The KLONDIKE

Santa Fe Route

SPECIAL EDITION.

THE KLONDIKE

The New Gold Fields of Alaska and The Far North-West.

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"FRONTIER ARMY SKETCHES," "CUBAN SKETCHES,"
"FUR, FEATHERS AND FUZZ," ETC., ETC.

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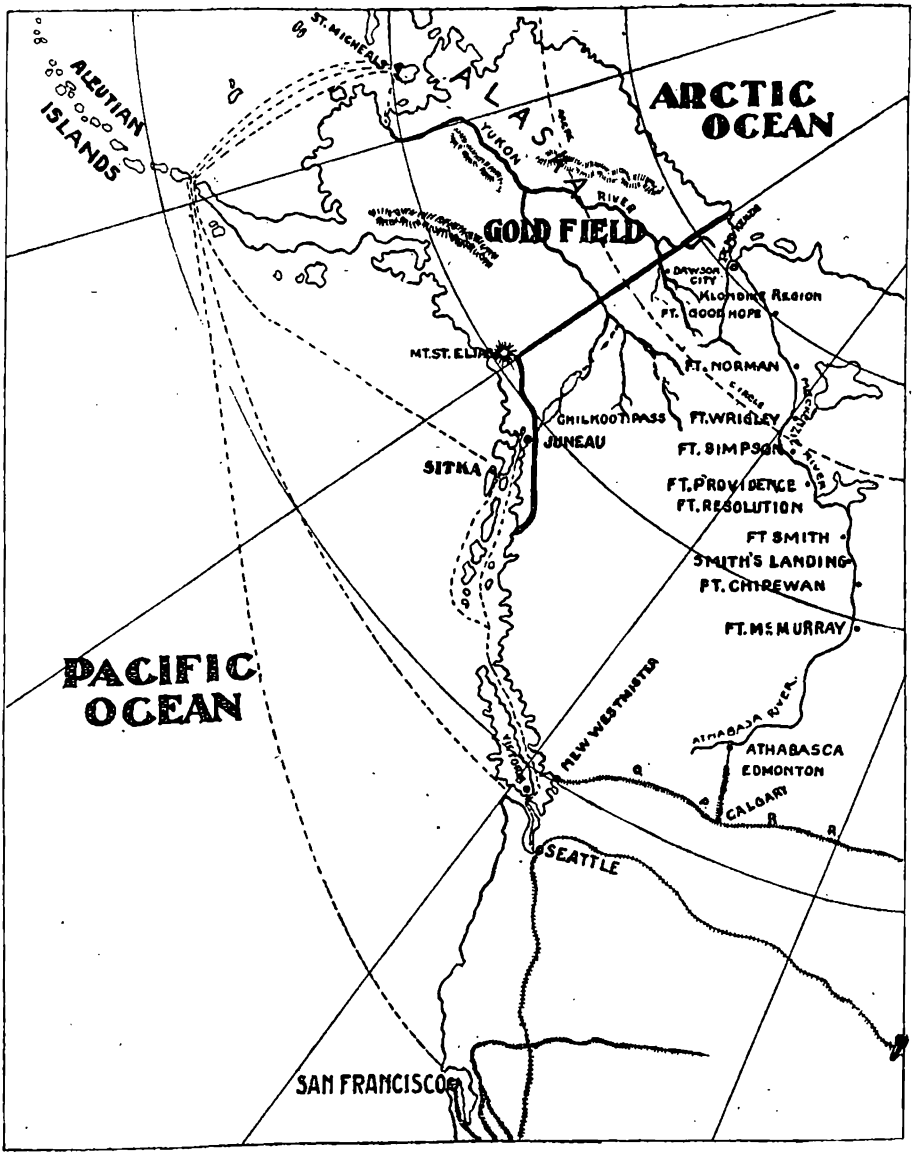
THE KLONDIKE.

CHAPTER I.

THE LATER ARGONAUTS.

NOT until July 14th, 1897, was the news received. There arrived at San Francisco an ocean steamer. She came from the north, and from a region hitherto locked against human interest by a seal of ice. Few had ever gone there, and of that few some were returning now, and under circumstances such as attract public attention when most other attractions fail. They were almost literally laden with gold. And from them a name was heard almost for the first time. The region they had left is called The Klondike.

They were a strange company. No ship since the old Californian days had unloaded so motley a cargo. It was midsummer, but they had left the Klondike at the earliest possible moment. Their belongings were peculiar. What baggage they carried was tied up in old blankets and pieces of canvas with ropes. Hundreds of people who did not know them, and had never heard before of the new land of gold, suddenly attracted, watched them as they came ashore.


ALEUTIAN ISLANDS
ST. MICHAELS
ALASKA
ARCTIC OCEAN
YUKON
RIVER
GOLD FIELD
DAWSON CITY
KLONDIKE REGION
FT. GOOD HOPE
MT. ST. ELIAS
FT. NORMAN
CIRCLE
CHILKOOT PASS
JUNEAU
FT. WRIGLEY
FT. SIMPSON
SITKA
FT. PROVIDENCE
FT. RESOLUTION
FT SMITH
SMITH'S LANDING
FT. CHIPEWAN
FT. Mc MURRAY
PACIFIC OCEAN
NEW WESTMINSTER
ATHABASCA RIVER
ATHABASCA
EDMONTON
CALGARY
SEATTLE
SAN FRANCISCO

For most of them were rich, and had grown rich quickly. In every man's pocket there was a bag of virgin gold. In all this queer make-shift baggage there was more of it. It had been gathered in a wilderness where none but savages, and few of them, had ever lived, and where there will never be a farm, a factory, a college. How much wealth they carried ashore that day will never be precisely known, and already they are scattered and have been individually forgotten.

When they went away they went singly or in small companies, and had nothing, and only vaguely knew themselves whither they were going, or why, or when they would return, or if they ever would. And now in the midst of ordinary life they suddenly step again over a gang-plank into the world, changed and fortunate men, bearing with them in its most attractive form that for which men have always been willing to do or dare or suffer almost any extreme — gold.

The almost universal question rose: Where did these men come from? Where, and how far and what is this Klondike? In what form did they find this yellow treasure they brought with them? Can not others do as they did?

The interest is natural. Not since the days of 1849, and not even then, has any event occurred quite as dramatic as the arrival of this northern steamer, and to all of the present generation the old tales have seemed half unreal and never to be repeated. The event was entirely unimportant except as to its interest for others, and the hopes it induced that a new

era might dawn in the personal fortunes of thousands who might go as these did and finally return with the same yellow wealth. So The Klondike as a name, and an immense region lying around it that is as yet un-

THE NORTHERN STEAMER.

explored, is interesting thousands of people. The event is even likely to change in time the commercial aspects of this country and the world. A vast region, now as unknown as central Africa, and with climatic

conditions that but for gold would have forever barred it from civilization, is now destined to come forward and be formed into some semblance of order and occupancy; perhaps at last to be made into the strangest commonwealth known to the history of the Saxon race.

Young men, and even those in middle life, are now thinking of the long voyage, of the chances reserved for them by fate, of how to get there, and of the distant and uncertain day when they may return, not as they are, but as those later argonauts were who landed in San Francisco and in a manner startled the world.

It is natural with a race that hitherto has stopped at no obstacle. The situation is peculiar. The region is in all details practically unknown. The climate is the most severe that was ever attempted to be conquered for purposes of even temporary residence by men of the temperate zones. The distances are very great by sea or land, and the obstacles and difficulties to be passed are greater than even those which existed when the paths between the Missouri and California were new-trodden and dimly known.

To answer some of these questions; to give an outline of the situation so far as it is now known, or can be known until new and even more startling facts shall reach the world, and until new routes are made and men grow accustomed to the situation and have learned to avoid a larger number of its difficulties, is the purpose of this little volume.

CHAPTER II.

THE LAND AND THE JOURNEY.

Since 1867 a huge territory called Alaska has more or less interested all Americans. Previous to that year it interested them very little, for it was known as Russian America in the geographies—a country of which Russia herself knew little, and with which she did little. She disposed of it at the earliest opportunity to the United States for the sum of about seven millions of dollars. William H. Seward, the war Secretary of State, was then in office. The contract was ratified and no particular criticism of this remarkable purchase was ever made, and Alaska has long since paid back far more than her cost, which was not more than a few cents an acre for all her vast territory.* Yet we did not need her, and the transaction remains one of the secrets of American diplomacy. Probably a friendly negotiation with the huge European oligarchy who has, strangely enough, always been our friend, was the only secret.

One singular thing was accomplished that is not often mentioned. The saying that "on her dominion the sun never sets" is not true of England alone. When the rays fall at sunset on Oumnak, the far-western islet of the long Aleutian chain, they at the

* Above $30,000,000 of gold had been taken out of Alaska previous to the Klondike find.

same moment light with the rising dawn that point of Maine which juts into the Bay of Fundy, and in his course the sun lights for us one continuous country, lacking only that narrow strip of territory which lies on the west coast of British Columbia where Canada runs to the sea.

Alaska was almost unknown at the time of its purchase, and is but little better known now. Any new feature or product necessarily is a new discovery. In articles in the latest encyclopædias one will not find gold mentioned as one of the products. It is the home of wandering tribes, Indians and Esquimaux, and in all the vast interior and northern part there are supposed to be only about fifteen thousand even of these savages. They are said also to be dying off, though there were two years ago not twice that number of white people to take what they might leave in the way of territory.

It is to our ideas, and notwithstanding the immense territory to whose contrasts we have been long accustomed, a strange country. Its coast-line is nearly eight thousand miles long—larger than the entire Atlantic coast of the United States. From north to south the extreme length of the territory is eleven hundred miles. From east to west it is eight hundred miles. Its area is 514,700 square miles. A glance at the map shows a queerly shaped territory. An arm of it runs southward in a long "panhandle" about six hundred miles long and of an average width of fifty miles. This was the form of the Russian

possession before we acquired it, and an equally narrow strip off of the west coast of British Columbia, extending southward, would give us continuous territory up to, and including, all Alaska. It is the solitary instance of our possessions not touching each other throughout their extent.

And in certain respects the climate is strange. It is far north, and is expected to be, and is, extremely cold. Its southern boundary is the sixtieth degree of north latitude, and the arctic circle passes through its northern half. Yet the climate of the southwestern part is fairly warm, and it is the rainiest country in the world. This is owing to the warm current of the Pacific, sometimes called the Kiro-Siwo, or Japanese current. There is much rain, a short summer and little heat. The cereal crops will grow, but they will not mature. Alaska will never be a farming country.*

But it has certain other natural resources. Forests, fish and furs are, and probably will always be, abundant. In the streams the salmon in the season almost fill the current and climb over each other. Fur-bearing animals abound. There are regions where the bears are so numerous that the Indians and whites alike find it more agreeable to let them have almost exclusive possession. In these parts salmon is the chief subsistence of the bears as well as of the people, the latter catching a year's supply while the fish run, and the bears finding a scanty subsistence the rest of the time, eked out by a long sleep in

* This has been always said, and until recently always believed. It is now disputed. See remarks of Prof. Jackson, in Supplement.

winter. On the coast there is cod-fishing as good as it is on the Newfoundland banks. Not far off the coast are the Prybilof seal islands, which, with others, have been the cause of much contention between our government and that of Great Britain.

Just where Alaska begins to jut out from the main continent, and form a huge square indented cape stretching westward until it almost touches Asia, and at about the 140th meridian of west longitude, is the Canadian boundary-line. The Yukon, the great northwestern river, a mile wide six hundred miles from the coast, rises in this British territory, its two branches, Pelly river and the Porcupine, joining each other in eastern Alaska and running westward through the country as the Yukon a distance of about 2,800 miles to the western coast.

Circle City, Alaska, appears now on all maps, and is convenient as a reference. It is an American settlement near the boundary line. It is at least fifteen hundred miles from the river's mouth. Beyond it still, some three hundred miles up the stream and across the line, the little river called the Reindeer runs into the Yukon, or Pelly, as an affluent, and this is now the place so much heard of called Klondike, or "The Klondike," where the alleged richest placer gold fields in the world lie.

Since this name and place are now attracting an attention almost universal, let us try to form some idea of distances. It is the longest and hardest road ever traveled for gold. The usual route is from San

Francisco to Seattle first, if one starts from the former place. Then nearly west from Seattle to the opening in the Aleutians at Ounimak. Thence northeast to St. Michaels. All this is a journey of at least five thousand miles. Up the river to the "diggings" is another seventeen hundred miles in round numbers; six thousand five hundred miles of travel at least from San Francisco.

It is useless to describe here the means of transportation. A few steamers that were until recently engaged in the northern business will now be increased in number to meet the demand. The navigation of the Yukon is closed by the end of September. Seattle will be crowded all winter with people who have started too late, but who wish to go by the earliest steamer of the spring of '98. The northern business has been until the extraordinary late demand arose, in the hands of a few men; the North American Transportation and Trading Company being most extensively in the business. Besides the boats used in the traffic it owns the stores along the Yukon river. Its principal business is the sale of supplies to the people it has carried thither, and it has had practically a monopoly. The charge has been $165.00 for the passage, with 150 pounds of baggage from Seattle to the upper waters of the Yukon. They feed the passenger on the way, but have not allowed him to carry any supplies for his own use. These supplies must be obtained from the company's agents. They can either be bought as wanted or contracted for beforehand. When bought as wanted it is manifest that prices may

be higher or lower according to demands and scarcity, and there may not be enough to go round at all. For four hundred dollars cash in advance this company has been in the habit of guaranteeing a year's subsistence. For the winter of 1897-98, though efforts have been made to get an immense supply of necessaries up the Yukon, there are those who think there is not enough, and that enough cannot be provided with all the facilities of transportation now at hand to meet the probable demand at any price.

With the spring of 1898 must come an end to this arrangement, so far at least as any monopoly of the business is concerned. It is natural for prudent men to wish to supply themselves, and find transportation for these supplies. A pressing demand brings competition always. With a certainty of this fact before him one who contemplates going to the Klondike will remember two things; that it is a journey that cannot be made in winter, and late in the summer means winter; that present facilities for the long journey are entirely inadequate, and will be increased and changed with inevitable certainty if the demand continues. Add to this conclusion another fact. If the demand does *not* continue it will be a very fortunate thing that any man who wanted to go did not succeed. It will mean a failure of the gold prospects.

A glance at the map will show the other route to the Klondike. This route is from Seattle north to Sitka along the coast. From Sitka northward it is

through the bays and inlets of that coast to Juneau. From Juneau to the head waters of the sound, where there is a settlement, and near which Chilkoot Pass opens to the southward. All this is on United States territory, but the British boundary line runs across the mouth of the pass, roughly speaking, and the remaining six hundred and seventy-eight miles of the roughest mountain journey conceivable are on British soil. From Seattle to the diggings is about 1,678 miles.

But a few months ago Chilkoot Pass was known, or had been traveled, by a very few men. Wagons are as yet impossible. Travelers must use pack-ponies or dogs and their own backs. The hardiest of northern woodmen and hunters could make such a journey, where the average man must leave his bones.

But the "overland" route is being investigated, and discoveries will follow as they always do. Time was when General Fremont was commissioned to find paths across the mountains that have now long been familiar, and when they began to be used the Panama route to the Pacific was abandoned. So it will be with the land-passage to the frozen north if the inducement remains long enough. Two other passes are now known besides the first-named, one of which is the White Pass. Any of them involve a land journey of six hundred miles. A man can take as much with him as he wishes, but wishes do not govern. Indian guides charge, it is said, a dollar a pound for carrying goods across the mountain streams. Any kind of a carrying outfit requires a large expenditure of money,

IN CHILKOOT PASS.

and this outfit must consist either of dogs or ponies. Strangely enough, the dog-sledge is preferred.

Transportation is so precious that a man who cannot carry a load on his back weighing fifty pounds might better not start, because an emergency may arise at any time that would deprive him of all other means of carrying the absolute necessities of life.

Every new enterprise is marked by innumerable mistakes. All inexperienced miners load themselves with things they afterwards throw away. For such a journey the most primitive necessities of life only can be carried, and for such a country as Alaska all we mean by the word "clothing" in civilized life must be cast aside. Underwear is made of heavy blanket flannel. Coarse, strong trousers, the heaviest and most durable made, must be worn. Foot-wear must be coarse, heavy and strong. The coat should be a pea-jacket. A "slicker," by which is meant a waterproof coat, should be carried. The fur-lined sleeping bag of the artic regions is a necessity. A few tin pans and cups, and a frying-pan and coffee-pot, constitute the cooking vessels. A pick and a long-handled spade are the chief needed tools. To go loaded with fire-arms is foolish, though one rifle to a party, and a good revolver per man, is not superfluous.

When the scene is reached the first essential is a shelter of some kind. In the summer a tent will answer, but there is little summer, and among the first tasks is that of preparing a place for winter. When timber for building a log-house is scarce the only

resource is a "dug-out" excavated in the side of a hill and well drained. It is in any event a struggle for life agains the rigors of an artic winter.

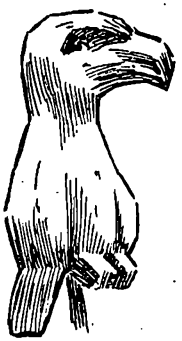
It must be remembered that nothing to eat can be grown there. The brief summer does not bring relief from famine. For all time to come common necessities must be imported. The salmon with which the streams abound in the running season are not good human food for any but Indians. The fur-bearing animals are as a rule not eatable.

Hope, haste and imagination will carry many a man off his feet in this new excitement. It must be remembered that the road is the farthest, longest and hardest ever traveled for gold, and that the country, when reached, is probably hopeless for any other purpose than mining. The climate is appalling when met under any but the most favorable conditions of health, courage and resources.

And a word further as to the particulars of this climate of an unknown country. To go there is equivalent to entering within the arctic circle. Eight months in the year the world there is in the relentless grasp of frost. During the winter of 1896–97 the mercury was at times seventy degrees below zero, and often it falls to ninety. The ground freezes to a depth of fifteen feet or more. Streams are locked fast in an embrace that dynamite could not sunder. Vast fields of snow cover the arctic scene. It is a mountainous land, over which roads in winter are quite impassable. Plenty to eat of oily food, plenty to wear of the thickest kind, and a house into which the bitter, still,

numbing cold cannot enter, are absolute necessities.

Summer, so called, is a season of melting snows, slush, mud, and sometimes there may be a day of intense humid heat. None of these things will deter humanity when gold is the stake, but not to know, or to undervalue the conditions, will be suicide to many an adventurer.



CHAPTER III.

GOLD MINES AND MINING.

Old men remember the times of the California gold excitement. Except in placer mining there is hardly a single process used now that was the best that could be done in mining then, and even in digging and washing free gold out of gravel, "pay-dirt," many of the minor processes have changed.

But in respect to the finding and mining of gold, the vast majority of those who go to the Klondike will at first know almost absolutely nothing. Some of the more prudent and acute will try to find out as much as possible about it before they start. The majority will leave the farm and the shop and trust to luck. Some of these will be successful, as in the old Californian times, and as in those times, a man who has mined for years will go over the ground and find no "sign," though as eager as any one to make a "strike." A tenderfoot who knows nothing at all will come prodding and aimlessly digging over the same ground and "strike it rich." In all placer mining there enters the enticing and unfortunate element of chance.

A word may be said here with regard to the plentifulness of free gold at places nearer home than the Klondike. The excitement is long ago over, and most people's attention has been occupied with the

idea of mining by machinery costing large sums, and the taking of gold in various combinations with other metals from lodes which lie imbedded in ledges of quartz.

But there is still placer mining in the United States. When the careless and impatient California placer miner had worked out his claim and abandoned it, along came the Chinaman, and worked over all his "tailings," and, it has been often said, took out more gold than the original miner did. So in later times, ground that has been repeatedly gone over in the old days is still worked by later miners. Colorado is rich in placer mines. In 1897 the gold product of that state will be about $20,000,000, as against $16,500,000, in 1896. In the low grade diggings there are many millions awaiting the expensive building of flumes and ditches. Immense placers in one locality in northern Colorado are estimated to contain $800,000,000 in free gold, and a ditch forty miles long will open these fields. In southwestern Colorado there is a placer field a hundred miles in length. Clear Creek and Gilpin, almost in sight of Denver, which have been mined ever since the Pike's Peak excitement, are yielding more gold now every year than they ever did then. In California, in almost all the old fields, placer mining still goes on, and new diggings are constantly discovered. A glance at the figures show that the annual output is immense, and constantly increasing. But the excitement is gone. A miner goes steadily about his business in a civilized community. The climate is inviting instead of repellant. With im-

proved processes mining in these regions has become a business, not a speculation, and the charm is gone.

Would it not be well for the reader who wants to go to Klondike to ask himself how much the love of adventure, and the instinct that courts chance and luck, is mixed up with his desires toward that new region?

There are unquestionably many hundreds of persons who are now thinking of the Klondike, and who are exceedingly anxious to try their fortunes there, whose only idea of gold is that it comes out of the ground, that it is dug for, and found, and is the direct representative of all values, got at first hands without waiting, and that in a week or a month one may become immensely rich.

To some of these it may be interesting to know something of the long story of gold mining, of the various forms of that industry, and of the details accompanying the simplest modes of securing the mysterious yellow treasure that has a greater fascination for the human eye than any other form of wealth.

Gold is a metal that has been found almost everywhere over the world, but always in limited quantities. It is, of course, in this limit of product that its value chiefly consists. There is even English gold. There is gold in eastern Siberia, opposite Alaska. It is found in most of the countries in Europe. Gypsies and poor people even now work the sands of the Rhine and the Danube for the small particles of gold found in them. In Austria, in the Tyrol, in

Italy, in Hungary, there are gold mines. Carolina gold was once a well-known product in this country, though now few persons remember that gold was ever mined there.

Every one of these places has in its day been the scene or source of an excitement, a "gold-fever."

All the mines from which was taken the gold of the earlier ages are now, so far as can be known, forgotten. A very little of the yellow metal went as far then as a great deal does now. It was a little square, flat world in the common belief, in which were not included at all the very countries that have produced nearly all the gold of modern times.

Gold is chiefly found in one or the other of two special forms. First, in mineral veins, usually quartz, and in that case generally associated with other metals, such as lead, silver, calcium, bismuth, the pyrytes, etc. Sometimes these admixtures are of great density and hardness. Often the gold found in connection with them is in very minute quantity. Most of the modern processes of mining have their uses in cheaper or more rapid ways of separating these metals, and getting out the gold, the silver, the lead, separately. Metallurgy is the highest branch of chemistry, and chemistry is the highest field of modern applied science. Most of the gold mines of today depend for their value upon scientific processes, constantly in the hands of experts. All the romance is taken away. Immense sums are invested in machinery. Sometimes they pay largely, more often only moderately, and frequently they cease after a

while to pay at all. In the midst of unusual excitement it is worth while to realize that even gold mining always comes down at last to a business basis.

The other form in which gold is found is that which always first attracts the attention of mankind, and causes rushes to certain localities. It is where the dream of sudden wealth seems likely to be realized, and the dull yellow metal can be actually seen and taken up in the hand—found, held, owned.

This is placer mining. *Placer* is a Spanish word, pronounced properly pla-*sair*, and means literally pleasure; that is, plenty of metal easily mined. We obtained the term when we got California, and pronounce it in our own way. The gold thus found is free gold, in "dust," nuggets, scales, filaments, lumps. The gravel in which it lies is called "pay-dirt." It came there by being ground by natural processes out of the quartz or other matrix in which nature placed it, and deposited in a more or less unmixed and natural state amid the washings of the hills and mountains. Therefore placer diggings almost always lie near streams or washes, or where there was once a stream, though it may have been so long ago that all traces of it are obliterated. The nature of the ground is alluvial. It came from somewhere else. It bore with it in its movings these ground-out grains of gold. It is a heavy metal, and as it moved it gradually sank to the bottom of the mass. Often the gold lies at the very bottom of the gravel on the "bed rock," stopping there because it could sink no farther. When it has reached that

resting-place a natural roughness or obstruction of the rock may intervene, and may have caused it to gather more thickly in one place than in another. This constitutes a placer field. When the gathering is in quantity unusual in one place the diggings are very rich, and many persons grow excited, and thousands of people want to go there at once. Free gold may be thinly scatttered over a large area. In this area there are usually rich spots from the causes mentioned. "Prospecting" is a diligent looking for these spots. It is usually all underground. Surface indications show little or nothing except in streams. Hence the element—the fascinating and unfortunate element—of luck and chance.

Placer mining has always been the boon of the poor man. At first, at least, machinery is not required. He takes his find out of the sand by simple and crude home-made processes, and without melting, or refining, or chemicals, the only really yellow metal in all nature is his, and just as he finds it it will buy anything this world has to sell.

All the gold of ancient times; the gold of the vessels of the temple, and of Solomon's treasures, and of the old Roman empire, was got by placer mining. The chemical processes, and the machinery, are all, so far as known, of modern invention. They do what nature did when she made the placers; they grind it out of the rock where it was placed in veins by ancient melting and pressure processes, and reduce and refine and separate it. The miner who strikes it rich in placer diggings has had all this done for him by

nature without cost. This illustrates briefly the two kinds of mining.

Placer mines usually yield gold in the form of fine particles called "dust," but not always. The diggings at Klondike are so far remarkable in chiefly giving up their store in the form of flakes, scales, small pieces called "nuggets." Of the quantity usually yielded by placer diggings in proportion to the total amount of dirt washed, many erroneous ideas are held. In California in the flush times, and in the richest fields known up to that time, the average amount of gold found to every ton of dirt was about forty-five cents worth. In Australia at about the same time the yield was larger — about eighty to ninety cents being got out of an average ton. The stories from the Klondike exceed these modest figures so far, and it will be seen that fifty, a hundred, five hundred dollars to the pan (not the ton) are startling results. The opinion of old miners is that these finds are in reality pockets, limited in extent, unusual, and not to be counted upon as falling within the yield of the usual mining claim. They believe there is gold there, perhaps even in comparatively great plenty, but also that there are many fields in Alaska that will equal those of the Klondike in final general results, and that this general result will in a year or two come within the limits of the previous experience of mankind. If not; if the indications so far apply generally; then that the Almighty has reserved for these later times the richest gold-find of all history, and

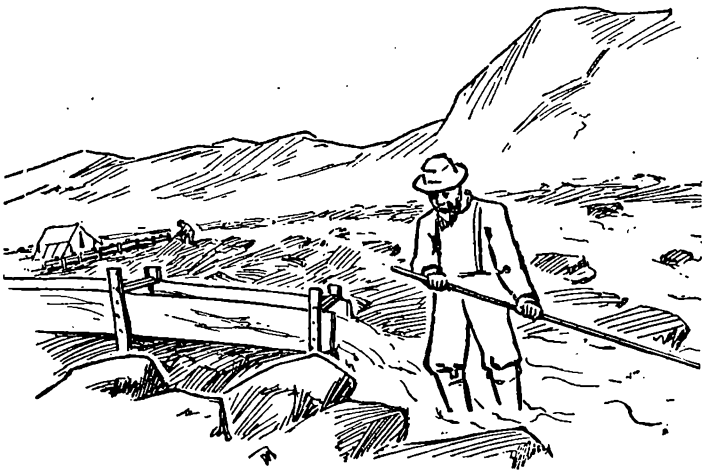
fenced it in with all the terrors and perils of the arctic zone.

In placer mining there are used certain tools and implements, the names of which are long since familiar, but the definite uses of which are not so well understood. The miner's outfit is very simple. It means not so much costly and technical tools as very hard work and patience.

As previously stated, the prime necessities are a pick and a shovel. There is always digging to be done, and after the digging comes the "washing." This operation requires, at least in prospecting and first work, a "pan." This is a circular dish of sheet iron—a common tin wash-basin will answer—about thirteen or fourteen inches in diameter. It is filled about two-thirds full of dirt, and held in the running stream or in a hole filled with water. The miner usually picks out the larger stones by hand, and gives a peculiar motion compounded of a shake and a twist to the pan. He wants to keep the contents suspended in the stream of water, so that the lighter contents will wash out of the pan, while the heavier will sink to the bottom. Among these, black sand, iron ore, etc., will be found the grains of gold. This washing is repeated until a quantity of the heavier stuff is collected, and the gold that is in it is finally recovered by another careful washing in the pan, this last operation being called "panning out."

A "cradle" or "rocker" is a less familiar implement. It is an oblong box with rockers on the bot-

tom like a child's cradle. At one end is a movable hopper with a perforated sheet-iron bottom, and in this the dirt is placed. Water is poured on this, and the machine is rocked to and fro with an upright wooden handle. Below the hopper, and along the bottom of the box, are placed cross pieces of wood called "riffles." Beside these, as the cradle is rocked



THE SLUICE.

and the water carries the dirt slowly along the sloping bottom of the box, the particles of gold collect.

On the same principle, but of more extensive capacity, is the "sluice." This is a longer box with riffles. They are often joined in series, and may extend several hundred feet. A stream of water is introduced into the upper end, the dirt is cast in with a

shovel, the riffles retard the stream so as to allow the heavier particles to settle against them, and finally there is a "clean-up" and a "pan-out."

The long-accustomed wealth of a Vanderbilt or Gould or Rockefeller may cease to charm. It becomes usual. But to have the feeling of growing wealth come suddenly must make a moment in a man's life worth many days of toil. It is this that gives the charm to the placer mining industry. To work for the pan-out, to wait for its results, and at last to find it rich beyond compare; this is the miner's dream. And, as in the results of a lottery-drawing, it is the fortunate man alone who is known, and his success is heralded. Surely in all the mining adventures of the world, the great majority have failed. It will be true also of the Klondike, though of these uncertainties and risks the world will never take warning, and it is a singular fact that the man who has spent his life in a mining country, and knows his own story and the story of a hundred other ragged millionaires, is the last of all to accept the warning of universal experience and oft-repeated failure.

With these facts before them it is not singular that almost all miners believe in the existence, somewhere, of a "Mother Vein," the source of all the gold. But in all the world so far this great repository of untold riches has never been found. There may be many such mother veins; there may be none at all. It may exist in a liquid state in the white-hot bowels of the earth, and from it in times long past may have been injected into the fissures of the cooling quartz all of it

that has ever been found, either ground out and washed down into the placer-fields, or clinging still to its original matrix.

In connection with the Klondike fields they are again discussing the nearness of the mother-vein. It is among the dreams of men that there is even a renewed possibility of its being found. But no quartz veins have thus far been found near the place. The rich find has come from a distance and direction unknown, and whether down the streams from the north, or whether carried thither by glacial action, any theory built upon present known facts would indicate that the mysterious source of riches is, if it exists at all, possibly hidden beneath a garment of eternal ice that all the suns of the present creation will not melt.

CHAPTER IV.

THE ACTUAL CONDITIONS.

Although many millions had been taken out of the purchase of Secretary Seward in the past few years, there was no hint of immense and unexampled mineral wealth in the Alaskan region until late in the summer of 1896. Some weeks after the first find it was rumored locally that a strike had been made at Klondike, or Reindeer river, and Circle City and other camps began instantly to be deserted by their adventurous inhabitants for the new diggings.

The name, variously spelled, but now known to be *Kloon Diuck*, and Indian in its original meaning of "Fish river," or "plenty of fish," has now taken permanent form as it stands. While all the charts speak of Reindeer river, they too were mistaken, for there were never any reindeer there to name it for, and will not be until the experiment of bringing them thither and propagating them as domestic animals fitted to such a region has further advanced. The dog has, however, been adopted as a draught-animal on American soil, and the reindeer will undoubtedly become in that region a common domestic animal within a brief time. To this slight degree at least our ideas have been changed by our Alaskan domain.

Reindeer river is among the best salmon streams running into the Yukon. At every stream during the

season some of the vast throng of fish turn aside, the main body going up the Yukon at the rate of about a hundred miles a day. Nevertheless, it is at its mouth a shallow stream, easily prospected. And it had been visited by miners, but they made no remarkable finds. It is believed that they did not linger to further investigate because discouraged by the number of bears. A find of magnitude would have detained them notwithstanding, but the bears were there for salmon and the men for gold. One party found what they wanted and the other did not, and the intimate companionship of the two species has never been pleasant to either.

But in the summer of 1896 a man named Carmack, now often spoken of as McCormick, was a resident "squaw-man," having allied himself with a woman of the Stick tribe some years before. He was a salmon-catcher, and not a miner; and had been led to place his nets at the mouth of the Reindeer, known to him by its Indian name, as stated, which sounds to American ears as the name is now spelled and accepted.

Visits to the stream had given Carmack the idea of prospecting it for a chance find, and at about the time mentioned he, with some two or three Indian companions, started up the stream. Going up the Reindeer, or Klondike, they came to a considerable tributary coming in on the right. Here conditions seemed favorable for looking for gold, but they followed the smaller fork some twenty-five miles before they went ashore.

The results of this unskillful prospecting by men

who were not accustomed miners; were to that fraternity tenderfeet in fact; would almost have turned the head of a hardened veteran. For at a depth of only three feet Carmack found in the low bars beside the creek gravel that panned a dollar to the pound of dirt. Others have since found dirt near by that panned ten dollars to the pound—the richest find known in mining annals except the cases of the few huge "nuggets" of Australia and the Sacramento valley in California.

Remote as this discovery was, and lone and silent as was the wilderness, it was not long a secret. Then happened the rush, first locally, resulting in the depopulating of Circle City and other camps, and later extending among mining men by word of mouth, finally including nearly every man who had gone north into that region before the discovery, with the general purpose only of seeing what he could find.

At last the world at large was let into the secret by means that have been described. The stories of gold-finds are old. They occur frequently. Men pay little attention to them. It required the docking of of the battered Alaska steamer at San Francisco on July 14th, and the coming ashore of the men who wore upon their weather-beaten faces, and displayed in their clothing and their rude belongings, the fact that they were Argonauts; returned adventurers from a strange land who had come laden with comparatively vast sums.

Then over all the wires passed the news: "They were weatherbeaten and ragged, and looked like

tramps, but they brought with them nearly a million dollars in gold-dust washed from the sands of the most marvelous mining district the world has known. An average of $25,000 each was their record for a few months' exile in the far north."

These were the words that were read by perhaps ten millions of persons before nine o'clock on the following morning. It was a statement of fact, and not an estimate, a rumor or a guess. And almost instantly thousands of those readers knew that they themselves wanted to go to the Klondike. They knew nothing of the details, the climate, the scene, the journey, the cost, the toil, the uncertainty. These facts always come more slowly afterwards. Let us see what some of them are now.

A lady teacher connected with a missionary enterprise writes thus from Circle City, in a letter dated in February, 1897, and printed in a public journal:

. . . ." We have had but three mails in the six months I have spent here, and if this letter does not leave inside of a month there will be no opportunity to send it out until next July. It took our last mail just three months to travel, with dog-team, over the nine hundred miles from Juneau, Alaska—our nearest 'civilized' town—to Circle City."

With reference to the two routes, mentioned in a preceding chapter, this writer says:

"The miners prefer to reach the gold fields here by coming over this trail from Juneau, but I preferred to come all the way from Puget Sound by steamer; up through the North Pacific and Bering Sea to the

mouth of the Yukon river, and then fifteen hundred miles up the river—in all a two months' trip."

She touches upon the personal experiences which seem small at a distance and are large in actual contact, and which show something, a good deal perhaps, of the actual conditions of the country and the journey. She says:

"Steaming up the Yukon is interesting . . . . but whenever the boat stops to take on wood, to trade with the natives, or is laid up on the ever-present sand-bar, it is immediately taken possession of by these little pests (the mosquitoes) . . . . When the passengers see that the boat is about to stop a wild rush is made for the staterooms, and bags made of mosquito-netting or cheese-cloth are quickly drawn down over hat, head and shoulders."

Referring to the strange effects of latitude she says:

"During the shortest days we have but little more than two hours of daylight. . . . . Lamps are lighted in the school-room at half-past one, and I go to school in the morning long before daylight."

She refers to Circle City as "the largest log-house town in the world," to the strange ideas of Indians and half-breeds, and finally states certain facts about climate, thus:

"This is an unusually mild winter (winter of 1896–97) on the upper Yukon. Fifty-four degrees below zero is the coldest yet registered by the standard thermometers, while the average has been twenty-eight below. It is a dry cold, with no wind or

drifting snow until the present month. During the first part of the winter riding after a team of from four to twelve dogs was the principal amusement. But suddenly all our men got the Klondike fever, and dogs became too valuable to be used as play-things. Where a man can take a pan and wash out twenty-five dollars worth of gold-dust in ten minutes, no wonder those who hear of it get the fever. It is a common sight to see a man and a dog harnessed together to a sled loaded with provisions and blankets, and starting out on the two-hundred-and-forty mile tramp through the snow and cold to Klondike. A hundred dollars is a small price to pay for a poor, wolfish-looking dog. Some Indians rent their dogs, getting a dollar a day for each. . . . . Now that the dogs are gone some of us have taken to snow-shoes for exercise. The web snowshoes, and not the Norwegian 'ski' are used here. . . . . "

As has been shown by comparative statements gathered from statistics, the gold-find of the Klondike is of incomparable richness. But the strangeness of the circumstances does not end here. The attractive wealth is found under peculiar mining conditions. The ground freezes to a depth of sixteen to eighteen feet. It is a bleak, barren, mountainous land, the shores of the Yukon from Circle City up being especially rugged. Southwestern and southern Alaska are forest countries; in the Klondike region, above the log-house metropolis, timber is scarce. The gold-bearing gravel does not lie on the surface, and the first thing to do is to sink a well through the

overlying earth down to the gravel. In the earlier finds the wells were sunk only about three feet. But richer finds afterwards made were found at a depth of twelve to eighteen feet.

The brief summer sun never thaws the ground entirely more than a few inches below the surface, and the extreme cold of the quick-coming winter re-freezes only a thin layer. To sink a well, or shaft, a fire is first built on the ground, and kept burning many hours. Then, in the partially softened earth the shaft is sunk. When the gravel, the pay-dirt, is reached, it is taken out and piled in the open air, no attempt being made to wash it; except perhaps the washing of a few panfuls to ascertain if it be worth while to continue the digging; until the thaw of the coming summer shall have furnished water for the sluices or cradles. The washing and panning out must necessarily be done during the brief summer, though where, after the gravel is reached, it can be worked by tunneling laterally from the shaft, it is possible, of course, to work eighteen feet under ground and below the frosts, even in the arctic mid-winter, and continue to take out gravel beneath or in the frozen ground. Still, the hoisting would necessitate work out-of-doors at the surface, and the very little we know of real cold throughout the United States is still sufficient to cause us to believe that a man cannot labor in a temperature of sixty to eighty degrees below zero. It will be safe, at least for the present, to regard the mining season in Alaska as consisting of not more than one hundred days in a

year. If ever it grows longer it will be through artificial appliances in the way of shelter which now seem impossible.

MAN-AND-DOG TEAM.

When, under the most favorable circumstances, the gravel is lifted out, it is in frozen masses unless found at a depth of about eighteen feet or more, and resembles broken concrete. A man who strikes pay-dirt at a distance from the surface less than this has the pleasure of picking and shoveling in frozen earth all the time, winter or summer. Water to use in pans and sluices is, for the same reason, impossible during three-fourths of the year, because it is all frozen. There is only one advantage. The gold found is all called "dust," but little or none of it is really that at the Klondike. It is found in nuggets and flakes that can be often picked out with the fingers to a large extent. Only a few of these, of course, need be found to make the diggings pay, but the dirt is all usually washed. There is no sign of volcanic action, no commingling of the gold with other metals as is usually the case. If the gold is there at all it is unmistakable—dull yellow, visible to a large extent, and almost of refinery purity.

Even the pay-dirt differs from other gold-bearing gravel. It is of an almost inky blackness. It lies there upon the bed-rock, unlike anything that can anywhere be found on the surface. It does not belong there, and came from a distance and place unknown — a place which, if a man should find it, would make him the richest person the world has ever known.

It requires sixty-two Troy ounces of gold of the usual fineness of dust or nuggets to make the value of one thousand dollars. A pan of dirt weighs about

twenty-five pounds. It has been told and believed that this sum has been frequently washed from a single panful. If this is true it means that that there is dirt at Klondike about one-sixth of whose mass by weight is gold. If it is true every reader of these lines should understand that such instances are like those of finding some one of the great nuggets of California and Australian history, at least one of which, in a solid lump, was worth twenty thousand dollars. Those of a bigness making them worth two to five thousand dollars have been found in perhaps two score instances. But the world understands that such finds do not indicate even the general richness of a placer field. In scattered nuggets and lumps and flakes in a panful, the case is different and yet the same.

But many tales have reached civilization that come within the verge of belief without a call upon credulity. So far as the present excitement is concerned they apply to the Klondike fields alone. Stories of from twenty-five to one hundred dollars to the pan are common. Immense sums have already been brought from there without any question—sums at least that are immense when considered in relation to the small number of men who thus far have worked that field during one brief summer. For the interest that now prevails there is full and justifiable cause, though all the facts may mean when sifted simply this; that a new and rich gold field of unknown extent and undefined limits has been discovered; that it is so far as known a placer-field, or poor man's mining ground; that the region in which it lies is new to

FROZEN PAY DIRT.

the mining world in all its conditions, and that it is a field difficult in the extreme.

Yet if you ask a man who knew the difficulties and was a partaker in the hardships of 'Forty-nine, you will find him smilling at all the perils and hardships of Alaska save one—the eternal cold.

The road he traveled in his time to reach the scene of his dreams and hopes was as difficult as this. If every convenience and necessity of human life is wanting now at Klondike, so were they in early California. If youth and strength and courage conquered then, they will conquer now.

The climate of California, and outdoor life and work, saved many a puny life, and gave a lease upon length of days and pleasant memories. The climate of Alaska is equally sure—to kill. The scarcity and price of lumber, the difficulties of transportation, the rude methods of life, the absence of statute law, the forlorn need of woman and home—all these have their remedy in time and the instincts of the Saxon race. That which is offered for consideration by whomsoever wants to go for gold now is something time and energy and race-instincts cannot remedy. Let us be plain. It is something no sane man will risk or undertake save for one great stake — gold. It is in that light that the question should be considered.

CHAPTER V.

PROSPECTS AND CONCLUSIONS.

It is in a sense absurd that the name "Klondike," should be imagined to include all, or even a very considerable part, of the mining territory of an immense country. The visit of Carmack to his future fortune was in a sense a mere accident. Glacial, volcanic, or other geological action does not take place in a limited territory, and it is a conceded fact that the gold-bearing gravel found at Klondike does not belong to the region by original and undisturbed deposit.

Many times since the news of the extraordinary find went to the world it has been mentioned that there were scores of tributaries, large and small, running into the great valley of the Yukon. There exists no reason why some of them, many of them, may not have borne down and spread out and deposited in ages past the same strange black gravel, bearing in greater or less richness, the alluring grains of gold.*

*The theory of a Mother Lode intrudes itself upon all theories. If glaciers wore away the lode by grinding, they may have carried it all downward in their course so that nothing is left of the mother lode. If water alone did it, the process was more gradual, but may be fully as complete. But it is not likely that in either case the action was limited. We must regard the Klondike as an instance merely, and that a repetition of that case is very likely to be found. If it should be repeated elsewhere mankind will be likely to conclude that all the gold discoveries of the past are unimportant by comparison.

The Klondike fields lie without question in the Dominion of Canada. There is no question of the prompt action of that government with respect to revenue. Almost all the miners are Americans. They come, take and carry away—as indeed foreign miners have always done in this country — without paying tax or royalty of any description to a country jealous and exacting in proportion to the physical size of her civilization, and with a large national debt. Measures have already been taken that must result either in disturbance more or less prolonged, or in taxation submitted to and then retaliated against, or in rejection by the miners with displays of hostility in various forms.

There is not intended here any prophesy of political changes or new boundary lines, though it is useless to deny that if the Klondike region during the coming summer continues to yield in anything like the richness so far shown, the chance of decided action in resistance of Canadian revenue measures do not grow small with the prospect.

Rather, attention is meant to be called to the fact that gold mining is most undoubtedly not confined to the Klondike.

All the lodes of the British possessions which lie east of the boundary seem to lead into Alaska. The Pelly and the Lewis or Porcupine rivers make the Yukon, joining in eastern Alaska after rising in British territory, and wherever the tributaries of those streams have been prospected gold in greater or lesser quantities has been found; Forty-Mile creek, Sixty-

Mile creek and Birch creek for instances. The remote headwaters of all these streams are in the same group of mountains, the area of which is perhaps a thousand miles. This group is almost entirely unexplored; its comparatively minute features are not known. It lies largely within the territory of the United States, and is probably all yet to be found rich in gold. The country farther north belongs to the same mountain range. It is entirely likely that the Klondike is only one instance, and it is certain that after late developments there, there is no accessible spot in Alaska that will remain long unknown.

The Yukon valley is one of the most desolate countries on earth. Even the natives avoid it and permanently live in it only in small numbers. The running salmon is its only certain dependence. It will be very fortunate if gold in richness half as great as that of the Klondike can be found elsewhere in a less desolate region. It will in reality pay better, and it is now almost a necessity that if such places exist they shall be found. It must be seen upon reflection that one stream on the upper Yukon cannot contain room for the claims even of those who are already on the way, waiting at Seattle or elsewhere, and destined to swarm over that limited territory at the earliest possible moment during the coming year.

H. C. McIntosh is governor of the British North-West Territory. On a visit to Seattle he is reported to have made for publication the following statement in regard to the gold future of that immense country, including Alaska. He said:

"We are only on the threshold of the greatest discovery ever made. Gold has been piling up in all these innumerable streams for hundreds of years. Much of the territory the foot of man has never trod. It would hardly be possible for one to exaggerate the richness, not only of the Klondike, but of other districts in the Canadian Yukon. At the same time the folly of thousands rushing in there without proper means of subsistence and utter ignorance of geographical conditions of the country should be kept ever in mind.

"There are fully nine thousand miles of these golden waterways in the region of the Yukon. Rivers, creeks and streams of every size and description are all rich in gold. I derived this knowledge from many old Hudson Bay explorers, who assured me that they considered the gold next to inexhaustible.

"In 1894 I made a report to Sir John Thompson, then premier of Canada, who died the same year, strongly urging that a body of Canadian police be established on the river to maintain order. This was done in 1895, and the British outpost of Fort Cudahy was found.

"I have known gold to exist there since 1889, consequent upon a report made to be by W. O'Gilvie, the government explorer. Many streams that will no doubt prove to be as rich as the Klondike have not been explored or prospected. Among these I might mention Dominion creek, Hootalinqua river, Stewart river, Liard river and a score of other streams comparatively unknown."

Some scientific men who have visited and partly explored the country give it as their opinion—and most of them under the present pressure have given their views to the public—that the gold-bearing gravel was carried to its present known place by glacial action, and not by river current. One of these, Dr. Everett, a mining expert, says that the summer of the region is worse than the winter, and that the general effect of the climate upon the average resident of the temperate zone is such that two years is as much as can be endured. There are, however, statements to the contrary. He also says that what miners there now regard as bed-rock, upon which the gold-bearing gravel rests, is a false bed-rock, and that underneath there is still another bed rock, with larger lumps of gold than are found on the first. He says that the country in the interior, back of the Klondike, will furnish enormous quantities of gold, and the finds already made are but a small beginning. The district, Dr. Everett thinks, will prove to be about three hundred miles square—about one thousand square miles.

During these summer months, even at the moment of this writing, search is making for new trails and passes by the overland route from Seattle to Juneau and northward—a route that by latest accounts is in round numbers about one-half the distance as compared with the sea and Yukon journey. An advantage found in it is that a man may carry what he pleases and is able to. The White Pass, at first mentioned merely as a possibility among three, is now

being used by an unknown number of hardy men whose education in mountain climbing has been acquired in the past thirty years in our own west. The distance to the Klondike from the head of the sound overland is about seven hundred miles — much less than that started upon without hesitation thirty-five years ago, from the western edge of the plains to California.

It may be said that so far as the Klondike is concerned work after September fifteenth must be postponed for at least eight months, and that prospecting in the winter is impossible. As has been stated, the Klondike river has been already staked for a distance of about thirty miles, and it is known that by winter at least five thousand additional people will have entered that valley besides those who must wait. No fortune can be made this year, no matter how near it may lie. A man does not go for the purpose of working for somebody else; he wants to work his own claim. He must find one, and it must pay.

Common sense shows that this year's work is over, but another year is coming—a year in which the Klondike may fade into insignificance, and other and wider fields may be the objects of the journey. The public disposition is to be there in time to take advantage of the first developments that must occur unless the present excitement is destined to die out and all who are there, or who go, will be glad to return if they survive.

But there is a feature of all mining history that ought to be remembered, and yet which never is. It has periods. The first is that of excitement and wild haste, of abandoning claims and taking up others, of an entire want of persistence. The idea is that mining is a gamble, and not an industry.

Nevertheless, if there is a mining future for Alaska it must come through persistent work, for that is true of every mining country. The man who finally wins is he who, having found a claim that is good, that it pays to work, sticks to it. Want of occupation is the form that poverty and despair have taken in these United States now these six years. A wild rushing from diggings to diggings in Alaska and the British possessions will not help this persistent situation at home.

It is certain that no power on earth can put a pause upon the tide that is now setting northward. Under the spur of necessity in thousands of cases, conservatism and calm judgment are put aside. Of the thousands who will go, a large proportion will reach the fields, and of those a few—comparatively a very few—will return with shining rewards. Disappointment awaits the many in Alaska as elsewhere. It is a long, and perilous, and costly journey at best. How infinitely better it would be before starting at all to fix in the mind the idea that fair success is better than none at all, and that it is *persistency*, not luck, that finally wins, in mining as in all things else.

The present condition of the mining laws of the Dominion of Canada constitute an item of interest.

Duties have always been collected under those laws wherever the means was at hand for so colllecting. A miner's personal property is subject to this tariff, including his kit of tools.

Early in July the question of excluding foreign miners entirely was debated, but that measure was not taken.

But on July 27th a measure was adopted by the Canadian Council at Ottawa which is now the law. Under this regulation a royalty is levied upon all the products of placer claims in Dominion territory, no matter by whom held or worked. This royalty is ten per centum upon all amounts taken out of any one claim up to five hundred dollars a week. Claims paying any returns less than that sum per week must pay a royalty of twenty per centum.

In addition to this every alternate claim is reserved as the property of the Government, and must not be occupied or worked by individuals.

In these provisions no distinction is made between Canadians and citizens of other countries.

Measures have been taken to strengthen and largely augment the Canadian constabulary at and near the gold fields, and to collect the revenue that may fall due under the law mentioned, and from the imports of new arrivals. A system of overseeing the working of every claim, so as to prevent avoidance or concealment of the values taken out, must necessarily follow.

Every American or other miner not a Canadian should remember that the Dominion has a right to

make these or any other regulations in her own territory.

The idea that there is any disputed territory, or boundary line, north of Mt. St. Elias is a mistake. The undecided line is far south of the Klondike, and refers to a portion of the panhandle of Alaska. Dyea is now said to be in the disputed territory.

The mining laws of the United States are embodied in the following brief of the statutes bearing upon that subject.

The term "placer claim," as defined by the supreme court of the United States, is: "Ground within defined boundaries which contains mineral in its earth, sand or gravel; ground that includes valuable deposits not in place, that is, not fixed in rock, but which are in a loose state, and may in most cases be collected by washing or amalgamation without milling."

The manner of locating placer mining claims differs from that of locating claims upon veins or lodes. In locating a vein or lode claim, the United States statutes provide that no claim shall extend more than 300 feet on each side of the middle of the vein at the surface, and that no claim shall be limited by mining regulations to less than 25 feet on each side of the middle of the vein at the surface. In locating claims called "placers," however, the law provides that no location of such claim upon surveyed lands shall include more than twenty acres for each individual claimant. The supreme court, however, has held

that one individual can hold as many locations as he can purchase and rely upon his possessory title taht ; a separate patent for each location is unnecessary.

Locaters, however, have to show proof of citizenship or intention to become citizens. This may be done in the case of an individual by his own affidavit; in the case of an association incorporated by a number individuals by the affidavit of their authorized agent, made on his own knowledge or upon information and belief ; and in the case of a company organized under the laws of any state or territory, by the filling of a certified copy of the charter or certificate of incorporation.

A patent for any land claimed and located may be obtained in the following manner: "Any person, association or corporation authorized to locate a claim, having claimed and located a piece of land, and who has or have complied with the terms of the law, may file in the proper land office an application for a patent under oath, showing such compliance, together with a plat and field notes of the claim or claims in common made by or under the direction of the United States surveyor general, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat, previous to the application for a patent on such plat ; and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in

such land office; and shall thereupon be entitled to a patent to the land in the manner following: The registrar of said land office upon the filing of such application, plat, field notes, notices and affidavits, shall publish a notice that such application has been made, for a period of sixty days, in a newspaper to be by him designated, as published nearest to such claim; and shall post such notice in his office for the same period. The claimant at the time of filing such application, or at any time thereafter, within sixty days of publication, shall file with the registrar a certificate of the United States surveyor general that $500 worth of labor has been expended or improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by reference to natural objects or permanent monuments as shall identify the claim and furnish an accurate description to be incorporated in the patent. At the expiration of the sixty days of publication, the claimant shall file his affidavit showing that the plat and notice have been posted in a conspicuous place on the claim during such period of publication."

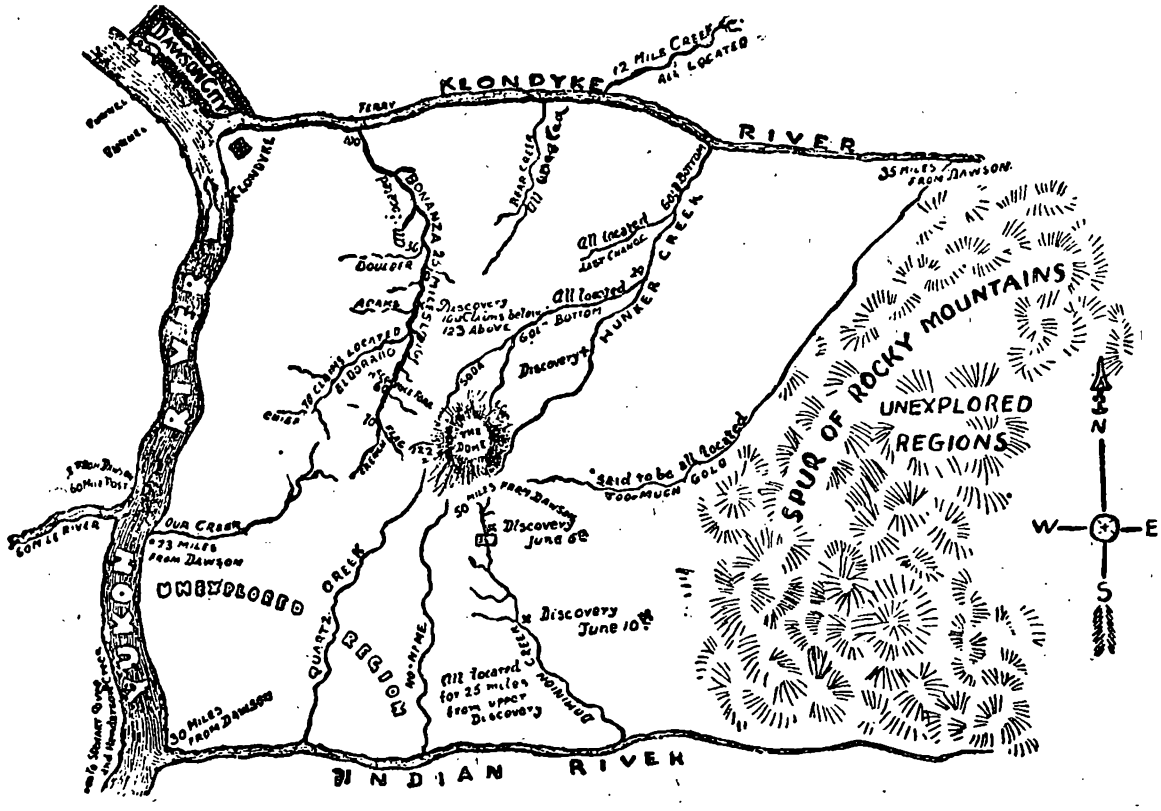
If no adverse claim shall have been filed with the registrar of the land office at the expiration of said sixty days, the claimant is entitled to a patent upon the payment to the proper officer of $5 per acre in the case of a lode claim, and $2.50 per acre for a placer.

The location of a placer claim and keeping possession thereof until a patent shall be issued are subject to local laws and customs.

TOPOGRAPHY OF THE KLONDIKE.—The actual topography of the Klondike diggings may interest many persons. The map below shows this in outline. While the Klondike—named on all charts Reindeer river—is an affluent of the Yukon, the stream itself is not worked, and the gold has so far been found in smaller streams running into it; as the Bonanza, Bear creek, Twelve-Mile creek, etc. The direction of the Yukon as shown is not the general course of that river, but a bend to the southward where the Klondike enters. The map is a mere outline drawn by a miner, serving mainly to show how extensive the locations are on the tributaries of the Klondike, on those of Indian river, and on Hunker creek and elsewhere.

It seems at least to illustrate the fact that it will be necessary, as remarked in a previous chapter, to find new diggings for the largely increased mining population which will appear on the ground in the summer of 1898. It is recommended to all who go to bear this fact in mind, and for reasons also heretofore given, to find locations if possible west of the boundary line and on American soil.

THE QUESTION OF LOCATION.—Bearing upon this question of location is the opinion of General Duffield, Superintendent of the Coast and Geodetic survey,



OUTLINE MAP OF THE KLONDIKE DIGGINGS.

who has spent considerable time in Alaska. He expresses the opinion that a railroad easily can be constructed from Taku Inlet to the Klondike gold fields, and believes that the enterprise will be worth undertaking because of the richness of the mines.

"The gold," said General Duffield, in discussing the question, "has been ground out of the quartz by the pressure of the glaciers, which lie and move along the courses of the streams, exerting a tremendous pressure. This force is present to a more appreciable extent in Alaska than elsewhere, and I believe that as a consequence more placer gold will be found in that region than in any other part of the world."

General Duffield thinks the gold hunters on the American side of the line have made the mistake of prospecting the large streams instead of the small ones. "When gold is precipitated," he said, "it sinks. It does not float far down stream. It is therefore to be looked for along the small creeks and about the head waters of the larger tributaries of the Yukon. There is," he adds, "no reason why as rich finds may not be made on the American side of the line as in the Klondike district."

FOOD RESOURCES OF ALASKA.—Before the gold finds the immense territory of Alaska had attracted attention only to its resources in lumber, fish and furs. Now the question of its inhabitableness in the sense of producing its own supplies has become a prominent one. While it is conceded that the valley of the upper Yukon is one of the most desolate in the world, it is

also known that there are portions of the country where the climate is milder, and valleys here and there whose supplies may hereafter become of immense importance to the mining portion of the community. Few persons are in possession of even such facts about these resources as exist. Some of them are as follows.

Dr. Sheldon Jackon, Commissioner of Education, says:

"The warmest friends of Alaska do not claim that it is rich in agricultural resources, or that it will agriculturally bear comparison with the rich valleys of the Mississippi river; but they do claim that while there are large areas of mountains and unproductive land agriculturally, yet there are valleys and plains where, with suitable care, many of the earlier vegetables, fruits and grains can be raised.

"On Kodiak, on adjacent islands, and on the shores of Cook's Inlet, where there are small Russian Creole settlements, they have for three-quarters of a century supplied themselves with vegetables and potatoes raised in their own gardens. During recent years the government and mission teachers in southeast Alaska have in some instances had good vegetable gardens. In northern Alaska, less than one hundred miles south of the arctic circle, the teachers of the Swedish Evangelical mission at Unalaska in 1891 cleared four acres of ground, on which they raised seventy bushels of potatoes. As that region has a frozen subsoil covered with a heavy coating of moss, the removal of the moss and the cultivation of the

ground will cause the soil to thaw out at a greater depth than it would otherwise. So that years of cultivation will cause the ground to yield much more plentifully than when first cultivated.

"In 1887, on the site of Lake Labugo, on the headwaters of the Yukon, over 2,000 miles from Bering Sea, a missionary, passing along, saw ten heads of volunteer wheat, nearly ripe, on the 22d of August, in a place where some miners had camped the year before and dropped the seed.

"Not only in the mild belt of Southern Alaska, but also in the arctic and subarctic belt of northern Alaska, various wild berries grow and ripen in profusion (cranberries, currants, raspberries, huckleberries, blackberries, strawberries), and there is no question that if the government places Alaska on an equal footing with the other states and territories in the establishment of one or more experimental stations it will be demonstrated that sufficient vegetabies can be raised for the consumption of its people."

Reference was made in a preceding chapter, without entering into details, to the introduction of the reindeer into Alaska, as a domestic animal. The attempt to do this has so far proved very successful, the introduction having been made about three years ago under the auspices of the U. S. government. In this connection there are facts not generally known, which may help to change the aspect of the food supply of the far north very materially. Dr. Jackson says:

"And if there is found a section so far North that

the profitable raising of vegetables and grains becomes impossible, that region can be utilized by the introduction of herds of domestic reindeer.

"Taking Norway and Sweden, where complete statistics are to be had, as a basis of calculation, and applying the same average to Alaska, it is found the country is capable of sustaining 9,200,000 head of reindeer, which will support a population of 287,500 living like the Laps of Lapland.

"The stocking of Alaska with tame reindeer means the opening up of the vast and almost inaccessible central region of northern and central Alaska to white settlers and civilization and the opening up of a vast commercial industry. Lapland, with 400,000 reindeer, supplies the grocery stores of northern Europe with smoked reindeer hams, smoked tongues, dried and tanned hides, and 23,000 carcasses per annum to the butcher shops. On the same basis, Alaska, with its capacity for 9,200,000 head of reindeer, can supply the markets of North America with 500,000 carcasses of venison annually, together with tons of delicious hams and tongues and finest leather. Surely the creation of an industry worth from $83,000,000 to $100,000,000 where none now exists is worthy of the attention of the American people."

ANOTHER ROAD TO THE GOLD FIELDS.—The outline map printed herein shows a road to the gold fields additional to the routes mentioned in a previous chapter. By it the traveler may reach these fields in two months from interior cities in this country, possibly in six weeks.

The new route is in fact a very old one. Railroads, and steamers and other water-craft, almost cover the route. But before these were built it was the old Hudson Bay trail into the far north, and had been in use nearly a century.

Calgary is a station on the Canadian Pacific railway, the terminus of that road being at New Westminster, on the coast in British Columbia, opposite Vancouver's Island, and about one hundred and eighty miles above Seattle. From Calgary a branch road runs north to Edmonton, and from that point to Athabasca Landing is a stage or wagon ride, or "portage" of about forty miles.

From Athabasca to Fort McPherson, which is situated far north at the mouth of the Mackenzie river, there is a continuous waterway for canoe travel down stream. At Fort McPherson the Peel river extends southwest into the gold fields. From Edmonton to Fort McPherson the distance is 1,822 miles.

There are two portages of some distance on this route; one already mentioned from Edmonton to Athabasca, and at a place called Smith's Landing, sixteen miles, over which there is a tramway.

With the exception of five other portages of a few hundred yards there is a down-grade water route all the way. Wherever there is a lake or a long stretch of deep-water navigation the Hudson Bay company has small freight steamers which ply during the summer months between the portage points.

From Edmonton a party of three men with a canoe should reach Fort McPherson within sixty days pro-

vided they are strong and of some experience in that sort of travel.

Experienced travelers recommend that the canoe be bought at home unless it be intended to hire Indians with large bark canoes for the trip. Birch-bark canoes can be purchased large enough to carry three tons, but are said to be unreliable unless Indians are taken along to keep them from getting water-logged. The Hudson Bay company will contract to take freight northward on their steamers.

The great advantage claimed for this inland route is that it has long been an organized line of communication. Travelers need not carry any more food than will take them from one Hudson Bay post to the next, and there is abundance of fish and wild fowl along the route. They can also get assistance at the posts in case of sickness or accident.

It is possible to return by the dog-sled route in the winter. There is one mail to Fort McPherson in the winter. Dogs for teams can be bought at any of the Hudson Bay posts which form a chain of roadhouses on the trip.

Parties traveling alone will need no guides until they get near Fort McPherson, the route from Edmonton being so well defined.

It is estimated that a party of three could provide themselves with food for the canoe trip of two months for $35. Pork, tea, flour and baking powder would suffice.

Parties should consist of three men, as that is the crew of a canoe. It will take 600 pounds of food to

carry three men over the route. The paddling is all done downstream except when they turn south up Peel river after reaching Fort Mackenzie, and sails should be taken, as there is often a favorable wind for days. There are large scows on the line manned by ten men and known as "sturgeon heads." They are like canal boats, but are punted along, and are used by the Hudson Bay people for taking supplies to the forts.

This route may be taken from the northern interior of this country by going to St. Paul, Minn., by rail, and there taking a train over the Canadian Pacific. Leaving St. Paul at 9 o'clock in the morning, the international boundary at Portal will be crossed at 4 o'clock the next morning. At 2 : 22 the following morning the traveler will find himself at Calgary, where he will leave the main line of the Canadian Pacific and travel to Edmonton, where the rail portion of the journey ends.

LAWS GOVERNING MINING CLAIMS IN ALASKA.—On July 31, the misunderstanding and contentions regarding the laws that are applicable to Alaska, so far as lands and claims are concerned, were set at rest by a statement made by Commissioner Hermann of the General Land Office. Many inquiries on this question have come to the Interior department, and numerous applications have been made for copies of the public land laws, which, however, *do not apply to Alaska.* The general land officials have therefore investigated the laws that govern there.

The mineral land laws of the United States, townsite laws, which provide for the incorporation of townsites and aquirement of title thereto from the United States government to the townsite trustees; the law providing for trade and manufactures, giving each qualified person 160 acres of land in a square and compact form — all these, with the coal-land regulations, are distinct from the mineral regulations or laws, and the jurisdiction of neither coal laws nor public land laws extends to Alaska, the territory being expressly excluded by the laws themselves from their operation.

The act approved May 17, 1884, providing for the civil government of Alaska, has this language as to *mines and mining privileges:*

"The law of the United States relating to mining claims and rights incidental thereto shall, on and after the passage of this act, be in full force and effect in said district of Alaska, subject to such regulations as may be made by the Secretary of the Interior and approved by the president," and "parties who have located mines or mining privileges thereon under the United States laws, applicable to the public domain, or have occupied, or improved, or exercised acts of ownership over such claims, shall not be disturbed therein, but shall be allowed to perfect title by payments provided for."

There is still more general authority. Without the special authority, above quoted, the act of July 4, 1866, says: "All valuable mineral deposits in lands belonging to the United States, both surveyed and un-

surveyed, are hereby declared to be free and open to exploration and purchase, and lands in which these are found to occupation and purchase by citizens of the United States, and by those who have declared an intention to become such, under the rules prescribed by law, and according to local customs of rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States."

It will be noted therefore that the general mining laws of the United States, a brief of which has been given in a previous chapter, are by the Acts above quoted made applicable to Alaska. There has been a misunderstanding because of the special exception made of that country by the laws themselves, until those exceptions were set aside by the Acts of July 4, 1866, and May 17, 1874. It will be remembered, also, that the patenting of mineral lands in Alaska is not a new thing, for that work has been going on, as the cases have come in from time to time since 1884. The confusion arising from the fact of Alaska having been excepted in the action of certain U. S. statutes is thus set aside, and persons who now go, and who locate claims within U. S. territory, may be assured that the mining statutes in force elsewhere also in general apply to Alaska.

OFFICIAL STATEMENT OF THE CLIMATE.—Under the direction of Secretary of Agriculture James Wilson, Willis L. Moore, Chief of the Weather bureau, makes public the following :

"The general conception of Alaskan climate is largely due to those who follow the sea, and this is not strange when we consider the vast extent of shore line (over 26,000 miles) possessed by that Territory.

"The climate of the coast and the interior is unlike in many respects, and as the differences are intensified in this, as perhaps in few other countries, by exceptional physical conditions.

"The natural contrast between land and sea is here tremendously increased by the current of warm water that impinges on the coast of British Columbia, one branch flowing northward toward Sitka and thence westward to the Kodiak and Shumagin Islands. The fringe of islands that separates the main land from the Pacific Ocean, from Dixon Sound northward, and also a strip of the main land for possibly twenty miles back from the sea, following the sweep of the coast as it curves to the northwestward, to the western extremity of Alaska, form a distinct climatic division which may be termed temperate Alaska.

"The temperature rarely falls to zero. Winter does not set in until December 1 and by the last of May the snow has dissapeared, except on the mountains. The mean winter temperature of Sitka is 32.5°; but little less than that of Washington, D. C. While Sitka is fully exposed to the sea influences, places farther inland, but not over the coast range of mountains, as Killisnoo and Juneau, have also a mild temperature throughout the winter months.

"The temperature changes from month to month in temperate Alaska are small, not exceeding 25° from

midwinter to midsummer. The average temperature of July, the warmest month of summer, rarely reaches 55°, and the highest temperature for a single day seldom reaches 75°.

"The rainfall of temperate Alaska is notorious the world over, and not only as regards the quantity but also as to the manner of its falling—viz.: in long and incessant rains and drizzles. Cloud and fog naturally abound, there being on an average but sixty-six clear days in the year.

"Alaska is a country of striking contrasts, in climate as well as in topography. When the sun shines the atmosphere is remarkably clear and the scenic effects are magnificent; all nature seems to be in holiday attire. But the scene may change very quickly. The sky becomes overcast, the winds increase in force, rain begins to fall, the evergreens sigh ominously, and utter desolation and loneliness prevail.

"North of the Aleutian Islands the coast climate becomes more rigorous in winter, but in summer the difference is much less marked. Thus, at St. Michael's, a short distance above the mouth of the Yukon, the mean summer temperature is 50 degrees, but 4 degrees cooler than Sitka. The mean summer temperature of Point Barrow, the most northerly point in the United States, is 36.8 degrees, but four-tenths of a degree less than the temperature of the air flowing across the summit of Pike's Peak, Colo. The rainfall of the coast region north of the Yukon delta is small, diminishing to less than ten inches within the arctic circle.

"The climate of the interior, including in that designation practically all of the country except a narrow fringe of coastal margin and the territory before referred to as temperate Alaska, is one of extreme rigor in winter, with a brief but relatively hot summer, especially when the sky is free from clouds.

"In the Klondike region in midwinter the sun arises from 9:30 to 10 A. M. and sets from 2 to 3 P. M., the total length of day being about four hours. Remembering that the sun rises but a few degrees above the horizon, and that it is wholly obscured on a great many days, the character of the winter months may easily be imagined.

"The mean summer temperature of the interior doubtless ranges between 60° and 70°."

It will be observed that in this official observation of the Alaska climate for six months the average, or mean, and the extreme, of midwinter temperature is not given, there having not been opportunity for exact observation. The degree of cold sometimes experienced is, however, a matter of personal experience with persons whose statements are given in previous chapters. Like England, Alaska owes that remarkable climate of the coast to a warm sea-current, and this will in time to come doubtless prove the salvation of the country.

MINING AT HOME.—Perhaps no greater service can be done in the way of giving information about the new-found mines than by saying a word in regard to those intending to mine while staying close at

home. There are now organizing hundreds of "schemes." How many of these ventures are reputable only time can tell, but it is very possible that the percentage of them that are is small indeed.

In some of these new concerns the fraud is already apparent, and when the time is ripe from every quarter of the country will go up a wail of sorrow. In many of the so-called "promoting" companies the methods of the discretionary operator are visible, and in some of them old hands at bucket-shop swindling have been found working with feverish activity.

One peculiarity about most of the companies is that they come out plainly with requests for money to prospect. The stock sold is not on any specific claim, but is, in fact, nothing more than a "grub-stake," as it is called in mining camps. In other words, the companies ask their stock-buyers to put up the capital, while the company sends out some one to prospect in the gold region.

Another outcrop of the fever is the man with information about the gold country to sell. Ten dollars is all he asks—come early and avoid the rush. Another asks whether you wish to go to the Klondike—send twenty-five cents for particulars.

Another, who advertises himself as reliable, pleads for some one to put up the money for him to sail into the Klondike—he will divide all he digs out.

Expeditions, also, are fitting out, and any one is entitled to join upon the payment of a certain sum. Apparently the most serious of all is one where the fixed price is $1,000, one-half payable here, the other

at Sitka. In addition, twenty-five per cent of the profits from any claims located is stipulated in the contract. An element of gambling attaches to it, however, in the fact that when claims have been located lots will be drawn for their distribution.

There will be stock companies innumerable, organized ostensibly to exploit the northwest. Possibly some will do it. They will be directed by men who will set honestly about the business of trade and transportation and mining, who will handle honestly the funds intrusted to them, and who, by enterprise and square dealing, will make dividends for the stockholders.

There will be other companies organized to exploit the pockets of the people at home. They will not move a boat, they will not grub-stake a miner, they will not sell a shovel, a pick, or a pan. Their directors will get money from the unsuspecting and use it for their own purposes. If the boom holds out and grows to sufficient size they will play the part of the adventurers who turned the city of Panama into a modern Babylon with the money contributed by the people of France.

The person contemplating investment in the stock of an Alaska mining company cannot be too cautious. He will have little security against fraud except in the honor and intelligence of the men who get his money. He cannot follow them to Alaska to see that they use it properly.

In short, sending capital into the Klondike will be even more precarious than going yourself, for the risks of nature will be added to the risk of man's rascality.

FURTHER ACTION OF THE DOMINION GOVERNMENT.—Reference to preceding page 49 will show the action of the Canadian Council at Ottawa with respect to duties, taxes, royalties, etc., in the Klondike gold fields. An instance of the rapid action of modern times may be found in the fact that already that decree of the Council has been reconsidered. On August 12th the project of compelling miners to pay from ten to twenty per centum royalty was set aside because of arguments brought against it by Canadians themselves, principally by Mr. Frank Oliver, of Alberta, who said:

"If the diggings were not rich this tax would either be impossible or it would prevent mining, and if they are rich it would only bring on a fight in a region which, all things considered, Canada could not expect to rule by main force except at a cost that would be much greater than the profit."

This convincing reasoning seems to have had the desired effect in persuading the ministry to abandon that portion of the scheme that imposed the royalties.

THE RESULTS OF THE "RUSH," AS NOW KNOWN.—Already many hundreds have started and are far on their way toward the El Dorado of the far north. Warnings were unheeded chiefly, perhaps, because of the difficulty of the average mind in comprehending the immense difference in climate, in the summer-time too, between all we know of what we call weather and the almost perpetual winter of the north. Correspondents describe many of these new Argonauts as

people who were never away from home before, and who are astonished at the difficulties they are called to face even before they have entered upon the actual hardships of the route. Abandoning baggage they in some cases still press on, moved by only one thought—to get to the land of gold. Some others are described as buying grain-sacks to hold the gold after they have reached the place. Others, surprised and discouraged at the beginning, throw away or sell for one-tenth of its cost their equipment, and turn back, praying only now for a possible return to the life they left. Some of the details are given in a letter from the U. S. Commissioner at Dyea who says :

"Of the 3,000 miners here not more than 250 are provided with horses, and it will be a physical impossibility for the Indian packers to get more than 250 outfits over the trails before winter sets in. The Indian packers at Dyea are on a strike. They have a good thing, but they want something better. When a steamer anchors in the bay, a mile from the shore, the stuff is piled on the rocky clefts and benches on either side of the long and narrow passage, as the banks on the right and left are too steep for the trail. So the miners have to hire Indians with canoes to get their baggage up to the sandy beach. This costs 1½ cents a pound. The miner then carries his outfit a couple of hundred yards farther to the high water-mark and pitches his tent for a rest. He is soon ready to make a start, but only goes one mile when he comes to a river about three feet deep and from 50 to 100 feet across, and very swift. He must wade and

take the chances of getting his outfit wet, to say nothing of getting the cramps himself in the ice-cold water.

". . . . The packing over the roads will not last more than six weeks, and then nothing can be done until the river freezes over; even then dogs will not be used. The spring excitement will begin about February 1, and I would advise all to remain away till that time."

Nevertheless the writer adds:

"Old Yukoners here are positive there will be even richer diggings discovered next year than Klondike, although there is enough gold there in sight and in drift to keep up the gold output for a decade."

A QUESTION OF THE FUTURE.—By the time the readers will have seen these lines the season during which it is possible to reach Alaska will have closed. But the desire to go there will not have been appeased. In the minds of men, especially of old miners, there are many intentions to be realized, or tried, during the coming short summer. Since the conditions of one great find are known similar ones will be carefully examined. It is impossible that the most adventurous, tireless, solitary and restless of men, the professional miner, will rest all his hopes upon the banks of a stream destined soon to be crowded with contiguous claims, and the late-comer crowded out, though so far only thirty miles of its course have been prospected. But the standing conditions ought not to be ignored. There will always be in Northern Alaska a want of

the means of living. The Alaskan climate is all hard, all remote, all cold. Some parts of the immense territory are less so than others. Timber is one essential of a mining country, transportation is another. A system of easier transportation across country now that it is in great demand; some plainer and easier passes than have yet been found, are wanted. To go to Alaska fully supplied for at least one year's stay is one thing; to go rashly unprepared and trusting to luck, and to hasten blindly to the Klondike, is quite another.

Much might be added here about the danger of making mistakes in going to the Alaska and British American gold region. It might be pointed out that new diggings have been found in California, and that Colorado is producing now about twenty millions in gold for every twelve months, and that if a man wants to mine he need not migrate to the region of the north.

These facts and arguments are always lost. The alluring elements of adventure and chance enter. There is without question an immense gold field in the north, and on American soil. If at his leisure a young and strong man goes there in the face of the idleness and distress that until recently have been the conditions in this country; if when he reaches there he goes to work and keeps at work with the idea of persistence rather than of gambling and chance, he may have success, and it may prove the opportunity of his life. Good health and comparative youth, a determination to simply embrace a great opportunity and win without the aid of mere chance, a determina-

tion to use the best of such opportunities that offers, and regard that as destiny rather than one which may prove better, a cool head and persistent work, will make at least a few rich in the end who would inevitably fail with the usual idea.

THE ROUTE BY THE CHILKOOT PASS.—A personal experience, as related by Dr. E. O. Crewe at Tattersall's, Chicago, August 15, is interesting in connection with the question prominent in many minds: "How shall I go, 'overland' or by the sea and up the Yukon?" The stories of hardships suffered by travelers over the Chilkoot Pass, as printed recently in the newspapers, he said were exaggerations. He had made the trip on three occasions, and described in detail its various stages. Some of the details of this overland journey are as follows:

There is a chain of lakes, Bennett, Taku and Marsh. There is a way of following certain shores and of avoiding certain sharp rocks and other difficulties, and these are details of local knowledge to be acquired when one has reached the place. There is a way of building rafts and procuring boats, and there are portages around rapids. All these things are the usual incidents of travel, and there is no difficulty that is at all insurmountable. At the proper season, the fall, there is game; but it is necessary to emphasize the fact that food-supplies must under all circumstances be carefully looked after as the chiefest necessities.

The steamers carry passengers to a point six miles north of Dyea, and following this there is an over-

land trip of twenty-eight miles. This requires three days, and there is one hard day. The first day, to Sheep Camp, is a pleasant walk. The next two bring the traveler to Stone House, and here begins the pass. There it is necessary to get up early in the morning to get an early start, and that night one may camp three or four miles beyond the pass. A strong man may cross the pass itself with one hundred pounds on his back in three hours. Sometimes it is like climbing the roof of a house. Sometimes it is in snow and slush up to the knees. But there is no danger and no great difficulty. You cannot lose your way. There is a wall of rock on one side and a wall of ice on the other—no chasms to fall into, no crevices in the ice. It is not as hard as climbing half way up Pike's Peak, a trick that hundreds of tourists do every year for pleasure. And that is all there is to the horrors of Chilkoot Pass.

The cost of living in the Yukon region, Dr. Crewe said, had been greatly exaggerated, and he told how every spring oranges could be bought for fifty cents a dozen at Dawson, fresh onions and potatoes for fifteen cents a pound, and flour and other provisions much cheaper than they can be packed in. He advised any intending to go to wait until late next March, then take the Chilkoot Pass route, when they can haul 500 pounds over the pass on a sledge, when the snow is frozen at night, easier than they can pack fifty pounds over at this season. Next season, it is not improbable there may be a hundred boats on the Yukon where now are but twenty, and at St. Michael's Island,

eighty miles from the mouth of the Yukon, he said there is now enough food supply to last 10,000 men five years.

"Many men will come back disheartened," said he, "but it will be because they are too easily discouraged, have too little pluck, or are unwilling to work. Alaska is the poor man's mining country. It is every man for himself, and thousands of men who have nothing will go there and in a year, by proper diligence, wash out $2,000 to $10,000, and many of them a great deal more, above all their expenses."

SCIENTIFIC MINING IN ALASKA.—Many people who know something of mining have suspected that the work of scientific mining had not yet begun in Alaska, and that it had a splendid future. Theory, at least, leads to the conclusion that by whatever process the gold was placed in the Alaska placers, much of it must have got into the beds—not the banks—of the streams, and lies there. Companies following this idea are now forming for the purpose of dredging for gold in the deeper waters, and in the Yukon itself. It is believed that the wealth of the banks is comparatively trivial as compared to the bed of the river. This gold is mostly dust, and investigations conducted by the assayer tend to prove that it has been gradually washed to the center of the rivers, where it is now imbedded in greater quantities than ever before discovered.

TWO NEW AMERICAN BEASTS OF BURDEN.—One is the dog and the other the reindeer. Both have been alluded to in connection with travel and transportation in previous chapters. Three months ago it had perhaps never occurred to the average American that the dog would ever be to him a necessity, such as the horse is, or be used for the same purposes. If he goes to Alaska it is likely this situation will be changed, and one of the reasons for the change will be that the intense cold spits the hoofs of horses, and the dog must take their place as a draught animal.

But the Alaskan dog is not a fair representative of the dog tribe. A physical description is that he looks almost like the gray wolf; a little smaller and a little hairier. Mentally, so to speak, he is a vicious brute, without the natural affection of the usual dog for man, snapping and biting upon all occasions, and incapable of responding to caresses even if he got them—which he never does. In cases of extreme hunger his own master is not safe. His usefulness is, however, unquestioned, for his endurance harnessed to a sledge is wonderful. These draught-dogs are used in teams of from four to twelve, and in an emergency only one may be used, the man pushing and the dog pulling. He is almost unaffected by the very great cold, sleeping in the snow and eating a scanty ration of dried salmon.

The reindeer of the domesticated species is not a native of Alaska, the American reindeer, so-called, being the Barren Ground and Woodland Caribou. The need of the domesticated species for the Indians

in Alaska was seen some years ago, and from those imported at that time considerable numbers have sprung. The advantages of the enterprise were pointed out in a preceding chapter.

The reindeer is singular in the fact that both males and females have horns—the only instance of the kind in the deer species. It is exclusively a northern animal, and one whose value it would be difficult to overestimate, since it serves as horse, cow and sheep, all in one. Weighing full grown not more than four hundred to six hundred pounds, it can draw three hundred pounds on a sledge, and its hoofs, as large as those of a cow, and opening widely, make it especially a snow animal. It lives by browsing on stunted shrubs in summer, and on moss in winter, and the latter it can paw away several feet of snow to reach. Moss is one of the characteristic growths of Alaska. A hundred miles over frozen snow is not an unusual day's journey for the European reindeer.

THE ALASKA SAVAGES. — As to these people, usually, if the way taken is either by way of Juneau and the Chilkoot Pass or the Mackenzie river, they are the first people seen. At some remote period now absolutely forgotten they came from Asia. The northwest coast Indians are so like the people known as Eskimo that, though not known by that name, there is no essential difference. Of the inhabitants of the Aleutian islands the same may be said. The Eskimo, strictly speaking, live in the northern and northwestern portions of the country, the Indians

thus designated being off-shoots or kindred, and, as stated, very like the Eskimo. In many respects these people are peculiar. They live exclusively upon fish and sea animals. They have no chiefs. In mental ability they stand high among savages. They have never been known to go to war among themselves, though they have always been at enmity with the southern tribes, and in self-defense are dreaded fighters. There is no fear of treachery or massacre by them. They will work, and it will be found that they understand quite well how to charge for it in proportion to the emergency. In the making of weapons and tools of the chase, and in the shaping and finish of their garments, the entire Eskimo kindred have always been remarkably skillful. They are equally so in the work required of them by the white men who hire them, and in many respects they stand in striking contrast to the usual Indian as we know him. "Blubber eaters" is not strictly a good name for them, for blubber is too precious a commodity to eat. They are more properly fish eaters. Those Indians with whom the voyager to Alaska is likely to come in contact know white people very well, are not untrustworthy, and as laborers and guides will be found quite indispensable. In the valley of the Yukon, and north of it, they are said to be slowly lessening in number.

ROUTES TO ALASKA FROM POINTS WITHIN THE UNITED STATES.—The vast majority of all who turn their steps toward the Alaska gold region in the early

spring must start from the interior of the country, and many must travel far before they reach even the beginning of any of the routes by land and sea described in preceding chapters.

Among these must be included all who live in the vast territory lying southwest of Chicago in Illinois, in north Missouri, in all of Kansas, in central Texas from Galveston north, in Oklahoma, in southern Colorado and all New Mexico and Arizona, and thence westward and northwestward up to San Francisco.

The main artery of all this region is the most splendid railroad system in the world, and the most far-reaching and stupendous, covering with its main lines and branches more than nine thousand miles in distance, and almost all of the vast region mentioned in area. When in western Kansas it converges into a single trunk line it becomes the greatest of the trans-continental roads, landing in San Francisco without change the passengers who have started from Chicago, and even those who started from Boston with but one, and that single one but a transfer from one car to another in Chicago. This great railroad system is known to thousands by its briefest name ; THE SANTA FE ROUTE.

The journey to Alaska may be made by way of San Francisco, the great seaport of the western coast, whether the passenger goes by way of the ocean and the Yukon, or to Juneau and Dyea and through the Chilkoot Pass. All who now live in the district mentioned, and who wish to travel toward the Alaska gold fields, are natural travelers by way of THE SANTA FE ROUTE westward, and thence northward either by the

northern steamers that leave San Francisco, or by rail to Seattle, and thence to Alaska by any route.

Another route is *via* the SANTA FE ROUTE to Pueblo and Denver, and thence by the Rio Grande Western to Ogden, and thence *via* Oregon Short Line to connection with Puget Sound steamers.

Still another is the SANTA FE ROUTE *via* Sacramento to Portland, and thence by steamer to Alaska.

So convenient is this great line as a route to the Pacific coast from all the territory named, that it can in truth be avoided only by trying. It is, in addition, a central route whereon the snow-blockades and long delays of winter and early spring are unknown, and its Tourist Sleeping Cars, long a feature of its equipment, and in which second-class tickets are honored as well as first, offers every comfort to the economical traveler. The nearest agent of the line will be found able to add all needed particulars.