

D. J. McKenny

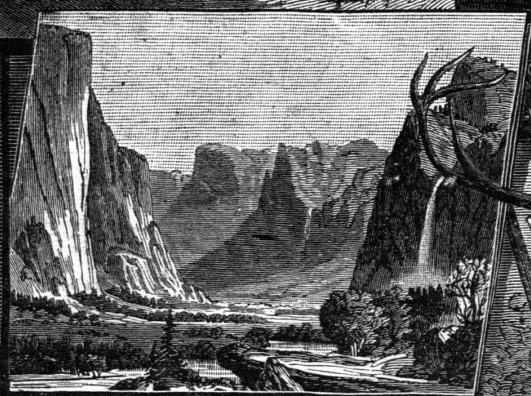
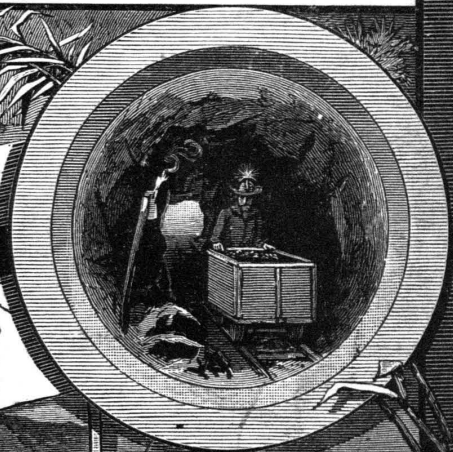
SEPTEMBER, 1886.

THE

West Shore

ESTABLISHED 1875

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

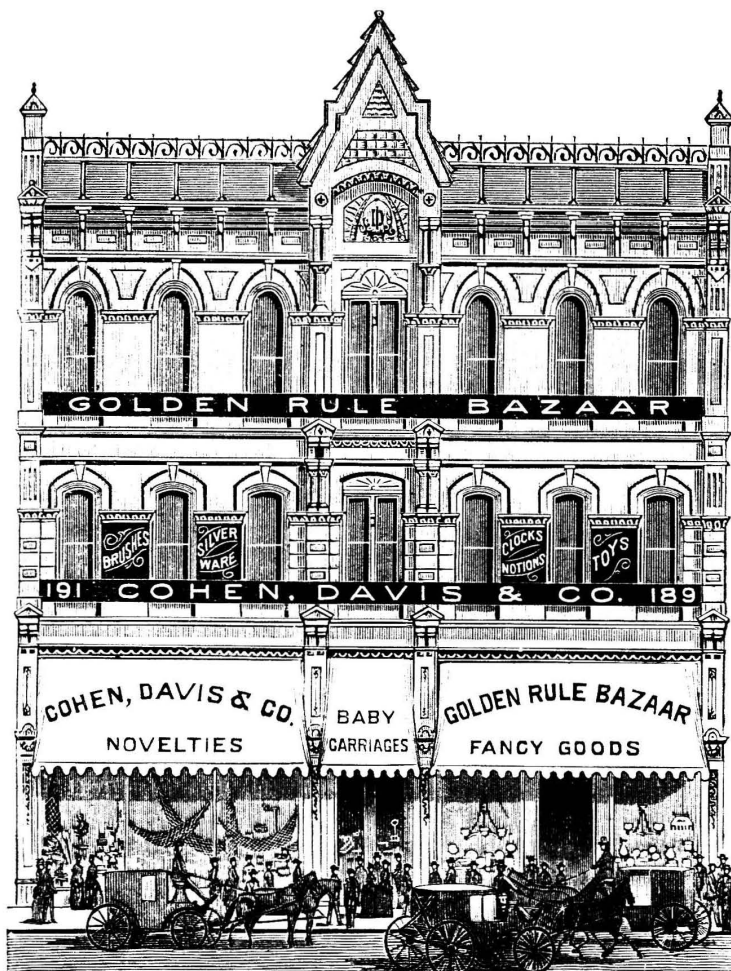


L. SAMUEL, PUBLISHER, PORTLAND, OREGON.

OFFICE—Nos. 171-173-175 Second Street Corner of Yamhill.

THE WEST SHORE!

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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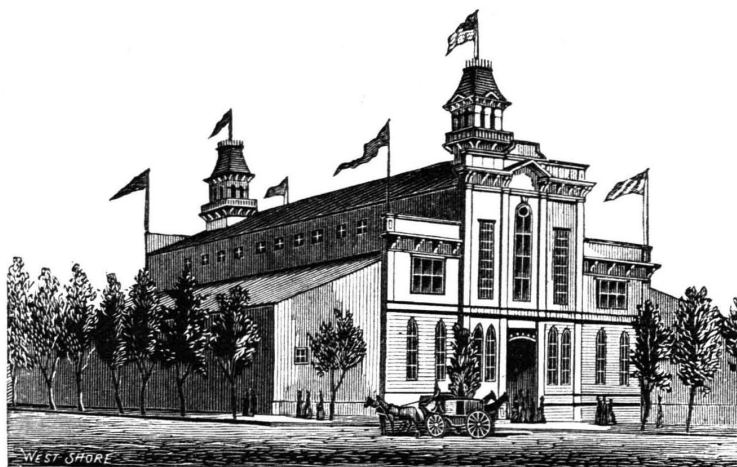
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Published at Portland, Oregon, U. S. A.

The Great Illustrated Journal of the Pacific Coast.



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THE WEST SHORE.

12th Year.

Portland, Oregon, September, 1886.

No. 9

ESTABLISHED 1875.

THE WEST SHORE.

An Illustrated Journal of General Information, devoted to the development of the Great West.

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To foreign countries, including postage.....2 25
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THERE has been considerable dissatisfaction among our fruit growers because the great demand for Oregon fruit predicted before the Northern Pacific was completed was not at once apparent the moment the last spike was driven. They seemed to forget that a business in fruit must first be built up. The railroads simply offered a means of reaching market, but the work of creating a demand for Oregon fruit has had to progress slowly. It has now advanced so far that plums, pears and apples are in almost unlimited demand for shipping, while dried and canned fruit is more easily marketed than formerly. The fruit cannery of Shannon & Co., of East Portland, the present season gave employment to one hundred and seventy persons, and used tin to the value of \$5,000.00. Next season they expect to increase their out-put five fold. The firm of Lusk & Co., the largest fruit canners of California, will have a cannery at Salem in time for next season's crop. There is every encouragement for our growers to maintain their orchards in first-class condition. The Oregon Fruit Evaporating Company has begun operations in this city and will work night and day for several months preparing fruit. The product of this establishment will be placed on the market in an attractive form, properly packed and handsomely labeled. This matter of the appearance of fruit when offered for sale is one to which our growers and packers should pay more attention. Fruit well packed and attractively labeled, will command attention and ready sale, when equally good fruit not so displayed will be neglected.

MUCH has been said from time to time about the lack of public spirit among the capitalists of Portland, because they have not invested their money in a number of enterprises which have been suggested as necessary for the future growth of the city. Especially have reduction works been urged upon them. It seems now that they have been quietly at work looking over the field, and having satisfied themselves of the practicability of reduction works at this point, have organized a company and are actively pushing the work of construction. Other enterprises are being taken up one at a time by our men of means, and we are satisfied that every field of industry that is practicable here will soon be occupied. With new railroads seeking us and our industries increasing, we may reasonably expect prosperous times for the chief city of the Northwest.

THE coming exhibition of the Portland Mechanics' Fair gives promise of excelling all its predecessors. The whole Northwest should be represented in this annual exhibit, which is viewed by a great throng of inquiring people from every section of Oregon and Washington, as well as by numbers from every portion of the United States. This can, and ought to be, made a grand exposition of the resources, products and industries of the Northwest. The fair will be open from the eighth to the twenty-third of October.

THE state fair will open at Salem on the thirteenth of September and continue one week. It is an institution in which every citizen of Oregon, no matter where he resides, should feel a deep interest. A more general attendance would benefit not only those visiting the fair, but the fair itself. The most appropriate and eligible location for this exhibition is Salem, the capital of the state, and people from other sections should be just enough to recognize this fact and do their duty in helping to make it a success.

THE business outlook in the Northwest is brighter than at any time for the past three years. A good crop of wheat has been harvested; a large crop of hops is being picked and marketed at a high price; a large amount of local and alien capital is being invested in mining properties in every mining district, and in every avenue of industry there is a feeling of a revival of good times.

THE October number of THE WEST SHORE will contain an interesting account of the ascent of Mt. Adams, accompanied by excellent engravings of scenery and incidents of the ascent. This is one of our grandest, yet least known, mountains, and for this reason the article will possess special interest.

MIDSUMMER ON ROSS ISLAND.

Opposite the upper end of Portland the Willamette is divided by a long island, which is a favorite resort for boatmen and picnic parties on warm summer days and long moonlight evenings. The steamboat channel and the current of the river are on the west side of the island, while on the east side is a broad, calm, sheltered stretch of water with scarcely any current whatever. This is a favorite place for boatmen, where in the cool evenings after the close of business for the day, may be seen every form of pleasure craft on the river from the canoe to the four-oared racing shell, and from the small boat bearing two hearts beating in as close unison as the oars, to the barge with its jolly load of merry-makers. On the island are many fine spots for picnicing, where a good turf stretches out on high ground beneath the wide branches of mossy oaks.

ONEONTA GORGE.

On pages two hundred and seventy-four and seventy-five is given a large colored engraving of one of the leading features of the Columbia river scenery. Oneonta gorge is known rather by name than by sight to the great majority of those who ascend the Columbia either by rail or boat, since it is passed so quickly that few observe it. In fact, to see it to advantage one must pay it a visit and pass between its rocky portals. Oneonta creek, one of the numerous crystal trout streams that flow down from the Cascades, cuts through the great rocky wall which hedges in the Columbia, making a narrow, massive, rugged and precipitous gorge, at the bottom of which the stream flows noisily among masses of fallen rock. It is a scene calling for deepest admiration, and one which elicits all the enthusiasm of the angler, who with rod in hand may whip the stream for trout from the gorge to its fountain head at the base of Mt. Hood.

LAKE OF THE WOODS AND MOUNT PITT.

The southernmost of Oregon's snow peaks is Mount Pitt, the crowning feature of the Cascade range near its terminus at the Klamath lakes. It was christened in honor of England's great statesman of that name, and by its title serves, in common with many other localities and objects, as a perpetual reminder of the early exploration and occupation of the upper Pacific coast by the enterprising subjects of Great Britain. It is often, though less commonly, called "Mount McLoughlin," in honor of the sturdy Scotch doctor who managed the affairs of the Hudson's Bay Company in this region for so many years, and who is such a prominent and honorable character in the early annals of Oregon. The latter name is the more appropriate, and should supersede the former. The engraving on page two hundred and seventy-six shows the mountain as seen from the shore of the Lake of the Woods, one of those crystal gems so

numerous in the Cascades, the mountain's snowy sides sharply reflected by the mirrored surface of the water. The lake lies at a distance from civilization, but he who seeks it will find beautiful scenery, refreshing mountain air and water, game in abundance, and his fill of sport with the beautiful trout with which it abounds.

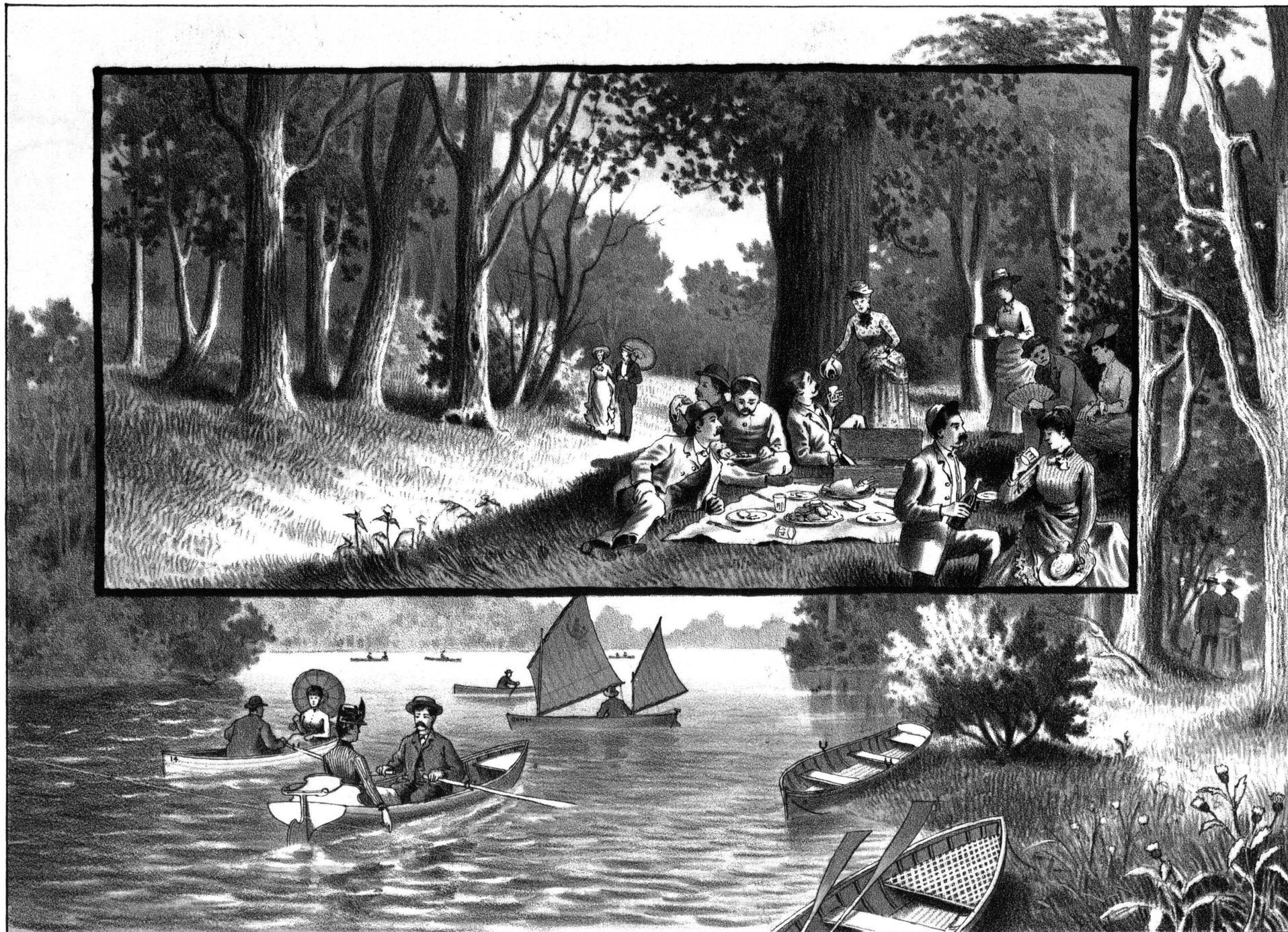
NEW CANALS IN RUSSIA.

A new canal, improving the water communication between the Caspian and Baltic seas, was opened recently by the Minister of Ways of Communication, General Possiet. The canal, which has cost \$1,500,000 to construct, joins the rivers Wyhegra and Kovja, and forms a fresh link in the chain of waterways known as the Maryinsky system, connecting the Neva with the Volga. Its length is fifteen miles; width, seventy feet; depth, seven feet. Some of the cuttings through which it runs had to be excavated to the depth of thirty feet. Most of the work has been done by hand, upwards of twenty thousand laborers having been employed in the undertaking, together with three dredging machines, nine stationary engines, and two locomotives.

Barges on Russian rivers and canals range in length from one hundred to three hundred feet. The cargoes which a large proportion of them carry, are, consequently, as large as many an ocean cargo; and instead of being mere lighters, carrying only portions of cargoes, they are, to all intents and purposes, the counterparts of sea-going ships. Thanks to the wide-reaching ramifications of the River Volga, the largest in Europe, barges of five hundred or one thousand tons can start in the spring with the floods from some tiny stream in the Ural mountains, and arrive in the autumn on the River Neva. On the other hand, it is possible for English steamers to make their way from the Neva through the canal system to the Volga, and thence descend to the Caspian sea. The Neva-Volga canal system thus possesses an importance which no English canal could claim, although we think that water carriage in this country deserves to be rescued from its present neglected and decaying condition, into which it has lapsed through the instrumentality of ambitious and over-grasping railways.—*Scientific American*.

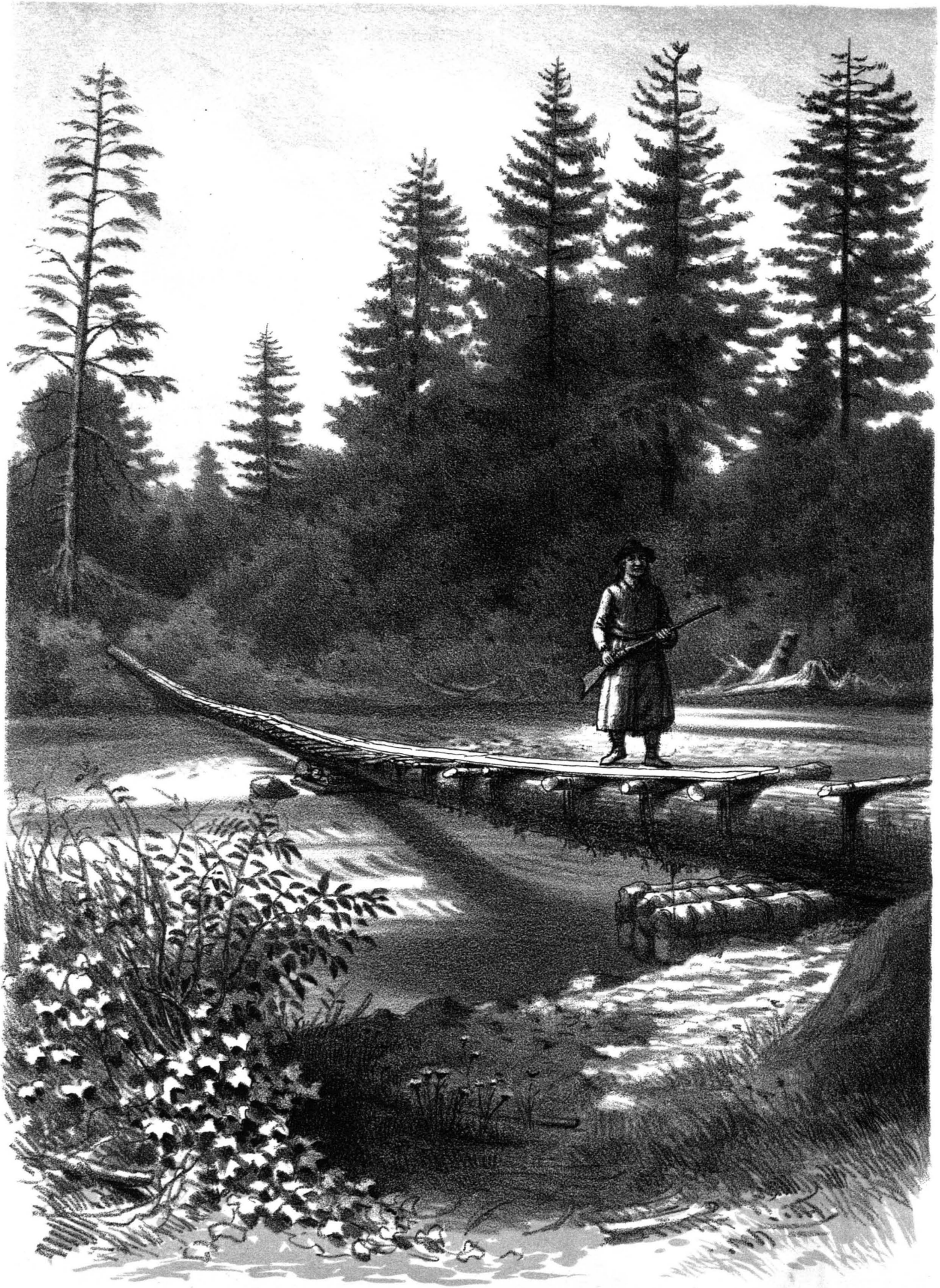
BRIDGE ACROSS INDIAN RIVER.

Mountain Indians construct across rivers and gorges substantial but crude bridges of logs and brush, similar in general appearance to the one illustrated on page two hundred and sixty-four. The bridge consists of trees which have been felled from either side of the stream so as to meet in the center. Having done this the limbs are pruned off, cross pieces are tied on with willow or hazel withes, and boards or brush laid across these for a foot path. Some of the crude sort with brush and dirt coverings, which the pioneers found spanning deep chasms, were far from inviting to a man with unsteady nerves.



PORTLAND HARBOR.-MIDSUMMERS DAY ON ROSS ISLAND.

THE WEST SHORE.



ALASKA-BRIDGE ACROSS INDIAN RIVER.

THE CŒUR D'ALENE MINES.

THE Cœur d'Alene mines, in Northern Idaho, have now become sufficiently developed to be an inviting field for the investment of capital. And as capital invested in mines, as in other productive enterprises, gives employment to labor, these mines are becoming more and more attractive to all kinds of industry. They are, indeed, in their variety, extent and richness, and ease of access, now unexcelled in the opportunities they present for profitable business by any undeveloped section of the "west shore." One local railroad has already been attracted to them, and the allies of the two great railways of the region, the Northern Pacific and the O. R. & N., are directing their course toward them. The local railroad referred to is an extension of the Cœur d'Alene Navigation Company's line from The Mission, the head of navigation on the Cœur d'Alene river, to Wardner, seventeen miles up the South Fork. This road, now under construction, will be soon completed. Its immediate construction was rendered necessary by the development simply of two silver bearing galena mines at Wardner, the Sullivan and the Bunker Hill, which are under contract to supply, within this and the next two years, fifty thousand tons of ore to the smelting works at Wickes, near Helena, Mont. There are other mining claims at Wardner which are believed to be equal in richness and extent to the Bunker Hill and Sullivan, and others in the South Fork valley which are known to be their equal. With the exception of fuel and water the country affords scarcely any means of subsistence to those engaged in its development, and as the agricultural region south of the Cœur d'Alene lake is the nearest source of supply for the principal staples, it is from this direction that railroads can penetrate the mines with the best chances for freight both ways. The O. R. & N. has already extended its line to Farmington, which is as far as its contract with the Northern Pacific allows it to go in that direction. But a local organization in alliance with it will build at once from Farmington to the lake, near the mouth of the St. Joe river, and its plan is to extend the railroad along the south bank of the Cœur d'Alene river to The Mission, and from that point, if satisfactory arrangements cannot be made for consolidation with the road now building to Wardner, it will make a line of its own up the South Fork, and it may build its own line there in any event. An ally of the Northern Pacific will be extended into the mines either from Spangle, on the Spokane Falls and Farmington road, or from the main line between Spokane Falls and Rathdrum. If any thing were needed to give the public confidence in the permanent value of these mines, the fact that these railroads are extending to them would be sufficient.

A comprehensive view of the character and extent of the Cœur d'Alene mines can be best imparted by considering them in the two classes to which they naturally belong. The first discoveries were of placer gold, on Pritchard creek, made nearly three years ago. In the

bed of this creek, in the gulches tributary to it and in the "old wash" on the hills for a distance of about six miles, gold in paying quantities was discovered and, in the aggregate, a great deal has been extracted during the past two years. But the obstacles to successful work upon the placers have been great, and they are not yet entirely overcome. The gold lies mostly on the bed-rock, and this in the main gulch is deep below the surface. Tentative operations have been undertaken to open this gulch by means of a bed-rock flume and a bed-rock drain, but a lack of capital and well-directed effort has hindered their success. The company undertaking to build a bed-rock flume a year ago began too far down the creek and exhausted its means before it had extended the flume to the point where it should have begun. This work, however, will be resumed, probably within a short time, and accomplish at least the drainage of the gulch so that the claims can be worked by drifting, if not by the hydraulic process. Another undertaking, supported by Chicago and St. Paul capitalists, has been tentatively carried on this season to open these deep claims. This is the Nye Pump process, which has so far proved its success by excavating the gravel down to bed-rock in the deepest ground in the gulch, and if it is found by drifting that the gold exists in paying quantities in this deep ground, the company will be prepared to put up any number of pumps desired to work these original discoveries.

In the side gulches, as well as upon the "old wash," the richness of which is fully assured, a lack of water has made it impossible to do much work. The Cœur d'Alene Water and Mining Company, however, will soon have a flume five feet wide built to cover these side gulches and hill diggings, and then a vast amount of placer gold will be taken out. But in spite of all these obstacles these placer diggings have yielded gold enough to sustain the country during the incipient stages of its development, and enable it to be extensively prospected for quartz and opened by roads. As a result of these first undertakings, in which many mistakes have been made and money wasted, the country is already well supplied with good public roads and without a burdensome debt. It has the flourishing town of Murray, the county seat, and the postoffice villages of Littlefield, Eagle and Delta, and four saw-mills on Pritchard creek; and while there has been no boom since the hand-sled boom of the first winter, when several thousand persons visited the gulch and left it again without even seeing the "grass roots" among which they were led to believe they could find gold, the country has reached a stage in its development when it is in danger of having another.

While work upon these original discoveries of placer gold has been going on a great many veins of gold quartz have been found, and a few of them opened. Last year a small stamp mill was put up by the "Golden Chest," a Louisville company, near Murray, and has been profitably run until within a short time, when it was decided to change its location in order to get a larger supply of water. There are now four arastras in

operation, all of them yielding a satisfactory amount of gold. A fifty-stamp mill, with mines sufficiently developed to supply it, is in process of construction by the "Idaho," another Louisville company, and will soon be in operation, the result of an expenditure of \$200,000. The "Golden King," another Louisville company, has its mines open and a mill erected, and will soon be furnished with machinery for crushing ore. A group of claims adjoining the "Idaho" company's mines has been secured for a Cleveland company, and interests in other promising gold claims have been taken by Louisville capitalists who, as soon as the "Idaho" and "Golden King" pay their first dividend, will be ready with the money to organize companies for their development. These capitalists have already got control of the "Goldsmith," a large gold mine on the South Fork, near Evolution, and have decided to put up a large mill upon it.

While in the vicinity of Murray and Delta the mines are chiefly gold, placer and free-milling quartz, there are a number of prospects rich in silver and lead. On the old Belknap trail one of the richest silver mines in the region is now being opened. At Carbon Center, about five miles up Beaver creek from Delta, an Ohio company is opening large and rich galena mines, and at the foot of Bald mountain some rich silver mines have attracted the attention of Louisville men who are hastening to secure them. The gold quartz is mostly free-milling, and some of it very rich. With the opening of the hill placers other hidden veins will doubtless be uncovered, so that from the start this district is now receiving there are abundant reasons to believe that it will continue to increase in business for many years, and become one of the largest and most productive gold districts in the country.

The silver region, or rather the silver-bearing galena district, is in the valley of the South Fork, a stream which runs in a generally western course—parallel with Pritchard creek and about twenty miles south of it—from the Bitter Root mountains into the Cœur d'Alene river. It is a larger and much longer stream than Pritchard creek, being not less than thirty miles long, while Pritchard is about fifteen. It unites with the main river about six miles above The Mission. In the hills on either side of the South Fork, all the way from The Mission to the foot of the mountain at Nigger Prairie, or Mullan City, as the new town at that place is now called, a district about forty miles long by fifteen wide, a great number of veins of galena and some carbonates and chlorides have been discovered within the past year, besides a few veins of gold. There are also some placer claims in the district. Properly speaking it is a great galena belt, the largest and undoubtedly the richest that has been discovered on the Pacific coast. The bulk of its wealth, so far as is now apparent, is its concentrating ore, although it is already known that much of its ore is almost pure galena carrying silver. Two of the mines in this belt, the Bunker Hill and Sullivan, have been shipping ore to the reduction works at Wickes since last winter, and for the past two months have been keep-

ing a fifty-ton concentrator running at Wardner on their low grade ores. These two mines alone have already built up the town of Wardner in Milo gulch, two miles south of the South Fork, attracted the local railroad above referred to, and induced the erection of a Hartsfield smelter at Milo, two miles below them. But on Canyon creek and on Nine Mile mines are already open which are equal to them in extent and richness of ore, while on Deadwood and Government gulches, on Big creek and Moon creek and around Mullan City sufficient work has been done to show that the Wardner mines are only a sample of the bodies of ore in this district. All that it now requires for its rapid and prosperous development are concentrating works and railway transportation. The building of the little road from The Mission to Wardner, which will give the country steam transportation during the navigation season to the Cœur d'Alene post, twelve miles from Rathdrum, will greatly stimulate work upon these various claims from this time forward, and make an all-rail route, which will be available throughout the year, a necessity to the country, as it will be a source of wealth to its owners. Mines enough have already been discovered and proved to make this region a field of prosperous industry for many years, but, as in all mining camps, a large number of prospectors, with the western hunger for the horizon, are extending their prospecting trips, and the limits of both the districts described will undoubtedly be widened. It is believed that the galena belt on the South Fork extends across the divide to the St. Joe, and prospectors are already following the leads in that direction. The search for gold in this country is rapidly increasing, and at the present time nothing is more attractive to eastern capital than a gold mine. In the Cœur d'Alene region there is still room for prospectors to use their picks and pans, while with the building of reduction works and the opening of transportation, they will have an opportunity to make their discoveries quickly available.

S. B. PETTENGILL.

THE NIAGARA SUSPENSION BRIDGE.

The stone composing the four towers of the Niagara railroad suspension bridge, having been found to be slowly disintegrating, it has been decided to replace them by iron supports. Although a difficult, and possibly dangerous, undertaking, the work is being carried on without much interference with the use of the bridge. Every precaution has been taken to prevent accident. The workmen are now engaged in removing stone from the sides of the towers, in order to make room for the preliminary ironwork. The upper caps are being drilled so that when the time comes, the hydraulic jacks may be readily slipped into place and the great cables transferred from the stone supports to the strong iron towers which are to replace them. These are being manufactured in Detroit, and will shortly be shipped to Niagara. Their cost will be \$40,000.00.

PAUL VARGAS---A MYSTERY.

MY STORY concerns a man whom I saw but thrice in my lifetime; or I should rather say, saw during three brief periods of my lifetime. We were medical students together. His name—I do not change it—was Paul Vargas.

He was a tall, dark-haired, pale-faced young man, strikingly handsome after his own peculiar style. His nose was aquiline and well-formed; the broad forehead betokened great intellectual power, and the mouth, chin, and strong, square jaw all spoke of strength of will and resolution. But had all these features been irregular and unpleasing, the eyes alone would have redeemed the face from plainness. More luminous, eloquent, expressive eyes I have never seen. Their dark beauty was enhanced by a distention of the pupil, seldom met with when the sight is perfect, as was Vargas'. They possessed in a remarkable degree the power of reflecting the owner's emotions. Bright as they always were, they sparkled with his mirth, glittered with his scorn, and when he seemed trying to read the soul of the man he looked at, their concentrated gaze was such as few could bear with perfect ease.

I can not say he was my friend. Indeed, I believe he had no friends, and I think I may add, no enemies. He was too polite and obliging to make foes, although there was usually a calm air of superiority about all he said and did, which at times rather nettled such an unlicked lot of cubs as most of us were in those days.

Yet, if we were not bosom friends, for some months I saw a great deal of Paul Vargas. He was an indefatigable student, and as if the prescribed course of study was not enough for him, was engaged during his leisure hours on some original and delicate experiments, conducted simply for his own pleasure. Wanting some one to assist him, he was good enough to choose me. Why, I never knew. I flatter myself it was because he thought me cleverer than my fellows; but it may have been he thought me duller and less likely to anticipate or forestall his discoveries.

All our fraternity looked upon Paul Vargas as abnormally clever, and when the closer intercourse began between us, I found at first no reason to differ from the general opinion. He seemed to have all the works of medical and surgical authorities at his finger-ends. He was an accomplished linguist. Let the book or pamphlet be English, French or German, he read it with equal ease, and moreover, had the valuable knack of extracting the gist of the matter, while throwing aside any worthless lumber which surrounded it. From my average intellectual station I could but admire and envy his rapid and brilliant flights.

He had resolved to become a specialist. He poured out the vials of his scorn on the ordinary practitioner—the marvelous being who, with equal confidence, is ready to grapple with fever, gout, consumption, blindness, deafness, broken bones, and all other ills and accidents which afflict mankind.

"It is absurd!" he said. "As well expect the man who made the lenses for that microscope to make the brass work also—as well ask the author of this treatise to print and bind it. I tell you one organ, one bit of the microcosm called man, demands a life's study before the cleverest dare to say he understands it."

Certainly the organ selected by Vargas for his special study was the most complex and unsatisfactory of all—the brain. Any work, new or obsolete, which treated upon it—anything which seemed to demonstrate the connection between mind and body, he examined with intense eagerness. The writings and speculations of the veriest old charlatans were not beneath his notice. The series of experiments we were conducting were to the same end. I need not describe them, but something of their nature may be guessed, when I say it was long before the time when certain persons endeavored to persuade the world that scientists were fiends in human shape, who inflicted unheard-of tortures on the lower orders of animals, solely to gratify a lust for cruelty.

One night I found him in a strange, preoccupied mood. He did his work mechanically, and I could see that his thoughts kept straying away. We finished earlier than usual, and for awhile he sat opposite to me in silence. Then he raised his eyes and asked me a question.

What the question was I have never been able to remember. I have racked my brain again and again, but have never recalled the purport of it. All I know is, it was, from a scientific point of view, so supremely ridiculous that I burst into a peal of laughter.

For a moment Paul Vargas' eyes positively flamed. Feeling that our relations were not friendly enough to excuse the indiscretion on my part, I hastened to apologize. He was himself again directly, and with his calm, superior smile on his lips, he assured me I had done nothing which demanded an apology. He then changed the conversation, and during the remainder of my stay talked as rationally and instructively as the most methodical old lecturer in the schools.

He bade me good night with his usual politeness, and sent me away glad that my ill-timed mirth had not offended him. Yet the next morning I received a note saying he had decided to discontinue that particular series of researches in which I had given him such invaluable assistance.

I was somewhat nettled at this summary dismissal. Vargas asked me to his rooms no more, and he was not the man to call upon uninvited. So, except in the schools and in the streets, I saw nothing more of him.

It was predicted by those who should know best that Paul Vargas would be the scholar of the year. I alone dared to doubt it. In spite of his great talents and capacity for work, I fancied there was that in his nature which would defeat these high hopes. There was something wrong—something eccentric about him. In plain English, I believed if not mad then, he would end his days in a madhouse.

However, he never went up for his last examination. He had a surprise in store for us. Just before the final trial in which he was to reap such laurels he vanished. He went without a word of warning—went bag and baggage. He left no debts behind him. He defrauded no one. He simply, without giving any reason for his departure, went away and left no trace behind him. Some time afterward it was reported that he had come into a large fortune. This explanation of his conduct was a plausible one, and was generally accepted as correct.

After the nine days' wonder had died away, I, like others, ceased to think about the missing man. The years went by, I passed my examination creditably, and was very proud and hopeful when duly authorized to place M.D. after my name.

I have narrated how I first met Paul Vargas. I had no expectation of again seeing him, nor any great wish to do so. But we did meet a second time. It was in this wise.

When I took my medical degree I was far from being the staid, sober man I now am. Having a little money of my own I resolved to see something of the world before I settled down. I was not rich enough to be quite idle, so I began by making one or two voyages as doctor to an emigrant ship. I soon grew tired of this occupation, and being in England, but not yet cured of roving, I cast about for something professional to take me abroad. I had not long to wait. Cholera was raging in the East. A fund had been raised to send out a few English doctors. I tendered my services, which were accepted.

At Constantinople I was detained several days waiting instructions. One day, while idly strolling through the streets, I came face to face with Paul Vargas.

Although he wore the fez and was in appearance more Turkish than English, I knew him at once and accosted him by his name. Surprised as he looked at my salutation, he had evidently no wish to deny his identity. As soon as he recognized me he greeted me cordially, and having learned what brought me to Constantinople, insisted that I should pay him a visit. I willingly consented to do so. I was most curious to ascertain why he had thrown up the profession so suddenly. The day being still young I started then and there with him for his home.

Naturally, almost my first question was why he left us so mysteriously.

"I had my reasons," he said.

"They must have been powerful ones."

He turned his dark eyes full upon me—

"They were," he said, "I grew sick of the life. After all, what did it mean? Work, work, work, only to find out how little one really knew or ever could know by study. Why, in one-half hour I learned more by pure chance than any one else has yet dreamed of."

I questioned him as to the meaning of his arrogant assertion, but he evaded me with all his old adroitness; then we reached his house, and I forgot all save admiration.

His house was just outside the city. House! It might be called a small palace. Here he lived in true Oriental luxury. Judging from the profusion which surrounded him, and from the lavish scale on which his establishment was conducted, I felt sure that the report of his having inherited a fortune was quite correct. All that money could buy, all that an intellectual Sybarite could desire, seemed to be his. Books, paintings, statuary, costly furniture, rich tapestries, the choicest dishes and the rarest wines. Only a man in the enjoyment of a princely income could live in such style and splendor.

He led me from room to room, until he opened the door to one more beautifully garnished than any of the others. A girl was sitting at the window. As we entered she sprang forward with a cry of joy and threw her arms around Vargas.

He returned her passionate embrace; kissed her, whispered some words of love in a strange, musical language, then gently disengaging himself, said—

"Myrrha, welcome an old friend of mine, an Englishman."

She turned toward me. Her beauty absolutely dazzled me. She was tall and majestic; coil upon coil of jet black hair crowned her well-poised, queenly head. Her cheek had the clear brown tinge of the south. Her eyes were glorious. Never before had I seen such a splendid creature. The perfection of her form, the look of splendid health and glowing vitality would have been enough to make her an object of the greatest interest to anyone of my profession.

The bright colors of her rich dress well became her. Although in years she was but a girl, the gold and jewels which covered her hands, arms and neck seemed quite in keeping with her beauty. As I looked at her I felt that Paul Vargas' earthly paradise ought to be complete.

She came forward with unembarrassed grace, smiled a bright smile, and giving me her hand, bade me welcome in English, correct enough, although tempered by a slight foreign accent.

After a little while Vargas suggested that I should walk around the gardens with him. As we left the room, the look that passed between him and the girl was quite enough to show the complete love they bore each other.

"Your wife, I suppose?" I said, when we were alone. "She is very beautiful."

"My love, my life, my very soul!" he exclaimed, passionately. "But not my wife in your sense of the word."

I said no more, feeling that the subject was a delicate one to handle. Who Myrrha was, or why she should live, unmarried, with him, was none of my business.

I had not been long in his society before I discovered that Paul Vargas was, in some ways, much changed—I may say improved. He seemed altogether a better sort of fellow than the man I had known of old. No less polite, but more natural. His invariably charming manners were enhanced by the addition of something like

friendliness. In an hour's time I felt that I had made more progress with him than I had in the whole of our previous intercourse. I attributed this change to the power of love, for, wife or no wife, it was plain that the man loved his beautiful companion with all the force of his strong nature.

Yet it shocked me to discover that all the old ambition was dead. I mourned that such a highly gifted man could at his age withdraw completely from the battle field, and seem only to strive to make life as soft and sensuous as it might be possible for wealth to make it. I spoke once or twice to this effect, but the darkness of his brow and the shortness of his answers told me that I trod on forbidden ground. For his own sake I hoped that the day would come when he would weary of his voluptuous existence and long for the bracing tonics of hard work and the struggle for success.

I was detained in Constantinople three days longer. Vargas pressed me to take up my abode with him. It was not worth while to do this, as at any moment I might be ordered away. But I spent several hours of each day with him. He was always glad to see me. Perhaps the sweetness of his seclusion was already beginning to pall upon him, and the occasional sight of a commonplace, work-a-day face was a welcome one.

The route came at last. I bade my friend good-bye, and sighed as I thought how grimly the scenes of death and misery to which I was about to pass would contrast with the Elysium I was quitting. Vargas accompanied me to the steamer by which the first part of my journey was to be made.

"Do you mean to live here all your life?" I asked.

"No, I shall grow weary of it—very soon, I expect."

"And then?"

"Then I shall sell everything and try another land."

"You must be rich to live as you do."

"I was rich. I had sixty thousand pounds—but in the last year or two I have spent two-thirds of my fortune."

"Two-thirds of your capital—what folly!"

He shrugged his shoulders, and smiled that old superior smile. Then a deep gloom settled on his handsome face.

"I have plenty left—plenty to last my time," he said.

"What nonsense you talk! What do you mean by your time?"

He leaned toward me, placed his hand on my arm, and looked at me with an expression in his eyes which thrilled me.

"I mean this," he said slowly. "I could, if I chose, tell you the exact day—if not the exact hour at which I shall die. You see how I live, so can understand that if I have money to last my time, that time is short."

"My dear fellow!" I exclaimed, "have you any complaint—any secret malady?"

"None—I am hale and sound as you. Nevertheless I shall die as I said."

His absolute conviction impressed me more than I cared to show.

"A man must die of something specific," I said. "If you can predict your illness, can you not take steps to prolong your life?"

"Prolong my life!" he echoed as one in a dream. "Yes, I can prolong my life—but I will not."

I could only conclude that Paul Vargas meditated self-destruction.

"Why should you not care to live?" I urged.

"Care to live!" he cried bitterly. "Man, I revel in life! I have youth, strength, love—fame I could have if I wished for it. Yet it is because I may have fewer temptations to prolong my life that I am squandering my wealth—that I let ambition beckon in vain—that, when the moment draws near, I shall forsake the woman I love."

It was as I had guessed years ago—Paul Vargas was mad!

He sank into a moody silence, broken only when the moment of my departure came. Then he roused himself, shook hands with me and bade me good speed.

"We shall meet again, some day," I said cheerfully.

His dark eyes gleamed with all the old scorn they were wont to express when anyone whose words were not worth listening to opposed him in argument.

"We shall meet no more," he said, curtly and coldly, turning away and retracing his steps.

He was wrong. We met again.

I worked through the cholera, saw many dreadful sights, gained much experience and a certain amount of praise. On my way home I inquired for Vargas, and found he had disposed of his house and its entire contents, departing, no one knew whither.

Two years went by. I was still unsettled, still holding roving commissions. I blush to say that I had been attacked by the gold fever, and in my haste to grow rich had lost in mining nearly all I possessed. I cured myself before the disease grew chronic, but ashamed to return all but penniless to England, for awhile I sojourned in one of those mushroom towns of America—towns that spring up almost in a night, wherever there is a chance of making money.

I rather liked the life. It was rough but full of interest. The town held several thousand inhabitants, so there was plenty of work for me and another doctor. If our patients were in luck we were well paid for our services; if, as was usually the case, they were out of luck, we received nothing, and were not so foolish as to expect more. Still, taking one with another, I found the healing art paid me much better than mining. My studies of human nature were certainly extended at New Durham. I met with all sorts of characters, from the educated gentleman who had come out to win wealth by the sweat of his brow, down to the lowest ruffian who lived by plundering his own kind, and my experiences were such that when I did return to England I was competent to write as an authority on the treatment of gunshot wounds.

One evening I met the other doctor. We were the best of friends. As our community was at present constituted there was no occasion for professional rivalry. Our hands were always full of work. Indeed, if we maneuvered at all against each other, it was with the view of shunting off a troublesome patient.

"I wish you would call in at Webber's when you pass," said Dr. Jones. "There's a patient of mine there. He's going to die, but for the life of me I can't tell what ails him."

I promised to call and give my opinion on the case.

Webber's was a mixture of drinking bar, gambling hell and lodging house. Its patrons were not of the most select class, and the scuffles and rows that went on there made the house a disgrace even to New Durham. By this time I was too well known to fear insult even in the lowest den of infamy, so I entered boldly and asked to be conducted to Dr. Jones' patient.

A blowsy, sodden-faced, vicious looking woman led me up-stairs and turned the handle of a door.

"He ought to be dead by now," she said. "If the doctor can't cure him, or he don't die in two days, out he bundles."

I walked into the room taking no notice of the brutal threat. There on a wretched apology for a bed—with a look of heart-rending despair in his large dark eyes, lay Paul Vargas.

I thought I must be dreaming. The man I had seen little more than two years ago, lapped in absurd luxury—spending money like water to gratify every taste, every desire—now lying in this wretched den, and if Jones' view of the case was correct, dying like a dog! I shuddered with horror and hastened to his side.

He knew me. He was conscious. I could tell that much by the light which leaped into his eyes as I approached.

"Vargas, my poor fellow," I said, "what does this mean?"

As I spoke I remembered how he had predicted his own death. He must have remembered it, too, for although he made no reply, and lay still as a log, there was a look in his eyes which might express the satisfaction felt by a successful prophet, when one who has laughed at his forecast is bound, at last, to realize its correctness.

I addressed him again and again. Not a word did he answer, so at last I was compelled to think that his power of speech was gone. Then I went to work to thoroughly inspect him and ascertain the nature of his complaint.

I sounded him, tested every organ, examined every limb; but like my colleague was utterly unable to find the cause of his illness. Of course I labored under the great disadvantage of being unable to get a word of description of his pains from the patient himself. I satisfied myself that he had absolutely lost the power of moving his limbs. This utter helplessness made me fancy the spine might be broken, but it was not so. Paralysis suggested itself, but the obviously clear state

of his mind as shown by those eloquent eyes was sufficient to send this idea to the background. At last, I gave up fairly baffled. I could give no name to his ailment—could fix no seat for it.

His bodily weakness was great; but weakness must be caused by something. What was that something? So far as my knowledge went, there was no specific disease; yet I was as certain as Dr. Jones that Paul Vargas, if not dying, was about to die.

And underneath us was the din of drunken men and unsexed women. Ribaldry and blasphemy, oaths and shrieks, laughter and shouts, rose and penetrated the frail planks which bounded the small, dirty room in which the sufferer lay. At all cost he must be moved to more comfortable quarters.

I went down-stairs and questioned the Webbers as to how he came there. All they knew was that late one night the man entered the house and asked for a bed. He was accommodated with one, and for two days no one troubled about him. Then some one looked him up and found him in his present deplorable state. One of the inmates who had a grain of kindness left, fetched Dr. Jones. That was all they knew of the affair.

I managed to secure the assistance of four strong and almost sober men. I paid what reckoning was due at Webber's, then set about moving the poor fellow. He was carried carefully down-stairs, laid on an extemporized stretcher and borne to my house, which, fortunately, was only a few hundred yards away. During the transit he was perfectly conscious, but he spoke no word, nor, by any act of his own, moved hand or foot. I saw him safely installed in my own bed, and having satisfied myself that no immediate evil was likely to result from the removal, went out to look for some one to nurse him.

I was obliged to seek extraneous aid, as my household consisted of an old negro who came of a morning to cook my breakfast and tidy up the place. Except for this I was my own servant.

Decent women in a place like New Durham are few and far between, but at last I found one to whom I concluded I might venture to trust my patient and who, for a handsome consideration, consented to act as sick-nurse. I took her back with me and instructed her to do what seemed to me best for the poor fellow. She was to give him, as often as he would take them, brandy and water and some nourishing spoon meat.

Vargas was now lying with his eyes shut. Except that he undoubtedly breathed he might be dead. I watched him for more than an hour, yet found his state a greater puzzle than ever. So utterly at sea was I that I dared not prescribe for him, fearing I might do more harm than good.

It was growing late. I had a long, hard day before me on the morrow. I had to ride many miles, and doubted whether I could get back the same day. Yet, late as it was, I did not retire to rest before I had thoroughly examined the clothes and other personal effects which I had brought from Webber's with the sick man.

I hoped to come across the name of some friend to whom I could write and make his state known. Money or articles of value I had little expectation of finding—such things would soon disappear from the person of any one who lay dying at Webber's.

The only scrap of writing I met with was a letter in a woman's hand. It was short, and though every word showed passionate love, it ended in a manner which told me a separation had taken place.

"You leave me," it ran, "you may hide yourself in the furthest corner of the world; yet when the moment you know of comes and you need me, I shall find you. Till then farewell."

On the fly-leaf was penciled, in Vargas' peculiar handwriting: "If I can find the strength of will to leave her, my beloved, surely I can die in secret and in silence."

There was no envelope, no date, no address, no signature to the letter. All it showed me was that Paul Vargas still clung to his morbid prophecy—that he had made up his mind he was to die, and it may be he had been driven into his present state by his strange monomania. The mystery was—why should he leave the woman he loved and come here to die alone and uncared for? It was, of course, just possible that in some way he had learned I was in New Durham and was making his way to me.

This could only be explained by the man himself, and he was without the power of speech.

After giving the nurse strict instructions to call me if her charge's condition showed any change, I went to the bed I had rigged up in my sitting room, and in a minute was fast asleep. After I had slept for about three hours a knocking at my door aroused me. Opening it I found the nurse standing outside. Her bonnet and cloak were on, and by the light of the lamp she carried with a tremulous hand I saw that her face was ghastly pale, but, nevertheless, wearing a defiant, injured look.

"What's the matter?" I asked.

"I am going home," she said, sullenly.

"Going home! Nonsense! Go back to the sick-room. Is the man worse?"

"I wouldn't go back for a hundred dollars—I'm going home."

Thinking some sudden whim had seized her, I expostulated and commanded and entreated. She was inflexible. Then I insisted upon knowing the meaning of such extraordinary conduct. For awhile she refused to give me any explanation. At last, she said she had been frightened to death. It was the man's eyes, she added, with a shiver. He had opened them and stared at her. The moment I heard this I ran to his room, fearing the worst. I found nothing to excite alarm. Vargas was quiet, apparently sleeping, so I returned to the stupid woman, rated her soundly and bade her go back and resume her duties.

Not she! Horses would not drag her into that room again—money would not bribe her to re-enter it. The

man had looked at her with those fearful eyes of his until she felt that in another moment she must go mad or die. Why did she not move out of the range of vision? She had done so, but it was all the same—she knew he was still looking at her—he was looking at her even now—she would never get away from that look until she was out of the house.

By this time the foolish creature was trembling like a leaf, and moreover, had worked herself up to a pitch bordering on hysteria. Even if I could have convinced her of her folly, she would have been useless for nursing purposes, so I told her to get out of the house as soon as she liked; then sulkily drawing on my clothes, went to spend the rest of the night by Vargas' bed.

His pulse beat with feeble regularity. He seemed in want of nothing, so I placed a low chair near the bed and sat down. As I sat there my head was just on a level with his pillow. I watched the pale, still face for some time, then I fell into a doze. I woke, looked once more at Vargas, then again closed my eyes, and this time really slept, feeling sure that the slightest movement of his head on the pillow would arouse me, I did not struggle against drowsiness.

Presently I began to dream—a dream so incoherent that I can give no clear description of it. Something or some one was trying to overpower me, whether mentally or physically I cannot say. I was resisting to the best of my ability, the final struggle for mastery was just imminent, when, of course, I awoke—awoke to find Paul Vargas's luminous eyes, with strangely dilated pupils, gazing fully into mine. The whole strength of his mind, his very soul, seemed to be thrown into that fixed gaze.

I seemed to shrivel up and grow small beneath it. Those dark, masterful eyes held me spellbound; fascinated me; deprived me of volition or power of motion; fettered me; forbade me even to blink an eyelid. With a strong, steady stroke they pierced me through and through, and I felt they meant to subjugate my mind even as they had already subjugated my body, and as their gaze grew more intense, I knew that in another moment I must be their slave.

With this thought my own thoughts faded. For a time all seemed dim, misty and inexplicable, but even through the mist I see those two points glowing with dark, sustained fire. I can resist no longer, I am conquered, my will has quitted me and is another's.

Then thought came quickly enough. I am ill—dying in a strange place. There is one I love. She is miles and miles away, but not too far to reach me. I must and will write to her before it is too late. Yet I curse myself for the wish as in some dim way I know that some fearful thing must happen if she finds me alive.

Then all consciousness leaves me except that I have the impression that I am out of doors and can feel the night air on my brow. Suddenly I come to myself. I am standing bareheaded close to the post-office, with a kind of idea in my bewildered brain that I have just posted a letter. I feel battered and shaken, large beads

of perspiration are on my forehead. In a dazed way I walk back to my house, the door of which I find left wide open—an act of trustfulness scarcely due to New Durham. I enter, throw myself in a chair and shudder at what has taken place.

No—not at what has taken place, but at what might have taken place. For I know that Paul Vargas, although speechless and more helpless than an infant, has by some strange, weird mental power so influenced me that I have identified myself with him and done as he would have done. His unspoken commands may have worked no evil, but I shudder as I feel sure that had he ordered me, while in that mesmeric state, to murder my best friend, I should have done so.

It was only when annoyance and anger succeeded fear, I found myself able to return to him. I felt much mortified that I, in the full vigor of manhood, had been conquered and enslaved by the act of a stronger will than my own. I went back to the sick-room, and found Vargas lying with closed eyes. I laid my hand on his shoulder, bent down to his ear and said—

“When you recover I will have a full explanation of the jugglery you have practiced on me.”

I resumed my seat, fearing his strange power no longer. Now that I knew he wielded it I was armed against it. I flattered myself that only by attacking me unawares could he influence me in so mysterious a manner. When next he opened his eyes I did not shun them. I might well have done so—their expression was one of anguish and horror—the expression one might imagine would lurk in the eyes of a conscience-stricken man to whom had just come the knowledge that he had committed some awful crime. Every now and then they turned to me in wild, beseeching terror, but they bore no trace of that strange mesmeric power.

Paul Vargas, if he was to die, seemed doomed to die a lingering death. For some ten days longer he lay in that curious state—his symptoms, or rather absence of symptoms, driving Jones and myself to our wits' ends. We tried all we could think of, without beneficial results. Every day he grew a little weaker—every day his pulse was a little weaker than on the preceding day. Such stimulant and nutriment as I could force down his throat seemed to do no good. Slowly—very slowly—his life was ebbing away, but so surely that I was fain to come to the sad conclusion that in spite of all our efforts he would slip through our fingers. By this time he had grown frightfully emaciated, and although I am convinced he suffered little or no bodily pain, the look of anguish in his staring dark eyes was painful to encounter.

I had obtained the services of another nurse, and was thankful to find that, to her, the dying man was not an object of dread, although after my own experiences I could not blame her predecessor.

Hour after hour, day after day, Paul Vargas lay unable to move or speak, yet I felt sure in full possession of his mental faculties. Several times I noticed when the door was opened a look of dread came into his eyes.

He breathed freer when he saw the new-comer was either the nurse or myself. This puzzled me, for if, as I suspected, he had willed that I should write a letter and send it to the proper place, his look should have been one of hope and expectancy, instead of its displaying unmistakable signs of fear.

Although Vargas often gave me the impression that he was trying to subject me again to that strange influence, it was only once more that he attained anything like success. One day, grown bold at finding I had as yet avoided a repetition of my thralldom, and perhaps, egged on by curiosity, I met his strange fixed gaze half way and defied him to conquer me. In a moment or two I found I had miscalculated my powers, and—although I blush to say it—felt that in another second I must yield to him, and, as before, do as he wished. At that critical moment the nurse entered the room and spoke to me. Her voice and presence broke the spell. Thank God, it was so; Vargas was sending an impulse into my mind—urging me in some way which I knew would be irresistible—to perform, not some harmless task, but to go to my medicine chest and fetch a dose of laudnum heavy enough to send him to sleep forever. And I say, without hesitation, that had the woman not entered the room at that very moment, I should have been forced to do the man's bidding.

Yet I had no wish to cut his few last days short. If I had given him that poison it would have been suicide, not murder.

Although he had predicted his own death, why was Paul Vargas so anxious to die that he had endeavored to make me kill him? Unless their tortures are unbearable, few dying persons seek to precipitate matters; and this one, I am sure, suffered little or no pain; his death was lingering and tedious, but not painful.

After this fresh attempt to coerce me I was almost afraid to leave him alone with the nurse. I even took the precaution of being present when Dr. Jones, out of professional curiosity, paid him an occasional visit.

The tension on my nerves grew unbearable. I fervently prayed for the man's recovery, or if recovery was out of the question, for his death. At last the time came when death seemed to be drawing very, very near—so near that Jones, whose interest in the case was unabated, said, as he left me in the evening—

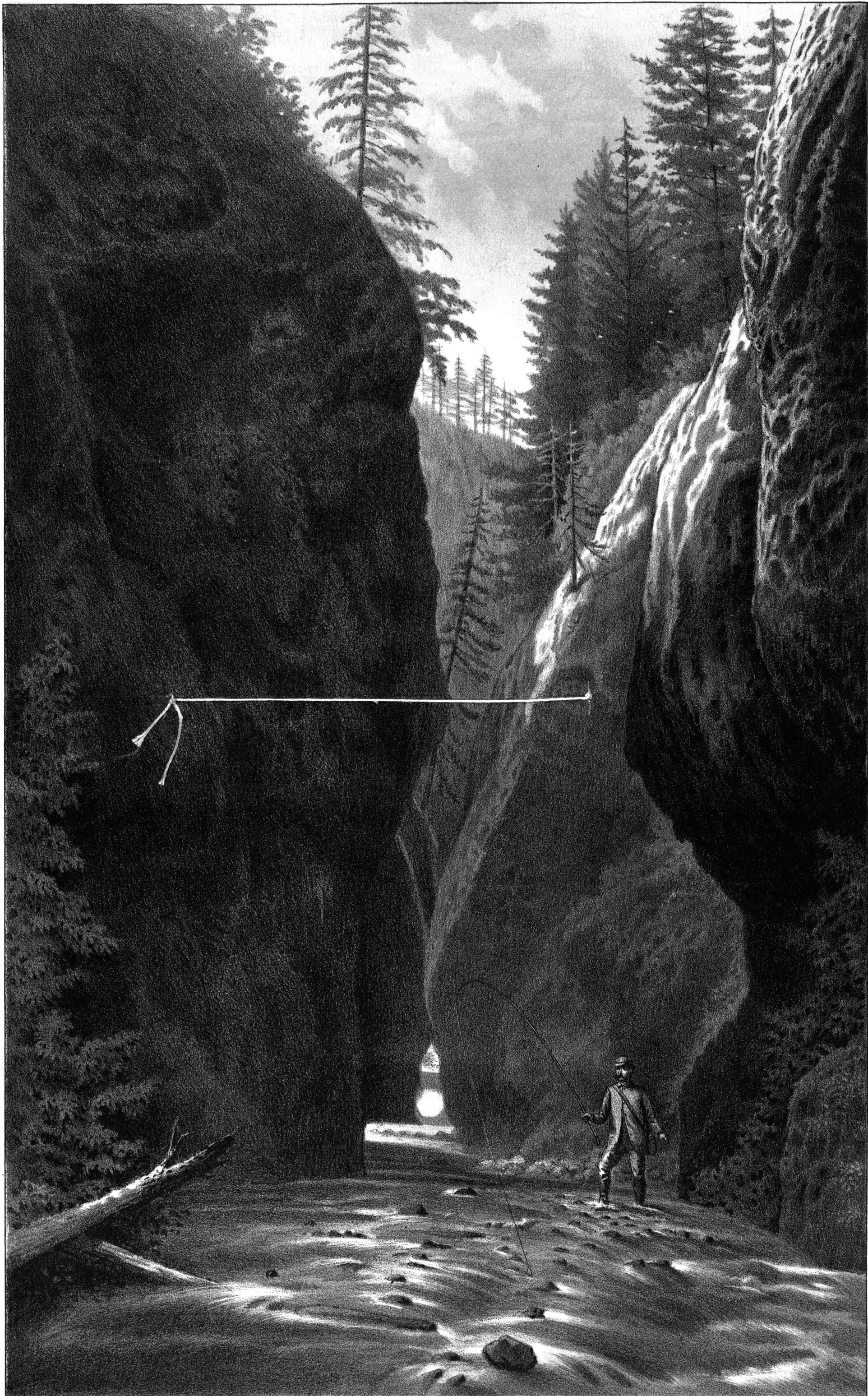
“He will die to-night, or before to-morrow is over. I believe he has only kept himself alive the last few days by sheer force of will and a determination not to die.”

I assented gloomily, wished my colleague good-night and went to rest.

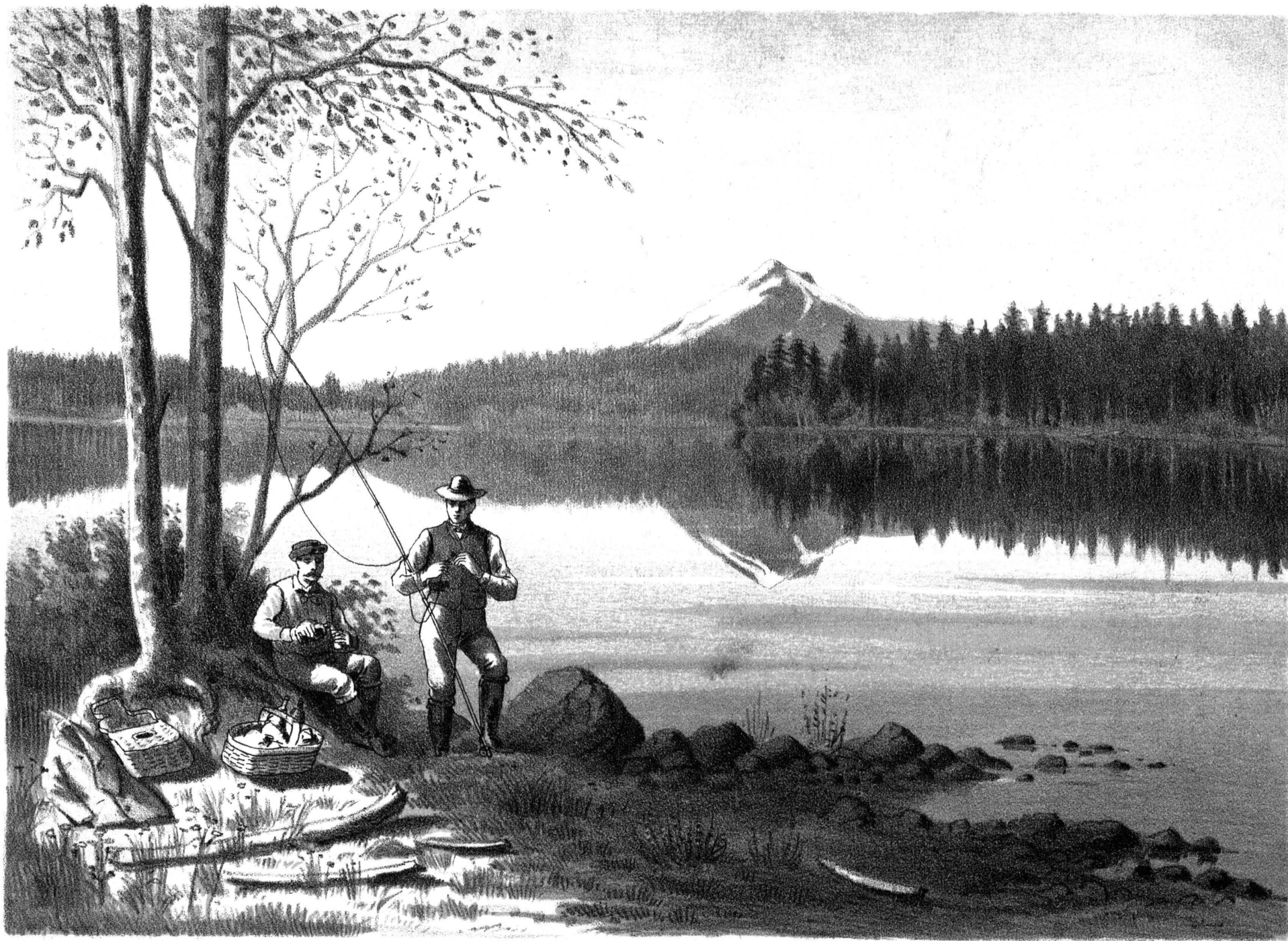
Next morning, just after breakfast, I heard a rap at my door. I opened it, and found myself face to face with a woman. She was tall, and even the long black cloak she wore did not hide the grace and symmetry of her figure. A thick veil covered her face. Thinking she had come for advice, I begged her to come into the house.



WASHINGTON.—LOOKING EAST THROUGH SNOQUALMIE PASS.



COLUMBIA RIVER-ONEONTA GORGE.



THE WEST SHORE.

SOUTHERN OREGON.-LAKE OF THE WOODS AND MT. PITT.

I led her to my sitting-room. She raised her vail and looked at me. I knew her in a minute. She was the lovely girl who had shared with Vargas that luxurious eastern paradise—the girl whom he called Myrrha.

She looked pale and weary, but still very beautiful. Her sombre attire could not diminish her charms. My one thought as I gazed at her was, how any man, of his own free will, could tear himself from such a creature. Yet for some unknown reason, Paul Vargas had done so.

It was clear that I was entirely forgotten. No start of recognition showed that my face was anything but that of a stranger. I did not wonder at this; I was very much changed, bronzed and bearded—was, in fact, as rough-looking a customer as many of my own patients.

For a moment she was unable to speak. Her eyes looked at mine as though they would anticipate what I had to tell her. Her lips trembled, but no words came from them.

At last she spoke—

“There is a gentleman here—dying.”

“Yes, Mr. Vargas is here,” I replied.

“Am I in time—is he still alive?”

“He is very, very ill, but still alive.”

A wretch reprieved on the scaffold could not have displayed more delight than did Myrrha when she heard my words. A look of indescribable joy flashed into her face. She clasped her hands in passionate thankfulness and tears of rapture filled her eyes. Poor girl, she had little enough to rejoice at. She was in time—for what? To see her lover die. That was all.

“Take me to him at once,” she said, moving toward the door.

I suggested a little rest and refreshment first. She declined both, peremptorily.

“Not a moment must be wasted. I have traveled night and day since I received his letter. Quick! take me to him, or it may be too late.”

I asked her to follow me. She threw off her long cloak, and I saw her dress beneath it was plain black; no ribbon, jewel or ornament broke its sable lines. With a look of ineffable joy on her face she followed me to Vargas’ room.

“Let me go first and prepare him,” I said.

“No. Let me pass,” she replied, sternly.

She laid her hand on the door, opened it, and preceded me into the room.

Paul Vargas’s eyes were turned—as, indeed, they had for the last few days been turned—toward the door, yet the look which leaped into them was not one of joy and welcome. It was a look of woe—of supreme agony. A convulsive shudder ran across his face, and I expected his next breath would be his last.

Why should the advent of this beautiful visitor so affect him? Had he treated this woman so evilly that he dreaded lest she came to his death-bed to heap reproaches on his head? Yet he himself had summoned her from afar—by the letter which he had willed me to write.

Injured or not, Myrrha came to console, not reproach. My doubts on this point were at once set at rest. With a cry of passionate grief she threw herself on her knees beside the bed, clasped the poor wasted hand in hers, and covered it with kisses. In a strange tongue, one unknown to me, she spoke words which I knew were words of fervent love. The musical voice, the thrilling accent, the gestures she used, were interpreters sufficient to make me understand that she was rejoicing that death had spared her lover long enough for her to see him once more.

A soft look, a look that echoed her own, came over the sufferer’s face—a look of infinite tenderness and deathless love. But it was transient. His eyes grew stern. I fancied they tried to drive her away. Then as she heeded not his commands, they besought and appealed to her. In vain—the strange girl laughed joyfully as a bride who welcomes her bridegroom. She kissed him again and again. Then with a weary sigh he closed his eyes—never, I thought to reopen them. I went to his side.

He was not dead, but he bore infallible signs of approaching dissolution. Practically, it was of little moment whether he died now or in an hour’s time. Nothing could save him. Still, the wish one always feels to prolong the faintest flicker of life prompted me to speak to Myrrha.

“The excitement will kill him,” I whispered.

She sprang to her feet as if stung. She threw at me a glance so full of horror that I started. Then bending over Vargas she satisfied herself that he still breathed.

“Go,” she whispered fiercely, “leave me alone with my love. Take that woman with you.”

I hesitated. I wanted to see the end, but I could not dispute the sacred claims of love and grief, nor help sympathizing with the girl in her desire to be alone with the dying man. My duties were ended. I had done all I could, but death, in his present mysterious garb, had conquered me. The man must die. How could he die better than in the arms of the woman he loved?

I motioned to the nurse to leave the room. I followed her through the door, then turned to take my last look at Paul Vargas.

He was lying apparently unconscious. Myrrha had thrown herself on the bed by his side. His poor, pale face was drawn close to her full, red lips. Her bosom beat against his. Her arms were wreathed around him, holding him to her. The contrast between life and death—between the rich, strong, glowing life of the young girl, and that of the man now ebbing away to the last few sands was startling. I closed the door reverently. My eyes filled with tears, and I sighed for the sorrow which was about to fall on the devoted, passionate creature. How would she bear it! Then I went about my duties, knowing that when I returned home I would have a patient less.

I rode a few miles into the country to see a miner who had met with an accident which would most likely

prove fatal. Just as I reached his cabin my horse fell suddenly lame. I led him the rest of the way, and having done all I could for the injured man, started to return home. There was nothing for it but to leave my horse to be fetched the next day, and walk back to New Durham.

I strode on as briskly as the nature of the track would allow. As I trudged along I thought of Myrrha and Paul Vargas, and wondered if by any chance I should find him alive on my return. I was so preoccupied with these thoughts that not until I was close to him did I notice a man lying at the side of the track.

At first I thought it was one of the common sights of the neighborhood, a man dead drunk; but as I stood over him I found, for a wonder, it was not so. The man's back was toward me; his face was buried in the herbage, but I could hear him sobbing as if his heart was about to break. As he lay there he threw his arms out with wild gestures of despair—he dug his fingers into the ground and tore at it as one racked by unbearable torture. He was evidently a prey to some fearful bodily or mental distress. Whichever it might be I could not pass without proffering my assistance.

His agitation was so great that he had no idea of my proximity. I spoke, but my words fell unheeded. Sob after sob burst from him.

I stooped and placed my hand on his arm. "My poor fellow, what is the matter?" I said.

At my touch he sprang to his feet. Good heaven! Shall I ever forget that moment? Before me stood Paul Vargas, well and strong as when we parted some years ago at Constantinople.

What saved me from fainting I can not tell. The man stood there before me—the very man I had left an hour or two ago at his last gasp. He stood there and cast a shadow. He did not fade away or disappear as a vision or hallucination should do. There was life and strength in every limb. His face was pale, but it was with the pallor of grief; for even now the tears were running from his eyes, and he was wringing his hands in agony.

Speak? I could not have fashioned a word. My tongue clave to my palate. My lips were parched and dry. All I could do was stare at him, with chattering teeth, bristling hair and ice-cold blood.

He came to my side. He grasped my arm. He was still flesh and blood. Even in that supreme moment his strong, convulsive clutch told me that. He spoke. His voice was as the voice of a living man, yet as the voice of one from whom all joy of life has departed.

"Go home," he said. "Go home, and learn how the strongest may tremble at death—at what cost he will buy life—how the selfish desire to live can conquer love. You asked me once if I could prolong life. You are answered. You brought her to me—you yielded then but not the second time, when I would have undone the deed. Go home, before I kill you."

Something in his whole bearing struck me with deadly terror—a natural, human terror. I turned and

fled for my life, until my limbs refused to bear me further. Then I sank on the ground, and, I believe, lost consciousness.

When I recovered I made the best of my way home, telling myself as I went along that overwork and want of sleep were acting on me. I had dreamed an absurd, horrible dream. Nevertheless I trembled in every limb as I opened the door of the room in which I had left Paul Vargas, dying in the arms of the woman who loved him.

Death had been there during my absence. I knew the meaning of that long, shapeless form stretched out on the bed, covered by the white sheet. Yet I trembled more and more. The words I had heard in my supposed dream came to me clear and distinct. It was some time before I could summon courage enough to move the covering from the dead face. I did so at last, and I believe shrieked aloud.

Lying there in her black funereal dress, her fair hands crossed on her breast, her waxen face still bearing a smile, lay the girl whom I only knew by the name of Myrrha—dead.

HUGH CONWAY.

IT almost staggers belief to think of the improvements which have been made in labor-saving machinery. The number of inventions that have been made during the past fifty years is unprecedented in the history of the world. Inventions of benefit to the human race have been made in all ages since man was created, but looking back for half a hundred years, how many more are crowded into the past fifty than into any other fifty since recorded in history.

PAPER is about to monopolize another branch of industry, which is no less a one than the making of gentlemen's headgear. By a new process of manipulation, hats more serviceable and finer than anything now on the market are made of wood pulp. They are impervious to water and not wanting in flexibility. It is believed that felt hats will have to take a back seat as soon as these new hats can be placed on the market in sufficient numbers to supply the demand. They are certain to revolutionize the hatter's trade, as they can be molded into any shape or style desired and colored to meet the taste of the public. They can be made to represent a glossy or nappy appearance.

THE Boston *Herald* recently published an interesting account of the views of prominent New York business men as to the present condition and prospects of trade. They all agree in the opinion that, notwithstanding the temporary interruptions caused by the labor strikes, we are on the eve of a great business revival, and that the settlement of these difficulties will be followed by a period of prosperity similar to that which the country enjoyed from 1879 to 1881. Each of the parties interviewed bases his judgment on facts within his own knowledge, so that the concurrent testimony is of the highest value. There is not a croaker in the list.

THE LOST CABIN.

EVERY mining district in the West, from British Columbia to Mexico and from Colorado to the boundless Pacific, has its legend or tradition of some great natural store of golden wealth, the exact location of which no one can tell. Somewhat similar in their main features, they vary widely in details. Their general tenor is to the effect that some party of emigrants, in seeking the western El Dorado, discovered a quartz ledge where the gold was visible in huge masses, but being ignorant of the precious nature of the substance, had left without noting any land marks by which the place could again be found; or if not ignorant of the value of their discovery, they had been driven away by hostile Indians, or compelled to abandon the locality because of a lack of provisions, sickness or fear of the rigors of winter in a mountain region isolated from civilization and any source of food supply. Numerous and varied were the character of these discoveries and the reasons for abandoning them; but the same final conditions apply to them all, that all subsequent efforts to find again the abandoned or neglected treasure have proven fruitless, notwithstanding that in some instances faithful and unremitting search has been pursued for years by a numerous body of credulous and persevering prospectors. Such is Stoddard's famous gold lake, to find which thousands thronged into the Sierra fastnesses about the head-waters of Feather river, such, also, are the emigrant ledge of Death valley, the emigrant diggings of the Modoc country, the blue bucket diggings of Oregon and a score of others of a like nature; but the most wide-spread of all is "the lost cabin," a mythical habitation which tradition has located in nearly every mining state and territory on the Pacific coast. In some cases it was discovered by sailors who had deserted from their ship, and being out of provisions could not remain; in others genuine miners were the lucky men, but were driven away by fear of winter snows; but in all cases they had constructed a cabin in which, upon their departure, they deposited their tools, with the expectation of again finding them when they were able to return; and this is the cabin that is lost, so completely and mysteriously hidden from human sight, that the ceaseless quest of thousands has failed to reveal its presence in California, Oregon, Montana, Wyoming or Arizona. To be sure, the men who actually built the cabin or saw the treasure in its storehouse, can not be found, but the mines are full of men who claim to have been acquainted with a man who once knew the owners of this mysterious domicile, and whose eyes had been dazzled with a sight of the gold brought away by them from the abandoned diggings; and some have even been blessed with a sight of a rough chart of the route to, and location of, the fitting house of logs and brush, drawn by some one, from verbal directions given on his death-bed by one of the semi-mythical prospectors to a friend who had aided him in his distress. About these charts there was always something wanting to make them complete,

generally the exact location of the cabin, which, being the most important, the dying man had naturally reserved for the last, and when *in articulo mortis* had been unable to complete his narrative. Such are the various lost cabins, of which one may hear in whatever mining region he may go. I have upon occasion spent much time and exercised much patience in investigating these traditions of the mines, and in doing so was so fortunate at one time as to run across a lost cabin tale so complete in its details as to render it worthy of relation. I was stopping temporarily in Yreka, that old and famous headquarters for the miners of Northern California, where are to be found numerous enthusiastic men who believe in the existence of this mountain cabin as firmly as they do in the turgid Klamath, with whose fierce waters they have battled for years for possession of the golden grains hidden away in the sands of its bed.

Among the most faithful devotees of the lost cabin is old Alvy Boles, an itinerant blacksmith, who made his headquarters at a certain ranch in Shasta valley, and early in my researches I was advised to interview him. Accordingly I engaged a rig one day and drove over with all the speed possible to coax from two well-seasoned livery nags. I found the object of my search a tall, rawboned Kentuckian, mounted on the apex of a huge stack of hay and delivering his opinion on various subjects with a vehemence and command of invective indicative of a positive character and voluble familiarity with expletives. Upon being made acquainted with my desire to learn all I could about the lost cabin, he slid gracefully down one side of the stack, took a seat on a convenient boulder and motioned me to a prostrate fence post. His tale as unfolded to me at that time was too incoherent, too emphatic in language, too much seasoned with spicy opinions of various parties whose names occurred to him at various points in the theme, to be related as it fell from his lips, so I will be compelled to take the facts, or fancies, he revealed and clothe them in garments of my own weaving. Having done so I present the following as the most authentic, fanciful and complete lost cabin story yet offered to a credulous public :

In the good old days of 1850, before California had yet become a state and while the excitement over the Trinity mines was raging furiously, there stood on the trail from Shasta to Weaverville a large canvas structure, kept as a public house and known far and wide as the "Blue Tent." Here, for the moderate sum of one dollar, the weary traveller could procure a meal of bacon, beans, and coffee, and allay his thirst with villainous whisky at two bits a drink. Another dollar secured for him the privilege of spreading his blankets upon the ground floor and sleeping until it was time to squander a third dollar for breakfast, consisting chiefly of what was left over from supper, and attractively spread upon slabs beneath the stalwart pines. The Blue Tent had its counterpart in every new mining camp, and was no better nor worse than its fellows. It was a favorite rendezvous for miners, who nightly gathered there to

participate in its revelries, try their luck at the gambling tables, and swap lies with any who might have that commodity to barter.

Late in the summer there crossed the mountains a company from Indiana, having waved a tearful adieu to the land of hoop-poles and pumpkins and come to seek their fortunes on the golden slope of the Sierra. Their long journey across the plains being over, and the necessity for union which its perils and privations demanded, no longer existing, the company broke up into small bands and scattered in all directions. Among them were three warm friends whose homes were by the muddy current of the Wabash, and now that they were strangers in a distant land they resolved to unite their fortunes and court the smiles of the fickle goddess together. Two of these, named Cox and Benedict, were men who had long since passed the golden age of youth, while the other, a son of Senator Compton, was still in the vigor of a young and hopeful manhood. Having decided to stick together, the next question that presented itself was one of a definite plan of operations. Should they go into the mines with pick, shovel, pan, and rocker, or should they embark in some business scheme where the profits were more sure, leaving to others the wet drudgery of the mines with its great possibilities and uncertainties? Like the great majority they decided upon the former course and started for the Trinity mines, whose fame was then drawing thousands of new emigrants as well as experienced miners from the older diggings. At that time an "experienced miner" was one who had worked a few weeks and learned the rudiments of placer mining, for more than the rudiments was known by few in those restless, exciting, experimental days. In furtherance of this decision they reached the Blue Tent on their way to Weaverville. Here they learned that the diggings on Trinity were overrun with men unable to find a paying claim, and that gold had been discovered on Klamath, Salmon, and other streams to the north, whither many were going notwithstanding the hostile spirit displayed by the savages of that region. This intelligence worked a change in their plans and led them to determine upon a general prospecting trip to the north, passing into a region about which little was known save that the natives were warlike and aggressive. Paying but little heed to the mournful predictions that they would find but little gold and that their scalps would soon assist in the interior decorations of some brave Indian's wigwam, they laid in a liberal stock of provisions, and with their blankets strapped upon their shoulders and the supplies and utensils upon the back of a diminutive and long-suffering mule, they turned their faces northward and resolutely plunged into the unknown wilderness beyond. Notwithstanding the hardships incident to a journey into a strange country, over high mountains and through deep canyons, during which they lost their mule by a stampede and sustained a compound fracture of the cradle that was to have rocked them into a competency, they finally reached in their wanderings the headwaters

of the north fork of Trinity river. In their numerous prospects many times "color" had been found, but nothing that gave promise of yielding the wealth they had set their minds upon, and so they still journeyed on in search of "pound diggings."

One evening camp was pitched on the side of a small mountain, where a cold spring bubbled up between the spreading roots of a giant pine. It happened to be Compton's turn to attend to the camp duties and prepare the meals; and while the young man was engaged in gathering firewood and making preparations for the evening's repast, his two elder companions started out upon a short tour of exploration. Left alone to his work the cook collected a pile of faggots, made a pot of hot coffee, some water biscuits, and fried a skillet of bacon whose savory smell made him long for the speedy return of his associates. At last hunger overcame his sense of etiquette and he sat down alone to the tempting repast, hoping the others would soon join him. In this he was disappointed; for the supper became cold and darkness settled down upon the mountain without any sign of their presence being given. Compton became uneasy. He began to fear that something unusual had happened. They might have perished at the hands of Indians without any warning of a struggle reaching him, for an arrow is a noiseless missile, and even the report of a rifle could be kept from his ears by intervening hills and the dense forest. On the side of the mountain, some distance above the camp and where the hill was comparatively barren, was an immense ledge of rocks, and the idea of building upon this a beacon fire to guide his friends homeward in case they had lost their way, suggested itself to his mind and was quickly acted upon. It also occurred to him that in case hostile savages were about, the camp fire was calculated to make him altogether too conspicuous. He decided to leave it, and after building his beacon light to retire some distance into the shadow and see whether it attracted friends or foes. It was but the work of a few minutes to pile upon the ledge an immense heap of dry brush; but just as he was about to ignite it he heard the voices of his friends calling to him from the camp below, whither they had just returned and were surprised to find it deserted. Leaving the useless beacon unlit, which stands to-day as a landmark to assure him who is so fortunate as to find it that the "lost cabin" is close by, Compton hastened down the hill, eager to learn why his companions had so long delayed their return. It was a most wonderful story they poured into his astonished ears.

In their ramble they wandered some distance from camp, careful, however, to keep their bearings so that they could return without difficulty, and finally came upon a beaten trail, apparently made by animals, along which they travelled leisurely for some distance. Suddenly, just as they rounded a point of rocks, a huge grizzly bear rose up from the bushes immediately in front of them. His shaggy form looked massive and terrible, while his ferocious growl plainly showed that

something had occurred to sour his temper. They had never seen a grizzly before, but had heard many stories of his great size, strength and ferocity, and knew at once that the animal that now disputed their passage was the great monarch of the mountains himself, and that to run was useless. Without stopping to speak or even to see what the other was going to do, each whipped out his revolver and poured shot after shot into the shaggy breast and open mouth of the brute, and by one or two lucky shots succeeded in dispatching the monster before he had time to realize that these strange animals that walked on their hind legs and spit fire, really intended to fight him. When he fell to the ground they turned and congratulated each other upon their lucky escape, and then cautiously approached their fallen adversary to see what a dead grizzly really looked like. They found him lying in a hole several feet in diameter and partially filled with lava rock. Having satisfied themselves that their late antagonist was dead, they leaped into the hole intent upon securing some bear meat for breakfast; and while carving for their anticipated meal, one of them noticed a peculiar object in the hole and stooped to pick it up. It proved to be a little lump of gold. Bear steaks were forgotten, while the two victorious hunters began pitching out the lava rock with feverish haste. A small space was soon cleared, and the loose dirt at the bottom was found to be literally studded with lumps of gold of various sizes, enough to make them rich and ensure their comfort for the remainder of their days. Gathering darkness warned them to return to camp while yet there was light to guide them, and carefully marking the spot so that it could again be found, they hastened back to their companion, bearing sample nuggets to verify their wonderful tale.

They sat late over the flickering camp fire, laying plans for the future, wondering how much of the precious metal that astonishing hole contained, and seeking in vain for some plausible theory to account for its presence there at all. At last, completely tired out, they fell asleep, while visions of Sinbad's wonderful valley of diamonds and the marvellous riches produced by the genius of Aladdin's lamp, floated before their slumber-wrapped eyes. Camp was moved in the morning to the vicinity of the wonderful hole where the grizzly had been slain, and they made deliberate preparations to reap their golden harvest. Six hundred paces east of where the bear lay they constructed two small cabins, one for themselves and one for their possessions.

They worked a short time and then decided to build a larger and more comfortable house in which to spend the winter months and began cutting logs for that purpose; but as winter approached with its unknown dangers of Indians, scarcity of food and possible burial by snow, they concluded to abandon their discovery and go out of the mountains. Their mining tools and camping outfit were carefully stowed away in one of the cabins, where they still remain to testify to the truth of this story.

They blazed their way on the trees as they went along, and in due time arrived at the Blue Tent, where

they convinced the croakers that their scalps still perched upon their craniums and that there was an abundance of gold to be found in the unknown regions to the north. They made no secret of their success, freely exhibiting their dust and nuggets, and telling every one how they had been secured. From the Blue Tent they proceeded to San Francisco, whence Cox and Benedict sailed for their home on the banks of the Wabash, satisfied with their moderate fortune, while young Compton remained to seek again in the spring the abandoned treasure. During the winter he was stricken with the cholera morbus, and though cared for tenderly by a fellow Mason named Maxwell, died in a few days. Before his death the young man gave explicit directions to his fraternal friend how to reach the auriferous hole in the far mountains of the Trinity.

Early in the spring, party after party started out in search of the deserted cabins, some of them having the directions given Maxwell, but most of them "going it blind," knowing simply, in an indefinite kind of way, that somewhere to the northward there were wonderful diggings, near which would be found an empty cabin. In vain hundreds of men searched through the mountains, the cabins could not be found, and they have remained completely lost to the present day. For a number of years a few hopeful ones made periodical excursions in search of the elusive cabins, but gradually the tale of the wonderful pit of gold, guarded by its huge dragon, the grizzly, was relegated to the catalogue of marvellous legends in which the early history of California is so rich; yet even now can occasionally be found a credulous man who is inclined to believe there is "something in it;" and old Alvy Boles, the only true and faithful devotee, annually studies his faded memorandum, and then visits the headwaters of the Trinity, to search for the grizzly's grave with as much zeal as did the Knights of the Round Table for the Holy Grail.

HARRY L. WELLS.

THE OLDEST NEWSPAPER IN THE WORLD.

The oldest newspaper in the whole wide world is the *King-Pau*, or "Capital Sheet," published in Peking. It first appeared A. D. 911, but came out only at irregular intervals. Since the year 1351, however, it has been published weekly and of uniform size. Now it appears in three editions daily. The first, issued early in the morning, and printed on yellow paper, is called *Hsing-Pau* (business sheet), and contains trade prices and all manner of commercial intelligence. The second edition, which comes out during the forenoon, also printed upon yellow paper, is devoted to official announcements and general news. The third edition appears late in the afternoon, is printed on red paper, and bears the name of *Titani-Pau* (country sheet). It consists of extracts from the earlier editions, and is largely subscribed for in the provinces. The total number of copies printed daily varies between thirteen and fourteen thousand.

AMONG THE VOLCANOES AND GLACIERS.

WHAT would this earth be without the mountains? Their fingers wring the treasures of the snow from the passing clouds and sprinkle the dew-pearls upon the plains. From their glacial plow-shares the fertilizing soil is turned in mighty furrows upon the earth, while from their reservoirs of fire there issues the molten rock from whose disintegration the wasted soil is to be replenished. Ice and fire meet in fierce extremes in this misty borderland of clouds and earth, where the mountains reign alone.

As one looks from the tranquil deeps of the sound or the restless flow of the Columbia upon the shapeless vastness of Rainier or the splintered heights of Hood, he little comprehends what wonders of geology and what revelations of beauty unfold on nearer view. It is to some of these revelations of the past history and present condition of these mountain peaks that we now invite your attention. When we go to the mountains we must be like them, things of nature. We must forget the artificialities of our civilization, we must avoid hotels like a pestilence, we must partake of the wild life of the wilderness. Mounted upon the hurricane deck of a cayuse, with accumulated treasures of mineralogy, botany, and art piled thereupon, we consecrate ourselves to the solitudes and the verities of nature.

First and foremost among the mountains to every Oregonian is Hood. It is the background of the earliest memories of the visible universe to all of us who were born and reared in Oregon. The time when Mt. Hood was "a hole in the ground" has become a classic allusion among all old Oregonians, and sacred to the memory of Old Joe Meek. While used as a synonym of the impossible, this popular humor came, after all, very near the truth. In fact, there was a time when Mt. Hood was a hole in the ground—or, more exactly, when there was a hole where Mt. Hood now is. Like all things material, this snowy pillar of the sky is subject to change, may be measured by time, and so has a regular biography, unwritten yet, save by the rocky pens of its glaciers upon the scoriac sheets below, and unread, save where a wandering student or busy miner has caught a glimpse between the lifted leaves of the mighty book. Though belonging to the Titanic order of earthly things, yet just as the animal or plant, Hood has its period of growth and decay. It is one of the temporary affairs that the unending forces make and mould and destroy. Without being particularly scientific in form we may frame a series of views that will show how things looked before Hood began to be. The picture may be a little dim, but we must expect the mist of years to gather about a subject so remote. A few facts must be a sunbeam to guide our thoughts into the void.

Miners say that in all the canyons north of Hood there are ledges of granite. We are also told that Mt. Defiance, a bold dome southwest of Hood river, is also granite. We ourselves found on the north side of Hood, above the snow line, rocks of granite and porphyry.

Near the mouth of Hood river there is a bank of conglomerate, the pebbles of which are granite or quartzose, while the cement is ferruginous. Now granite is one of the old rocks. It is plutonic and forms old lands long out of water or undisturbed by fire. Such old formations as the Allegheny, Rocky, and the Alps ranges are of granite. The Andes are formed of a rock which is the oldest of the volcanic series, andesite. Andesite is a link between the volcanic and plutonic rocks. The granite of Hood appears to be near andesite. Other parts of the Cascade and Sierra Nevada ranges are of the same formation. The Alpine peaks of Southern California are almost entirely granite. Indeed, long before the igneous activity which covers nearly all the Pacific slope with basalts and lavas, there were ranges of hills and mountains along the present line of the Cascades and Sierra Nevadas. That was the time when all the rivers of California ran west into the sea, bearing down gold from the decaying rocks of the old Sierras. That was before there was any coast range, and only a few islands, girted by a broader Pacific, marked the spot where our present western-most mountains were to rise. Mt. Defiance was then ruling without a peer in granitic majesty in Northern Oregon. East of it was a river which rolled down pebbles of granite and jasper. That valley must have extended to nearly where Mt. Hood now stands. Hills of granite stood close by, which, upheaved, furnished the broken boulders that are now found upon its slopes. But this archaic valley, surrounded by long, carven hills, met with violence and disruption as the igneous period came on. The calm of that ancient age was suddenly broken as the lakes of fire, pressed by the settling of the earth's crust, suddenly burst from their subterranean bounds. A sheet of basalt from five hundred to three thousand feet deep covered the older rocks. Rivers of melted rock, outrunning those of Ætna, or Iceland, or Mexico; pools of fire deeper than those of Mauna Loa or Kea, must have covered all that peaceful ancient valley. Near the close of this period of fiery activity, which was no doubt of long duration, these Titanic forces began to pile up Mt. Hood as a monument for the future. But this mighty pile was not the work of a day. A volcano grows like a tree, putting on layer after layer of its rocky rind, or pressing new matter into its emptied spaces. Volcanic growth seems to be as follows: A crack opens in the ground, consequent upon unequal settling of the upper crust through interior shrinkage. Then steam issues forth through the crack, throwing out fine earth, sand, and fragments of rock. The surrounding strata are tilted up and seamed. Material piles up around the opening, changing it to the form of a circular orifice. By the same pressure which made the crack in the earth's crust, extensive masses of rock are liquefied and squeezed out to the surface. At first it is a white-hot lake of molten rock. Supplied from its subterranean fountains the lake brims and overflows. But as it descends from the crater it cools rapidly; a film gathers on the shining surface, and on the cool ground below a crust is

formed upon which the superincumbent river rolls with constant crackling noises. Along the sides the slag gathers and prevents any great lateral flow, while the interior of the stream thus limited bulges up. The hot middle of the lava river may be dammed up again and again by the accumulations of slag, to overflow also again and again, until at last the major part has lost its fluidity. Then it lies silent, black, cold, a twisted, contorted, cavernous river of dead lava. Drift rocks lie half melted upon the surface. Papilli, scoriae, pumice, ropy coils of red and yellow rock lie piled here and there. The stream of lava, if very extensive and therefore slow to cool, may run nearly level. If on an uninclined plane, without obstruction, it usually declines at an angle of about five degrees from horizontal. Doubtless the first ejection of Mt. Hood formed a burnt mound many miles in diameter, at a slight incline toward the center, but the bulk of Hood was never emitted at once. After a period of inactivity the earth beneath was squeezed again. New rivers of lava overran the old. The roughened surface of the old laminae so retarded the flow of the new lava streams that the mountain gradually became very steep. Streams of lava ran out, now on this side, now on that, not in concentric circles, but in ridge after ridge. The mountain ever grew higher and higher, spreading over the prostrate forms of old ridges that had bowed their necks to make him a throne. The vast body of molten rock, accompanied by steam in its upward bursts threw out piles of the surface granite and tilted the ancient strata into every conceivable position. Mt. Hood thus became a great cone, with long slopes and rounded top, which held within a funnel reaching down to the Tartarean fires. The summit may have been several thousand feet higher than now. It was like the volcanoes of the Sandwich Islands—vast mounds of black rock with a hole bored in the top. We may make a rough approximation of the former incline of Hood in this way. On the north side is a spur known as Photographers' Point. This is about four miles from the top, and is six thousand eight hundred feet high, or about four thousand five hundred feet below the summit of the mountain. This point evidently ran directly from the summit. Hence the former slope of the mountain must have been nearly on a line drawn from the summit to the top of Photographers' Point. Although perhaps not so high as it once was, it is the very perfection of airy lightness and the exemplification of the manner in which the Titans piled Ossa upon Pelion to scale heaven. It is up such steep, hard slopes that our minds are made to climb from the flats of earth to the unlimited expanse of the sky.

And now we are confronted by the interesting question, how was the present crystalline lightness of Hood fashioned from its old igneous vastness? We answer that fire built the mountain. Water carved it. Water is the greatest sculptor on earth. In the form of rain it fashions smooth mounds and swelling meads. In lakes and rivers it forms plains and canyons. As ice it carves the jagged pinnacles of the highest peaks. It was in

this glacial form that this mighty sculptor began its work upon the great crude block of Hood. Hood had now become, we must remember, the imperial peak. Far overtopping the kingly height of the older granite Defiance, it was now fitting that Hood should wear the ermine robes of state. And so he did; snow wrapped the imperial form. On the higher slopes it did not melt; it slid in avalanches from above, "gathering heap till ruin seemed of ancient pile." Snow is merely little flakes of frozen water. It looks white because the particles lie unconformably upon each other, thereby refracting the light so as to mingle the spectral colors. Under pressure the particles of snow assume the crystalline form. The mass then allows the light to pass through with equal refraction and presents the phenomenon of clear blue ice. Thus snow is transformed into ice without having been melted at all. That ice is the material of glaciers. But a great mass of ice set thus upon a mountain side is not stationary; it slides bodily, seizing rocks from beneath, and with these as plow-shares ripping up the underlying strata. As the ice-river moves downward, it cracks and snaps open, closing again and cementing the yawning gaps. The glaciers are the great agents of denudation. Moving slowly but irresistibly against a wall of rock, a glacier cuts away the supports, letting masses from above drop upon its surface. The load of rocks which it thereby gathers it bears along with it as trophies in its downward march, until the summer heat of the lower regions relaxes the icy grasp and strews the wreckage in the canyons far below. The constant trituration in the bed of a glacier between the claws and plow-shares and harrow-teeth held in the icy grip and driven into the underlying strata, wears deeply into the mountain. On the lower levels the constant thawing causes gullies and trenches and well-like holes, extending probably to the bottom. Surface rivulets form the stream running in the gully beneath the glacier, which sweep away the rock-dust as fast as it is ground. The streams are frequently almost as white as milk. Such are some of the general features of glaciers, common to all our great peaks.

But we must not forget that we are standing all this time on the northern side of Mt. Hood, with the basaltic pinnacles rising in majesty above, and the blue ranges northward, bounded by the shining band of the Columbia, while the frequent boom of falling rocks in the canyons, mingling with the sweet tinkle of the dropping water, fills our ears. Twenty-eight miles from Hood river, over sandy plains and through forests, up, up, up, the sweet breath of the mountain balm filling the air, and the polished leaves of the chincopin or the gay columbines and lupines relieving the sombre majesty of the fir and pine forests, and we find ourselves at the foot of Mt. Hood. Having discoursed on our way upon the old sculptors of ice and fire, we are prepared to draw near and examine the details of these æons of nature's work. With the account of the general character of glaciers and their action fresh in our minds, we ascend

Photographer's point on the first evening of our stay, and search the ramparts of rock and ice for revelations of their history and probable future. Hardly more than a glance at the north side of Hood is needed to confirm the theory that it is the glaciers that have transformed it from the regular volcanic cone of the first period of its existence into the broken pinnacles now seen. There are three glaciers on Mt. Hood—the Eliot on the north, White river (so-called, though really on the east fork of Hood river) on the east and the Coe on the northwest. The first-named is the most accessible, being only half a mile from the terminus of the stage road, and the most regular and typical in its development. It rises in a depression between two monstrous buttresses of rock, which form the great precipice two thousand feet in depth. Down this the accumulated snows of winter are hurled in the avalanches of summer, bearing with them fragments of rock, which, falling upon the lower projections, wear the cliffs steeper and the gulfs deeper. By its fall the snow is crushed and hardened. It slides over irregularities by which it is broken into cubes, wedges, prisms—nearly every geometrical figure. Jammed into a slightly inclined basin, it is transformed into pure ice. On the southeast of this basin is a long ridge terminating in Cooper's spur. The movement of the ice in the basin is northeast, until meeting a low ridge it is deflected northward, cracked into numberless fissures, through a narrow pass. Here the ice is again compacted and moves with little fracture to its terminus. The upper levels are worn in many places into circular holes as regular as wells. Streams of water falling into them carve their sides into all manner of fantastic designs. The lower portion of this glacier is entirely covered with debris, hence, the first view is disappointing. Instead of the crystal pinnacles which imagination has formed, we see a dark wall, looking like rock, except that it shines here and there at points where the thawing is so rapid as to wash away the sand coating. It is said that some years ago the Eliot glacier ended in a perpendicular wall of clear ice. It wastes away at the rate of twenty feet a year, and has become less steep with the wearing process. From beneath rushes a noisy torrent, thick with pulverized rock. This is the main fork of Hood river.

Over the ridge, coming down from Cooper's spur, nearly on the east side of the mountain, is the White river glacier. This is larger than the Eliot glacier, but not so long and regular in form. It has scooped out more of the mountain, since it fronts the morning sun, and consequently melts faster and moves more rapidly. The canyon of the White river glacier is a prodigious one, and the water falls which descend into it from the wildly-tossed and broken juts of the glacier, and the gaunt desolation all around it, have a rude grandeur altogether beyond the more symmetrical beauty of Eliot glacier. The western moraine of the Eliot glacier is bounded by a shaggy bluff, surmounting which we encounter a vast snow field. Wading, ankle deep, through the soft mass for half a mile, we reach another bound-

dary of rock, between which and the ridge called Barrett's spur, lies the Coe glacier. This is the smallest, but most beautiful of all. From the precipitous walls of Barrett's spur, rocks constantly descend with thunderous sound. Recently a cliff at the head of this glacier split asunder and fell into the abyss with a crash that shook the country for twenty miles around. The cracks and seams of the Coe glacier, the rainbow tints about the edges darkening into the indigo of the lower deeps, are of marvelous beauty.

Although the aqueous activities are now the main ones operating on Hood, the igneous are not yet extinct—it still smokes. There is still a true crater on the south side near the summit. It consists of several deep, well-like cavities, from which a suffocating smoke issues at frequent intervals. A volcano is like the fabled Prometheus—the vulture of the air may gnaw away his substance, but from the forces underneath they may as speedily be renewed. No one knows what resources of new growth may be hidden beneath the snow and rocks of the ancient peak. Though in the present fullness of his might he hurls away the loose fragments of his crumbling exterior, his heart of fire may, at any time, rebuild the waste.

W. D. AND H. S. LYMAN.

SALT MINES OF NEVADA.

The San Francisco *Bulletin*, writing of the salt mines of Nevada, says: If the salt formation of Nevada were in railroad communication, there would be no market in this country for the foreign article. In Lincoln county, on the Rio Virgin, there is a deposit of pure rock salt which is exposed for a length of two miles, a width of half a mile, and is of unknown depth. In places, canyons are cut through it to a depth of sixty feet. It is of ancient formation, being covered in some places by basaltic rock and volcanic tufa. The deposit has been traced on the surface for a distance of nine miles. It is so solid that it must be blasted like rock, and is so pure and transparent that print can be read through a block of it a foot thick. At Sand Springs, Churchill county, there is a deposit of rock salt fourteen feet in depth, free from any particle of foreign substance, which can be quarried at the rate of five tons a day to the man. The great Humboldt salt field is about fifteen miles long by six wide. When the summer heats have evaporated the surface water, salt to the depth of several inches can be scraped up, and underneath is a stratum of pure rock salt of unknown depth. Soda, borax and other valuable minerals also exist in large quantities near these localities, and branch railroads will sooner or later bring them into market. A considerable business in gathering borax is already established on the line of the Carson & Colorado railroad. If Nevada will cut down her working expenses and develop her natural resources, she will be above the necessity of seeking land grants from her neighbors or from the general government.



THE WEST SHORE.

OREGON.-ELLIOTT GLACIER OF MT. HOOD.



OREGON.-OFF TILLAMOOK LIGHT.

OFF TILLAMOOK LIGHT.

TWENTY MILES south of the entrance to the Columbia river is Tillamook head, a bold headland of rocks reaching far out into the sea, and forming, with Cape Disappointment, or Hancock, the enclosing arms of the bay in which the early navigators vainly sought for years the mouth of the Great River of the West. Naturally these two capes were important land marks to the pioneer navigators, and are prominent on the somewhat crude and inaccurate charts prepared by them. Marking, as they do, the entrance to the Columbia, the one on its immediate shores and the other the nearest headland south of it, they were selected by the lighthouse engineers as suitable locations for lights to guide mariners along the coast and direct them to the entrance of the river. That on Cape Hancock was easily established and maintained, owing to its great accessibility through Baker's bay, and was in operation a number of years before the other was constructed. Congress having made an appropriation of \$125,000.00 for a light at Tillamook, Major Gillespie made an examination of it in 1879. He found that the head was inaccessible from the sea, and could not be reached by land for purposes of constructing a light without building a road for twenty miles through a rough and unknown region of rocks and dense forest; also that its altitude was too great for an effective light. He therefore decided to utilize Tillamook rock, a bold basaltic mass rising abruptly from the sea one mile off the heads. Two explorations revealed the fact that the construction of a light house would be a work of great difficulty. The rock rises abruptly from the water on the western side for a distance of fifteen feet, and then slopes gently backward, forming a narrow, irregular bench, extending along the north, west and part of the south sides. Springing from this bench and inclining toward the sea, it rises on the west to the height of one hundred and twenty feet, with a rounded knob on top. This is the side it presents to travelers passing it on steamers plying between Portland and San Francisco. On the east, the side from which it is viewed in the engraving on the opposite page, it is very steep for the first thirty feet downward from the crest, and then slopes off gradually to the sea. The north side is nearly vertical. On the south side a deep fissure divides the rock into two parts. The fissure terminates against a rocky wall which rises abruptly before it to the height of thirty feet, the top being the bottom of the gap as shown in the engraving. Even in a calm sea the swell beats the water into foam about the rock, while in times of storm the billows dash against it with great violence. The water rushes madly into the fissure, and throws a sheet of spray clear to the top of the rock, often leaping in masses over the top of the wall and sweeping down the opposite side. The shore line eastward from the rock is marked by three distinct headlands, rising fifteen hundred feet above the line of white-tipped breakers, and crowned with a dense mass of firs. At their base are great piles of rock, about

which the waves beat with great violence. These rocks, and the larger one on which the light is kept, once swarmed with sea lions, but since civilization has encroached upon their retreat they have sought other habitations.

The work of construction was a long and difficult one. The steamer *Corwin* was, in October, 1879, taken as close to the rock as possible, and then with great difficulty two men landed with a cable, which they made fast to a rock, the other end being secured to the mast of the vessel. A block and traveler were attached to this, and men and materials were landed in this way. It was impossible to keep the cable taut, as the swell kept the vessel constantly in motion, and the passengers received an occasional ducking while in transit. A working party remained all winter preparing the surface of the rock for occupation. Early in January the coast was visited by a terrible storm. The waves, after rebounding from the face of the rock and filling the chasm on the south side, were thrown by the wind entirely over the rock at every point, carrying away in their impetuous descent down the eastern slope, the supply house on the lower level, and even endangering the quarters of the men higher up. The storm continued several days, reaching the height of its fury during the night of the ninth, when the men were in their bunks. The men became panic-stricken, and would have rushed for the top of the rock had not the superintendent restrained them. He knew that in the intense darkness they could not cross the slippery rock, and would be blown off by the wind into the maddened sea below. For two weeks the water was so rough that the *Corwin* could not approach with supplies. By the first of May the top had been sufficiently leveled. Two large and four small derricks were then landed with infinite difficulty, and the actual work of construction was begun. The materials used were eight thousand five hundred cubic feet of ashlar stone and ninety-six thousand six hundred brick, all of which were landed from the deck of the vessel by a derrick. The work was completed, and the first light exhibited on the twenty-first of January, 1881. Supplies are still landed by means of a derrick. Few of the thousands of people who annually pass Tillamook rock have any idea of the expense and danger attached to the establishment and maintenance of the light which shines so brightly as a warning to mariners of the proximity of an unhospitable coast, and as a guide to the entrance to the mighty Oregon.

A WHOLESALE department has been added to the Farmers' and Mechanics' store by the enterprising proprietors, Messrs. Prager Bros. The numerous departments which have been opened the past year render this the mammoth establishment of Portland, and consequently of the Northwest.

THE WEST SHORE is preparing for its holiday issue a large engraving of Mt. Hood, executed in eight colors. It will be a handsome picture and worthy a place on the wall of every house which contains an admirer of Oregon's majestic mountain.

WINNIPEG TO PEACE RIVER.

Another railway enterprise of vast interest to this city (Winnipeg) and province is about to be brought prominently before the public. At the last session of parliament Messrs. A. P. Macdonald; Alexander Manning, H. S. Howland, Mr. Bain, of Toronto, and five or six others obtained a charter to construct a railway from Winnipeg to the Peace river country, a distance of one thousand one hundred and forty-four miles. The project is considered a reasonable one; it is undoubtedly feasible and would no doubt prove profitable, as the settlement of the northwestern part of the wheat belt advances. Mr. Macdonald is now in Winnipeg for the purpose of gathering full information regarding the proposed route and arranging for a preliminary survey. A very good, and at the same time accurate, idea of the country which the road would open up is contained in a report made to Mr. Macdonald by a well-known civil engineer, of Toronto, who has been over the route. He writes as follows:

In referring to our conversation yesterday respecting your projected railway from Winnipeg to the Peace river country, I have been looking at several maps with a view of getting detail information regarding the same.

Your line, I think, should occupy nearly the same ground that Mr. Fleming's location for the Canadian Pacific railway did, up to about two hundred and forty-four miles from Winnipeg, where the line passes between the Porcupine Mountains and the Duck Mountains, at a place called Thunder Hill, and I have no doubt the plans and profiles of the same could be readily obtained from the department at Ottawa, or tracings of them from which a good deal of information could be obtained up to that point, as I take it; a resurvey there would not likely depart much from the ground originally chosen unless it could be found possible to avoid some of the low lands in that distance without much increase of distance.

Your line from Thunder Hill in going to Fort La Corne, at the confluence of the north and south Saskatchewan rivers, departs to the north of Mr. Fleming's surveys, and on ground of which there is no reliable information as yet, apart from the general impression that it is fairly favorable ground for a line.

From Fort La Corne, four hundred and two miles, to Lac La Biche, seven hundred and eighteen miles, no large stream crossings will be encountered, as the line will trend between the North Saskatchewan river on the south and the Bow river on the north, flowing into English river at Isle a la Crosse lake, in which distance no serious obstacles can be expected.

Passing on the north side of Lac La Biche and continuing the general course north sixty-five degrees west, the Athabasca river is crossed, and the east end of Lesser Slave lake is reached at a distance of eight hundred and two miles, in which space some rough ground will likely be encountered between the Athabasca river and the latter place, as indicated by Mr. Horetzky, who

passed by there in 1874 on exploration for the Canadian Pacific railway.

Going on the north side of Lesser Slave lake, being the higher ground, and soon after leaving it you gain the valley of Heartbrook, which will lead you to Peace river, and there following the south bank of Peace river, crossing Smoky river, will bring you to Dunvegan, about one thousand and forty miles in an air line from Winnipeg; or by crossing Peace river where Heartbrook falls into it, and following the north bank in ascending the valley, would give the roadbed a southern aspect and better shelter from the winds.

In the whole of this distance you traverse a region laid down on the maps of the department of the interior as possessing a great adaptability for farming purposes in its various branches, and a line built through there would become a great sub-artery to the Canadian Pacific railway, and by the alleged superiority of its lands over those through which the line of the Canadian Pacific railway passes, may subsequently be developed into the better trunk line, with its outlet at Fort Simpson on the Pacific coast.

A striking feature of this contemplated line is that it will make all the large navigable streams in that vast region tributary to it in a greater degree than any other line, viz., the North and South Saskatchewan, the Athabasca and the Peace rivers, all of which are now successfully navigated for hundreds of miles, and its location being on the borders of the forest line, thus ensuring great facilities for material in constructing it, as well as of great economic value for the requirements of settlers and commerce.

The following are approximate distances, taken from the maps of the government surveys, in nearly an air line:

Winnipeg to the Narrows of Lake Manitoba.	112 miles
" " Thunder Hill.....	244 "
" " Fort La Corne.....	401 "
" " Lac La Biche.....	718 "
" " Slave Lake.....	802 "
" " Dunvegan.....	1,040 "

Add for detours in location, to be safe, 10 per

cent..... 104 "

or thus one thousand one hundred and forty-four mile ; from Winnipeg to Dunvegan.—*Winnipeg Manitoban*.

SNOQUALMIE PASS.

One of the best railroad routes across the Cascades, in Washington Territory, is Snoqualmie pass, at the headwaters of the river of that name, almost directly east of Seattle. It was considered by the Northern Pacific when its Cascades branch was located, but was rejected for a somewhat more difficult route further south. The pass will, however, soon be traversed by a railroad, as it has been adopted by the Seattle, Lake Shore & Eastern R. R. Co. for its route to Eastern Washington. A distant view of the pass is given on page two hundred and seventy-three.

NATIVE POPULATION OF ALASKA.

An enumeration of the inhabitants of Alaska was begun, but not completed, in 1880 by Ivan Petroff. He made what may be considered an altogether reliable count of the people of the western sections, including the Aleutian Islands, but only got as far east as Kenia, when he was, as he reports, taken and held prisoner by the natives until it was too late to complete his work. His report shows the population of the western section to have been as follows :

Creoles.....	1,413
Aleutes.....	2,214
Whites.....	145

Total civilized people.....	3,772
Natives.....	20,889
Total.....	24,661

The Creoles and Aleuts are civilized people, not in the full sense of enlightenment, and to a large extent, educated. Their settlements are located mainly upon the Aleutian islands, and many of them live in comfortable frame and log houses with thatched roofs, while all are devout members of the Greek church, which still maintains houses of worship.

The population of southeastern Alaska can only be approximately estimated from the statements of those who are familiar with its settlements, white and native. A careful analysis of the most reliable of these estimates points to a white population about as follows :

Sitka.....	350
Douglas Island.....	300
Killissnoo.....	100
Juneau.....	800
Wrangle.....	250
Other places.....	100

Natives, about.....	1,900
Total.....	7,000
	8,900

The native Alaskans are to some extent, as to numbers, educated in the elementary branches of a common school education. Some are members of the Greek, some of the Catholic churches, and, as a rule, are industrious and provident, living in permanent and substantial houses, and all are self-sustaining. These people, it should be understood, are not Indians. Their appearance, habits, language, complexion and even their anatomy, mark them as a race wholly different and distinct from the Indian tribes inhabiting other portions of the United States. They are far superior, intellectually, if not in physical development, to the Indian of the plains; are industrious, more or less skillful workers in woods and metals, and that they are shrewd, sharp traders, all who have had dealings with them will, I think, be willing to testify. They yield readily to civilizing influences, and can, with much less care than has been bestowed upon native tribes elsewhere, be educated to the standard of good and intelligent citizenship.—Gov. Swineford's report to the Secretary of the Interior.

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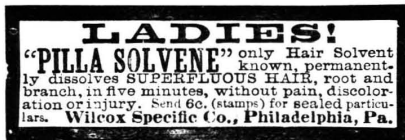
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