl and spinelle are found. The district was looked upon as the special appendage of the crown, and one of the most highly prized of King Thebaw's titles was "King of the Rubies." The government, however, did not work it. All they did was to let out the mines to the peasants of the province, who paid so much a month in shape of rentage or license, except when a stone discovered exceeded £10 in value. In that case it was seized by the officials who superintended the washing of the gravels and was supposed to be sent by them to the royal treasury. Practically this law gave the king almost a monopoly of the mines; for a ruby which is of less value than the sum named may be considered of trifling importance. Actually many of the best gems were embezzled by the "wons" and other functionaries through whose hands they passed, while a large number of the stipulated value never came under the eyes of the superintendents. Naturally, when either a sapphire or a ruby believed to be worth £10 reached the surface, the finder considered it more to his interest to break the stone in two, and so be able to claim the fragments as his own perquisites. In this way some of the best stones were ruined. Still, vast numbers did reach Mandalay. When the late king desired to impress a visitor he permitted him to thrust his arm into the great jars of rubies and sapphires which stood about the apartments like bric-a-brac in a London drawing room. In the treasury were some of priceless value, and when the fallen monarch and his consort left the country they took with them, as their private property, some gems of rare worth. But during the interregnum many of these jars of rubies were looted. Prudence has as yet counseled their concealment, though no doubt in due time the jewelers of London, Paris and Amsterdam will have the opportunity of estimating the amount of plunder which was last year snatched from the palace of the "Lord of the rubies." The British Indian government has resolved to extract a revenue from these mines of precious stones—*London Standard*.

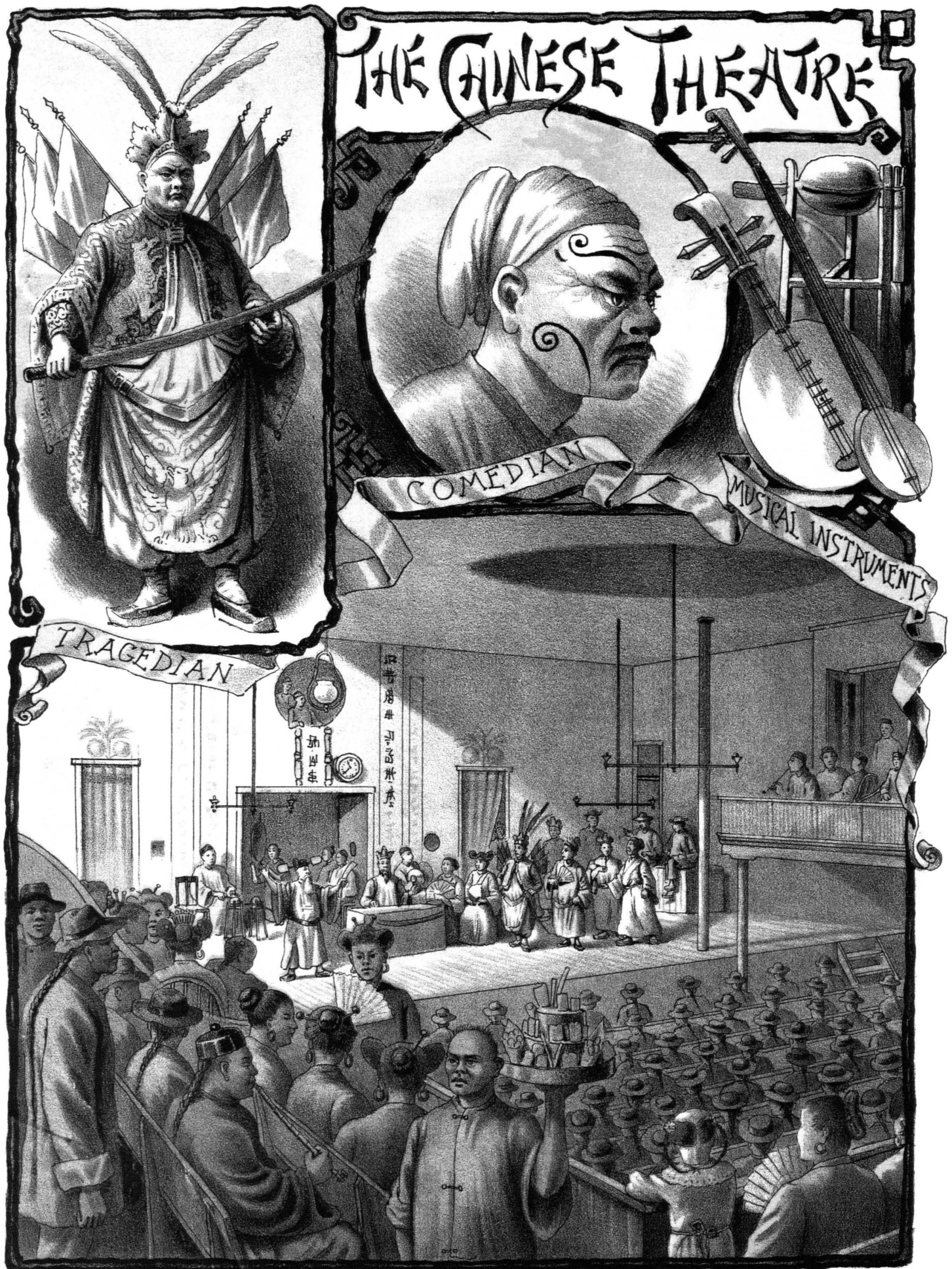
In the decline of life, when nature habitually repels the restorative influence of sleep, there is nothing so suitable to induce healthful repose as one-half to one teaspoonful of bromidia, at bedtime. It may be taken for years, in the same dose, with the same effect, and without detriment.—*Amer. Med. Journal*.



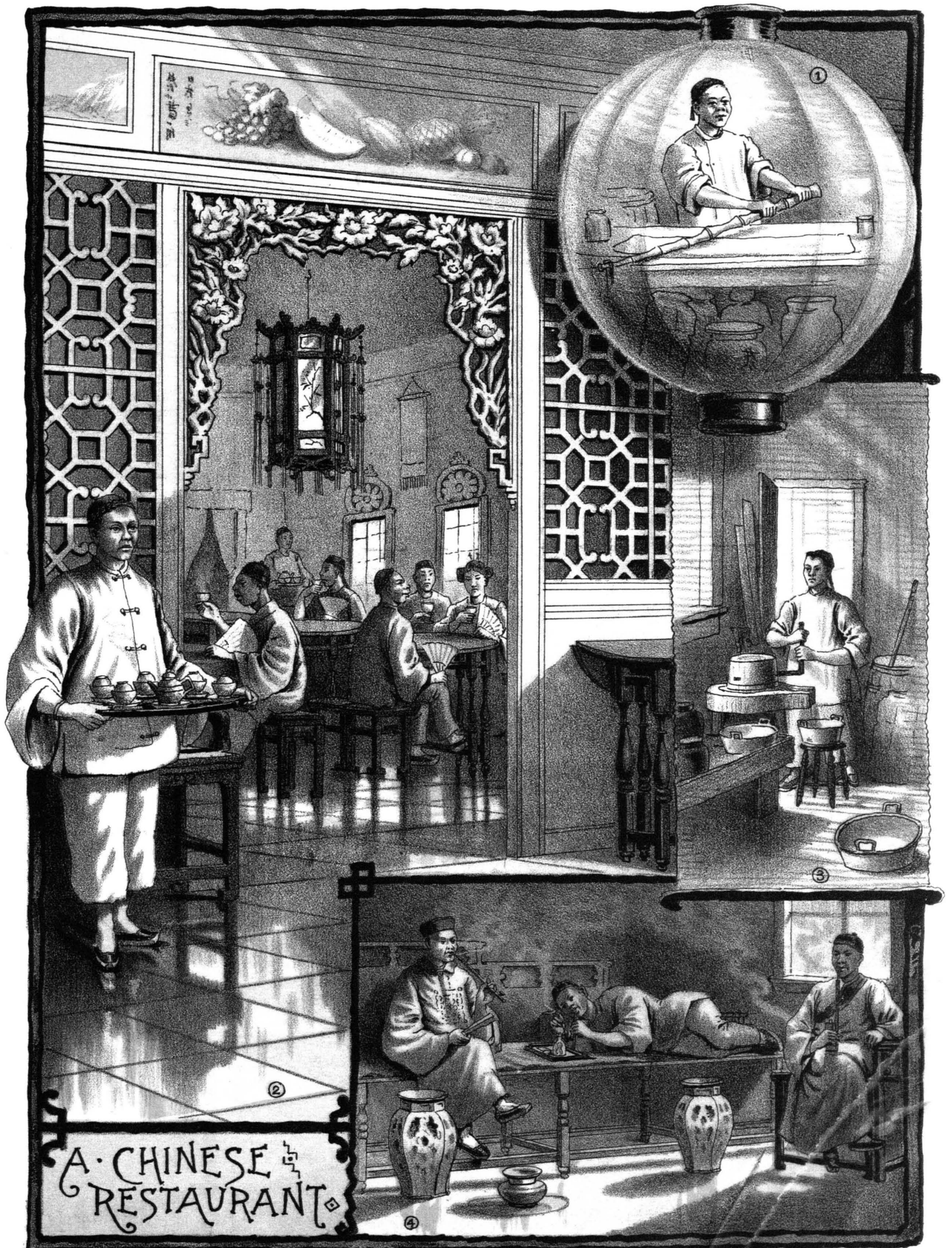


THE WEST SHORE.

PORTLAND OR. — A CHINESE FUNERAL.





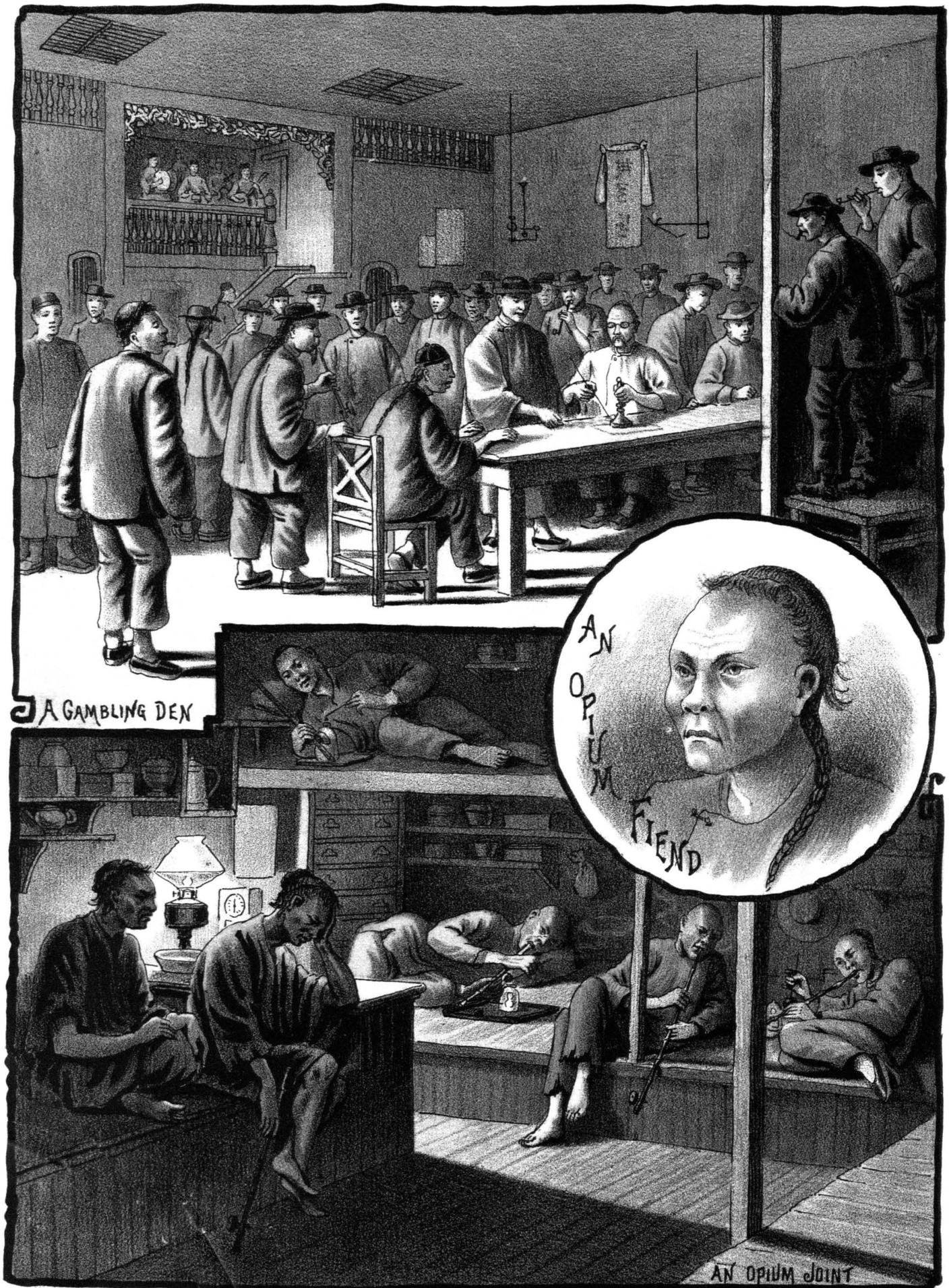


A CHINESE  
RESTAURANT

1-PASTRY COOK. 2-DINING ROOM. 3-RICE MILL. 4-AN AFTER-DINNER PIPE.  
PORTLAND, OR.-A NIGHT IN CHINATOWN.



THE WEST SHORE.



A GAMBLING DEN

AN  
OPIUM  
FIEND

AN OPIUM JOINT

PORTLAND, OR. - A NIGHT IN CHINATOWN.

## A CHINESE FUNERAL.

AS an overwhelming exhibition of grotesque ceremonies and imposing awkwardness, the Chinese funeral stands unrivaled. However impressive it may be upon the minds of the followers of Joss, to the unregenerate heathen of this country the spectacle is supremely ludicrous. Neither pen nor pencil can convey to one who has never witnessed the scene an adequate idea of the manner in which the numerous ceremonies are performed. Neither grace nor dignity is exhibited in any portion of the service; unless striding jerkily about in a long flapping robe of white cotton, with the head bandaged with a piece of the same material, may be considered dignified. Grace, there is none to be found in any mode of Chinese locomotion, in the ordinary shambling of the lounge, the jog trot of the coolie between his burdens, or the supposed stately stride of the dignitary; and when all these are combined in a funeral procession, the effect upon the Caucasian observer is far from impressive.

The ordinary Mongolian, when he departs this life, is enclosed in a pine coffin and carried to his temporary resting place with but little ceremony. The procession generally consists of the hearse, a hack containing two or three musicians, and an express wagon bearing the blankets and other worldly effects of the deceased, and an array of roast pig, rice and other edibles in quantity and quality such as he had probably never been able to enjoy while living. It is only when a man of wealth or position dies, that the genuine funeral service is performed, making it an event sufficiently rare to be always novel.

Not long since one of them became weary of the follies and vanities of the world, and severed the slender cord of his life with a butcher knife, within the sacred precincts of the joss house. Whether the place of his death entitled him to special distinction in his funeral, or whether he had friends or relatives sufficiently wealthy to pay the expenses of such an event, can not be stated; at any rate he was buried with much ado and ceremony. A temporary canopy and three tables were constructed in the street in front of the joss house, where the body lay in state. Upon the tables were placed a whole roast pig, bowls of rice, confections and a mass of eatables and drinkables that would have been a banquet for a score of men. Burning punk, paper prayers, fluttering banners, and numerous odd and fantastically-colored devices completed the scene. About these was gathered a motly crowd of spectators of both races, within whose enclosing circle white-robed priests performed the various ceremonies of the occasion. They bowed themselves successively upon mats, sometimes singly, sometimes in pairs and at times three together, repeating the performance at both sides of each table, reciting some form of supplication as they touched their foreheads to the ground. For nearly an hour this performance was carried on, a constant clatter being maintained by two Chinese bands occupying hacks stationed

near the tables. The spectacle culminated in a procession, which was intended to be imposing, but was simply ludicrous. After much running backward and forward, wrangling and chattering, the different elements of the pageant were properly placed and the line of march was taken up. The most difficulty was had in placing two white-robed musicians, who were evidently an important factor in the display. Each bore across his left shoulder a long pole, from the rear of which fluttered a banner, while a gong depended from the end held in front. Upon these gongs they beat at irregular intervals. They first took the head of the procession, then were moved to the rear, then given a place in the center, and, finally, after a start had been made, came trotting to the front and stationed themselves immediately behind the hearse. At this point a Chinaman ran towards them excitedly for the fifth time and snatched from their heads the dirty black hats they had forgotten to remove, revealing two red turbans that made quite a transformation in their appearance.

When fully in motion the cortege consisted of two couriers on horseback, who could neither keep abreast of each other nor in the middle of the street, a carriage with a band, the hearse, the two red-turbaned gong beaters, a standard bearer with the gorgeous three-sided ensign of China, an array of white-robed priests, an express wagon with the trunk, blankets and other personal belongings of the deceased, another discordant band, and sixteen hacks. In marching they neither kept step nor alligned themselves to the right and left or front and rear; but each man made progression as seemed to him the most convenient and, apparently, the most awkward. It was a spectacle that must be seen to be appreciated, but the artist has presented on page three hundred and six as near a representation of the scene as possible, for the benefit of those to whom a sight of the original is denied.

## HARD WORKERS.

There is one class of laborers who never strike and seldom complain. They get up at five o'clock in the morning and never get back to bed until ten or eleven o'clock at night; they work without ceasing the whole of that time, and receive no other emolument than food and the plainest clothing; they understand something of every branch of economy and labor, from finance to cooking; though harrassed by a thousand responsibilities, though driven and worried, though reproached and looked down upon, they never revolt, and they can not organize for their own protection. Not even sickness releases them from their posts. No sacrifice is deemed too great for them to make, and no incompetency in any branch of their work is excused. No essays or books or poems are written in tribute to their steadfastness. They die in the harness and are supplanted as quickly as may be. These are the house-keeping wives of the laboring men.



## SECTIONAL TRAITS OF AMERICANS.

## PART I—THE EAST.

THE inhabitants of the three great sections of our country—the East, the South and the West—exhibit distinguishing peculiarities which are interesting not merely as matters of fact but as evidences of the influence exerted by climate and heredity, by social necessities and institutions, in modifying the character of a people.

Fortunately for New England the agricultural and mineral resources of a country are not its only elements of greatness, for, in these, her deficiencies are well known. A story is told of a Western man traveling in New Hampshire who gazed for an hour out of the car window and then said to a fellow passenger, "I say, stranger, a man wouldn't have to go fur in this country to get out o' sight of both land and water." It must have been through a section equally stony that another traveler rode on horseback and afterward declared that, in the course of ten miles, he saw no living thing save a solitary chipmunk that sat on a bowlder trying to crack a pebble while the tears ran down its cheeks. But notwithstanding its poor soil and ungenial climate, the wealth of New England exceeds that of any portion of the United States. According to the last census its inhabitants have \$661.00 per capita, while the people of the great West have only one-half this amount, or \$333.00, and the South brings up the rear with but \$154.00 per capita. Even the poor hill-side farms of Vermont and New Hampshire have on them substantial houses which Yankee industry and skill have provided with many comforts often lacking on much more productive farms in the South and West. That the farm fences are substantial goes without saying since they are made of fragments of primordial rocks, and bowlders great and small dropped by glaciers and lasting forever. These stone fences, enclosing stony fields, seem pathetic memorials of hard and ill-requited toil. They are monuments of their builders more significant, as they are more enduring, than are their gravestones with the quaint inscription, "Here lyeth ye boby"—such weary bodies to lie down.

The people of New England are, perhaps, the most industrious on the face of the earth—in the country districts certainly they can not be excelled. And even in Boston, among wealthy people, the habit of constant occupation is almost universal. This is, of course, together with their economy, the secret of their wealth. Hard work is to them a necessity, a duty and a pleasure; to take hold and lift is their chief joy. Not learning nor amiability nor even godliness is the point of honor with them, but the ability and willingness to work. The genuine Yankee housewife would stitch all day without a knot in her thread rather than seem to be idle. I once saw a patch-work quilt made of inch wide pieces of white cotton—the scraps from a shirt factory. This monument of mis-applied industry was exquisitely

patched and quilted, yet I gazed on it with a feeling of melancholy not unmingled with disgust. The busy housewife who showed it to me must have shared, to some extent, my feelings, for she remarked, that "it hardly seemed worth while to put so much work on a white cotton spread; one could spend one's time better in reading a book." I know of another woman who, not content with the reputation for industry which she had justly won, would hang out clean sheets on the line with her week's washing so that her neighbors might be at once humbled and dazzled by her peerless industrial powers. In the cities, among people of considerable means, the women are, possibly, less busy than their husbands. But the country women appear to have even more of this mania for labor than the men—perhaps because, for generations, they have been kept in harness more uninterruptedly. There are no market days for them, with the relief of a trip to the village, no town or freemen's meetings, no outside interests of any kind, save only the church; and the church in New England is far from being the intellectual and social center that it once was.

Coupled with this industry is an economy so minute that it beggars description. It may, however, be illustrated by a contested will case recently tried in Vermont. The deceased was worth millions, yet it came out, in the course of the trial, that she had been almost microscopically saving, even going so far as to patch her worn out porous plasters. Frequently the large fortunes accumulated by the closest economy are expended with noble, because discriminating, generosity. The cities are full of successful men who have saved at the bottom to spare at the brim. But among that considerable portion of the people whose utmost thrift only serves to maintain the decencies of life there is, to say the least, a thoughtfulness about petty expenditures which would seem mean if it were not necessary. Being necessary, it is admirable. It were a folly to expect impulsive liberality among those who, while living for generations on stony land, have tenaciously preserved that high standard of personal comfort and laudable ambition for their posterity which they inherited from their Puritan ancestors. The excess of women in New England has, probably, something to do with the marked economy of its people, for women are more attentive to the details of saving than men. Wherever the latter are largely in excess reckless expenditure is the rule, and it is reasonable to suppose that where women form the more numerous sex society will be colored by their characteristic prudence.

The social equality which prevails in the rural districts of New England would be, to a Southerner, the most noticeable feature of life in those sections. The New Englander, like Horace, may be

"poor,  
Lord of some few lean acres and no more."

But he knows that industry and skill are the "open sesame" of fortune, and that on some bright to-morrow



he may find himself a factory king or, at least, a selectman of his native town.

The political organization known as the town system has been another and powerful influence in the development of this social equality. A town is geographically a section of land about five or six miles square. In law it is a corporation which is obliged to protect health and order within its borders, to provide free instruction for all the children of its inhabitants, and a support for all its poor, as well as to maintain safe and easy communication by means of roads and bridges. Each town is entitled to at least one representative in the legislature who is elected, in some states, at the annual town meeting and at another meeting of voters called the freeman's meeting. In the eye of the law the town is a city, but there is an important difference between them. For while the city is governed by representatives chosen by the people, the town is a pure democracy in which all matters of internal administration are decided by the direct voice of the whole body of voters. No city government was formed in New England for more than a century and a half after its first settlement, and Boston conducted its affairs by means of the town meeting until the year 1821. If New England has successfully withstood the aristocratic tendencies of her rapidly accumulating and concentrating wealth it is largely owing to the sense of equality which has been developed by her town system. From the town meetings in Faneuil Hall liberty on this side the ocean flashed forth her first defiance to despotism and, if she be doomed to die, it will be in the town meetings of rural New England that she will make her last stand.

Still another element of this social equality is the education of the common schools. In no part of our country has the free education of the people been as systematic, as superior and as long continued as in New England, and nowhere are its beneficial effects so conspicuous as among native New Englanders. The influence of education in developing a spirit of equality and independence is no modern discovery. While Athens was still in her glory the inhabitants of Mytilene forbade some of their tributaries, who had revolted from them, to give their children any instruction for "they knew," says Anacharsis, "that no more effectual method could be devised to retain them in servitude than to keep them in ignorance." The Puritans provided against the degeneracy of their descendants by making prompt arrangements for their education. Only eight years after the settlement of the colony of Massachusetts its General Court imposed a heavy tax for the foundation of Harvard University and by the year 1649 both grammar and primary schools were established throughout every New England colony, except Rhode Island.

To these influences—industrial, political and educational—we are to ascribe the social equality under consideration. In the country districts of New England the hired man of even a rich farmer usually sits at his table and, if he be a worthy son of the soil, he will save his pennies, work his way through college and come

back to marry his employer's daughter. All this is ideal democracy; it is this fair chance for all which is the glory and the strength of a republic. But social equality, like every other good, has its attendant disadvantages. Where it characterizes a whole people we need not look for frequent manifestations of gracious and conciliatory manners. For manners, according to a beautiful definition, "are the happy ways of doing things; each one a stroke of genius or of love—now repeated and hardened into usage." But these strokes of genius and of love it were unfair to expect among those upon whom toil has laid his heavy hand. They only who have had the leisure to refine life by elegant pursuits are likely to originate those gentle, skillful, considerate ways of doing things which add so much to the power of such as practice them and to the pleasure of those for whom they are practiced. But while even rural New England is not without such men and women, they lack the prestige of class distinction. Their humblest neighbors regard them as belonging to no higher social grade than themselves, and are not prompted, therefore, by social ambition to imitate their ways. The charm of these ways they may indeed recognize, but they regard it as an individual gift, and therefore inimitable—not as the evidence of a higher grade of culture and the characteristic of a higher class to which they would do well to aspire.

In the cities, on the contrary, class distinctions are not only marked but, if the fossilized old families could have their way, they would be ineffaceable. With these distinctions we find, among the higher classes, an exceptional attention to the details of etiquette which permeates, by imitation, through the under grades of society. But the descendants of the Puritans have seldom mastered the happy art of uniting ease with polish. The Eastern manner has plenty of varnish—varnish so thick that it hides the grain—but in that oil of graciousness which brings out the native grain more clearly and lubricates the stiff and uneven workings of social intercourse it is lamentably deficient.

The severity of New England's climate has, probably, something to do with the rigidity of the New England manner. Antiphones tells us of a polar country where the words spoken in winter became audible only with returning warmth. And New England, if not quite so cold as that, is yet so cold that during almost half the year "every prospect freezes" and, as Heine said of his own land, "even the sun there is obliged to wear a flannel jacket to keep from catching cold, and the only ripe fruit are baked apples." Where people are compelled to spend a good part of their lives in splitting kindling wood and making fires or shoveling slippery paths through drifts of snow a certain amount of frigidity and rigidity will naturally creep into their daily walk and conversation.

Allied to this rigidity of manner is a reserve in speech which passes for culture among the higher classes and for prudence among the lower, but which makes society, wherever it prevails, as dull as it is decorous.

Those ladies, in particular, who assume to be social patterns appear to subsist on canned proprieties. They have mastered the art of living by receipt—so much culture, so much conscience, a liberal measure of dried politeness with a pinch of preserved bigotry. The whole, moistened with temperance principles and seasoned with extract of prudence, is mixed to a stiff consistency with frozen formalities and set where it will work well. It is no wonder that Thoreau, who had "traveled a good deal in Concord" retired to the wilderness to escape a world of conventionalities. Nor is it strange that after obeying the established code of proprieties he should exclaim in disgust, "What demon possessed me that I behaved so well." In all but the best, and, therefore, the frankest society, great care is taken to say nothing in opposition to the supposed opinions of the community at large, and especially of the company present. There results constant restraint and more or less hypocrisy. These traits of the people are, as I take it, an inheritance from their Puritan ancestors. At the time when, in the Massachusetts and New Haven plantations, religious dissent was punished with exile, and the want of a religious experience by exclusion from all political privileges, that degree of dissent which was certain to exist among so intellectual a people would, as a rule, be carefully masked. It had been the lofty though impracticable aim of the early Puritans to found a commonwealth of the pure in heart. They sought to establish an aristocracy of saints and were barely saved from an oligarchy of hypocrites and fanatics. Since church members had pre-empted all civil privileges and honors irreligious men demanded admission to the church, and yielding to this demand, Stoddard, the grandfather and colleague of Jonathan Edwards, had publicly taught that personal purity is not required for a Christian profession. By opposing this lax doctrine, which he had countenanced for twenty years, Edwards aroused the fury of his congregation, which, by a vote of twenty to one, instructed its committee to refuse him admission to their pulpit even as a supply. This nearly unanimous vote is a sufficient proof that a century and a quarter of Puritan rule had loaded the church with hypocrites—outward conformists who purchased peace by silence and preferment by lies. It was inevitable that among the descendants of such a people social odium would punish dissent long after the early Puritan laws had been liberalized or neglected. And to this Puritan code, and the social influence which survived it, we may reasonably ascribe the reserve, the restraint and the time serving, not to say timid, acquiescence in prevailing opinion which seem to be characteristic of the Yankee at home.

But if New Englanders are stiff as pokers, like the poker they can be heated to whiteness. If they are often reserved and time-serving they are capable of a terrible enthusiasm. Only warm them sufficiently and, like the crystal chlorophane, they respond with a flash of light. To the slave power they were long suffering, even to the verge of sycophancy. Though they had at

stake no private interest to blind their judgment; though they might so easily have seen the right since they were not profited by the wrong, how long they wavered and temporized, fighting southern fire with northern wind. But, at length, the pen of a woman narrating a pathetic, o'er true tale; the songs of Whittier, of Bryant and Lowell; the papers of Channing, the sermons of Beecher; the denunciations of Benjamin Lundy, of Sumner and Philipps, the insults offered to Garrison in the streets of Boston; the fatal shot at Sumpter, roused these descendants of the Puritans to that moral fervor, as valorous as 'twas self-denying, which prompted Carver and Brewster and John Winthrop, the sublime, to brave the hardships of a distant wilderness and the ferocity of savage races, that so, in peace, they might worship God and prepare an asylum for mankind.

The love of intellectual culture is almost as strong a passion with New Englanders as their love of labor. In the little town of Melrose, just out of Boston, there are only some forty-five hundred people, yet it required, at one time, forty-four clubs to satisfy their mental and spiritual cravings. Where there is so much intellectual activity we must expect a degree of intellectual affectation and extravagance like that which amused the public in some of the deliverances of the Concord school; when, for instance, one of its philosophers gravely informed his hearers that "woman is a spiral descending outwardly from the heart of God" he was answered by a smile as broad as the country. I had, myself, a conversation with one of the moons among the Concord lights which well illustrates a phase of affectation not uncommon among the under-graduates of Eastern culture:

"Oh, wouldn't you love to sit at the feet of Plato?" exclaimed my interlocutor, with an ecstatic accent.

I replied that I rather thought I would, but added, for what it might bring, that I would prefer to sit at the feet of Job.

"Oh, yes, Job," she answered thoughtfully, "I am almost ashamed to say that I have never studied him, but I want to devote next year to Semitic literature."

But notwithstanding the follies which these examples illustrate, it remains that our country owes to New England her chief intellectual inspirations. One of the best American biographical dictionaries contains notices of six thousand eminent Americans of whom three thousand and seven were natives of New England.

The literary pre-eminence of this section dates back to the earliest settlement of the colonies. The Puritans came to this country not for dominion or gain or adventure, but for the sake of religious ideas. They anticipated all those hardships which, within four months of their landing at Plymouth, did, in fact, carry off nearly one-half their number. But, in the sublime language of Gov. Bradford, they considered "that all great and honorable actions are accompanied with great difficulties and must be both enterprised and overcome with answerable courages." As the originators of an enterprise so far-reaching and important they took themselves,

their doings and opinions seriously, and while the stumps were yet standing in their corn-fields they issued volume after volume of theology, history and even ostensible poetry, in which their views and their adventures were preserved for succeeding times. Lay writers they had who were learned and vigorous—Bradford, Brewster, Gookin, Winslow and the Winthrops. But it was to her clergy that colonial New England was chiefly indebted for her intellectual activity and distinction. The Puritans made it their earliest care to institute regular preaching in every town. The salary of the minister, at first provided by voluntary contributions, was afterward raised by taxation. They believed that a people must be religious to be capable of enduring liberty, and thought it no violation of personal rights to compel attendance at church and the support of the ministry. In this they reasoned as we now reason in compelling attendance at the public schools and the support of school teachers. But, while providing for preaching in every town, they prevented the undue multiplication of churches and the growth of schisms by enacting, in Massachusetts, that no additional churches should be formed without the consent of the magistrates and the majority of existing churches. Under this union of church and state the clergyman belonged to the whole community, and the whole community belonged to the clergyman. Supported by general taxation he was not compelled to trim his sails to suit the whims of wealthy parishoners, and enjoyed, therefore, a spiritual and intellectual independence seldom attained under our present system of voluntary church support. The laziness and apathy which are apt to ensnare the preachers of a state church they happily escaped under the stimulating influences of a new world to be conquered for civilization and Christianity; and of numerous attentive and critical hearers to whom their preaching was the most stately and interesting feature of lives otherwise destitute of recreation and with few of those means of intellectual culture common in modern communities. The preachers of that day—such men as Thomas Hooker, who “when he was doing his Master’s work, would put a king in his pocket,” and John Colton, to whom “play was toil” and “work a recreation,” and Thomas Shepard, the “soul-melting,” and Cotton Mather, “the mighty”—these men, and their compeers, were the intellectual leaders of their generations. They shared the persecuting spirit which was then well nigh universal; their fierce theology flamed forth in such awful publications as that bearing the discouraging title, “The Glory of God Exalted in the Final Damnation of All Men;” they believed that the joys of the saints would be emphasized by witnessing the torments of the lost, nor did they shrink from that most appalling of dogmas, the damnation of infants. Michael Wigglesworth’s “Day of Doom,” which Cotton Mather predicted would be read until doomsday itself arrived, and which did, for a hundred years, enjoy a popularity in this country unequaled by any succeeding work—this epic of Protestant theology describes the reprobate infants as arguing with Christ concerning the justice of

their fate. But the Judge, unmoved by their plea that they

“never had or good or bad  
Effected personally,”

concludes the case with them as follows :

“You sinners are; and such a share  
As sinners may expect,  
Such you shall have, for I do save  
None but mine own elect.”

He is not, however, without a touch of relenting, for he adds :

“Yet to compare your sin with their  
Who lived a longer time,  
I do confess yours is much less  
Though every sin’s a crime.”

“A crime it is; therefore in bliss  
You may not hope to dwell,  
But unto you I shall allow  
The easiest room in hell.”

The religious dogmas of the Puritans, which a wiser and a gentler age have overwhelmed with ridicule or abhorrence, were maintained by men who were, themselves, neither ridiculous nor abhorable. Most of their errors were hopeful modifications of the errors common to their time. In the stern penal code of Massachusetts ten offenses were made punishable by death, and in Plymouth there were eight; but the English law of the period decreed capital punishment for more than thirty offenses. The religious intolerance of the Puritans was shared by all their contemporaries who possessed religious earnestness, so that the denial of citizenship to those who differed from them was, perhaps, a necessary condition of their continuing free citizens themselves. But, while denying freedom to others, they honored it in this, that they sought it for themselves with self-sacrificing devotion. They were often mistaken in their ideas of duty, but a conviction of duty they had so definite and so commanding that pleasure withered when she crossed its path and passion slunk away. Therefore are they revered by their descendants who cling to the land of rocks and rills with “a deep affection and recollection” voiced by Whittier in the noble lines :

“Then ask not why to these black hills  
I cling as clings the tufted moss,  
To bear the winter’s lingering chills,  
The mocking spring’s perpetual loss.

I dream of lands where summer smiles  
And soft winds blow from spicy isles,  
But scarce would Ceylon’s breath of flowers be sweet  
Could I not feel thy soil, New England, at my feet.”

SUE HARRY CLAGETT.

A GOOD deal of money is made in various parts of the country, but especially in the South, on willow farms, that is, farms where the osier or basket willow is raised. There are two varieties, out of many, generally cultivated in this country, the red and the white. They will grow on quite damp land, but a well-drained, alluvial soil is best suited to them. The land is prepared as for a corn crop—thoroughly broken and cleansed; cuttings from well-ripened wood, about one foot long, are put in drills. The cuttings are put slanting in the ground, and only an inch or so is left exposed. They should be cultivated as carefully the first year as any other crop.



## THE CAVES AND GLACIERS OF MT. ADAMS.



THE idea of personality attaches more strongly to mountains than to almost any other natural objects. Now withdrawn into cloudy sanctuaries from which to emerge to mock the sun with their accumulated brightness, now seeming to catch and hurl forth storms and lightnings, and then wooing the plains below with their clear and revivifying waters—it is not a wonder that rude ages have imagined them the dwelling-places of the gods and of all manner of mysterious beings. But the science of our modern age has dethroned the gods and nymphs and satyrs, and has fashioned the eternal hills into stepping stones up to

the throne of a deity of truth, not fancy. In the light of science, then, we find the mountains to bear the finger prints of their creator, and upon their “skyish heads” we may well believe that the creative eye has looked with emotions akin to those which throb within us.

The great peaks of Oregon and Washington are peculiarly adapted to inspire that feeling of personality belonging to the rude fancy of ignorance, while no whit inferior to others in the amount of material afforded to the calmer, colder and more penetrating gaze of science. In their isolation, in their enormous accumulations of snow and ice, in their scorched and ashy desolations, which indicate their volcanic origin, they inspire the poet’s pen and artist’s brush, and no less do they become to the geologist an open book where he may read the records of the æons before man’s time. Mt. Hood and Mt. Adams are the most interesting and accessible of all our great peaks. Go by boat or train to Hood river, sixty miles from Portland, and you will find Hood twenty-eight miles south, and Adams forty miles north, either easily reached over pleasant roads by wagon or horseback. There is a good deal of rivalry between the inhabitants of the two sides of the Columbia over their respective peaks, but all that the impartial stranger can decide is that whichever he is on at the time is superior to the other. In two respects, however, Adams is unquestionably superior to Hood—it is enormous in area and it is infinitely varied. Passing from savage, frowning grandeur, as in the great glacier of the Klickitat, to the smiling glades coming up to meet the lava and glacial rivers, from the lakes which gleam like diamonds in their setting of greenery to the wild cataracts that leap the red and yellow cliffs—it is one perpetual change. None of our mountains begin to compare with Adams in this respect.

We crossed the Columbia at Hood river and proceeded to Trout lake, from which we drew a supply of the delicious trout which abound there, and then crossing the impetuous torrent of the White Salmon, we began the long climb of fifteen miles which leads to the snows and glaciers. Here let us pause to write the biography of the great mountain.

If our theory be correct, it will appear that Mt. Adams has been one of the pivotal points in the construction of the entire Klickitat and White Salmon basins, and the scene of one of the most gigantic volcanic outflows on this coast. As is well known the entire Columbia basin is volcanic. Throughout almost its entire extent the surface rocks are pumice, basalt, lava, tufa, breccia and the like. The soil, except where colored by decaying vegetation, betrays by its red and yellow, and sometimes purple, tints, the burning of subterranean fires. The agriculturist may find in this fact a sign of promise, since igneous rocks form the most fertile soils. Basalt is composed of feldspar, angite and iron, with a little olivine, and possesses all the essentials of plant life. Feldspar is rich in potash, soda and lime. Angite consists of one-fourth lime, hence it is, that although not a limestone formation, this region contains all the lime as well as other material necessary to sustain all manner of fruit and grains. It is, therefore, a matter for rejoicing that the larger part of the Pacific Northwest is covered from one hundred to three thousand feet deep with basalt. Washed from the hills and mixed with the carbon of decaying vegetation, it is again transformed by the mysterious alchemy of nature into the waving harvests of Spokane or Umatilla.

The great canyons of the Pacific Northwest have generally cut through this igneous covering, exposing freely its columnar structure. In the gorge of the Columbia and its eastern tributaries, one may study at ease the once-hidden masonry of our mountains and mesas. Whence came this once liquid flood of rock, spread over one hundred thousand or more square miles of territory? It was spurted up from the central fountain of the earth. There is reason to believe that those old outflows of the Snake and Klickitat differed essentially from the present great volcanic outflows of the world. The lava tongues of Ætna and Mauna Loa flow but a few feet or yards per day. They are covered with slag and cinders; there is always a dull, crackling scum of hardened rock on the advancing face, which breaks here and there, and out of the breaches issue bright, clear streams of melted rock, soon to be retarded in turn by cooling. But these comparatively small streams form ridges and dikes, or, where issuing repeatedly from the same vent, high peaks. Such was the manner of formation of Hood, St. Helens and Rainier. But these craters were entirely inadequate to supply the enormous lava floods which completely fill the basin of the Columbia.

We conclude, then, that for this there must have been a series of craters, earlier and of infinitely greater size, craters like Mauna Loa magnified a thousand times. A small volcanic vent builds a peak. A large one emits

a larger and more fluid flow, and hence the matter all runs away from the crater leaving its walls low and inconspicuous. No doubt more thorough examination of our mountains will reveal old craters, antedating our high peaks and commensurate in capacity with the old lava outflows and basaltic sheathing. Crater lake, now attracting so much attention, is an example of these. Yet even this crater, six miles long, half a mile wide, and three or four thousand feet deep, was insignificant compared to those which must have formed the basaltic blanket covering Oregon and Washington. Now, our theory in regard to Mt. Adams is that near it was one of those original craters, more ancient than the mountain itself, and the fiery fountain from which the Klickitat highlands flowed. We notice, in the first place, that Mt. Adams stands on a plateau higher than the surrounding country. Lewis river on the west, the White Salmon on the east, and the various branches of the Klickitat on the north and east, rise in these spacious environs. In the second place we see that from the mouth of the White Salmon to a point about thirty miles east, the whole country is one regular basaltic highland, all pointed southward. The hills abutting on the Columbia are about eighteen hundred feet high. At a distance of twenty-five to thirty miles north these have attained an elevation of twenty-five hundred feet. The table-land then breaks off to the westward with a steep descent into a great rotunda six hundred feet lower. This descent is uniform all around, so as to make a regular basin encircling Mt. Adams, and shut in on its outward edge by the amphitheatre of hills. The circumference of the rotunda thus encircling the mountain like an enormous circular-like ditch is probably over a hundred miles.

The character of the soil and scenery changes very noticeably as one descends from the plateau into the rotunda. On the plateau the soil is red in color and very deep. It abounds in grass and groves of oak, and on the west in dense forests of fir. In the rotunda, on the other hand, the soil is thin and ashy. The rocks protrude. The land is open, or thinly covered with pines, almost entirely without underbrush, park-like in the regular beauty of its groves. Now, imagine, first, that this is a level, circular plain, thirty miles in diameter. Then, imagine, second, that it is a sea of fire. The airy forms of the pines, the grace of the waving grass and flowers, must be displaced by the bubbling and hissing vortices of a lake of liquid rock. The seething mass would eat into the dark circle of hills and undermine masses which would drop in and send waves rolling shoreward with a thundering surf of more than phosphorescent brilliancy.

As the internal springs of fire injected more molten matter into the lake from beneath its volume would be augmented. It would rise along the boundary wall, and overflowing, deluge the outside world with its excess. This would be repeated many times. With the lapse of ages the interior energies would exhaust themselves, or, more accurately, the outflow would have become suffi-

ent to relieve the central pressure. The lake would cool. It would become a barren plain, sunk some hundreds of feet beneath the table land which it had built up. It might have retreated stage by stage, leaving successive limits of recession, amphitheatre within amphitheatre. The crater of the first Mt. Adams would then have been like the crater of the old Teneriffe—a vast, depressed plain. But like ancient Teneriffe, Mt. Adams could not rest. Near the center of the great barren plain, which succeeded the lake of fire, the lava burst up again. Wave followed wave until within the great circular plain there stood a vast, shaggy mountain, its spurs reaching nearly to the edges of the rotunda, and its sheets of lava nearly filling the interior.

Such, in brief, we believe to have been the manner of formation of that strange and beautiful region of which the majestic and glaciated pinnacles of Adams form the fitting center. More complete examination than has yet been made is needed to confirm the theory. There are, nevertheless, many reasons for believing it to be true, besides the general features that we have described. The first link in the chain of proof is the peculiar form of the bluffs that escarp upon the north side of the Columbia river. Take Mt. Rhoda, just back of the steamboat landing at White Salmon, for instance. The laminae of basalt on the west side of the ridge dip downward at a slight angle. Following east they rise, gain a level and gradually sink, making a grand arch and giving form to the mountain. This is evidently a cross section of the igneous ridge. As already indicated, this ridge can be followed back to the ruin of the great amphitheatre surrounding Adams. Even a superficial glance is sufficient to convince any one that this long ridge, terminating in Mt. Rhoda, must have flowed southward. The White Salmon runs parallel to it. Now a little river like this evidently could never have cut a vast dike like that transversely, but it possibly might have worn its way longitudinally in a fissure already existing between two ridges.

The final test of our hypothesis would be a survey of the old crater all around. This would be a lengthy task. On the south and west the rim of hills is sharp and well defined, punctured, however, by the gorges of the White Salmon and Lewis rivers. The Klickitat breaks the rim on the east. To the north the appearance is more broken and confusing. Whether our hypothesis of the geological history of Mt. Adams be correct or not, it is a most interesting problem to a scientist.

As one journeys across the enchanting, park-like region which we have thus supposed to have once been a lake of boiling lava, he encounters constant traces of the lava beds and caves which are so marked a feature of volcanic countries. These caves around Mt. Adams are almost numberless. New ones are constantly being discovered. The ice cave, six miles from Trout lake, has been so many times described that further account is almost unnecessary. Though only a few rods in length it is of marvelous beauty, with its great pavements of ice below, and huge stalactites and stalagmites betwixt

floor and roof, covered with delicate tracery and flashing back rainbow tints from the wall-like entrance or the torch of the explorer. There are other caves of large size, though none of so perfect finish. Surveyors traced one across three sections. Another near Trout lake has been followed a mile without discovering the end.

To explain these caves we must suppose that a stratum of lava, gathering slag and impediments on the edge, was thereby caused to rise, and crest over like a breaker on the sand, making a cave with a roof strong enough to remain. Others were formed by pyroducts; a tongue of lava, cooling on the edges and sides, top and bottom, would still be liquid inside; this might run out, leaving a long cavity. If the upper end of the cave were high up on the mountain side, in regions of frosty air, the cave might conduct cold breezes from above, freezing the water that leaked into the cave, even at the lower end. This explanation of the ice in some of these caves, suggested by one well versed in geological causes, is only lacking experimental verification. We have risen in altitude and now the eternal ice is at hand. We are ready to set foot upon the glaciers. The trail from Trout lake follows a general course up the White Salmon, and it is near the glacier in which that stream heads that we make our first camp on the mountain side. From this point, with the vast region of glades and caves below us, and the many-peaked and glaciated mountain above us, we can easily read its structure as it now stands. Though not equaling *Ætna* in the number of its vents—eighty-four—Adams has, nevertheless, a large number. At the base of the steeper part there are at least three subsidiary points of volcanic ejection. The one on the south is a red, crumbling pile of gnarled and twisted lava, forming steepes of scoriæ. At the summit are pillars of bright red, set upright with such a solemn precision as to almost compel the belief they were built by human hands for sacrificial altars. Yet it is sufficiently evident that they are of no mortal building. On the southeast, between the valleys of Bacon creek and the Klickitat, stands a cone of about the same elevation, yet since it rises precipitously two thousand feet from a sunken valley, it is much more conspicuous. This butte appears in the engraving of Mt. Adams, looking up the canyon of Bacon creek. Being farther from the mountain it stands out bold and lonely. It is bright red in color, much stained and burnt. The unnatural hue invests it with weird terror, as if it might still be made of live coals. The shape of the strange pile adds to its Sinaitic fearfulness. Its red sides rising as steep as volcanic rubbish may stick, the top comes out in a circular, perpendicular shaft of black rock. Evidently the funnel of the volcano, in its last eruption, was filled with hard rock, which, cooling as in a mould, formed a solid core. The softer material, crumbling, has left this still standing, a gigantic chimney. There is a similar cone on the northeast, streaked with yellow. The main pile of Adams is multiform, as appears from the illustration from the southwest.

There is no one exclusive crater. There is a main dome, a vast, substantial, integral body, cut sharp and white in the swimming, blue-black ether, twelve thousand three hundred feet above the sea. There are three supporting pinnacles, sharp and steep, a true pyramid. The one on the southeast is blunted. That on the northeast is scarcely separate from the main peak. The best view of these different tops is from the southwest. The best view of the cone is from the southeast. Its royal and commanding grandeur, its threatening fixedness, are to the last degree overpowering. It presents gashes and precipices that would annihilate any smaller mountain; yet Adams wears such scars with the most calm indifference.

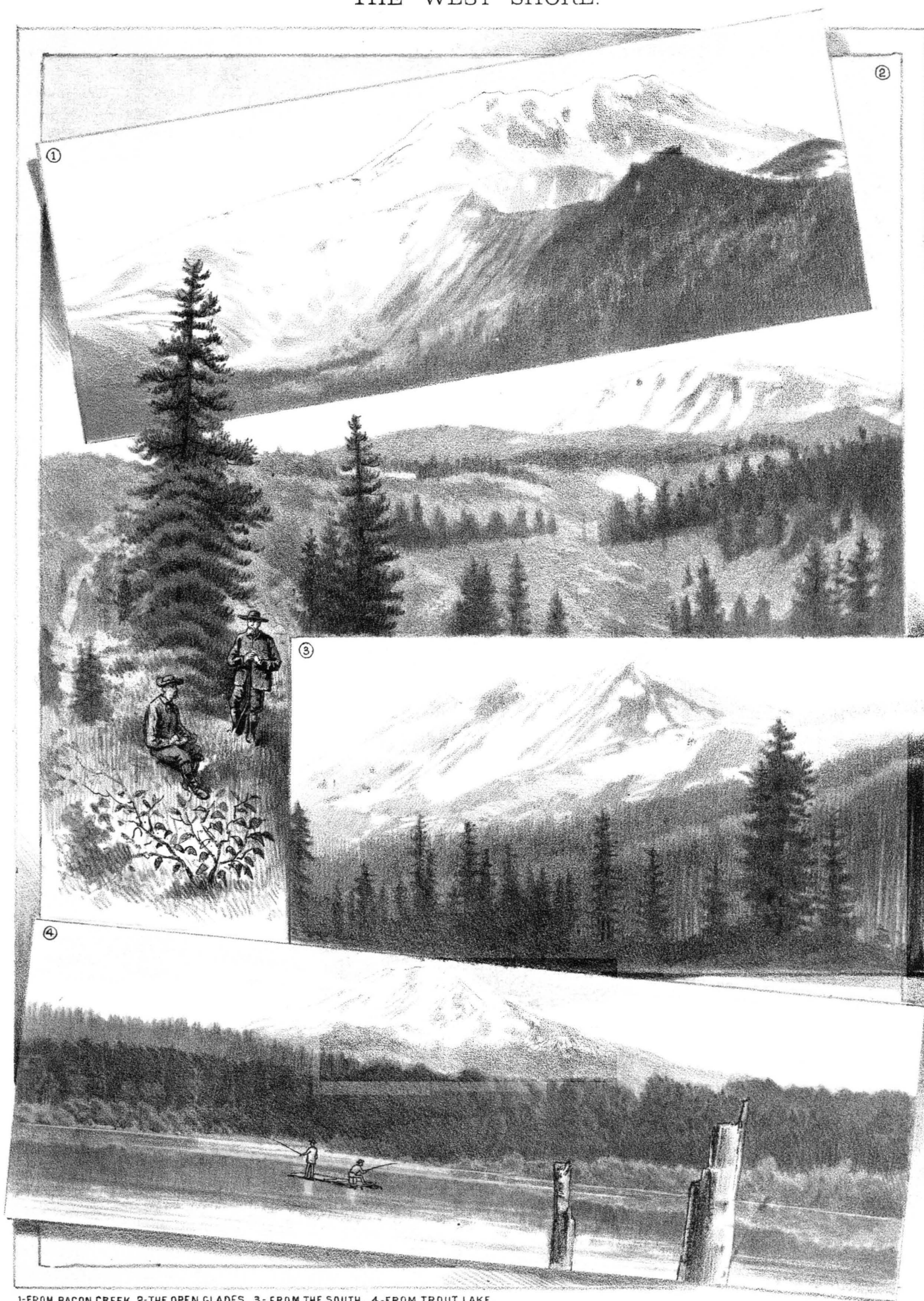
But we must no longer delay an account of the glaciers. Like Hood, Adams was formed by fire, transformed by ice. Between the heads of battlemented rock, forming rude ridges, there are snowy hollows. The snow, ever sliding down, is transformed into ice. There are six glaciers on Mt. Adams, one on Bacon creek, one on White Salmon river, one on Lewis river, and three on different forks of the Klickitat. Some of these are of enormous size. The White Salmon glacier, although short, is apparently a mile in width and hundreds of feet thick. It is strewn with red and yellow slag, which it grinds into mush, making a number of muddy torrents which compose the White Salmon river. The Bacon creek glacier is not nearly so large, although the canyon at its foot is deeper and far more beautiful. But come around to the east side of the mountain and view the birth-place of the Klickitat.

We have come up this morning, we will suppose, from camp on Mirror lake. Through the flowery meads and leaping cataracts and turf-bordered pools we reach the treacherous seams of Bacon creek glacier. Picking our way cautiously across it we reach a broken wall of rock, over which are numberless wild-goat tracks. A flitting gray streak now and then among the dark rocks makes our fingers tingle on the rifle barrel, but before we can bring it to an aim, the supposed goat vanishes, leaving us in doubt whether, after all, it was not a rolling rock. But look! No doubt about it this time. There is a genuine goat, perched in orthodox fashion on a beatling crag. Crack! goes a rifle and up leaps the goat, bounding through the air more like a bird than a quadruped. Down the juts of rock it flies with undiminished haste, though a little streak of crimson where it crosses the snow proves that the ball has hit. Following with reckless haste, the foremost of us suddenly flings himself backward and clutches at the air for support. And no wonder! At his feet yawns a chasm a thousand feet in perpendicular descent. The toppling rocks at the verge, loosened by the violence of his steps, roll down, starting larger ones, until a perfect avalanche flies sheer through the air, landing on the gashed and broken ice below, while thunders reverberate from the mighty walls of rock on either side.

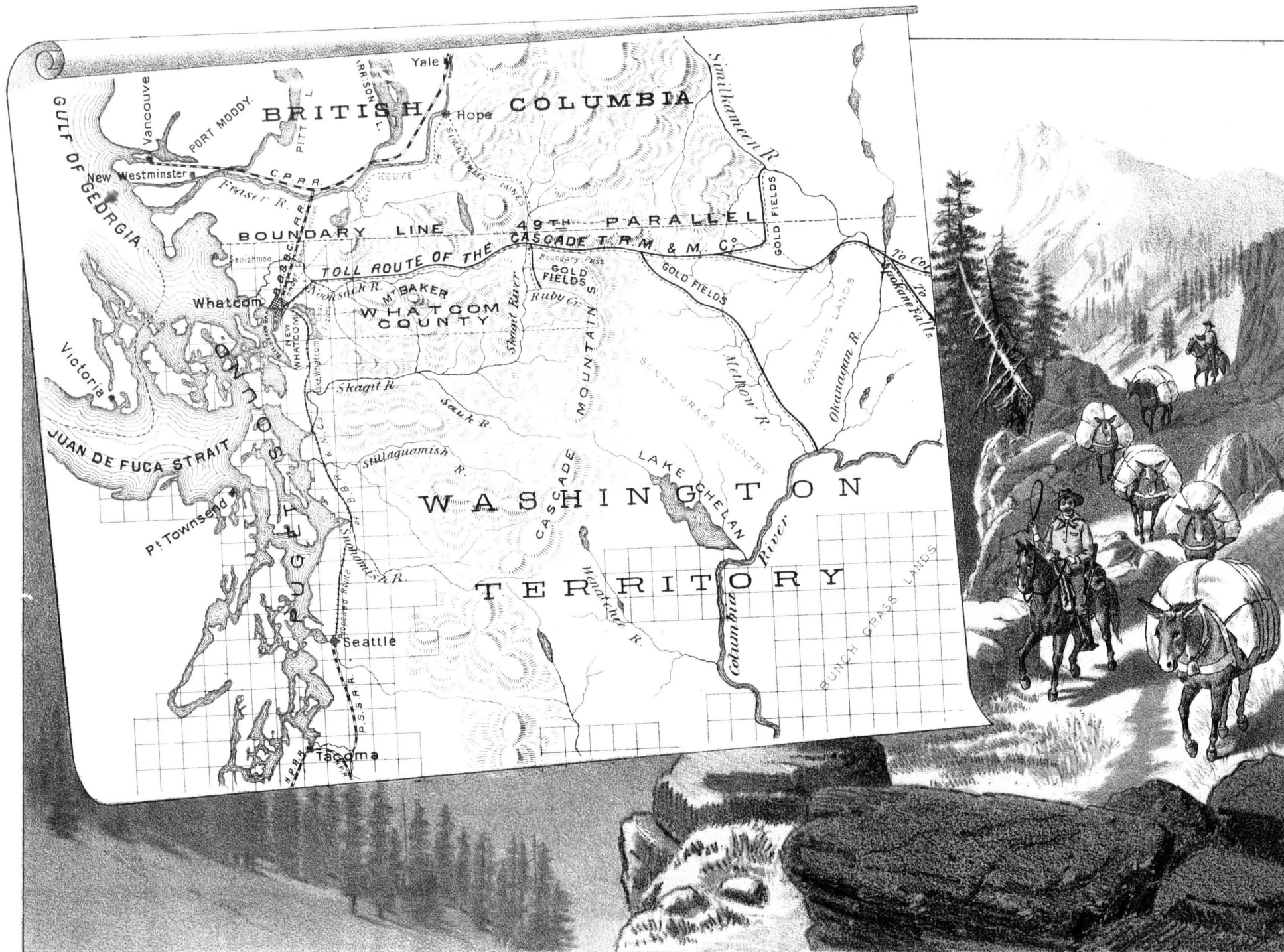
Withdrawn into swirling clouds with fiery blotches of sunlight resting here on dazzling snow fields, and



THE WEST SHORE.



1-FROM BACON CREEK. 2-THE OPEN GLADES. 3-FROM THE SOUTH. 4-FROM TROUT LAKE.  
WASHINGTON.-GLACIERS OF MT. ADAMS.



THE WEST SHORE.

WASHINGTON.— THE NEW ROUTE FROM PUGET SOUND TO EASTERN WASHINGTON.



there on monstrous crags of red, yellow, black and purple hue, while far below, the ice river, more than half a mile wide and probably two miles long, grinds its restless way between rocky buttresses, and lower yet, almost lost in the amber and purple depths of the canyon, the Klickitat takes its foamy course—so awful and sublime is the spectacle that we bow in involuntary adoration. This Klickitat glacier is the culmination of glacial grandeur. There is nothing of the kind on either Hood or Adams itself that equals it. The glaciers of the other forks of the Klickitat are said to be inferior to this in size and scenic grandeur. The glacier of Lewis river terminates in a perpendicular wall of clear, pure ice, a hundred feet in height. This gives it a unique beauty of its own, since masses of debris cover the lower part of all the other glaciers.

In ancient times the mountain must have been sheathed with ice at least five miles lower down than now. The ice has completely encircled the mountain with a succession of Alpine glades and valleys. The rock formation determined its erosion into terraces. The ice divided the terraces into separate meadows by medullary ridges. Along the ridges grow rows of white-stemmed pine, hemlock, sub-Alpine fir, and juniper. The meadows are velvety with grass and adorned with flowers. There are beds of buttercups and lupines and larkspurs. There are whole plantations of dodocatheons. The streams which wind and rustle through are lined with the burning scarlet mimulus. The painted brush glows like a live coal. There are also wild pinks in profusion. On sandy patches, phloxes, varying from purple to pure white, cover the ground. Along the rocks red and white bryanthus form beautiful clusters. A fragrant scarlet spiera grows in groups. Very noticeable was an odd, hooked, red flower that we had not before seen, nor have we yet discovered its name.

North and west of Adams, extending into the very heart of the Cascade mountains, is a marvelous region of grassy meadows, where deer and elk roam in primeval security, and countless little lakes, filled with the finest of fish, diversify the scene. A quite extensive valley was discovered in this region last spring. Unless the elevation prove to be such as to make it very cold and snowy, it will be a fine stock region. It is said by miners and trappers that this same character of country extends, with occasional breaks, far to the northward. It appears that time and nature have thus robbed the ancient lava lake with all the beauties of vegetation and all the possibilities of animal life. Desolation yields to growth, and life is forever triumphant over death.

In conclusion we can only say, that to the lover of the primeval aspects of nature, here is one of his rarest opportunities. No hotel has yet desecrated these sacred retreats; such is the ease of access and the profusion of nature's bounty, that no healthy human being would exchange it for the costliest luxuries which modern civilization affords.

W. D. AND H. S. LYMAN.

#### A NEW ROUTE ACROSS THE CASCADES.

A map of Washington Territory is given on page three hundred and sixteen, showing the proposed route of the toll road to be constructed across the Cascades from the northern end of Puget sound. The road will run from Bellingham bay, Whatcom county, and follow up the north fork of the Nooksack, pass within three miles of the glaciers of Mt. Baker, and cross the mountains to the mining regions of Okanagan, Similkimeen and Colville. The party of engineers who recently returned from a thorough reconnaissance of the route, report it far more practicable than was at first supposed. The grades are easy, and the mountain passes through which the road will run are natural highways. The distance from Whatcom to the headwaters of the Methow is less than eighty miles, yet all that vast mineral and grazing region is from two hundred and fifty to three hundred and fifty miles from tide water, by the present routes of travel. When the road is completed, thousands of cattle which now are driven southward to the Columbia or through the Snoqualmie pass to Seattle, will seek a market by the new route. It will afford means for the miners in that region, which is now known to abound in quartz ledges of the greatest value, to develop their claims. The road will be completed to the head waters of the Skagit, a few miles south of the international line, by the first of June, next. This enterprise will be of great benefit to Northern Washington, and will, no doubt, prove a profitable venture for its projectors.

#### AN ELEGANT ESTABLISHMENT.

Without question the suit and cloak house of H. B. Litt, corner of Third and Alder streets, in this city, is the largest and most elegant on the Pacific coast. No establishment in the United States, devoted exclusively to dresses and cloaks, excels Mr. Litt's in any particular. He has four reception and fitting rooms, all of them most elegantly furnished, two large salesrooms crowded with dress goods, suits and cloaks, and a large work room where fifty pairs of busy hands are daily engaged in making those stylish and splendidly-fitting suits for which Litt has become famous throughout the whole Northwest. He counts among his customers not only the fashion and wealth of Portland, but hundreds of ladies from interior towns and cities who desire to avail themselves of the opportunity he offers them to secure fashionable, neatly-fitting, artistically-draped and strongly-made dresses. Mr. Litt makes a specialty of cloaks, and will duplicate the Eastern price of any cloak in the market, giving his customers an opportunity to secure a better fit at the same price, besides being liberal in his terms of payment. Mr. Litt has thrown his reception rooms open to the ladies of Portland and vicinity, and gives a cordial invitation to all to visit his elegant establishment. He has built it up from a small beginning, and is justly proud of the success his taste and careful attention to the wants of customers has won.

## EXTENT AND NATURE OF PACIFIC FORESTS.

THE great density of the forests of the Pacific coast, and the immense size of the timber trees composing them, are matters of common knowledge, and have been so much insisted upon that many imagine that, should the Eastern forests be exhausted, there is upon the Pacific coast an inexhaustible fund upon which to draw. A glance at a map showing the forest, prairie and treeless regions of North America will suffice to dispel this idea. While the entire area of the states east of the Mississippi, save a few small patches upon the coast, and in Southern Florida, Northern Wisconsin and Minnesota, Missouri, Arkansas, the western part of Texas and the Indian Territory, and all of Louisiana, save a belt along the Gulf shore, are covered with a continuous forest, the forest of the Pacific coast is seen to consist only of a comparatively narrow tract stretching southward through the western part of Washington and Oregon, and in California dividing into two forks, one upon the Coast Range, the other upon the Sierra Nevada, enclosing between them the agricultural valley of the Sacramento and San Joaquin rivers. This forested tract is not more than three degrees wide, and its southern end stops short more than two degrees to the north of the southern boundary of California.

The entire area of the true Pacific coast forest is not larger than the state of California. This relative smallness is, however, to some extent, compensated for by density. The densest forest in the United States is located upon the eastern shores of Puget sound, where over two hundred cords per acre can be cut. Only slightly less dense are the districts upon the Cascade mountains in Oregon, that between the Coast Range and the ocean north of San Francisco, and that of the western slopes of the Sierra Nevada.

But this coast forest is not quite the whole of what may be called the Pacific forests. At the latitude of Puget sound the coast forest widens and extends eastward over the high mountain ranges, so that the forested region of British Columbia is wider than that of the United States, though it is much less dense. From this northern expansion a forest tract extends southward on the Cœur d'Alene, Bitter Root, and the western ranges of the Rocky mountains in Eastern Washington Territory, Northern Idaho and Western Montana. South of this forested patches appear upon the summits of the Rocky mountains, forming what may be called an interior forest, but one which is stunted and poor in species as compared with the forests east and west of it. Botanically, this interior forest belongs to that of the Pacific. The few species there are largely those of the thick coast forests dwarfed in size.

The most striking feature in all the forests of the Pacific region, or in the interior, is the absence of broad-leaved and of deciduous trees. The timber trees are almost entirely coniferous, and still more thoroughly evergreen. When broad-leaved trees occur they are confined to the valleys, and are of little economical importance.

North of the United States boundary the most valuable and characteristic trees of the coast forest are the tide-land spruce (*Picea stichensis*), the Alaska cedar (*Chama cyparis*), and the Pacific hemlock, which is a much larger tree than the eastern hemlock, reaching, under favorable circumstances, a height of two hundred feet, and a diameter of nine or ten. The tide-land spruce extends southward to about thirty-nine degrees north latitude, and the hemlock to the vicinity of San Francisco, but within the boundaries of the United States other timber trees assume a greater importance. The red fir (*pseudo-tsuga*), common in the interior of British Columbia, reaches the coast at Vancouver's island, and is the prevailing forest tree in Washington and Oregon. It is a noble conifer, reaching a height of two to three hundred feet, and ten or even twelve in diameter in the coast forest, but in the Rocky mountain regions it is scarcely recognizable in a small tree that rarely reaches one hundred feet. Extending throughout the forests of both the interior and coast ranges even into Arizona, except in the region of the Great Basin, it is at once the most widely distributed and valuable timber tree of the Pacific region. In Colorado it appears at an elevation of nearly ten thousand feet. The wood is hard and strong, difficult to work and durable, but varies much in density and quality, according to the conditions of growth. Lumbermen make two varieties, red and yellow fir.

The red fir, tide-land spruce and hemlock are in the Cascade forests accompanied by the red cedar, canoe cedar, or giant arbor-vitæ (*Thuja gigantea*), which, though extending northward to Alaska and eastward to Idaho and Montana, reaches here its greatest development, one hundred to one hundred and fifty feet in height, and as much as ten or twelve feet in thickness. It affects low rich woods and swamps, but occurs on ridges up to about five thousand feet. In this great coniferous forest, born of the heavy rainfall of the northwest coast, trees two hundred to three hundred feet high are often but a few feet apart. In the valleys of the Willamette, etc., maple, cottonwood, ash and alder line the streams, and open groves of oak cover the lower slopes. The more open parts of the forest are choked with huckleberry, hazel, berberry, salmonberry and other shrubs. In Southern Oregon more large trees diversify the forests, gradually replacing the northern forms. The sugar pine (*Pinus Lambertiana*), a tree as tall as the red fir and exceeding it in diameter, makes its appearance, and extends southward along the coast, Cascade and Sierra Nevada ranges. The wood is light, soft, coarse, straight-grained and easily worked, and its lumber is largely used throughout the Pacific coast for interior finish, doors, sash, etc., but it is inferior to Eastern white pine. Another valuable tree, of strangely limited distribution, is the Port Orford, or Oregon, cedar, confined to a narrow patch around Port Orford and Coos bay, and a smaller spot on the Upper Sacramento. It attains a height of one hundred and fifty to two hundred feet, and a diameter of six to



thirteen feet, and lives in a low, moist soil. The wood is light, hard, strong, close-grained, durable, full of odoriferous resin, and capable of a beautiful polish. Near the northern boundary of California the redwood (*Sequoia sempervirens*) makes its appearance, and is continued in a narrow belt along the coast range to beyond Santa Cruz. Although the redwood exists mingled with other trees, extensive areas are occupied exclusively by it, the huge, straight trunks rising up in close proximity, their tops so closely interlaced that the sun never reaches the forest floor which is carpeted with the fallen leaves of hundreds of years. Very little merchantable redwood timber now exists south of Russian river, for man's hand has been laid heavily upon the Sequoia, and unless care is taken, will soon render it practically extinct. The redwood is almost equal to the "big tree" in size, attaining diameters of sixteen, twenty, and even twenty-two feet, and heights of over three hundred feet.

The yellow pine of the Pacific (*Pinus ponderosa*), a tree equal in dimensions to the red fir, rivals that species in extent of distribution and in general value. It reaches its greatest development along the western slope of the Sierras of Northern and Central California, is an important tree in the Coast range of Northern California, and, east of the Cascades and Sierras, through Eastern Washington and Oregon, Western Montana, Idaho, the Black Hills of Dakota, New Mexico and Arizona, becomes, though dwarfed, the principal lumber-producing tree.

The forest of the California Coast range is remarkable for the possession of a number of trees of very limited distribution. The Monterey cypress, though from extensive cultivation, likely to become ultimately one of the most abundant of Californian trees, is limited by nature to a few groves near Monterey; *Cypressus Macnabiana* is still less common. *Pinus insignis*, Monterey pine, is found only in a few groves near Monterey bay, but is now widely cultivated as an ornamental tree; the bracted fir is confined to three or four canyons in the Santa Lucia mountains; and Terry's pine forms a few groups on the sand dunes north of San Diego. The forest of the Sierra Nevada is broadest in the region of Mt. Shasta. Its largest tree is the "big tree" (*Sequoia gigantea*), its most characteristic one, the great sugar pine, with which occur the red fir, the yellow pine, two noble species of *Abies*, or true fir, and the white cedar (*Q. Bacedrus*), a tree one hundred to one hundred and fifty feet high, with light and durable wood—not to be confounded with the quite different Eastern white cedar.

The two most beautiful and characteristic broad-leaved trees of the California coast forests are the California laurel or pepperwood (*Umbellularia*), and the madrona, or great arbutus (*Arbutus menziesii*), both reaching eighty or ninety feet in height. These, with six or seven oaks, some alders, willows and poplars, a birch, a buttonwood, a buckeye, a walnut and some buckthorns, are about all the non-coniferous plants

worthy of the name of trees to be found in the coast forests.

The luxuriant undergrowth and abundance of young trees in the forests of Oregon, as compared with the open growth upon the Sierras, where the trees are of enormous size, but far apart, show the effect of an abundant rainfall and temperate climate as contrasted with a warm climate and an unevenly distributed rainfall.

The interior, or Rocky mountain, forest is best developed in Colorado and Northeastern Arizona. Besides the prevalent red fir and yellow pine, Colorado has a spruce (*Picea Engelmannii*) which forms valuable forests at elevations of from eight thousand to ten thousand feet, and here and in Arizona the edible-seeded nut-pines occur. On the southern boundary of the United States the valleys have a few Mexican trees, such as the widely-spread mesquit and the tree-cactus.

According to Sargent, there are in the forests of North America four hundred and twelve arborescent species, of which two hundred and ninety-two belong to the Atlantic region, and one hundred and fifty-three occur within the limits of the Pacific region (including the Rocky mountains). The difference in totals is made up by ten species which cross the continent, fifteen species which extend from the Atlantic region into the Pacific, and eight species which stretch from the Pacific into the Atlantic. It must be remembered, however, that "tree" is an arbitrary word, the distinction between a shrub and tree being indefinable. This comparison is therefore unfavorable to the forests of Northern California and Oregon, where several shrubs attain development equal to that of some species admitted as trees. Moreover, if the small area of the coast forest of the Pacific is borne in mind, it will be evident that it is as rich in species as any forest tract of similar size upon the Atlantic coast, for of all the one hundred and fifty-three Pacific species only twelve are peculiar to the arid interior region. Fifty-three of the Atlantic species are confined to the same tropical extremity of Florida. The preponderance of conifers in the Pacific forest may be judged of by the number of species, fifty-three, against twenty-six in the whole Atlantic region.—W. N. Lockington, in *Journal of Progress*.

WORK on the northern extension of the California & Oregon railroad is progressing rapidly. The track will reach Sisson's, or Berryvale, in Strawberry valley, by the middle of November, and that point will be the terminus until spring. Berryvale is at the base of Mount Shasta, and is one of the most pleasant summer resorts in Northern California. The stage ride from there to Ashland will then be but eighty-eight miles, and will consume, on winter schedule, about seventeen hours.

#### A HARD FATE

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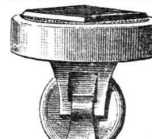


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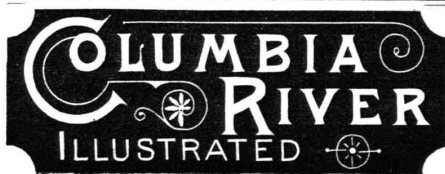
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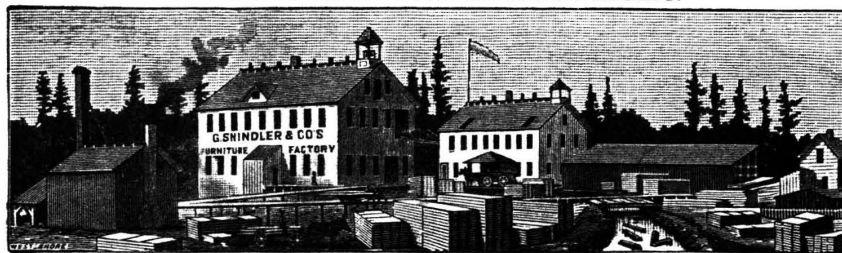
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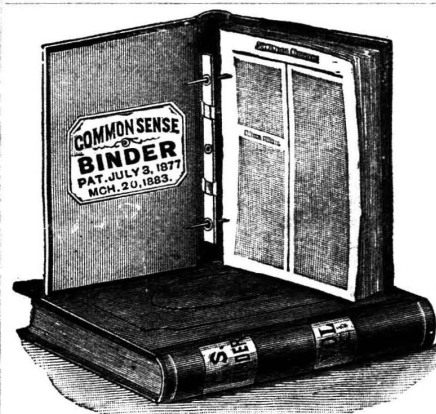
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