



LOADING LOGS ON THE BOB-SLEDS.

THE WORK OF CANADIAN LUMBERMEN.

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With Illustrations from Sketches by PARKER NEWTON. Engraved by MAURICE STAINFORTH.

AS soon as the bitter north winds of the late autumn begin to pipe over the Canadian hills, and strain and sigh through the boughs of the firs and spruces, the Canadian lumberman sets at work to prepare his bob-sleds and his harness for the coming winter's work; he puts new helms in his axes, buys a stock of groceries, the most important items in this list, of course, being flour, mess pork, molasses, and tea. Cooking utensils have also to be purchased, for each "lumber operator," as he is called in Canada, employs from ten to a hundred men. These men fish, pursue agriculture, or are employed in the saw-mills during summer, and they come from all parts of the country where there are rivers and ever-green forests. They are mostly stalwart fellows with broad shoulders and thick chests; they are clad usually in homespun, a grey, enduring cloth, woven by their mothers, sisters, or wives in their own homes; their socks are knitted from heavy yarn spun on old-fashioned spinning-wheels, and they wear two pairs at once. They do not as a rule wear boots during the winter, the substitute being "larigans," which are made of tanned cow-hide or moose-hide, sewn together much after the manner of an Indian moccasin, having at the bottom but one thickness of the leather. They are provided with heavy woollen mittens and fur caps made from the skins of lynx, mink, musk-rat, or loup-cervier. They take along with them a couple of suits of heavy clothes, including always a pair of stream-driver's boots. The latter are very thick in the soles and are provided with sharp iron spikes, which are necessary when the lumberman lays by his axe in the spring and becomes a "stream-driver."

When the cutting north winds begin to crust over the pools and streams with ice, the lumber parties bid good-bye to their families and set out with their teams. The most noted of the lumbering regions in Canada are the great stretches of forest

¹ The writer must acknowledge the use of a few introductory words by the author of *Life and Times of Sir John MacDonal*d, the late Edmund Collins, who was preparing a paper on the subject for this magazine before his fatal illness.

skirting the Miramichi, the Restigouche, the St. John, and the Ottawa rivers, though large operations are carried on along the shores of the great lakes, as, for instance, at Georgian Bay, in the province of Ontario, where there are over 30,000 islands sheltering the harbours nestling here and there on the coast. The teams are taken sometimes on the railway cars, but it is not unusual for them to travel distances of a hundred miles or more, drawing heavy loads of provisions and general outfit upon the bob-sleds. There are stopping-places along the way where horses and men can put up at night.

The first work on reaching the lumber woods is to build a shanty. This must be large enough to accommodate horses and men. The stable is connected often with the shanty, being separated by a partition. The shanties are rectangular buildings about twenty feet long, twelve or fifteen wide, and ten feet high in centre, with sloping sides. They are built of unhewn logs, and well banked with bark, moss, and clay to keep the heat within and the cold out. The roofs are made of rough bark, and the floors are laid with smooth planks and boards. There is seldom any division into rooms in these rude structures.



LUMBERMEN'S SHANTY.

A gang of choppers herd together like dogs in a kennel. Along the two sides of the open room beds are arranged; when accommodations are limited there are two tiers. These beds, or "bunks," are simply rough boxes made of planks or poles, and supported by two posts, with

pins set into auger-holes in the walls. Sometimes ticks are provided, but in most cases the boxes are filled with straw. A pair of heavy coarse blankets are allotted to each sleeper, although some of the men bring additional covering with them.

The lumber operator hires a man, or a man and his wife, to keep house for the choppers. At one end of the shanty, where barrels of salt pork, bags of beans, flour and potatoes, pots and pans are stored, the housekeepers set up their *Lares* and *Penates*. No one ventures to intrude upon the cook's preserves. A small space is left in the middle of the shanty for the mess-room.

Now, roughing it in a logging camp in the dead of winter is one thing, and means something different from the make-believe attempts at "roughing it" in midsummer, when camping-out under a white canvas tent, sleeping on soft, sweet-scented masses of spruce and hemlock boughs, and living off the fat of the land and water become a pleasure instead of a hardship. The exposures of one winter in a lumber camp would kill off one-half of the summer campers-out, who think they are pushing human endurance to the limit. Bad living and the cook would do the rest. The cook does the best he knows how with the materials in store. His dishes, which are not expected to tempt the capricious appetites of invalids, would disturb the peace of mind and dreams of an Eskimo. Entering a logging shanty about breakfast time, when the smoke from the frying grease mingles with the bad air and effluvia, due to lack of ventilation, is like going into the Zoological Gardens. Frankly speaking, we have nothing but admiration for the men who mix molasses with pork gravy and live through the winter. Salt pork, beans, black-strap molasses, and coffee are served three times a day in many different ways.

And yet the "loggers" are not without a supply of fresh meat. Many of the men

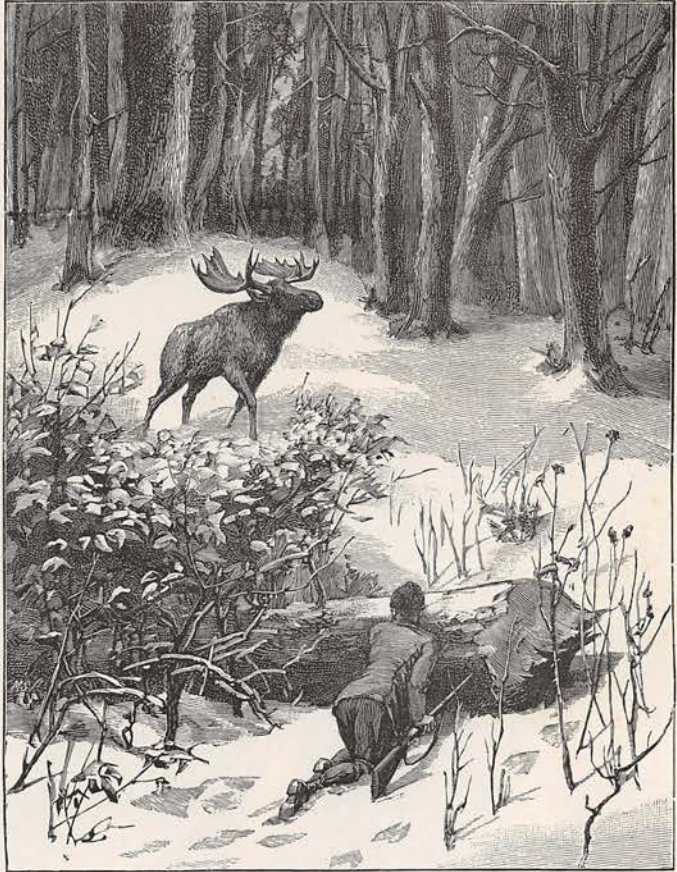
are wont to go hunting, and, as a result, they keep the camp in game half the time. The moose are most sought after, and the sport is attended by just enough excitement to make it exhilarating. There is little danger, except when a big ugly fellow is brought to bay—then look out for him!

The men in the shanties live a monotonous daily round. Supper over, they spend an hour or two smoking, sharpening axes, mending clothes, and playing cards. When liquor is smuggled into the camp there is apt to be trouble; arguments over cards end in blows, followed by cutting and shooting. The loggers are a clannish set, and few of these desperate affrays are heard of outside the lumber district. Many of the operators do not pay wages until the end of the season, and then, with their winter's money in their pockets, the loggers act like sailors after a long voyage.

As soon as there is sufficient snow for sleighing, men and teams are sent into the woods to break roads. This is done by having sleighs or "pungs" pass over the route several times, until the loose snow is well packed. When the snow freezes it becomes solid enough to bear the heaviest loads over soft or miry places. The roads must not be blocked, and so with each fall of snow there is more road-breaking. In order to keep the important sections of the route passable, it is customary to run a sleigh every few hours both night and day during a heavy snow-storm. Several winters ago were felled thousands of logs which the Canadian lumbermen were unable to send to market on account of bad roadways.

The routine of the chopper is about as monotonous as it is possible for hard work to become. Very likely he will sharpen his axes the

night before, and by four o'clock the next morning he has had his breakfast, and is on his way to the ground. The chopper selects a tree of the right size, sometimes marked by the boss, and without much ado he begins to drive the glittering blade up to the helve at almost every stroke. The chips fly in all directions, covering the snow around; the cut grows deeper and wider at each stroke; soon the tree sways and leans slightly to one side. Then the chopper steps to the opposite side, and gives one, two, or three blows, when with a creak and a groan the giant of the forest comes crashing down to the ground. The branches are trimmed and cut off and the trunk is cut into logs of market length. Sometimes the chopper prepares a bed for the tree to fall upon. This bed is made of brush and small trees, and is intended to keep the tree from splitting by breaking its fall, and also to prevent the trunk from sinking too deeply into the snow for the sawyers and hewers to work at it conveniently. A chopper is expected to cut from forty to fifty logs a day. Some experts have cut as many as ninety and one hundred logs in a day, but that record is



FRESH MEAT FOR THE CAMP.

made, of course, under the most favourable conditions. Many lumber operators pay their choppers according to the number of logs cut, and the wages will range from thirty to forty shillings per week and board.

The next thing after the logs have been cut or squared is to drag them out of the woods. They are chained and hauled by horses or oxen to the road. This work is called "swamping out." Then the logs are loaded on bob-sleds and taken to the mills or skidways. Two men and a pair of horses will drag and store on the skid-way from one hundred to one hundred and fifty logs in a day. That depends largely upon the distance to be travelled. From fifteen to twenty "pieces" can be piled

on the sleds. Thus a strong team of horses will draw without much trouble fifteen logs to a load, the logs averaging about 1,200 pounds apiece. The journey on the bob-sleds is tame and uninteresting, except when the load comes to a steep grade. Down the hill the animals go on a run; it is only chance that both the driver and his team escape a serious accident.

But the greatest perils and hardships have yet to come. In most cases, the logs cannot be hauled direct to the mills, and in that event they are taken to the "banking ground," to the bank of some stream. The logs are so piled that by knocking out the bottom log the whole pile goes tumbling down into the water. It is in the spring, when the ice begins to melt in the streams, that the logs are floated down to the mill, or to the "boom" on the freshets.

Now the "drive" begins. I am certain insurance companies



A JAM OF LOGS.

would class the work as "extra hazardous." The trip down the stream is always replete with incident, danger, and excitement. A huge mass of logs and ice is sent hurrying down the river, and the drivers follow it. For days the men direct, urge, and keep in hand the floating mass.

Few persons who have not seen the actual "driving" of logs can adequately realise what the work means. Armed with long pike poles, having a straight or curved prong in the end, the drivers try to keep the logs in motion by pushing and prodding. If one log should happen to catch on a projection of rock, where the river narrows, it is likely to cause a "jam," and that is what the men fear the most.

Over there the whole drive of logs comes upon a gorge. See that big stick of timber bring up with a jerk. Now it is the "king-pin" of a jam. Every minute adds

to the difficulty and the danger; the heaving mass becomes firm and rigid, and as thousands of logs from "up stream" continue to float down there seems to be no likelihood of breaking the jam right away. Meanwhile the boss is shouting commands to his men—is ordering one to do this, another to do that. But the drivers need no urging; they know their business. It is a lively scene; the bold fellows jumping, plunging, wading, slipping, leaping from log to log, crossing chasms in the swaying mass. Of course the objective point is to free the imprisoned log or logs that hold the others back. One driver more active and daring than his fellows reaches the king-pin; he succeeds in loosening its hold on the rocks, and turning flies for his life.

What a sound! What a sight! The jam breaks with a noise like thunder, and



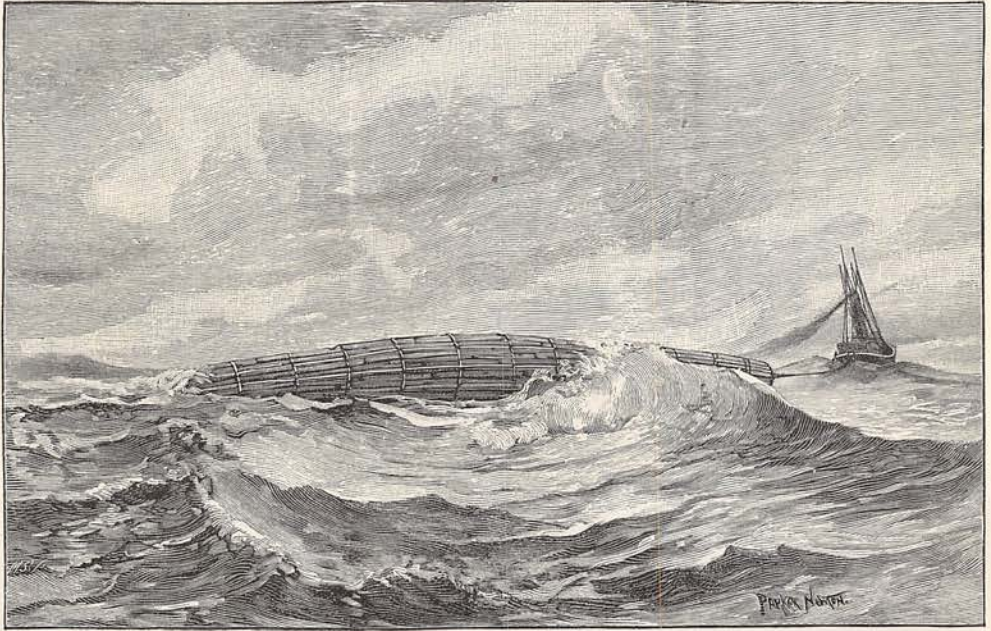
THE STREAM-DRIVERS.

starts with a jump. There is an upheaval and uplifting of logs as if thrown by an earthquake. What was once a seemingly solid mass is now alive and writhing. Huge sticks of timber are thrown into the air as if by giants at play; they roll over and over, turning and squirming, grinding and crashing. The roar of the on-sweeping flood and the pounding of logs are deafening. Sometimes a driver pays the penalty of his rashness. The poor fellow falls into a gap and is carried down the river before the eyes of comrades, willing, but helpless to rescue him. His head and shoulders are tossed for a moment above the drift. The victim has, perhaps, time enough to wave a parting salutation, and then he disappears beneath the flood of logs. Some weeks or months afterwards in summer-time, his body, bloated and unrecognisable, is found stranded on the bar, or whirling round and round in a secluded eddy.

The men who do the "driving" take their lives in their hands almost every hour of the day. They are as bold, fearless a lot of fellows as one could find the world over. They all belong to a race of athletes. Their work calls for the agility of a ballet dancer and the nerve of a tight-rope walker. It is no easy matter to jump from log

to log in mid-stream without losing one's balance. Yet the drivers accomplish this feat with ease and grace, aided more or less by the sharp iron spikes in their boots, and by the long poles in their hands. Should one lose his balance and fall into the water, he hears the unfeeling laughter and remarks of his comrades in danger.

The exposures and hardships of river-driving are enough to break down the hardiest constitution. I am told the men, as a rule, are not long-lived. At one time the driver is waist-deep in ice-water, and at all times he is drenched to the skin, stiff and sore from over-exertion. So, for days and weeks when the logs are running in these swiftly-descending streams, swelled to rivers by spring freshets, the drivers travel along with pikes, levers, and cant-dogs, to keep the logs moving and to start them when they are jammed. There is no let-up, no change of under-garments, no camp. At nightfall a blazing bonfire is made, and the men, aching in every joint, roll



A TIMBER RAFT.

themselves up in their blankets on the ground, and quickly fall into a sleep from which it is often difficult to rouse them in the morning.

The work of the stream-drivers ends when the logs arrive at the general catching station known to the lumberman as the "boom." This is a great storage and sorting place, which is maintained by all the operators along the drive. The boom consists of piers and extra large sticks chained together in such a way that it is practically impossible for logs or big blocks of ice to break through it.

The logs are held at the boom until the spring floods are over; here they remain until wanted by their owners. Each operator has a mark, or brand, usually on the end of his logs, and that enables the men to identify his property without trouble. Early in the summer thousands of logs or "pieces" are made into rafts, and floated or towed down the rivers and lakes to the great saw-mills. There they are sawed in the form of lumber and square timber, and cut also for shingles, posts, sleepers, railroad ties, &c. But the bulk of Canadian lumber is exported; it goes to the two principal markets, Great Britain and the United States. Last season the value of timber exported from Canada was reckoned at over £5,400,000, or about one-quarter of the total value of Canadian exports.

Indeed, one of the most interesting features incident to the lumber traffic is the journey of a timber-raft to the great lumber mart at Quebec. The summer tourist on the St. Lawrence is sure to pass almost daily many of these "tows" as they are popularly called. When cruising among the Thousand Islands he comes suddenly upon a slowly advancing tug-boat, puffing and breathing deep and

hard. Then, out from behind an intervening islet some 300 feet in the rear, pokes the nose of what might be a sea-serpent. It is the head of a timber-raft. Drawing alongside of the sinuous mass, one sees groups of dark-eyed, swarthy, half-breed Canadian lumbermen; some are lounging and smoking, others are at work with axe and maul, splicing and tightening the different sections of the raft for holding together during the voyage through the turbulent rapids at the mouth of the St. Lawrence. The men on the raft live in shanties and tents, in which provisions and cooking utensils are stored away from the rain.

If our tourist be of an inquisitive turn of mind, he will inquire as to the origin and destination of the great timber-raft. Then most likely he will learn the following facts: The raft has been constructed at the foot of Lake Ontario, near the city of Kingston. There, from many sources, from the mouths of streams along the great lakes, Superior and Michigan and the Georgian Bay, millions of logs are gathered every spring. The business is in the hands of two large concerns, the Calvin Company at Garden Island, and the Collins Bay Rafting and Forwarding Company. Their steam barges and sailing vessels are industriously collecting timber the year round.

A raft is made into sections, or "drams," each of which is about 200 feet long and fifty feet wide. About ten "drams" make a raft. There have been rafts that contained as many as twenty of these sections. But that is not necessary or safe. The pine timber "drams" are three and four layers deep, containing some 30,000 cubic feet. The oak "drams" are made of but one layer, having some 10,000 cubic feet. The bottom layer of the raft is firmly bound, with white birch or iron-wood withes, to pieces which form a frame, under which the lowest layer is laid.

When the big raft reaches the head of the Long Sault Rapids, it is split into its component sections. A new crew of men and a pilot are taken on board, and one section at a time is run through the rapids. The same methods are repeated down the Cascades, the Cedars, and Split Rock Rapids. Another crew takes the raft through the Lachine Rapids and on to Montreal. After that it is plain sailing to the port of Quebec. Now the raft is broken up and taken to pieces. Most of the logs or "pieces" are loaded on ocean schooners built for the trade, and Canadian spruce and pine and fir is wanted the world over.

What would you think of a timber-raft in a solid mass in the form of a ship as large as the celebrated *Great Eastern*, and full one-fourth heavier, being towed from Nova Scotia through the Atlantic Ocean to the city of New York? It remained for an inventive Canadian lumberman, aided by a New York operator, to carry a long-cherished scheme into execution. In 1885 Mr. Hugh Robertson contracted to build for Daniel J. Leary of New York such a ship-raft afloat in the Bay of Fundy. The raft was not completed until August 1886. It was 400 feet in length, 50 feet in width at the centre, and 33 feet in depth. It contained about 2,000,000 feet of lumber. The first attempt to launch it was a failure. On the second trial the mass ran down the ways nearly 200 feet, and there it remained; further attempts to launch the raft proving unsuccessful, Mr. Robertson decided to tear it apart and rebuild it.

The second ship-raft was finished in November 1887. It was larger than the first one, being 580 feet in length, 62 feet in width, 37 feet deep, and containing 3,000,000 feet of timber. It consisted of 27,000 logs arranged in sixty layers. Four permanent ways 1,200 feet long were constructed at a cost of £1,900.

In form the Robertson raft resembled that of a cigar with the pointed end cut off,



SAW-MILLS AND TIMBER-SHED.

and with flattened sides. The inventor obtained patents on his method of adjustment of the chains which bound the whole mass together. There was a two and one-half inch core, or centre chain, which ran from one end of the raft to the other. There were also iron link binders every seven feet running to the outside of the shell. Lateral chains kept the logs from working apart longitudinally, while encircling chains bolted around the surface prevented the raft from flattening out. The chains alone cost over £1,000. The logs were laid generally with the small ends towards the end of the raft, and interlapped so as to give strength. The end of the centre chain was spliced to the towing hawsers, so that the pull or strain would make the raft even more solid than it was on dry land. The value of the raft was placed at £6,000. It was calculated that the lumber would bring double that amount in the New York market. Indeed, one of the objects of this system of rafting is to send the longest and largest logs to a distant market at a comparatively low cost. The lumber schooners at Nova Scotia do not take sticks exceeding sixty-five feet in length, while the Robertson raft could carry lumber cut 100 feet in length. There is an increasing demand for logs of extra size, to be used in our cities for docks, piers, and piling.

The cigar-shape raft was launched without mishap at Two Rivers, November 15th, and for three weeks she lay at anchor in the bay waiting to be towed. On the 30th of November the steamship *Miranda* left New York for Port Joggins, Nova Scotia, and the great craft was taken in tow on the 9th of December.

The interesting experiment attracted attention far and wide. Over a week passed and no word was received. On the 20th of December the *Miranda* put in at Whitestone, Long Island, and reported that the raft was adrift. During a strong wind the large hawser parted, and then the bit to which the smaller hawser was attached gave way, and the *Miranda* was compelled to leave the raft to its fate. Of course there was not wanting any number of individuals who said "I told you so; the scheme was visionary." As the abandoned raft was almost in the pathway of the ocean liners plying between Liverpool and New York, the Maritime Exchange took up the matter. Secretary of the U. S. Navy, Hon. W. C. Whitney, sent the sloop of war *Enterprise* in search of the lost raft. The vessel found the remains of the raft 275 miles at sea, scattered over 600 square miles, and reported there was no danger.

The unfortunate ending of their first venture did not deter Mr. Robertson and Mr. Leary from giving the scheme a second trial. They still believed that with good weather the journey could be made safely. Again, operations were commenced in March 1888. A new raft 595 feet long, fifty-five feet wide, containing 22,000 logs, was launched in July. It left the Bay of Fundy August 2nd, towed by two powerful steam tugs. On the 11th it anchored off College Point, Long Island. The next day when the great raft towed by five tugs came down the East River, it was like a triumphal procession. People lined the docks and cheered the thing as it moved along. Steam whistles of all kinds blew their screeching whistles. The promenade on the Brooklyn Bridge was crowded with sight-seers. It was a great victory for the builder. It was a great day for the owner; he had saved £3,000 for transportation. Still, practical lumbermen will say that the Robertson system of rafting does not fulfil all demands; that the expense of construction, of towing, and of breaking up the raft, is about equal to that of sending lumber by vessel.

The work of Canadian lumbermen is many-sided and far-reaching in its effects. The traffic involves social, economic and political questions. Thus it is claimed that the lumbermen are robbing, and have robbed, the forests of Canada in a ruthless manner of the best timber, leaving thousands and thousands of acres desolate wastes; that great injury has been done to a young and growing country by allowing lumbermen to help themselves almost like freebooters; that on account of this cleaning up, the country is visited with devastating floods and severe droughts; that, lastly, the Government should exercise a stricter supervision over its lumber tracts and the work done by lumbermen. However, we are here concerned with the picturesque and human side of an industry which is rapidly changing the face of nature and the climate of our country.