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# BRITISH COLUMBIA MAGAZINE



DECEMBER



1913



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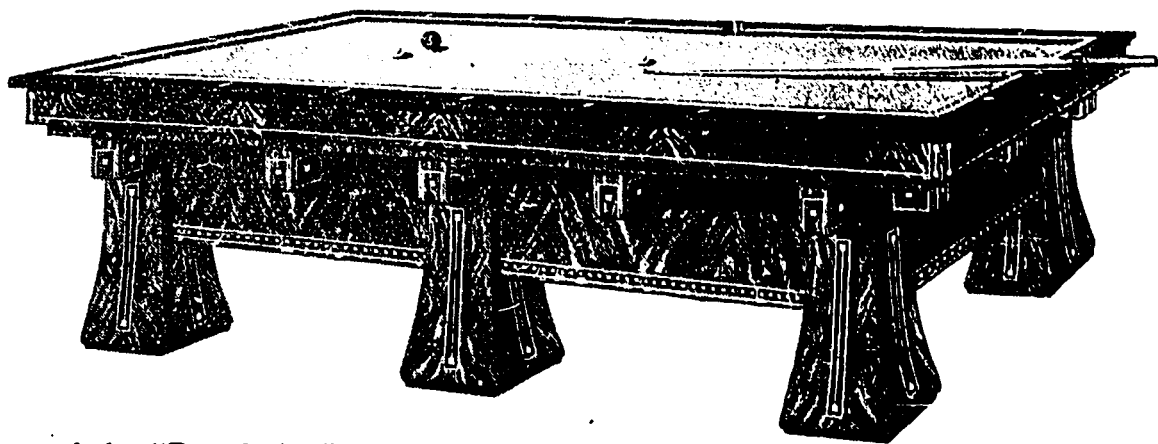
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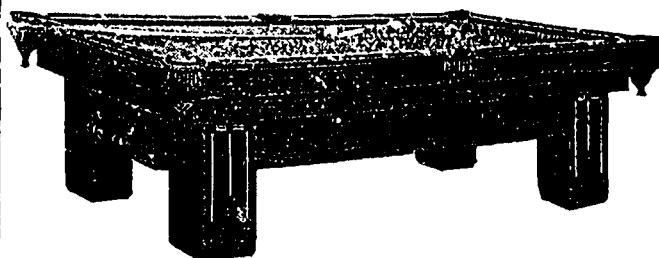
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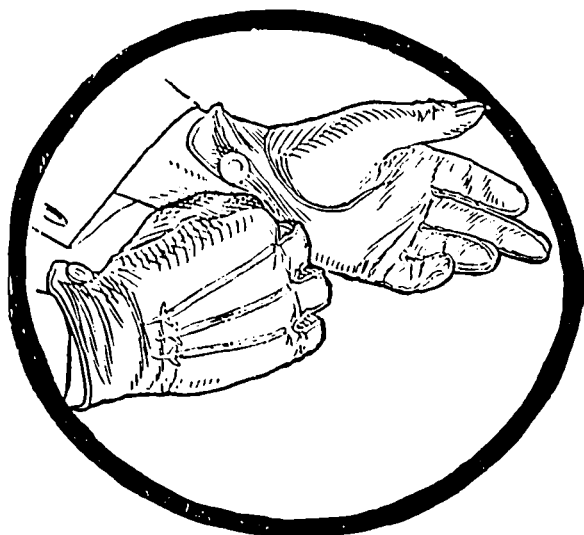
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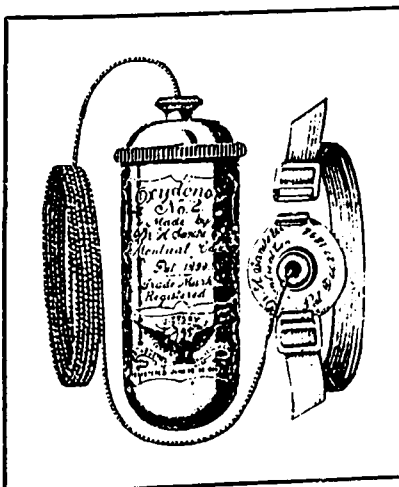
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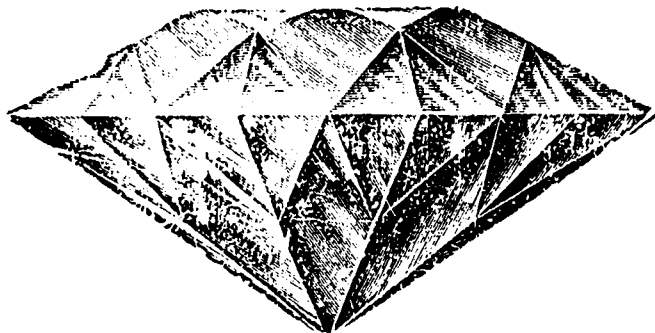
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# THE BRITISH COLUMBIA MAGAZINE

J. S. RAINE, Editor

J. L. W. LEARY, Development Editor

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VANCOUVER, B. C.

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## Inspiration

*Through the long night, in that remote domain  
Where ancient Thebes her ruined foundations bars,  
The Memmon statue stands and mutely stares  
Into the east. The very stars in vain  
Glow with a tropic splendor, for they gain  
No sound from the Colossus; but when flares  
The sun's first flame Memmon forgets his lares  
And breathes a mighty music o'er the plain.*

*So for long years I stood and waited—mute;  
My songs unsung, my very lips close-sealed.  
But as the sun wakes Memmon unto praise,  
So have you wakened me. I take my lute,  
And I shall try to sing what stands revealed  
Since you and love made radiant my days.*

*—Hallett Abend.*

# THE BIRKS BUILDING



THE LATEST OF VANCOUVER'S "SKY-SCRAPERS" IS ALSO THE HANDSOMEST. IT IS A TEN-STORY STRUCTURE, SITUATED AT THE SOUTH-EAST CORNER OF THE JUNCTION OF GRANVILLE STREET AND GEORGIA STREET



Vol. IX.

DECEMBER, 1913

No. 12

# *The* Pacific Highway in British Columbia

By W. W. Foster

*Deputy Minister of Public Works*

A VERY cursory examination of the topography of British Columbia discloses that, although Vancouver is on the west coast, if the province were divided by a road running direct north from Vancouver at least three-quarters of the area of the province would still be west of such a road; the fact would also be noted that, roughly speaking, the mainland of British Columbia is enclosed within two walls—the Rockies to the east and the Coast Range to the west—and that the many lesser ranges do not extend north of the fifty-first parallel, although the great waterways continue to run north and south as before.

The intermediate area between these great walls, swept over by glacial drift, is one containing great stretches of rich agricultural land, as well as the placer gold for which it originally became famous.

The Pacific Highway of today enters British Columbia at Blaine, and thence runs to New Westminster over a stretch nineteen miles in length, sixty-six feet in width, graded to an 18-foot width, and to be finished with oiled macadam.

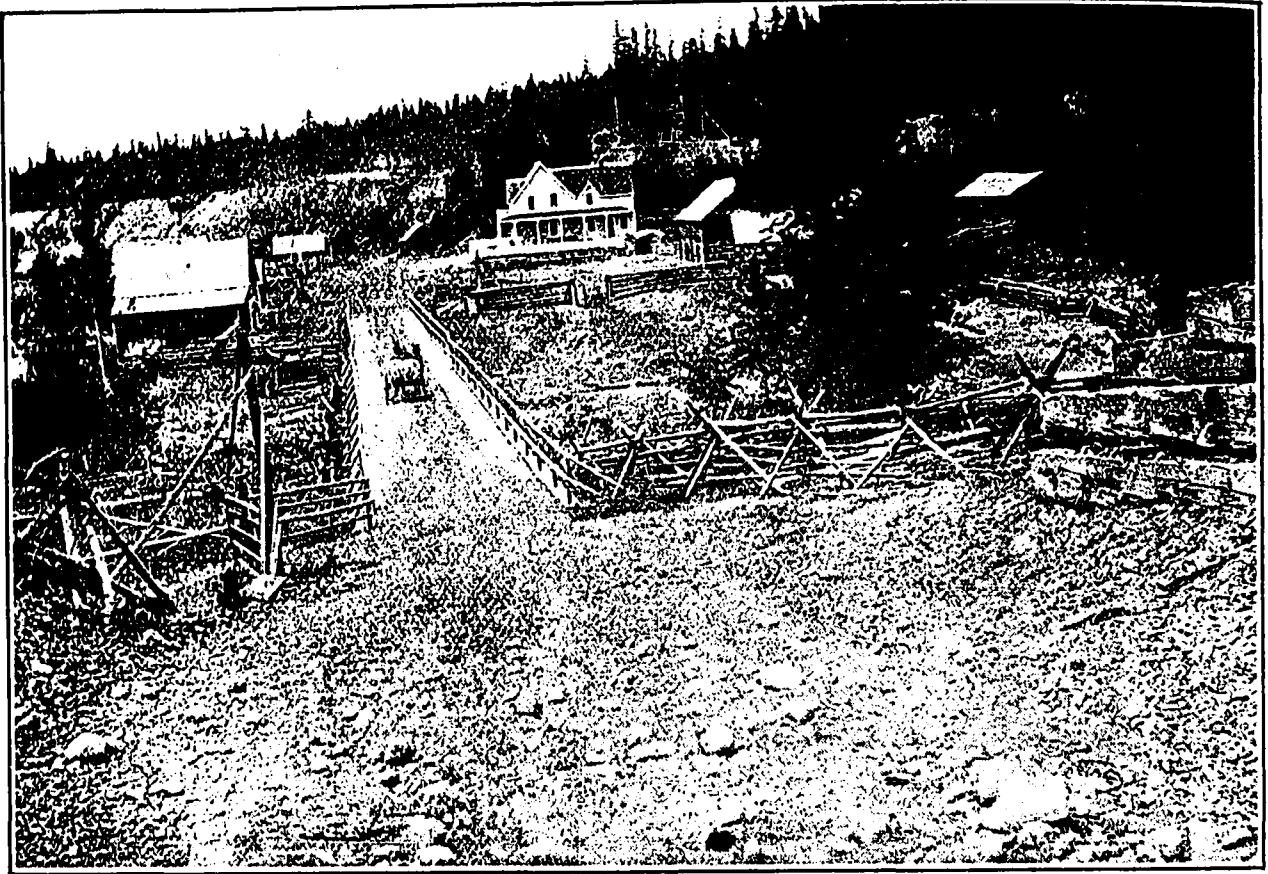
This road, traversing as it does a portion of the prosperous farming community of the lower mainland and before reaching New Westminster running through some

magnificent timber, is already attracting attention from the tourist—an average of fifteen cars per day having cleared at the boundary custom house during the summer—and with the opening of Kingsway, the paved road connecting New Westminster with Vancouver, another magnificent inducement is offered the autoist.

To the ultimate destination—the Far North—a route has already been mapped out for 700 miles—as far as Hazelton—as, although it is recognized that the potentialities of the province may demand not one, but several trunk roads northward, in the meantime the Old Cariboo road can be utilized to the greatest advantage as the main highway.

Leaving New Westminster the Old Yale road is followed to Hope, and although this road is now being standardized, its original location and condition was a striking tribute to the excellence of the construction work undertaken by the royal engineers in the early sixties.

From Hope it was urged that the route should still follow up the canyon, practically duplicating the location of a road of great historic interest, which Simon Fraser, in his journal of 1808, speaks of as "A series of threadlike tracks at varying



AUSTRALIAN RANCH, 199 MILES FROM ASHCROFT

elevations, clinging to the face of frowning precipices, or continued by crazy bridges over profound gorges." He further speaks of the difficulties and dangers of the canyon as being incomparably greater than anything encountered before in all his wide experience as a traveler, saying in his diary: "As for the road by land, we could scarcely make our way even with only our guns—we had to pass where no human being should venture." Later on, through the determination of Sir James Douglas, British Columbia's first governor, a road through this pass became an accomplished fact.

With the discovery of gold in the Cariboo, a road to connect the interior and the coast became a vital necessity. In 1861 the route from Yale (the head of navigation) to Lytton was examined by Captain Grant and a small force from the R. E., and work commenced in the following May.

In 1863 Sir J. Trutch constructed the suspension bridge at Chapman's Bar (removed this year) and connected to the road built down from Lytton, giving a magnificent highway from Yale to Alexandria, an unprecedented achievement for any colony, and a splendid tribute to those who not only overcame enormous physical difficulties, but had courage and confidence enough

in the potentialities of the young colony to use up all its available cash resources in trunk road construction.

Many absorbing tales are told of coaching days between Yale and Cariboo from 1864 to the early eighties, and a host of names may be called to mind of men now prominent in the affairs of the province who were then associated with deeds of romance and daring intimately connected with the history of this province.

With the advent of the Canadian Pacific Railway Company the road between Yale and Ashcroft, a section 104 miles in length of the most costly and dangerous nature, fell into disuse, and when a few years later a suggestion was made to re-establish it at a cost of one hundred thousand dollars, it was decided to abandon it entirely. Later on rock and snowslides, in conjunction with the railroad construction in progress, resulted in the obliteration of sections many miles in length, so that now, at a conservative estimate, the cost of constructing a standard road through the canyon east of Yale to North Bend would cost no less than one million dollars.

With this route up the Fraser out of the question, every available pass in the Hope Mountains was closely examined, and



CATTLE IN CORRAL, LILLOOET.

finally a location was secured where a maximum grade of only eight per cent. was necessary in order to cross the mountains. This road, at present under construction, follows Silver Creek from Hope, and passes through a country whose magnificent scenery is not the least of its great assets.

The terminus of the new Hope Mountain connection is Princeton, and in addition to traversing a valuable mining country, a considerable area of agricultural land is made accessible.

From Princeton to Ashcroft, running through a country rich in scenic, mineral and agricultural potentialities, a road has been in existence for many years, but relocation and standardization is in progress, in order that, with the completion of the Hope-Princeton connection, a standard road may be available throughout.

Whilst the Nicola district is best known at present owing to its successful mining operations and the magnificent opportunity for cattle-raising, it has an area of nearly eighty miles square, containing tens of thousands of acres, which experiments during the past few years have declared eminently suitable for any farming.

Shortly after leaving Ashcroft connection is again made with the Old Cariboo trunk road, and some idea of the present

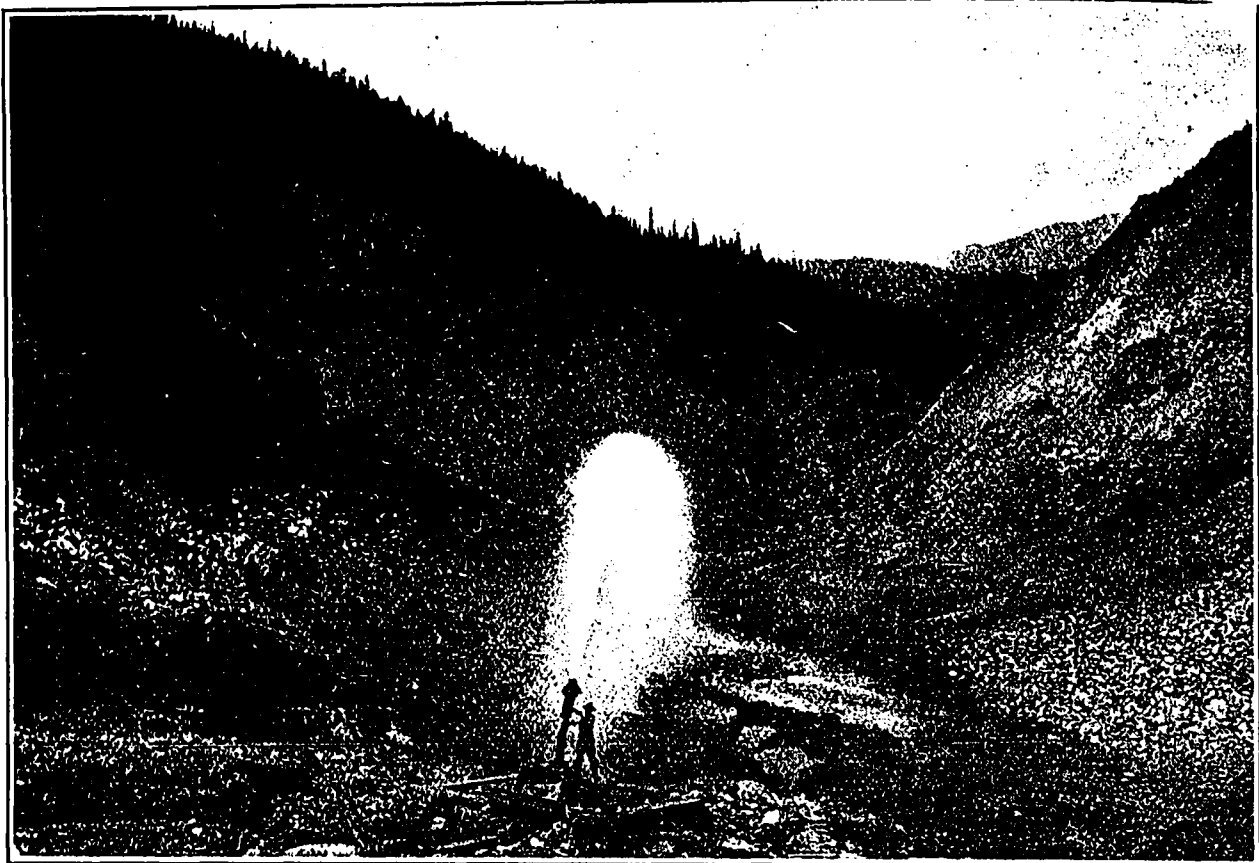
traffic over this road can be obtained from the records kept at the Thompson River bridge, Ashcroft, showing that nearly one million pounds of freight is being hauled monthly over the structure—this enormous amount being attributable to the heavy influx of settlers and the stimulation of the mining industry.

In the Lillooet district, containing over ten million acres, an immense percentage of this land is suited to some class of farming. The water supply is plentiful for stock and domestic use, whilst beyond the 100-mile House the higher slopes are well timbered.

In the Lillooet district both placer and hydraulic mining are in evidence, but, with the advent of a railroad to solve the problem of transporting heavy machinery, the future will see tremendous strides made in the recovery of gold.

To the tourist the road is a most fascinating one. Six and eight-horse teams are continually encountered, engaged in the business of freighting, and often at night a picturesque sight is afforded by the freighters camped out by the wayside—the white-covered vans and the camp-fire recalling tales told of the rush to the mining area in early days. At many of the roadhouses, too, are old-timers whose reminiscences are replete with interest:





HYDRAULICKING, LOWHEE MINE, FIVE MILES FROM BARKERVILLE

tales are told of the use of every kind of four-footed animal, including camels, as beasts of burden, of men who acquired fabulous wealth in a comparatively few days, of four who for a hundred dollars packed a grand piano upon their backs a distance of fifty-seven miles—for one hundred dollars!—and many others of adventure and hardship. Through the Lillooet, too, may still be found bands of wild horses whose ancestors, unlike their legitimate owners, were not fired with the desire to reach the Golden Cariboo and deserted on the way in.

The main road passes through immense areas where cattle are raised, and an interesting sight is to see large bands of cattle being driven in from the range, corralled, and selected for market; while fields of grain tell their own story of the fertility of the soil.

To keep the road open during the winter—an absolute necessity where all supplies must be brought in by freighters—has for many years been a serious problem; one, however, solved recently by the use of snow rollers—the heaviest fall of snow, sometimes as much as four feet in depth, being crushed down to a surface not only permitting easy sleighing, but usually the successful operation of automobiles.

Speaking of automobiles, it is interesting

to note the rapid improvement in methods of transportation upon the Cariboo road, where the automobile has entirely superseded the stage coach for passenger traffic, and although this is another factor contributing to the difficulty in providing a complete and up-to-date system of trunk roads, it is a matter of congratulation that the introduction of the auto makes a higher standard of road-bed imperative, and that British Columbia is maintaining its reputation by keeping abreast of the times in this as well as other matters of development.

The Cariboo section, extending from the 150-mile House to Quesnel, Fort Fraser and Hazelton, is a vast territory of which there is little known; the road as a good auto road practically ends at Quesnel, but under favorable weather conditions Fort Fraser is reached with comparative ease, and already one adventurous party has taken a car through to Hazelton.

The distance between Quesnel and Fort Fraser is 130 miles, and to re-locate the road, which is necessary in order to adapt it to modern methods of transportation, will cost about \$350,000.

From Fort Fraser to Stella, where a road exists which, like the section south, requires almost complete re-location, will cost \$110,000, and from Stella to Hazelton, where there is practically only a trail,

the road is estimated to cost about \$528,000, so that to provide for the section of two hundred and seventy miles between Fort Fraser and Hazelton, approximately one million dollars would be entailed, an enormous sum when the expenditure required in other portions of the province to meet absolutely necessary demands is considered.

The Cariboo, and on beyond, the Cassiar, are, however, marvellous territories, of which even those most conversant with the situation can but dimly appreciate the commercial possibility. Six million acres of agricultural lands are reached by the road, of which 164,000 have been surveyed and are ready for pre-emption. Maurice-ton has 120,000 acres, Hazelton is known to have over 35,000 acres of available arable land, whilst in the hinterland is an area of 8,000 square miles reported to be of finest quality, so that, with the advent of the Grand Trunk Pacific next year, and the Pacific Great Eastern at no distant date, the most sanguine prophet could scarcely over-estimate what the future has in store for this great new land in the centre of our province.

Heretofore, the Cariboo has been synonymous with gold, and as it was the gold rush of '59 that drew so much attention to British Columbia and was directly respon-

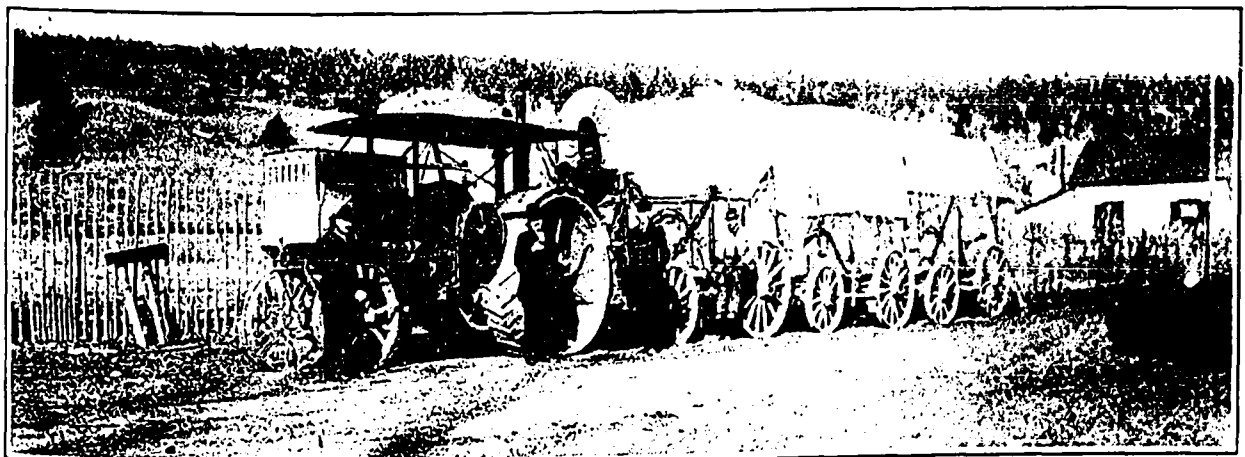
sible for its being raised to the dignity of a colony and province, it has been aptly described as the cradle of British Columbia.

In the year 1862 three million dollars' worth of the precious metal was recovered, some of the ground yielding up to one thousand dollars a square foot, whilst many men were reputed to have made from \$500 to \$1,000 per day. Gradually the workings became too deep for the pick and shovel, and the output dropped until the field no longer held the same attraction for the individual miner.

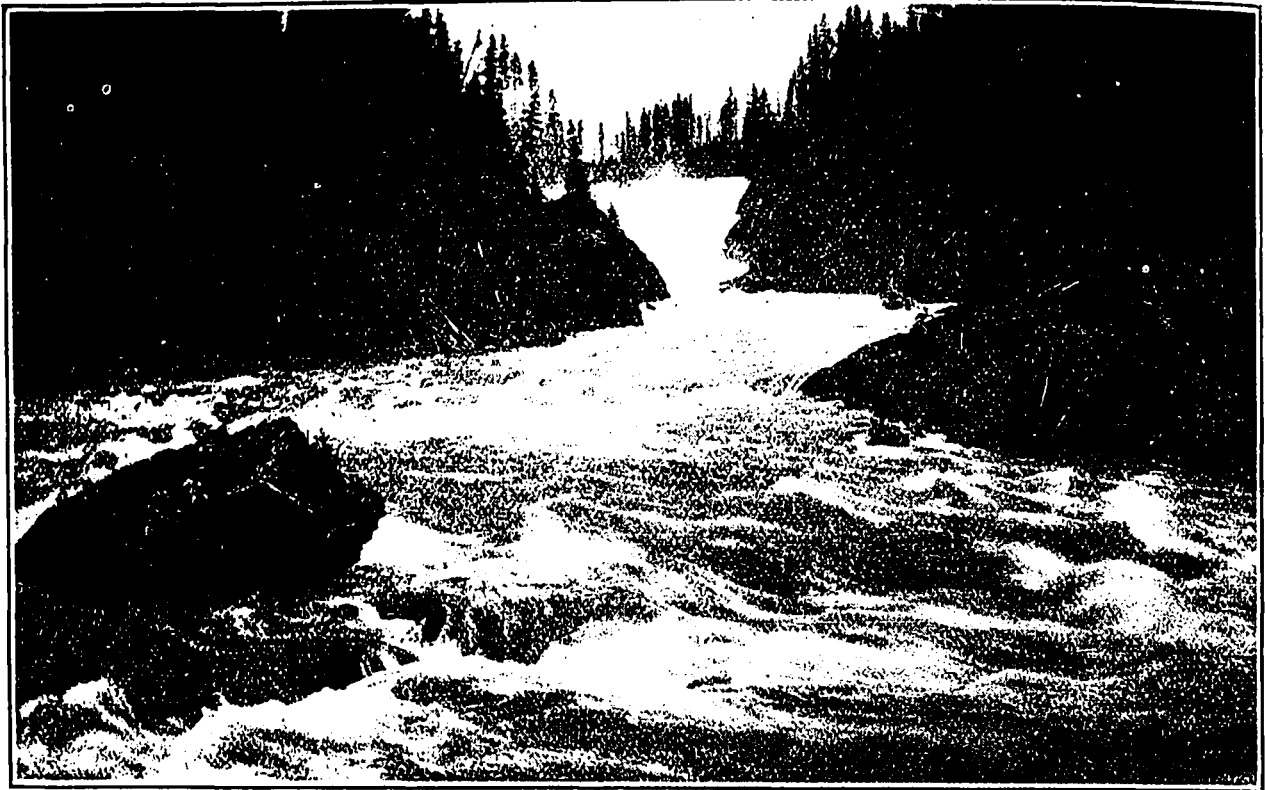
With, however, improved transportation facilities, the introduction of heavy machinery and the successful installation of hydraulic plants became possible, and many large and powerful companies are engaged in the recovery of gold upon an



SNOW ROLLER AS USED ON MAIN CARIBOO ROAD



FREIGHTING WITH GASOLINE ENGINE ON CARIBOO ROAD



SWAMP RIVER FALLS, NEAR BARKERVILLE

immense scale, two installations of machinery alone having cost a million dollars, so that these facts, coupled with the railroad construction taking place right into the heart of the Cariboo, assures not only the abundant and permanent prosperity of the district, but for the whole of the Cariboo a future to which the past, glorious as it has been, can bear no comparison.

To attempt a description of the trip north of the 150-mile House would be impossible on this occasion. The road, whether beside the stream, running on the side-hill, or crossing luxuriant flats, is full of interest. The Australian ranch, 199 miles from Ashcroft, was a landmark during the Cariboo excitement, and it is said the original locator brought in his effects in a wheelbarrow from Montana without assistance of any kind. The Indian rancheries at Stony Creek and other points, the abundance of game, including moose, and the accessibility of mining operations where giant monitors wash out great banks of gravel, and where later from the sluice boxes one can watch the recovery of gold, give the Cariboo road a fascination all its own.

The distance to Hazelton from Vancouver was given as, roughly speaking, 700 miles. On beyond another 500 miles would be required to reach the boundary of British Columbia through the Cassiar, a district over 150,000 square miles in extent, whose potentialities, for the most part, lie dormant and practically unknown.

Throughout such a trip, as, indeed, is the case anywhere one travels in the province, natural beauty is revealed in a manner and to an extent neither photograph or pen could ever describe, and whilst thinking of the vast material assets British Columbia possesses in her lands and forests, beneath the soil and rock, and contained in her waters, we would remember she will ever have an asset that can never be despoiled in the glory of her scenery—an asset whose value is better understood as the rapid extension of methods of transportation results in an increasing volume of tourist traffic. Other and perhaps more material wealth may perchance depreciate, but the gold that glitters when the sun shines over the mountains and valley, lakes or seas of British Columbia is eternal.

# The Queen Charlotte Islands

By James Cullins

FOR the man seeking escape from the rigors of cold and hot climates, who wants something more equable without either extreme—who has failed to obtain that measure of satisfaction with life which comes through success—who is looking around for a country whose undeveloped condition, combined with unbounded resource, gives every man an equal chance to reach the happy goal of success in life: the capitalist seeking new avenues for investment; the invalid who would find a home where conditions of health are unequalled—in short, for the man who would be content with rather primitive development for a short time in order to live in the most beautiful, salubrious and resourceful country—a sportsman's paradise, a painter's dream, a "back-to-nature" apostle's ideal country—to these the writer would recommend an examination of the claims of the Queen Charlotte Islands, the sentinels of the Pacific warmed by the Japan "river in the ocean,"

Many so-called "blue-prints" and maps of the Queen Charlotte Islands, especially of Graham Island, are of some use so far as they go; but there are a great number of places where no person has ever set foot, and little is known of the rivers, streams and general interior. Now and then a lone timber cruiser takes his pack and goes forth, but the mountains and valleys are not his destination. He has eyes only for the timbered sections, and, after a few days, he returns to the settlements. The Indians seldom go far from the waterways. In the interior they are at a loss to proceed. A few miles inland is an unknown country to the large majority. All the settlers make it a point to have their locations along the inlets, or only a few miles inland, to save packing their supplies where there are no trails.

From Parry Passage to the head of Masset Inlet, including Virago Sound, there are but five or six pre-emptors on the west side, where the land is staked for

timber limits or purchase. The east side is open for pre-emption, and is being settled especially along Masset Inlet and on the east coast, between Masset and Rose Spit.

On the west coast, from Parry Passage to Rennell's Sound, the only residents are the men drilling at Tiahn Point. This section will never be occupied by farmers, the land being rocky and densely covered with fallen timber, and also very hilly. Here and there, inland, one finds a small valley, but until roads cut into the interior from the east side there will be no means of ingress except by water, and it is unsafe to make the passage at certain seasons of the year. The only trail is from Naden Harbor to Tiahn Point for the convenience of the mail-carrier.

At the head of Masset Inlet a mountain range runs along the coast line, and a trail crosses over, five miles from Denan Bay to the shores of the west coast, which is a shorter route than via Parry Passage or, overland, via Naden Harbor. At the present time there are several routes by which to reach Queen Charlotte City and Skidegate. One is to take a launch to Queens-town, then to cross Mexican Tom's trail, a journey on foot of sixteen miles, proceeding by the wagon-road from Tl-el River. Another route is along the beach and road, via Tow Hill, Rose Spit and Cape Five. Either journey will take from two to three days. There is a trail from the coal mines on Yakoun River to Lawn Hill, but it is necessary to take a boat from Masset to the coal-mining camp up the Yakoun before starting on this trail.

Prospectors would find a field on the mountains and along the water courses of Graham Island. That there is gold, silver and copper on the islands there can be little doubt. In almost every stream and along the beaches gold has been found, and the black sand deposits of the east coast show iron and gold in such a combination that the best-known means of separating the two minerals have failed.



A SPRUCE LOG 70 FEET LONG AND ABOUT 5 FEET IN THICKNESS—"ONE OF MANY THOUSANDS"

The mines at Jedway, Ikeda, Tasso, Copper Island and Gold Harbor are producers, and their product is astonishing. Immense bodies of copper ore have been opened up.

The three drills now at work on the Yakoun River, Slate Chuck Creek and at Chown Point are all in bodies of coal, while the Wilson Camp, on the Yakoun River contains the best coal ever discovered on the Pacific Coast. It is well known that beds of coal exist on Naden Harbor, but no great effort has been made to develop the field. Until recently there has been no demand for coal in the northern country. The opening up of the Grand

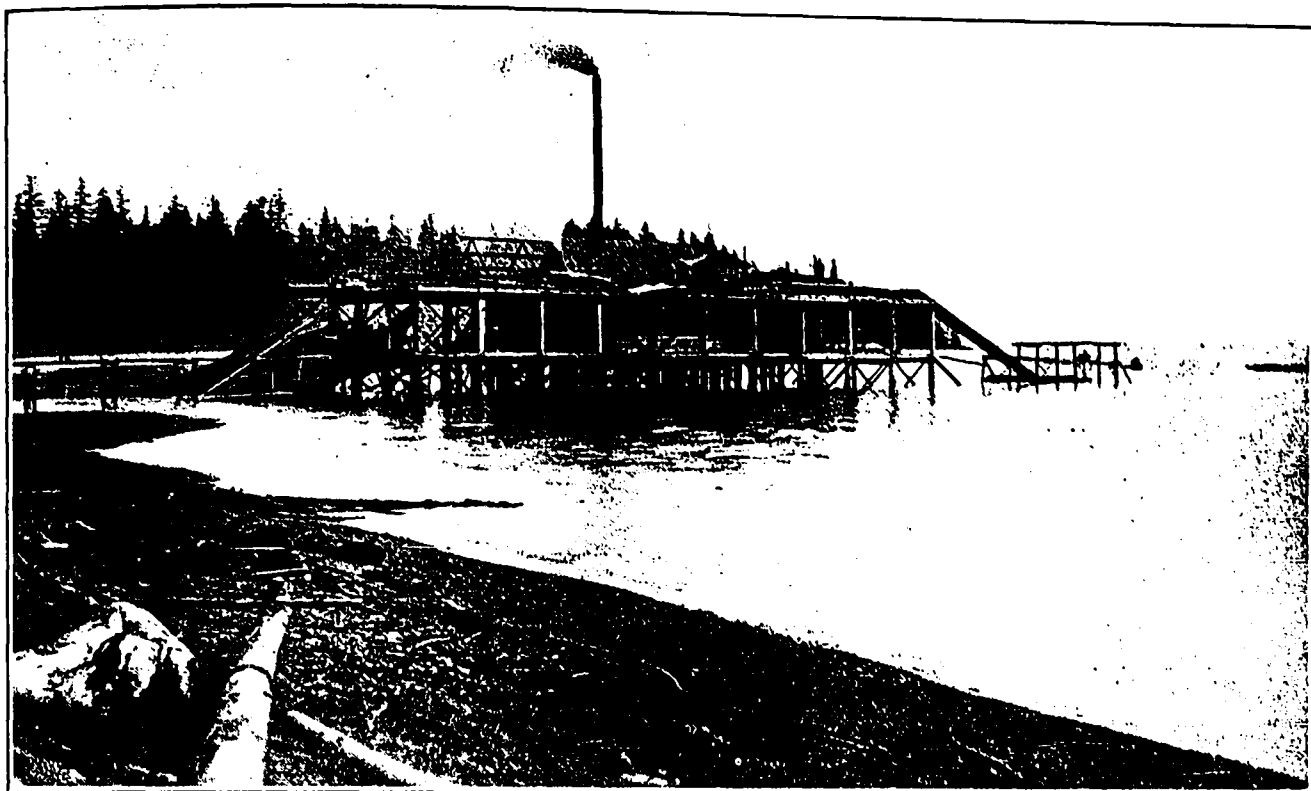
Trunk Railway and the steamship traffic to the north will mean that the owners of coal claims now have a market, and development work will proceed with great vigor.

The oil fields on the west coast of Graham Island are also attracting attention. One drill is now sinking a thirteen-inch hole at Tiahn Point. On ground held by the Northern Oil Company a quantity of paraffin oil exudes, and in all directions for many miles, oil shale, in place, from which tar and asphaltum exudes, can be seen. There is no doubt that vast beds of oil underlie the whole of the ground from Frederick Island to Otard Bay, as reported by one of the best geologists the world ever knew, the late G. M. Dawson, formerly head of the Geological Department, Ottawa. Prof. Ells, also of the Geological Department, examined the field, and, in placing his map and report before the department calls attention to the oil and other indications of the existence of the fluid in quantity along the west coast.

Of the timber wealth little need be said. Any observing visitor can measure its extent, while passing along the waterways, and add one million of feet to every foot in sight. Spruce, hemlock, yellow cedar and alder are the principal trees on the islands, and there are billions of feet waiting for the millman and purchaser. All

the timber limits have been staked, producing a revenue to the government of many hundred thousands of dollars annually. With good waterpower, an easy means of floating the logs to mills, and a market opening up along the line of railway, numerous sawmills will be in operation in the near future.

The agricultural lands would be developed more rapidly if the means of communication could be hastened. Along the east coast of Graham Island, from Lawn Hill to Masset, is a fine stretch of land, eighty miles in extent, on which more than one hundred pre-emptors are now located. Along the shores of Masset Inlet, on the



SAWMILL AT SEWALL.

east side, a large number of people have pre-emptions, between Masset and the Yakoun River. Along the Ain River and at Sewall, on the west side of the inlet, are a number of locations which will rapidly fill up with settlers. There is room in the interior for large farms, but it will be necessary to drain the land. In some places there are miles upon miles of treeless land which will require capital to have it drained, and this will all be brought under cultivation before many years.

The mildness of the climate should induce many dairymen and truck gardeners to take up sections of land on the islands, in a country where the long summer days give opportunity to work overtime and the mildness of the winter can be proved by the fact that the wild cattle on the island are the cattle turned loose by a farmer many years ago.

Without disparaging Vancouver Island, it is asserted that the climate of the Queen Charlotte group will compare favorably with that of the island to the south. The writer is free to express the opinion that the Queen Charlotte Islands have a better climate than that on Vancouver Island. This assertion is not made to belittle Vancouver Island. The lowest temperature ever experienced here was when the thermometer fell to four degrees below zero, and the snowfall does not last over a few days. Daylight hours of summer are from

3 a.m. to 10:30 p.m.; cattle graze the whole year round, and there is an absence of wild animals and pests that are productive of numerous ills.

There are other attractions which will go to inducing settlement on the islands, and among them must be considered the vast fishing beds along the shores. For the first time, this year, the two large canneries, at Naden Harbor and Aliford Bay, proved to the world that the salmon fisheries will be a factor in furnishing food for the millions of Europe. Since the commencement of the fishing season the fishermen have been restricted from fishing in the fresh-water streams. During the spring, this restriction compelled the men to fish in the deep sea, off Langara Island, where they obtained, by trolling, more than ten thousand cases of the King salmon. This does not include the salmon marketed for consumption in the home market and put up by the Indians for their winter food. Trolling for King salmon is an exhilarating sport. Each fisherman starts out in his small boat with a line and spoon bait. He rows here and there, drawing the line and bait, the latter flashing through the water until it attracts the attention of the fish. He springs for it and is hooked. A struggle then takes place between the fisherman and the fish. Unless care is exercised the fish will break the line, or release itself, by tearing off a portion of



WHALING STATION AT NADEN HARBOR

its mouth. The fish is allowed to dart hither and thither until tired with its exertions, when it is drawn to the boat and "landed." Weighing from fifty to seventy-five pounds, this, the largest of the whole salmon family, is one of the most beautiful fish in these waters. Some of the men engaged in the work captured twenty of these monsters daily, for which three cents per pound were paid by the cannery. The fishing for King salmon will be, in future, one of the attractions of the island. Two seasons ago the great traveler and writer, Seton Ker, was among the fishermen off Langara Island. He made an enthusiastic fisherman and promises to bring a colony of his sporting friends to the islands.

At the close of the King-salmon fishing the "humpback" run commences. So plentiful is this fish in the northern waters that the canneries could not handle the vast numbers brought in. At times the streams are polluted with the carcasses of those which ascended for the purpose of spawning. The cannery hands worked overtime during the run, but could not attempt to put up the thousands that the fishermen captured. Following this run the "coho" salmon starts. This fish takes to the "spoon," and is also captured in the

seines and gill nets. The price paid for the "coho" salmon is fifteen cents.

Off these islands are the halibut grounds which are considered the best in the world. Millions of pounds of halibut are exported in cold storage, giving employment to a large number of fishermen. Poachers from the United States and many fishing boats may be seen outside the three-mile limit, hauling in large numbers of the halibut, which weigh from twenty to three hundred pounds. On the completion of the G. T. P. railway, when a ready means of transportation will be open, the halibut of northern waters will be conveyed to the eastern markets in large quantities from the cold storage plants in Prince Rupert and on the islands.

Black and red codfish, which are now thrown away by the fishermen, will be shipped in the future, and the erection of oil-making plants will make valuable the large numbers of dogfish which swarm in Hecate Straits. The oil of this fish is marketable at eighteen cents per gallon—one dozen of the fish furnishing two gallons of oil.

In the streams the varieties of trout cannot be excelled. The Yakoun River is a sportsman's paradise. At the entrance it will afford game for the hunter in the way of ducks and geese, while the waters are





PIONEERING A NEW COUNTRY

full of trout of several varieties. Several other streams on Naden Harbor and Masset Inlet are good fishing grounds, and the camping facilities are excellent.

The launch owner will find Masset Inlet and Virago Sound two of the finest stretches of water on the continent. They are land-locked and run for many miles through the heart of the island. With tide-water running at the rate of five and six miles an hour, the boatmen make the forty miles from Masset to Denan Bay in a short time. There are now over thirty splendid boats on the inlets, and every owner of a location looks forward to the time when he will be the master of a gasoline launch. The Indians are expert builders of boats, and the placing of an engine in one of the craft is not expensive. The ownership of a launch is becoming a necessity as well as a means of pleasure.

On the east shore of Graham Island is a stretch of sandy beach, extending from Masset to Skidegate. In some places there are from fifteen to twenty miles along which automobiles may be taken, and where the opportunity is given to run twenty of the machines abreast. The hard-packed sand compares with the best automobiles drives in the world. The Provincial Government is now constructing a road to connect Masset with Queen Char-

lotte City, and, in the near future, one of the best of automobile roads, skirting along the shores of Hecate Straits, will extend for one hundred miles, from the north end of Graham Island to the southern boundary.

The tourist, seeking for grandeur of scenery, should pay a visit to the islands. There are mountain tops to explore, where the snow-line is but a few miles from the shores of beautiful bays. Juskatla, one of the prettiest spots, is a bay dotted with islands. Entering a narrow gorge from Masset Inlet, it extends for fifteen miles inland to the foot of mountain slopes covered with green verdure the whole year round. A few miles away, across Masset Inlet, is Ain River, running from a lake, with waterfalls and unexcelled scenery. From the head of Masset Inlet, and but five miles across a mountain, the wild west coast, with its storm-rent rocky shores, can be reached. Caves and pyramids line the coast, cut from the rock by the sweep of the sea. Islands show here and there, with wild birds flying into the caves and perching on the pinnacles. It is a veritable no-man's land, splendid in its location, and in possession of the vast army of sea-birds.

It would be impossible, in a short article, to show the natural resources and many attractions that will be brought to the attention of the visitor. The opening up



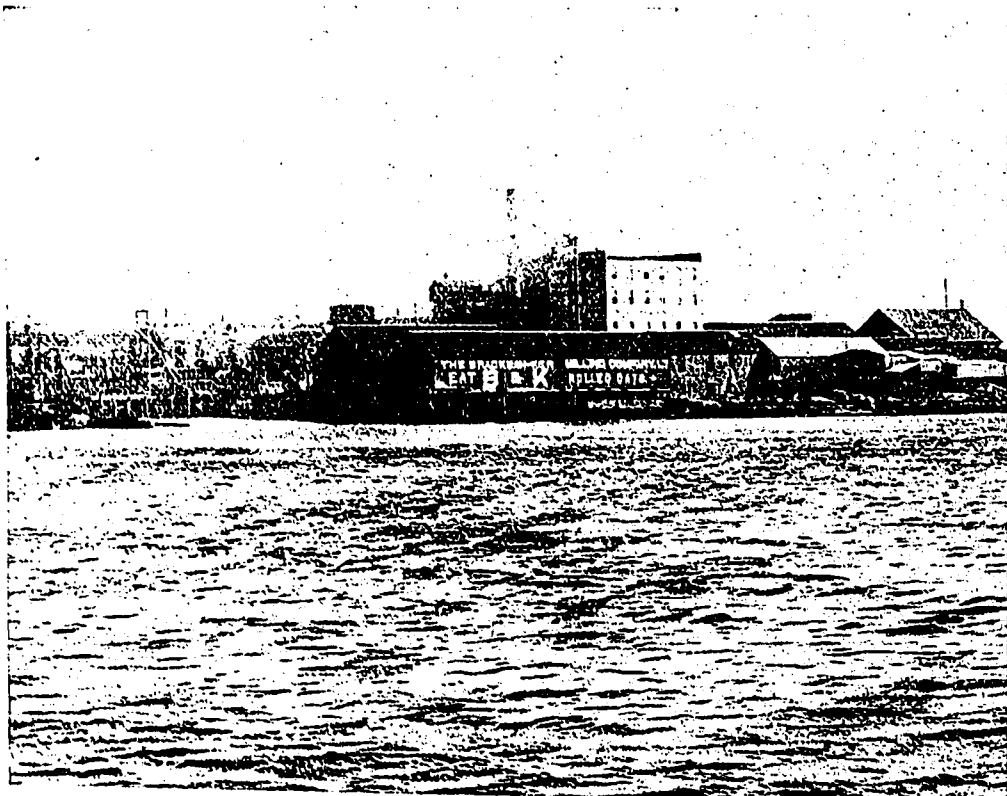


ICELANDERS BUILDING THE FOUNDATION OF THEIR FIRST HOUSE

of the country, following the completion of the transcontinental railway, is but a matter of time. The few hundreds of residents who have made their homes on the islands will then be augmented by the thousands seeking to better their condition, financially, and for health. The past five years have produced many changes. Settlers are preparing the soil for the time when the markets of Prince Rupert and other places will require their produce. Men are at work surveying, prospecting

and developing. Fisheries are being operated, and changed conditions are apparent on all sides. Already the islands are producing more revenue to the provincial exchequer than any other portion of the country.

This newest land is an asset that will be bound to attract attention, and those who have done the work of pioneering will not fail to see the Queen Charlotte Islands take their place as the most productive section of the province of British Columbia.



BRACKMAN-KER MILLING CO., VICTORIA, B. C.

# The Pioneers of Sunny Pond

By H. Mortimer Batten

HE was certainly in a most disreputable plight when he and his wife arrived at Sunny Pond, having in the meantime spent their honeymoon on the overland route from the Beaver Meadow. The end of his tail had been bitten almost through, so that the tip hung limp and useless, while at irregular intervals down his right flank patches of fur were missing. Nevertheless he was a fine young specimen of muskrat-hood, measuring twenty inches from tip to tip, while his slender, meek little wife, for whom he had done battle across the cedar swamp, was at least two inches shorter.

Why the two young rats had left behind them the gay and social Beaver Meadow for the seclusion of Sunny Pond I do not know, unless it was that, having made an alliance with one another, they felt independent of the rest of their kind. It was the month of April, and their unprojected arrival created no little stir. The old woodchuck, who spent his days in sunny bachelorhood on the extreme pinnacle of a rampike overlooking the pool, sat up with corpulent dignity and surveyed the newcomers. The mild-eyed blue and white cow, who belonged to a settler beyond the cedar swamp, stood fetlock deep in the limpid flood and eyed the new arrivals with casual interest.

It was clear from the moment of their arrival that the muskrats were there to stay, and after an hour or so they and their immediate neighbors had come to regard each other as part of the landscape. Let it be understood straight away that these people from the Beaver Meadow were associated with the foul living denizen of underground London by name only; they were peace-loving vegetarians, who wished for nothing more than to spend their domestic felicity secure from their foes.

Sunny Pond was not more than ten yards in width, overshadowed on the north side by a dense growth of aspen and poplar, in which the slender stems of the golden rod struggled for sunshine. It was one of

those hidden-away corners of the earth that Nature seems to have reserved for her peace-loving citizens, and once in the dim past an earlier generation of muskrats had lived and flourished there.

The new arrivals were mated for life, and forthwith proceeded to make the pond habitable. When they rested during the days and nights that followed no man can say. The home of the muskrat is *never* completed; there is always patching, restoring and finishing to be done, and that very evening they got to work.

The male appeared to possess little originality concerning the art of house-making. He merely imitated his wife, diving when she dived, and gathering, so far as was possible, exactly the same weeds as she gathered. Then he would pause to nibble at her face in the midst of an extremely difficult task, but these attentions she seemed to regard as part of the ordinary difficulties.

It was very convenient for the two muskrats that they were not the first tenants of the pool. They found a home already made for them, but it needed renovating and repairing. The hole was nine inches below the surface, and ran off into the hard clay bank on the south side of the pond. Evidently the water had stood at a higher level in the days of the previous occupants, for every musquash knows that nine inches of water above the entrance is not sufficient.

The female rat set to work and dug another hole nine inches lower. She dug vertically till it joined the existing passage, then with weeds and clay they plastered up the old hole till it resembled the solid bank, and passers-by would never have guessed that the front door of a musquash burrow once existed there.

Ere this task was completed the margin of the tiny pond was dotted over by the star-like spoor of the two rodents. And when that day the sun shone out on the sleeping forest with all the intensity of

newly-wakened spring, they relaxed their toils for an hour or so, and sat out on a partly submerged log under the trees, attending their toilets and at intervals nibbling each other's faces. At the far end of the pond stood a pile of decayed rubbish, which resembled the old nest of a loon, but which might have reminded the rats that they had yet "heaps" to do. So presently they left their cool retreat and swam off together towards the burrow.

The hole they had constructed was eighteen inches from the surface, and two inches from the bed of the pool, and in passing to and from it the rats would be compelled to cross a perilous stretch of shallow water, through which they could easily be seen by their foes—winged or footed—ere they reached the secure depths beyond. This was not safe, and at present they must devote all their energies to the task of making a secure retreat; for who could say what dangers lurked in the midst of this strange country?

They proceeded forthwith to dig a canal across the bed of the pool, extending from the mouth of the hole to the deep water in the centre. The canal was perhaps three inches in depth, and the making of it was no easy matter since the earth was bound with fibrous roots. It was not a straight canal by any means, and as the rats ran along it from the mouth of their hole their moving paws stirred up vast clouds of mud, which hid them from view, answering just the same purpose as the ink-fluid of the cuttlefish. Whether this was intentional or not I cannot say, but you would have found just the same thing across at the Beaver Meadow.

The rats had now a safe retreat, from which they could pass unseen to the secure depths of the pond. They could dive from their home and run along the bottom of the canal, creating neither sound nor ripple, and anyone peering into the water would have seen only a muddy cloud that marked their course.

But by no near means were their toils completed. The interior of the burrow required attention. It was provided with but one entrance—that below the surface—from which the subterranean passage extended almost vertically till safely above water-level. Here it widened out into quite a spacious chamber, which the previous occupants had evidently used as a

dining-room, for the floor was still littered with husks and bark. The room was nearly two feet in width, and from eight to ten inches in height. From it a second passage led into the bedroom—a similar chamber, lined with fusty grass and moss, which certainly needed renewing. Also the ventilating shaft was in bad repair.

It will be readily seen that, since the only entrance to the burrow was below water-line, a ventilating shaft of some sort was necessary. This the previous occupants had made by constructing a vertical hole from the centre of the bedroom ceiling—a hole so small that even a weasel would have had difficulty in squeezing down it. The outlet (or inlet) of the shaft had been hidden by the gnarled roots of the rampike on which the woodchuck dwelt, and was no more conspicuous than a mouse hole, for which it might easily have been mistaken.

Since then, however, the rampike had rotted away, and the mouth of the shaft, becoming exposed to the weather, had washed larger and larger, till today the very roof of the bedroom showed signs of caving in. This was quickly repaired from the interior, the rats diving and bringing up some of the clay they had dislodged in making the canal. The shaft was partly blocked, and the ceiling of the chamber daubed and plastered, but the bulk of the work had to be done from outside.

Working outside was dangerous. One loses count of days and nights during those weeks of bustle and activity, but I know that it was in the glare of the sun that the rats repaired the exterior of the shaft. For it is during the hours of darkness that the killers are abroad—the ghostly, silent-winged owls, passing like spectres of death through the underbrush; the lightning-darting marten, one of God's most beautiful and most unlovable creatures; the fisher, the short-tailed weasel and the dreaded mink.

The male rat mounted sentry while the female worked, and while the old woodchuck objected vehemently to their intrusion. At first he seemed inclined to fight, but the rats gave him so little encouragement that he fell asleep in the midst of it.

The task at first presented difficulties, but finally proved most simple. Instead of daubing and patching the crumbling shaft, the female merely buried the whole

dilapidation under a vast pile of sticks, gnawed to convenient lengths, and laid criss-cross so as to admit the air and keep out the weather. When the pile was complete it resembled a crow's nest that had fallen from the trees, but in a day or two it was comfortably screened by the rank, quick-growing vegetation.

It would seem now that the bank dwelling of the muskrats was finished, and all that was necessary for the immediate future was to re-line the bedroom. This they did that same afternoon, for they were working against time—the male gathering coarse grass and swimming under water with it so rapidly that there was scarcely time for it to get wet, while the female stuffed her cheeks with dry moss, gathered from the tree roots, and in this manner kept it dry for the lining of the nest.

During the whole of these proceedings the rats had worked side by side, seldom more than a yard apart, and that golden May evening they rested from their toils. They sat on the partly immersed log, nibbling each other's cheeks or basking idly in the pale sunshine, and one wonders whether the peace and solitude of their hidden-away little world entered into their souls, to brighten darker hours with fragrant memory. It was a long-lingering twilight, vermilion, gold and crimson, that shone blood-red upon the pool, interwoven with shadows dark as ebony.

After this we lose sight of the female for a long, long time. She and her husband lived their lives apart. For the male these were idle, sunny days—inspired by happy prospects, perhaps, which may, or may not, have helped to lighten his desolation. He was an ideal father, in that he kept away from the nursery altogether while his children were blind and helpless, instead of eating them during his wife's absence, as other members of the family, after which he is ruthlessly named, might have done.

Where he lived I do not know. Perhaps he spent his evenings in social intercourse with the bachelor woodchuck; perhaps he was allowed to sleep in the dining-room. But I am rather of the opinion that he lived the life of a vagabond and an outcast.

Had he taken a proper interest in the world surrounding him the time might

have passed lightly enough, for the whole woods were responding to the wakening touch of spring. From the cedar swamp sounded the persistent purr of spruce bugs, and the low, plaintive call of the grouse bird. Partridges drummed in the thickets, and a vast and wondrous assortment of insect life crawled from the bed of the pond into the rushes, there to leave behind its aquatic garb, and take on semblances more wonderful. Bright crimson and green dragon flies, that buzzed hither and thither over the water, or darted, hawk-like, to snatch up some morsel of insect life and devour it as they flew. A multitude of strange things filled the air—a world so vast and minute, so perfect in every detail, that one wonders how the Creator of all things comes to know them each by name.

Every living creature the spring affected in some way or other. The old woodchuck, as though aware that his sedentary mode of existence was more inducive to corpulence than longevity, took to climbing up and down the rampike, with many laborious grunts, for hours on end.

The little whitetail deer, whose mottled wide-eyed fawn was hidden under a wind-fall not a hundred yards away, heeded not the musquash as he sat on his favorite log, when each evening she came down to drink. The peace-loving woodland folk know each other on sight, but one evening while the deer drank, and while musquash was scratching his ear on the log, a rending and crashing of mighty branches sounded from the cedar swamp.

With a shrill whistle of warning to her fawn the deer vanished like a wreath of smoke, and out of the shadows lumbered a fur-clad omnibus, heading straight for the pool.

It was a bear, a morose old male, driven half mad by the deer flies and mosquitos. With a mighty splash he dashed into the pond and lay there, wallowing and snorting throughout the hours of darkness.

At length the female again put in an appearance. She broke surface dragging with her a tussling, kicking ball of fur, and in the centre of the pool left him to fend for himself. The little one struggled gamely to the bank and sat there, shivering and blinking. Presently the mother reappeared with a second youngster, then a third and a fourth and a fifth. What

the male thought about it I do not know, but ere a quarter of an hour had elapsed eight young rats, each of a soft, baby roundness, were distributed, shivering and unhappy, about the margin of the pond. Four of them had joined their father on the log, and the other four looked as if they wished they were there, but feared to make the plunge.

Soon the young rats could swim as well as their father or mother, and in a very short time their babyhood days seemed to have slipped from them. They became infused by the habitual industry of their parents. No family of boys and girls were more industrious, or lived together in more perfect harmony. Day and night now, the silence was broken at intervals by the sharp "smack" alarm signals, which were given at the faintest unaccustomed sound.

When the two parent rats dwelt alone this smack system of signalling danger was of little practical use, beyond the possible likelihood of its startling away an intruder, but now its full value became manifest. Often when the male rat was mounted sentry on the log, his wife and some of the children were swimming below the surface, and any ordinary alarm would not have reached them. The sharp smack, however, conveyed the tidings not only to those above the surface, but also to those under it, and preventing them from rising haphazard.

As the young rats grew the pond became somewhat crowded, but the muskrats were not alone in this respect. The family of the two old racoons, that dwelt in a bass-wood near, evidently exceeded all anticipated dimensions, with the result that the racoons were compelled to enlarge their home range. Thus one evening they paid a visit to Sunny Pond—a barred and blotched assembly of ghostly figures, appearing in single file from out the darkness.

Smack! smack! smack! went the tails of the muskrats, for the racoons were not to be trusted; and from a safe retreat the rats watched their pibald neighbors groping with delicate forepaws along the margin. Presently a dispute arose over a maimed and struggling frog, and in the midst of it one of the young racoons was bundled into the water by his brothers and sisters.

This was altogether too much for the father musquash. Diving, he attacked the young racoon from the rear, and having

completely vanquished him, a noisy but bloodless battle ensued between the rats and the racoons, the wide expanse of the pond in between them.

At this period a fresh spirit of industry suddenly possessed the female, and she it was who started upon their winter home, her husband and the family following her example. Under the shelter of the tree, just beyond the reed bed, where the water was about twelve inches deep, they began to collect together a heap of mud and decayed rushes. As the collecting process went on the water surrounding the heap was increased in depth accordingly, the debris being dragged from the bottom, till eventually a round island was formed, surrounded by a moat of deep water. This island was about two feet in width, and since the building fever now possessed the whole family it grew visibly each day, till at length it stood three feet out of the water.

When this stage was reached the two adult rats got busy on the interior, gnawing a vertical passage into the dome from twelve inches or so below the surface. This they continued till safely above high water-level, then in the centre of the dome they hollowed out a chamber, two feet in width and eight inches in height. There was no need for a ventilating shaft, the roof being porous enough to admit sufficient air together with that the rats carried in and out in their fur.

The roof, in the meantime, required constant attention to prevent it from falling in, and in the midst of these proceedings the old cow strolled down to the pond, and with her usual nonchalant air proceeded to eat the whole structure.

In spite of his peace-loving tendencies the old rat was a fierce and valiant fighter, and swallowing his dread of the blue and white animal with the incomprehensible voice he taught that cow, once and for all, what she was up against.

And once again, ere the fairy tints of autumn faded into the sombre grey of winter, he was called forth to do battle for his family. This was a life and death affair: for the young rats—those that lived through it—it was the dawning of terror.

One dark sultry night a strange sound issued from the direction of the rampike—a ghostly and awful sound, which struck terror to the hearts of the muskrats. It

was a noise of scuffling—of an asthmatical and over-fed woodchuck gasping for breath, and attempting to scream with that which he did not possess; followed by a snarling, worrying, desperate tussle.

The old muskrats and three of the young dived for the bank burrow, which they still regarded as their safest retreat. The remaining five froze where they were—too terrified to close an eyelid.

The terror smelt them out one by one—darting upon each in turn with a movement too swift to follow. He was a fiendish brute—half cat, half weasel, his devilish face disfigured by scores of scars and scratches. He killed the young rats and left them, as he had killed the whole family of racoons—animals twice his size—and the woodchuck.

Next he raided the dome and found it empty. He sought the bank burrow and found it, as he found most things he sought. Evidently the male rat heard him coming and was there at the entrance to meet him. A strange and awful battle ensued.

It lasted all night and all next day. The fisher, for it was he—the fiercest and most terrible killer Nature has seen fit to inflict upon her solitudes—was mad with the lust to kill. He was four times the weight of the rat, and ten times more powerful. He could outrun the hare and outclimb the squirrel, but fortunately he was not entirely at home in the water.

The rat was fighting for life and home, and had the walls of the burrow to protect him. They fought till the breath of the pekan gave out, then simultaneously they rose to fill their lungs. Simultaneously they went down again, and thus, hour after hour, the battle went on. Always the pekan found the rat awaiting him, and had he possessed any notion as to when he was beaten he would have abandoned the battle in its early stages.

When dawn came the pekan, mad with fury, began to search round for a more vulnerable point, and at length discovered the airshaft, by which he forced an entrance. The rats escaped under water, but remorselessly the terror pursued them, and now it was the female that held the field.

Limp and almost lifeless the male rat lay under his favorite log, only the tip of his nose out of water, and each time the pekan drew near to it the female smacked the water with her tail, and led him off

elsewhere. It was a game of hide and seek, played throughout the sweltering heat of that awful day, with death as the issue.

Had it not been for the old cow there is no doubting how it would have ended. With the twilight shadows she strolled down to the pond, the drowsy tinkle of her bell ringing strangely through the woods. The fisher heard and crouched to meet her. She stamped her hoofs and shook her head defiantly, filling the whole woods with the metallic tinkle. What became of the fisher one could not say; he vanished unseen, and only a far-off scratching in the cedars told of the direction he had taken.

A few more days of sunshine, during which the muskrats completed their preparations for winter. Here and there about the pond they constructed floating rafts of reeds, which they anchored into position with other reeds. Into the dome they gnawed narrow passages and verandahs level with the water line, and here they basked, or ate the food they had secreted in their pouches while foraging. The old rat still preferred the submerged log, and had one approached it a faint scent of musk would have been distinguishable, for it was here he exercised the strange habit from which his family has derived its name. What was the object of the musk I do not know, unless it was to convey to other rats the intelligence that "this claim is already staked."

The sun was going south, the nights were becoming long and chilly. Inside the dome was as cosy and snug as a New York clubroom. One evening a blizzard swept the cedar swamp, followed by an intense calm. When morning came the pond was frozen over, and thereafter the ice increased steadily in thickness day and night. The iron hand of winter was laid upon the land. Where now the busy, bustling life of a few weeks ago? All was silent.

Had the rats constructed the entrance passages of their homes nearer to the surface they would have been frozen in, but as it was they were able to pass to and from under the ice, and conduct their affairs in the ordinary way. Nor were they prisoners in the pool, for the floating rafts, which moved constantly in the breeze, helped to keep the water open in their immediate vicinity.

Half the winter had passed uneventfully, when one day an Indian, thin as a January wolf, paused on the bank of Sunny Pond. He laid down the bundle of traps he was carrying, and from under his parki drew a hollow wooden tube, some two feet in length. Then, silently as a lynx, he stole over the ice towards the dome.

He stood above it and raised the hollow tube. With a quick movement he struck downwards, and a long steel spear shot from inside the tube, penetrating the dome. There was a muffled squeal, and as with nimble fingers the Indian re-charged his weapon, a dark shape darted from the foot of the dome, clearly visible through the wind-swept ice. It was quickly followed by a second and a third and fourth, then down went the deadly hollow tube once more. The spear penetrated the four inches of ice like matchboarding, pinning the fourth rat to the bed of the pond.

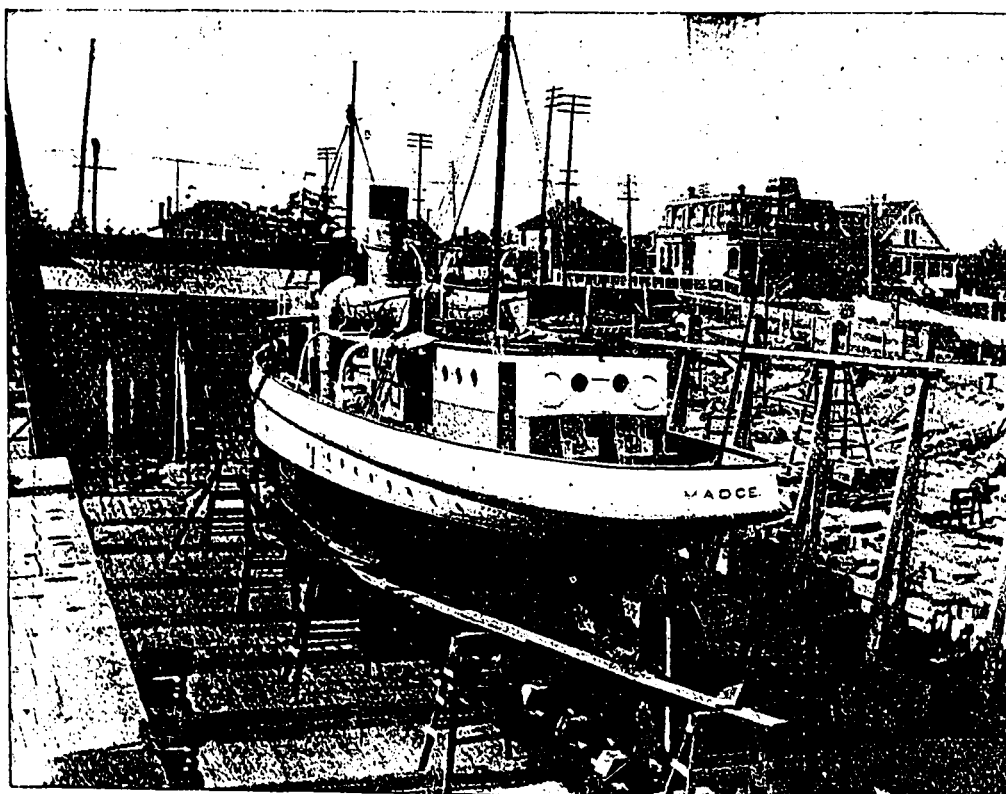
The Indian kicked open the dome and took from it the limp body of the rat that had died while it slept. He made a hole in the ice and procured the second, muttering something about "heap good business. Both young rats." Then, having

poured some magic dope on each of the floating rafts, he cunningly secreted his traps under them.

But next day the three remaining rats—father, mother and one of the young—decided to leave the place of so many sorrowful memories, upon which, it seemed, the sun had ceased to shine. They turned their faces towards the perilous overland route.

Through the cedar swamp ran a rough tote road, and it was here that the one remaining cub did a foolish thing. Scared into desperation at being so far isolated from his beloved element, he tried to hold up a timber drag drawn by five powerful horses and manned by three stalwart lumberman. The leading horse swerved aside and the driver looked up to see a miserable little musquash, all fangs and bristled, holding the centre of the roadway. Quietly he got down and dropped his jacket over the terrified creature, with the muttered remark: "I'll take you home for the kiddies, my sonny."

Thus the parent muskrats returned to the place from whence they came—alone, as they had left it.



VICTORIA MACHINERY DEPOT, VICTORIA, B. C.

# Victoria as a Great Pacific Seaport

WITH the completion of the Panama Canal practically assured for the year 1915 the world's eyes are being turned to the Pacific Coast with the utmost curiosity and interest. Here the future Armageddon of commerce seems likely to be fought out, and here the modern Tyres and Sidons seem most likely to rise in the years to come.

From San Diego to Nome there is a feeling of expectancy in the air along the Pacific coast-line, and in nearly all the important ports along the coast there has been marked activity in preparation for the opening of the canal.

Victoria, the capital city of British Columbia, situated at the southeast end of the Island of Vancouver, close to the point of junction to the Strait of Georgia and the Strait of Juan de Fuca, has a commanding advantage in the matter of trade and commerce with parts of the United States and Oriental ports; and the fact that it is the nearest Canadian port to the Panama Canal is certain to very greatly increase its tonnage when this great waterway is finished.

Long ago, in the Hudson's Bay Company's times, Victoria was easily conspicuous as a great natural port. She has always been supreme in the prime essentials for a world-port, to wit: Nearness to the ocean, freedom from fog, security in port for vessels, and safe and easy sailing to the ocean roadsteads. She had already built up a very considerable trade, both in freight and passenger traffic, before the question of the United States taking up the trend of the enterprise dropped by De Lesseps had been contemplated. Her trade with the Orient, and her trade with the United States and South America, was the most important feature of her commercial life.

Steadily each year the business of the port grew. The tonnage of vessels from 1903 to 1912, while fluctuating in the first few years, has since 1909 advanced steadily, and the table of figures showing this increase from 1909 is significant of that fact. In 1909 the tonnage of vessels at Victoria was 4,826,869; in 1910, 5,673-

697; in 1911, 7,307,274. In the year 1912-13, ending March 31, 1913, the tonnage was 9,046,113. The increase in the tonnage of vessels for the past ten years has been 168.29 per cent. Import duties have increased steadily ever since 1908, as evinced by the subjoined figures:

1908	.....	\$1,029,296.00
1909	.....	1,240,612.63
1910	.....	1,544,203.63
1911	.....	1,984,893.62
1912	.....	2,618,025.13

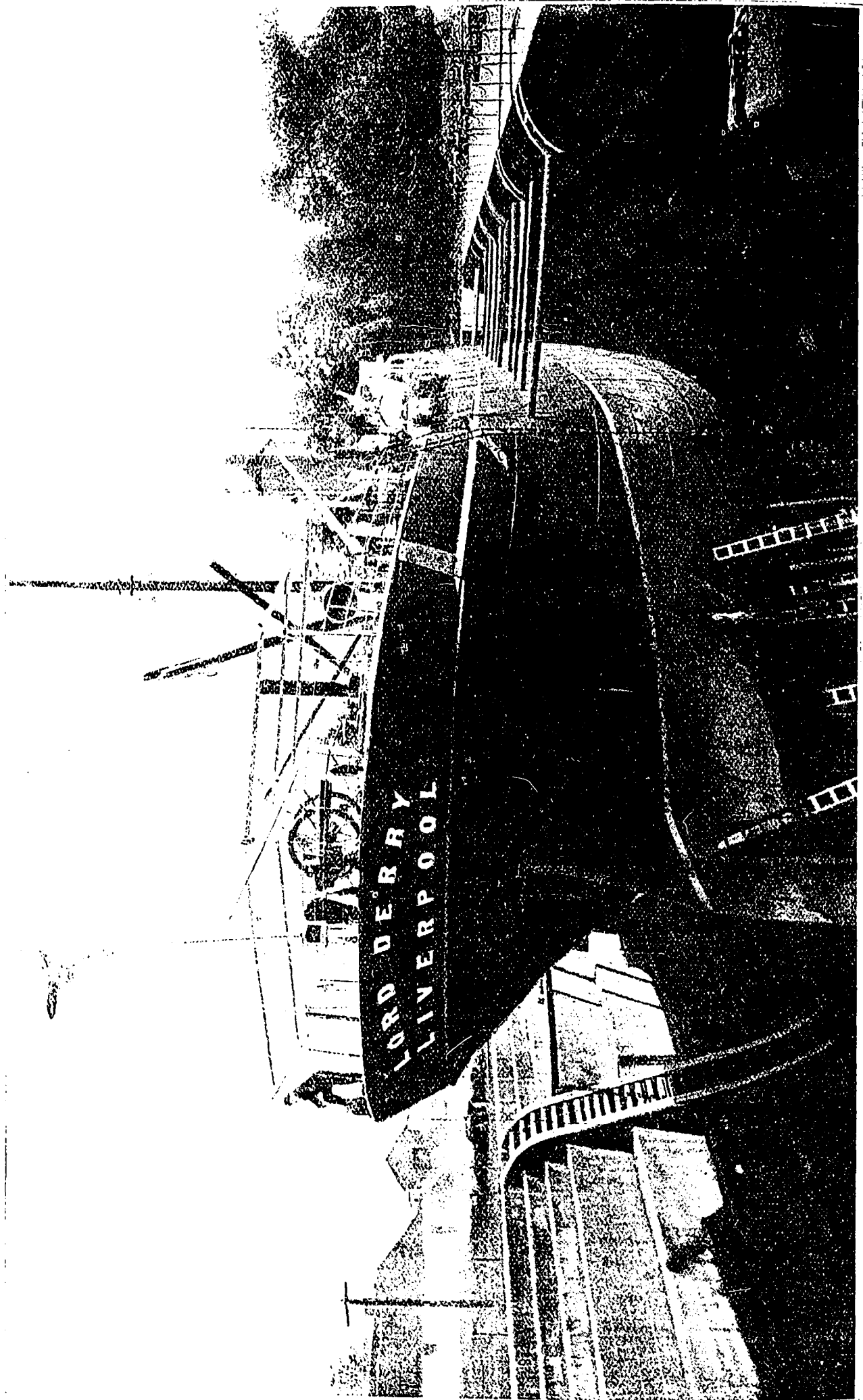
The value of the imports for the year ended March 31, 1913, totals \$11,409,033. While there are no figures available for exports there is an immense volume of this class of trade handled by this port of Victoria.

In the act of preparation for the opening of the canal, Victoria will have crucially important and extensive additions made to both the outer and inner wharf, together with a Dominion Government dry dock at Esquimalt Harbor, which is practically one with the city of Victoria, the adjoining municipality of Esquimalt being to all intents and purposes a portion of Greater Victoria.

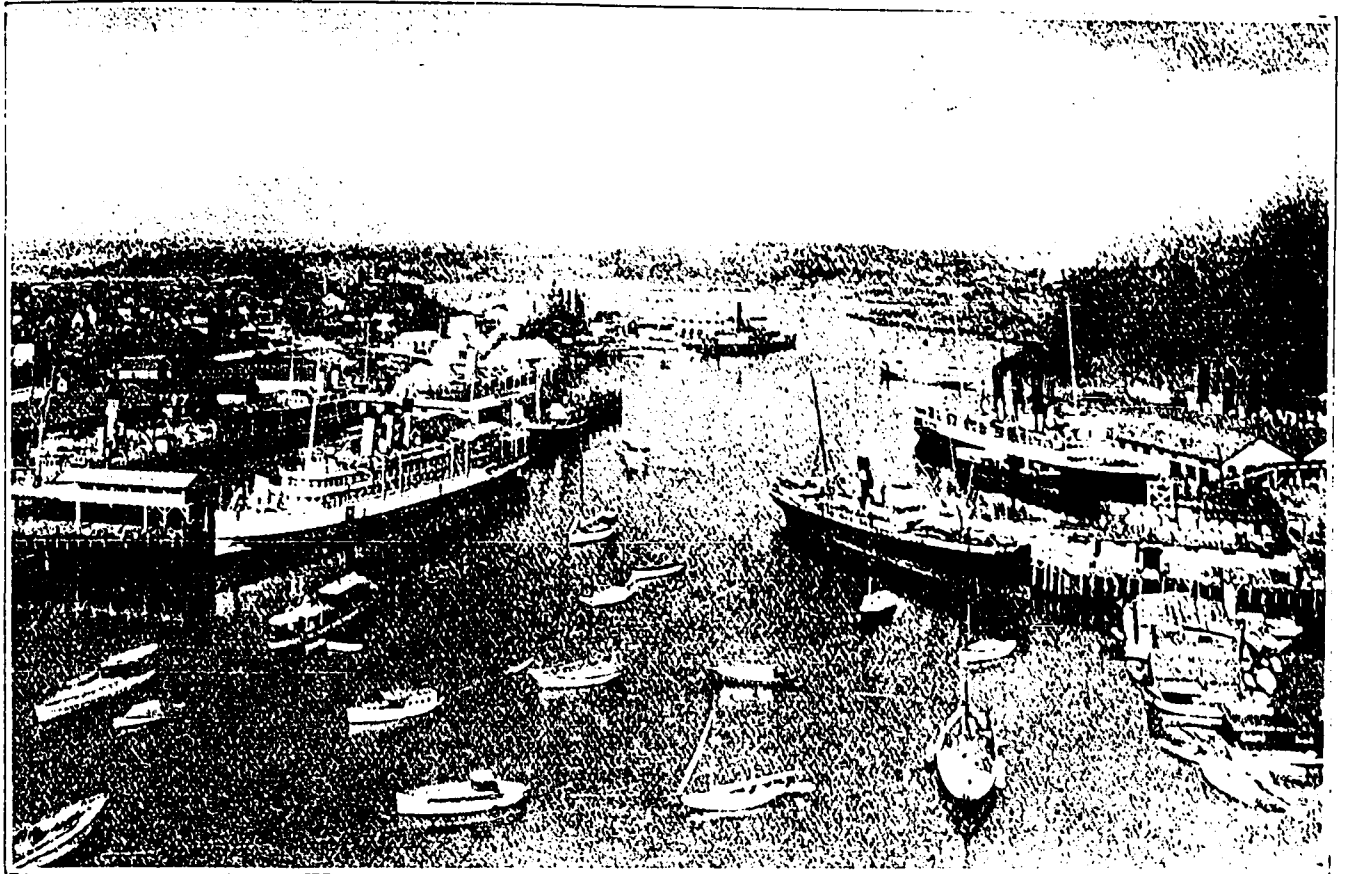
The additions to the outer wharf include the immediate building of two immense piers, together with a breakwater, and the sum of \$2,300,000 for the initial outlay as a preliminary expenditure, indicates the magnitude of the undertaking. These piers will be constructed of concrete, with spacious warehouses; and modern cargo-handling facilities will be built to enable the cars to load and unload their cargoes at the docks.

A breakwater of stone, with concrete blocks surmounted by a concrete wall 2,500 feet in length, will extend westerly from Ogden Point. The concrete piers will be of 1,000 feet in length, and there will be room for close to thirty of the largest ocean-going craft on the final turning over of the work. To connect the harbor with the railway terminals on the 112 acres set aside for that purpose on the former





SS. LORD DERBY UNDERGOING REPAIRS AT ESQUIMALT DRY DOCKS



INNER HARBOR, VICTORIA, B. C.

Songhees Reserve there will be direct rail connection.

The outer harbor comprises an area of nearly 300 acres of water, varying in depth from thirty to eighty feet. The breakwater, which is now being constructed under the Dominion Government's plan, will not only effectually shelter all the piers to be constructed under the present arrangements, but all piers hereafter to be built to the north, and, in addition, will protect the entrance to the inner harbor, thereby proving of incalculable benefit to the great number of coasting vessels entering and departing from the inner harbor.

Additional piers are contemplated besides, and one of these will be constructed directly against the breakwater. When this outer harbor is finally completed it will be second to no harbor on the coast as to modern and ample facilities for handling freight and passenger traffic, and it is destined to work a revolution in Victoria's already great trade as an ocean port.

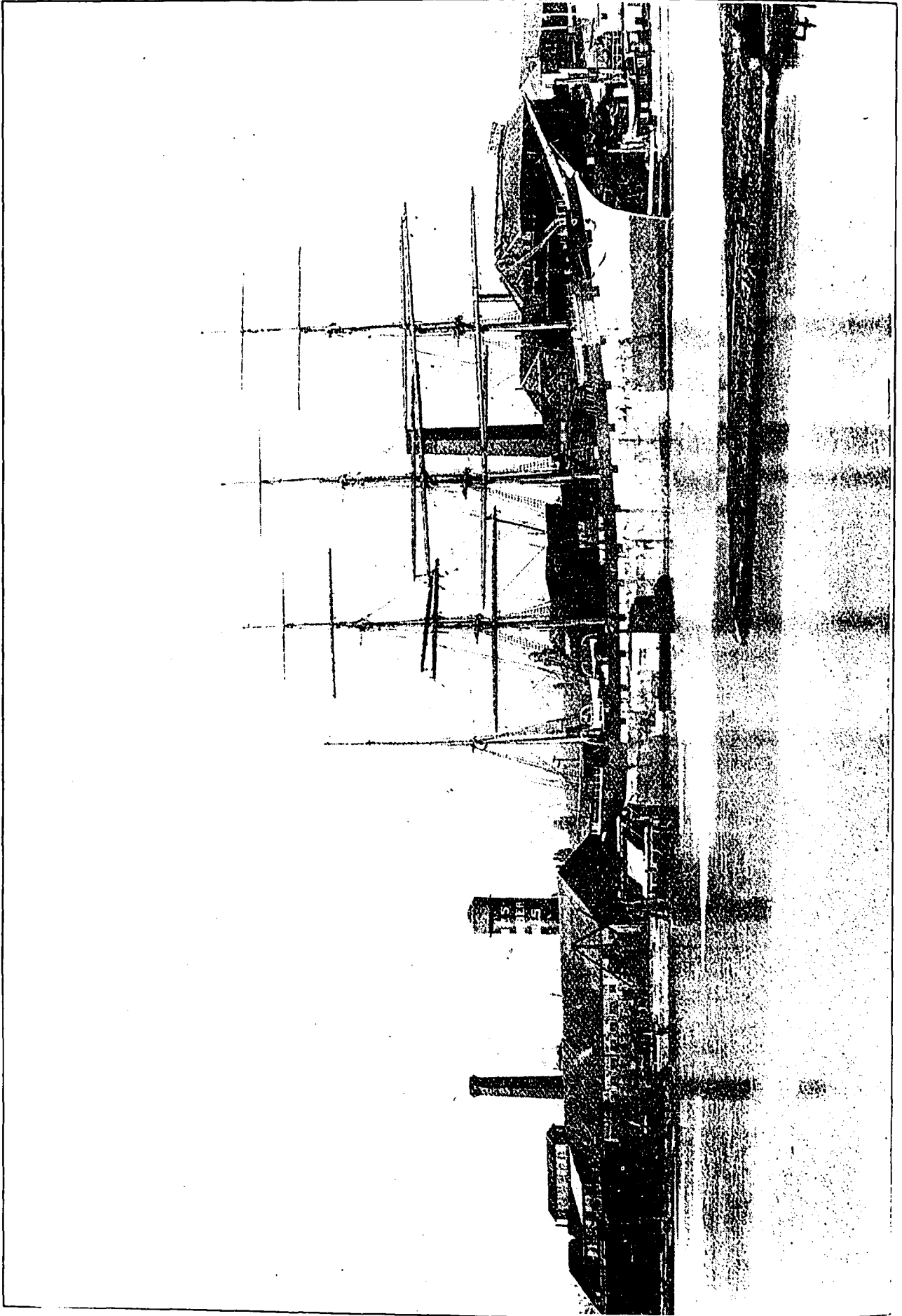
The completion of the Panama Canal reduces the distance from Victoria to Europe by 6,640 miles. The old route was 14,470 miles long, and the consequent reduction very nearly cuts the distance in half.

That this will result in a most remarkable difference in the present trade with

Great Britain, and of all Europe, cannot be for a moment denied.

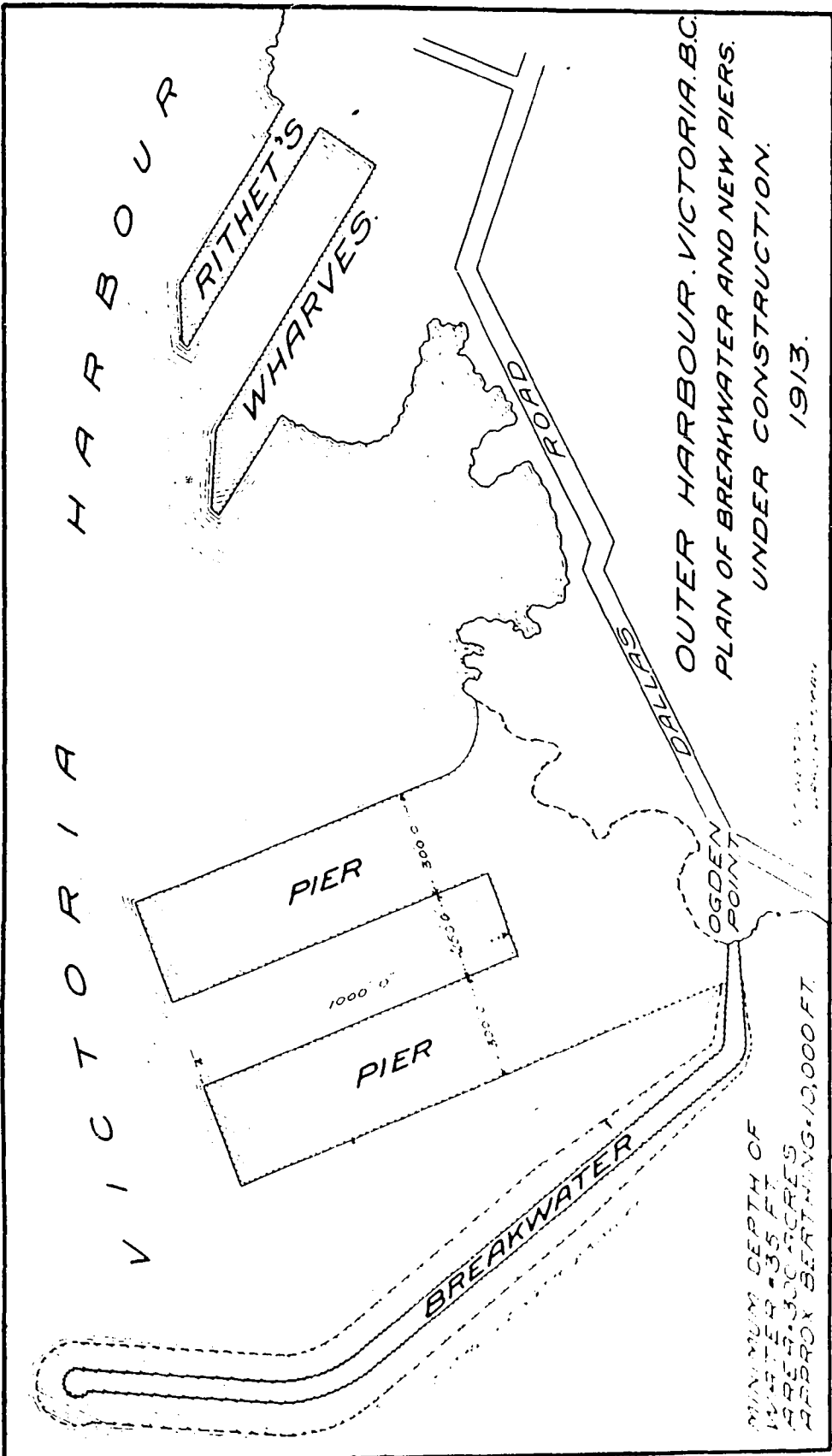
The present indeterminate status of shipping in the Panama Canal, is, naturally enough, the stumbling block to accurate calculations in this respect. It can be confidently predicted that the best minds in the United States are in favor of a strict adherence to the precepts of the Paumotu-Hay Treaty. It is an open secret that President Wilson himself is not in accord with any attempt to modify or tamper with the terms of this treaty. It is realized, also, by the most influential newspapers of the United States that any attempt to change the agreement embodied in this treaty would react in national disaster to the credit and standing of the United States in the councils of the entire world. One of the most conspicuous champions of a rigid adherence to the Paumotu-Hay Treaty is no less than Senator Elihu P. Root, whose attainments as a constitutional lawyer are second to none in North America, and whose long experience in public life, and spotless reputation, lend additional weight to his solemn protests in the United States Senate against any discrimination being read into the spirit and letter of this memorable obligation.

The inner harbor of Victoria is also receiving the attention of the Dominion



BAROU YRSHERE LOADING 1,832,834 FEET OF LUMBER AT CANADIAN-PUGET SOUND LUMBER COMPANY'S DOCKS, INNER HARBOR, VICTORIA

VICTORIA HARBOUR



OUTER HARBOUR, VICTORIA, B.C.  
PLAN OF BREAKWATER AND NEW PIERS.  
UNDER CONSTRUCTION.  
1913.

PLAN OF NEW OUTER HARBOUR AT VICTORIA, B.C.

Government, and the dredging and removing of rock obstructions in the channel is being proceeded with apace. The roar of dynamite echoes sullenly from the enveloping waters, the dredges steadily apply their shovels, and week by week and month by month the improvements of the inner harbor goes steadily on.

The fleet at Victoria at both the outer and inner harbors has increased steadily in number and importance during the past few years, and vessels now come and go by the hundreds when ten years ago they were "like angels' visits, few and far between."

The Dominion Government's new drydock at Esquimalt Harbor will be the last word in modern drydock building, and will be one of the three largest in the world. Esquimalt Harbor has been said to be the second finest natural harbor in existence, and whether or not that be a statement based on actual fact, it cannot be denied that it is a truly magnificent harbor in every respect; and one which is going to take a high position and wield immense importance in the new trade era which will be brought to the Pacific Coast by reason of the opening of the Panama Canal.

Shipbuilding, already established at this harbor, is certain to receive a decided impetus through the building of the drydock; and it is safe to assert that, with the raw materials close to hand on Vancouver Island, Esquimalt will one day rival the Clyde in its ship-building operations. This is not to assert that the metamorphosis will occur at once, but to declare that in the course of events this will come to pass. To build ships as cheaply in Canada as they are built in Great Britain there must be industrial conditions in Canada which will guarantee the turning out of vessels as cheaply and efficiently as they are at present being turned out in the European shipyards. Great industries like the Krupp armour works, and the shipyards of the Clyde, are the result of centuries of experiment, experience and gradual upbuilding. The future shipyards of Canada will have to be built from the bottom up, the same as the Old Country shipyards, and not from the top down.

Waterfront industries around the outer and inner harbors of Victoria are many and important, but future years will see these

by the scores where they are now only comparatively numerous. The Songhees Reserve, when it finally reaches its commercial zenith, will be packed with factories, and connected by rail with the outer harbor, thereby affording both easy and quick transit to Oriental and European ports. By reason of the improvements in the inner harbor, the same facility will apply to local shipment.

No one coming to Victoria and taking a dispassionate and even rigid survey of the situation can help but be impressed with the fact that this is going to be a very great world-port on the Pacific. The access to seawater is broad, clear, short and unobstructed. The freedom from fog is greater than any other port on Canada's western coast. The Dominion Government's improvements to the outer harbor will not only afford absolute safety to vessels lying in that port, but will afford as well complete immunity from danger to the shipping in the inner harbor.

The improvements to the inner harbor facilitate in a tremendous degree the vast-growing traffic of this portion of Victoria's waterway; and the dual-joined harbors, the inner and outer harbors of Victoria, will combined make as nearly as possible an ideal Greater Victoria Harbor when considered in conjunction with the superb harbor at Esquimalt. With the Dominion Government's drydock established at Victoria any ship afloat can be repaired, and with the inevitable selection of Esquimalt as the naval headquarters, in case of any war, or in the event of the British admiralty placing the Pacific Coast unit in Canadian Pacific waters, the importance of Victoria as a world-port will be further emphasized.

When the canal is completed there is bound to be a great change making for the growth of Victoria as a seaport and a city. It is the first and last port of call in Canada on its western shores, and it will be, in due time, thoroughly equipped for whatever volume of trade may be launched through the "Big Ditch."

It was written formerly "All roads lead to Rome." To paraphrase this saying it may be set down, in the spirit of prophecy founded on the irresistible trend of events: "All ships sail for Victoria."

ERNEST MCGAFFEY

# The Oolachan or Candle Fish

By Hilda Bland

MUCH has been written about the fish of British Columbia waters. From the whale to the smelt they are all interesting, and have their value to mankind.

During a trip up the coast of North British Columbia I heard many references to the oolachan, or candle fish, which aroused my curiosity. The information regarding this fish, which I obtained from various sources, may be of interest to others.

The first fishing expedition of the season is up the Naas River in quest of this small fish, which runs up the northern rivers, principally the Naas, to spawn, during the months of March and April.

Though the old-time custom of catching and cooking this fish are obsolete, it has lost nothing of its popularity with white man and red. It is indeed a most palatable fish, and the grease which is extracted from it forms a staple food of the Indian.

The advent of the oolachan in the "old times"—as the Indian speaks of the day before the inundation of the predatory white man—was salvation to hundreds of starving people, for it came just at the time when the somewhat improvident Indian had arrived at a state of famine. Hence the reason for its name, Allamaud-Kum, meaning "Salvation," being given to it by the Indians.

Should the run of oolachans fail, hundreds of Indians literally die of starvation. Indeed, the Indians from the interior often died on the trail as they journeyed down to the Naas, so little food had they left of their winter store.

The right of fishing on the Naas was held by the tribes who lived near the river, the interior Indians, chiefly the Kiti Ksheans, the Haidas, from the Queen Charlotte Islands, and the Tsimpshian, from lower down the coast, having to pay for this privilege. The sum paid by the head of each family to the Naas chief was in furs equal in value to thirty or forty dollars.

The fish, for its gracious qualities, was

held sacred by the people, and extreme reverence was displayed in the catching and cooking of it. The manner of cooking was a ceremonial, every part having a deep meaning. The fire over which it was cooked was built of spruce bark, which gives great heat, but little flame. To coax the fire to a blaze by blowing it was forbidden, as it would surely bring down the fury of the "north wind," and only a traveler up the Naas in winter can tell what a dire calamity that would be.

The wife of the chief of each tribe held the sacred office of cooking the fish. To do so she was attired in a costume kept for the purpose, head gear, cape and gloves being made of the fibre of the inside of the cedar bark. The oolachans were placed horizontally on a rack over the fire—to string them up was an insult to the deified fish. The whole tribe assembled around the scene of operations, and no frivolous talk was permitted; a deep, solemn, silent gratitude pervaded the atmosphere. Doubtless when the fish was served the Indian showed his appreciation in a very practical manner. For the remainder of the day no one was allowed to drink water, the tradition being that if this were done a rainy season would follow.

The first great haul was for immediate use, but the later catch was kept for extracting the oil. These fish were left until they were in an almost putrid state and then placed in boxes with hot stones until the oil oozed out. The boxes, several of which I have seen, show clever workmanship. They are made of cedar wood, the different parts being very skilfully notched together. The outside is carved.

The Indians stayed on the Naas until the second catch had been rendered down and then proceeded homeward, carrying their boxes of grease with them.

Between Hazelton and the Naas River is a trail, some hundred miles long, known as the "Grease Trail." It was along this trail that the Indian from the interior

trudged with his burden of oil. By this time the summer was fast approaching and the grease was in liquid form. No wonder that as he staggered along he left behind him a slippery pathway, from which the trail takes its name.

At Port Essington the Indians are giving serious consideration to a smokehouse. The little oolachan will be brought down

from the Naas, smoked and shipped by the Grand Trunk Pacific across the continent, and will doubtless be as popular a breakfast dish in the east as in the west.

United States analysts say the oolachan oil is purer than that of any other fish and of greater medical value. Rightly have the Indians named this fish "Alla-Maud-Kum"

## The Song of the River

*Born on the hills, thy voice, with early glee,  
Most sweetly sounds when nearest to its source;  
As babbling infants, pure, unfouled and free,  
Breathe most of Heaven in their earliest course.*

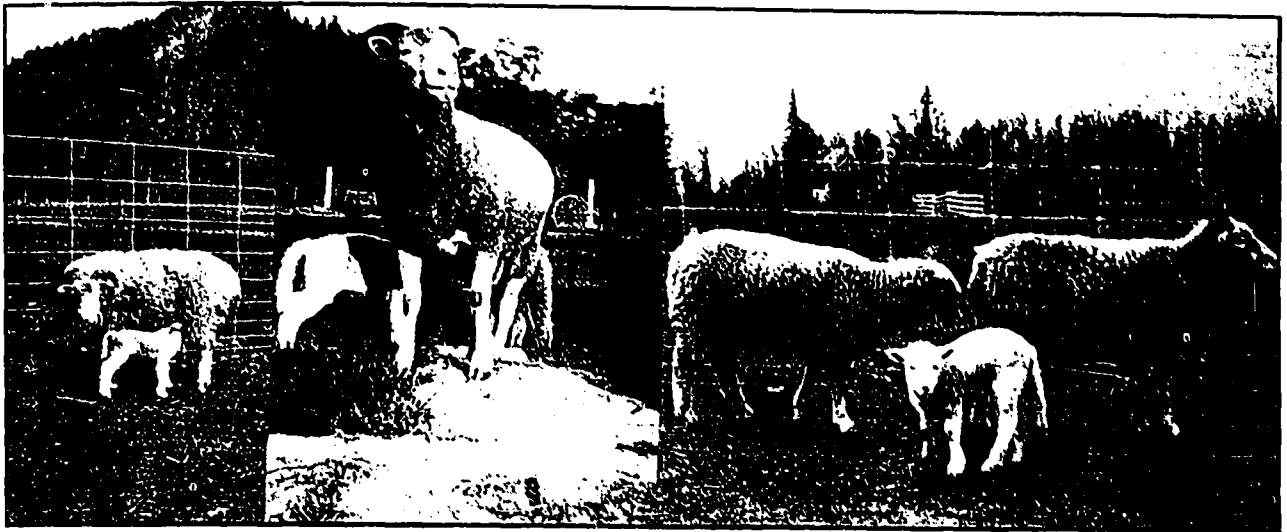
*Thy prattling lisp soon swells to fuller song,  
In rushing volume gathering as it flows;  
Like mirthful youth, all laughing, loud and strong  
O'er life's sharp crags its forceful torrent flows.*

*These changing voices of thy wayward stream,  
Thus sound symbolic of our human way;  
The burdened roar, the moan, the hissing gleam,  
Or kiss of flowers in eddies' sweet delay.*

*The joyous tenor of the swift cascade  
Too soon is changed to some complaining surge;  
Or low contralto through a lingering shade;  
But always song—an anthem or a airge.*

*Solemn at last, no rush, no sound, no foam,  
The current flows with smooth un murmuring glide.  
So we, our tumult o'er, and nearing home,  
May calmly meet our ocean's welcome tide.*

—J. Berryman.



EWES 41 AND LAMB,  
FEB. 18, 1912

AGAIN WITH HER TWINS,  
SEPT. 6, 1912

ALSO WITH HER OTHER LAMB, BORN  
MAR. 31, 1913, AND HER YEAR-OLD LAMB

## Double Crops of Lambs in British Columbia

By Moses B. Cotsworth, F.G.S., New Westminster, B. C.

THE above picture of ewe No. 41 and her lambs raised in both the spring and autumn seasons at the Canadian Government's Experimental Farm at Agassiz, B. C., demonstrate the fact that she had a lamb on February 18, 1912, and twins on September 6, 1912, followed by another lamb on March 31, 1913—lambs each six months in succession.

The following copy of a letter from Superintendent Moore establishes the fact that this great benefit of duplicating the supply of human food in the form of mutton and lamb can be regularly attained without materially increasing the cost of keeping the ewes, consequently the cost of production can be reduced about half.

DOMINION OF CANADA  
DEPARTMENT OF AGRICULTURE

Experimental Farm for British Columbia

Agassiz, B.C., November 19, 1913.

Dear Sir:

In reply to your note of recent date, we beg to advise that that ewe No. 41 did not have a lamb this fall. . . . We did not wish her to have any, as four in succession is almost too hard on her and detrimental to the offspring.

With regard to the other sheep, we beg to say that two others had lambs this spring and fall; one had hers while we were away at the exhibitions and a pair of twins died. Ewe No. 39 had

a ram lamb on February 24 and again a ram lamb on September 26, 1913.

Faithfully yours,

P. H. MOORE,

Superintendent.

Moses B. Cotsworth, Esq.

231 7th Street

New Westminster, B. C.

On page 257, ending the writer's description of ancient almanaks and calendars printed in the *British Columbia Magazine* for April, 1912, the reference to the double breeding seasons so patiently won from Nature by Jacob to enrich his family who developed the nation of Israelites, led many readers to enquire how Jacob found the great and valuable secret by which he redoubled the off-spring from his flocks of both sheep and goats, by breeding both flocks in March and again in September.

Thus, whilst Laban only could increase his in the rates of one, two, three and four; Jacob solved the problem of how to reduce the cost of living for his family, by increasing his flocks in the double rates of two, four, eight, sixteen and so forth, by the simple means recorded in Genesis, Chapters XXIX to XXXI, which, when rightly read, reveal the fact that he took stakes of poplar, hazel and chestnut and set them up—just as the ancient druids during later centuries set up more permanent stone



pillars in rows directed to enable them to locate precise seasons for farming purposes, by watching the monthly variations of the points of sunrise along the horizon.

The vital point of observation he had to watch for was the central distant stake in line from the central sighting stake, to see when the sun rose due east on March 21 and September 23, in order to guide him to the right dates for driving the rams and the goats to their respective flocks for breeding, as Syrian farmers now locate by means of printed calendars Jacob lacked. Jacob had only the sun and his own powers of observation to guide him by means of those stakes he erected each six months, as indicated by the recent dates recorded on the diagram.

Jacob was not the trickster some people wrongly judge him, after superficially reading Genesis XXIX to XXXI. While abiding by his contracts he served unobser- vant Laban according to his deserts. After Laban had reduced Jacob's wages ten times, and palmed Leah upon him instead of Rachel, it was not reasonable to expect that Jacob would disclose to Laban the great secret means by which sheep and goats could be so rapidly increased, when they were then used as we use "money" (for exchange). That secret was consequently worth more than all the patents invented till then.

As both sheep and goats carry their young five months, Nature allows one month for the lambs to draw the mother's milk, and thenceforward to rely more upon the tender grass. So Jacob established two breeding seasons of six months each, which have been misinterpreted as "years."

Consequently the seven seasons he served for Leah and Rachel, respectively, were

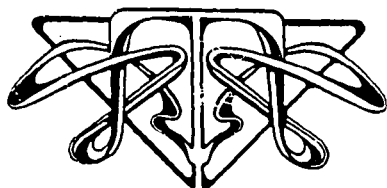
only three and a half years for each. It is further interesting to note that his descen- dants kept to that secret form of reckoning their lives until Moses won the secret of the true year's  $365\frac{1}{4}$ -days length from the Egyptians, as the most useful knowledge requisite to enable the Israelites to provide food during their forty years in the wilder- ness, where Arab tribes still live by the same means.

Thus Exodus XII, verse 40, mistakenly reads "now the sojourning of the Children of Israel, who dwelt in Egypt, was 430 years," which were really half years, as proved by their going down to Egypt in 1706 B. C. and their exodus in 1491 B. C. —a difference of 215 years only. Similar- ly Jacob lived only  $73\frac{1}{2}$  years, counted as the 157 seasons of six months each.

The main point is that, by using Jacob's method in British Columbia we can reduce the cost of living, as indicated fifteen years ago in my preface to the "Rational Almanak" by the words: "Much can be done to ennoble our race and benefit man- kind by patient efforts *even in such unlooked-for directions as increasing the production of sheep for food*—whilst at- tempting to reform our drifting calendar system, which needlessly changes day-names throughout every year," and fails to yield the equal monthly measure needed in these times of monthly earnings and payments.

The limited space available for this article precludes recording the more com- plete proof detailed in the forty-three pages from 149 onwards in the "Rational Alma- nak"\* which explains how many world- wide benefits have been, and can be, won for us all and our children.

\*Published by W. Allen & Sons, Snow Hill, London, E. C. Price, \$1.25. a



# A Jill of All Trades

By Amy Rosemary Miller

THERE was the usual rush of deck hands and passengers, endless clang and clatter, cries of "Look out, there," "Good-bye," "All aboard, A-L-L A-B-O-A-R-D." Lines were cast off, bells rang, passengers cheered and waved handkerchiefs, and, amid deafening roars from countless throats, the "Ruritania" was off, homeward bound for New York.

"That is Miss Daphne Carlyle," confided Mrs. Leverett to her husband in the hushed aside that accompanies marital understandings. "She belongs to the famous Winthrop family of Boston. Looks to be twenty, but she must be thirty-five. They say that she just went on the stage to shock her folks. She makes loads of money, and goes to Europe every year after the season."

"So?" queried the husband, glancing at the lady indicated. "Oh, yes, now I remember. She's the one they were talking about down in the smoking-room. She made a hit in the name part of 'The Search for Susan,' that new play of De Launay's. The Winthrops are all rich, so, of course, she must be on the stage from pure love of it, eh?"

"She's booked here as Arabella Winthrop." Mrs. Leverett ran a languid eye down the passenger list, pausing at the very bottom among the W's. "They say she's a milliner, too; makes loads of money, buys her stock in Europe, and manages all her own property."

A tall, dark man strolled slowly past Miss Arabella and came up abreast of the Leveretts. Mr. Leverett stared for a moment in surprise before grasping the stranger's hand and giving it a pump-handle shake.

"My dear, you remember Carter Sibley? Well met, old man. I thought you were in little old New York."

"I am riding the waves regularly now," laughed Mr. Sibley, showing his white teeth in a pleasant smile.

"I thought that you were a government

detective?" broke in Mrs. Leverett, glancing up at him quizzically. "You told us that you made the waves of crime your duck pond."

"Often ducks become ambitious and paddle in deeper water," he laughed.

"Oh, how perfectly lovely," gushed Mrs. Leverett. "Are you on the track of a criminal, Mr. Sibley? If so, please whisper and tell us. I am dying to know something of the inside work of the great detective bureaus."

With a twinkle in his dark eyes Mr. Sibley paused to lean over and whisper, in a stage aside: "If you have any smuggled lace sewed upon your petticoats be sure the stitches are good."

"Oh-h-h," cried Mrs. Leverett, disgustedly, "is that it?"

Mr. Sibley laughed loudly.

"Women are perfectly crazy about gore," observed Mr. Leverett, "and yet they faint at the sight of a mouse."

"Of course you understand that this is not official news," cautioned Sibley, as he moved away to greet passing friends.

"Mum's the word," Mr. Leverett replied reassuringly.

That evening Miss Arabella appeared at the dinner table in a black lace evening gown, stately and resplendent. At her belt was a huge mass of American beauty roses and about her plump white throat was a necklace of graduated gold beads linked together by a tiny chain. Both roses and beads harmonized exquisitely with her abundant golden hair, bringing many admiring glances from her fellow-passengers.

"H'm, the usual assortment. I fear I'm in for a dull trip," she commented inwardly, noting the family party headed by a stout and fussy father returning from the Carlsbad waters—fat and perspiring mamma with three pasty, giggling girls in tow, also the young and very sporty only son, who prided himself upon being a devil of a fellow with the ladies. Further down

**PAGES**

**MISSING**