The World's Biggest Lumber Yard.

THE CANADIAN FORESTS AND HOW AMERICANS ARE TURNING THEM INTO BOARDS AND NEWSPAPERS

Enough Wood Pulp to Paper the Globe—A Visit to a Mill and Something About How Such Paper is Made—The Last of The White Pine—How Lumbering is Done—Big Government Forest Reserves.

(Special Correspondence of the Deseret News by Frank G. Carpenter.)

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OTTAWA.—Imagine yourself seated in one of Telephone Bell's tetrahedral kites, flying over the biggest lumber yard of the world. I refer to the immense forest area of the Canadian dominion. It begins on the Atlantic and ends at the Pacific, stretching from east to west for more than 3,000 miles. Starting in Nova Scotia and New Brunswick, you look down on enough big trees to cover the state of Massachusetts. There are lumber mills working, and the proprietors of the London newspapers are putting up pulp mills there to supply the paper for the greatest reading constituency of Europe. Going westward we fly over the vast forests of Quebec, and into those of Ontario from where a great part of our white pine now comes. Here the forests extend from the shores of Lakes Superior and Huron northward to those of Hudson bay, and go on to the west, almost to the setting sun. They take in the Lake of the Woods region, and then switch to the north and skirt the wheat belt, until they lose themselves in the giant woods of the Rockies and the Pacific.

British Columbia has the same climate and vegetation as Washington and Oregon, and its trees are surpassed by none in the world. They are sometimes 40, 50 or 60 feet thick; a single log will load a car, and one tree cut into boards may make a train load. Timber, which will square two or three feet and make a log 60 feet long, is spoken of there as a tooth pick, and such tooth picks are exported all over the world. This British Columbia timber belt is almost untouched. It is as wide as from New York to Boston, and it runs north and south about as far as from Philadelphia to Detroit. It has red and yellow cedar, white and yellow pine, red fir, maple, and oak. It is one of the most valuable pieces of woods left on the North American continent.

THE WOODS ABOVE THE LAKES.

Flying back to the east, let us look for a moment at the woods beyond the Great Lakes. Above Lakes Superior and Huron is an extension of the forests we had in Wisconsin and Michigan. Fully one-third of the trees are more than 100 years old, and many have seen several centuries. They consist of white pine, birch and maple and other hard woods, with a strip of spruce at the north vast enough to make the wood pulp for the newspapers of generations to come. These woods are furnishing a large part of the white pine of the United States. Four million pine logs are floated down every year to this city of Ottawa, and other millions go to the Great Lakes and across to the United States. We charge duties of $2 a thousand on all such lumber, but it comes in by the ship load.

AMERICAN LUMBERMEN IN CANADA.

Americans already own a big share of the lumber business here, and they are rapidly acquiring more. Many of the lumber camps are managed by our people. Connecticut axes cut down the forests, and mills, equipped with American machinery, are sawing the logs into boards for American houses.

I have met many of our lumbermen here and have chatted with them about the business. One of the best posted is B. W. Arnold, who is largely associated with General Russell A. Alger in pine lands in Minnesota, and who has also large interests in British Columbia and Canada. He has saw mills along the Great Lakes, and ships pine and other lumber to the United States. In my chat I asked him about the wood which we are now getting from Canada. He replied:

"The United States imports all sorts of lumber from here. It gets considerable pine, red birch, balsam and spruce, but the most important of all is pine. Nearly all the white pine used east of the Ohio comes over the international boundary, and we also ship pine to the west central states. The most of the American pine has been cut off. We have some such forests left in Minnesota, but there is comparatively little in Maine, Michigan or Wisconsin."

CANADIAN PINE.

"How does the Canadian pine compare with ours?"

"It is not so good," replied Mr. Arnold. "What we are now cutting would have been classed as third grade lumber in the Michigan forests a few years ago. Indeed, I doubt if more than 10 per cent of what Canada is selling is up to the average pine that we sold 20 years ago. The best 10 per cent comes from trees which are about 300 years old, the next grade is from trees 150 years old, and the lower grades are younger and smaller. We are now cutting pines which give us 14 or 16-inch boards and some which give less. The logs are cut in 16-foot lengths."

"Is there much demand for white pine?"

"Yes, it is the aristocrat of the soft woods, and is in great demand, notwithstanding the high prices. We are now getting $28 a thousand for it at wholesale in New York. White pine was formerly used for everything. Our carpenters and builders have been working with it since the beginning, our tools are made for it, and for years our houses have been built of it. Therefore, every one wants it. It is especially valuable for shipping boxes, it is so clean and white that the stencils show plainly upon it, making the box a good advertisement for the shipper."

LUMBERING IN CANADA.

"How is the timber gotten out in Canada?"

"Much of it is cut in the woods in the winter and floated down the streams to the sam mills along the railroad or to the Great Lakes. The Ottawa river takes down millions of feet yearly, and nearly every stream of any size has its part in carrying the logs. Every winter the lumbermen are chopping away in the forests. They begin to make roads for the new camps in July or August, and then cut down the trees. In the dead of winter they haul the logs over the snow to the streams. They live in log cabins, in camps, and we have a regular system of supplying them with provisions. The work is hard and we have trouble in getting good labor. There is no eight-hour law, and the men begin at 6 in the morning and work until dark. Just now we are hiring our men from Montreal. We pay from $26 to $30 per month and board for ordinary workmen, and more for skilled men."

BIG LUMBERMEN OF NORTH AMERICA.

"Who owns the most of the timber on this continent?"

"By far the greater part belongs to the governments, although private parties have millions of acres. The chief lumberman of Canada is Booth of Ottawa, who is said to control more than 9,000 square miles of good timber lands. The chief lumbegman in the United States is Warehouser, an old German, who came into Minneapolis with a few dollars and is now worth many millions. Warehouser had some credit; he began his career in the United States by buying timber lands on long time. As the lands rose in value he sold enough to pay his interest, and went in debt for more. His property doubled and quadrupled and then doubled again; and as a result Warehouser is one of the world's richest men. He is now in partnership with Heins, a well-known lumber dealer of Chicago. Warehouser and Heins have enormous timber properties in the northwest and along the Pacific slope."

"How does the Canadian government handle its forests?"

"It leases them on a royalty of so much per thousand feet," said Mr. Arnold. "Such leases are sold to the highest bidder at auction, the bidders having a certain time to get the timber off, after which the land goes back to the government. It now costs us about $6 per thousand to lease white pine lands, and in addition we have to pay $2 per thousand duty, so that we must make $8 per thousand before we can begin to figure on our expenses and profits."

CANADA'S FOREST RESERVES.

Speaking of the government timber, the Dominion is doing all it can to preserve the trees. On some of the public lands the regulations are now such that no trees below a fixed size can be cut. The timber is sold only when it is ripe. If these arrangements are kept in force, they will give Ontario a forest reserve of 40,000,000 acres, which will, it is estimated bring in $30,000,000 a year.

Canada has set aside a number of national parks. In two of its Rocky mountain reservations it has almost as much as we have in all our national parks, and in Ontario there are 7,000,000 acres of such reservations. The Yeho park on the Pacific slope is 40 miles long and 15 miles wide, and the Rocky Mountain park, along the line of the Canadian Pacific railroad, is 96 miles long and 46 miles wide. The Algonquin National park in central Ontario contains twelve hundred thousand acres, and northern Quebec has a national park of more than a million and a half acres. Our national parks have all been created since 1872, and their area all told is only a little more than three and a half million acres. The Canadian government guards its forests against fires, and pays half the wages of the fire rangers on timber lands leased to lumbermen.

COULD PAPER THE WORLD.

Canada has some of the greatest wood pulp forests on earth. North of the pine belt there is a strip of spruce and poplar which runs across the greater part of the continent. It contains enough trees of the right sort to supply the newspapers of the world for ages. Indeed, it could furnish enough to almost paper the globe and leave some to spare. In the Lake St. John basin of the province of Quebec there is a wood pulp area as large as the state of South Carolina, on which are now standing 100,000,000 cords of pulp wood. A half million tons of pulp could annually be made from that forest for an indefinite period; and this is only a patch on the whole. Sir Alfred Harmsworth, the proprietor of the London Mail, has bought large tracts of spruce timber in Newfoundland, where he will make the paper for his many publications, and the Lloyds, the owners of the Shipping Register, another London newspaper of wide circulation, have also invested in pulp forests.

Canada has now 39 mills, which are annually turning out 275,000 tons of wood pulp, a large part of which goes to the United States. I went through a pulp mill here at Ottawa which was grinding spruce logs to powder, reducing them to pulp, and finally turning them into paper. It was making great rolls of newspaper, each as big around as a hogshead, and it was also turning trees into paper bags. The mill belongs to a company of Americans. It is operated by the Ottawa river, which furnishes many thousand horsepower and runs saw mills, factories and paper mills.

WORLD'S BIGGEST PULP MILLS

The biggest pulp mills of the world, so I am told, are those of the Lake Superior Corporation at Sault Ste. Marie, Canada. They are run by Americans, operated with American capital, with Canadian labor and Canadian lumber. These mills make both mechanical and chemical pulp, turning out a big product when in full operation. During my visit to them the mechanical works only were going and the output was 100 tons per day. A hundred tons, however, gives little idea of the amount of paper made. It takes about a cord of wood to make a ton of pulp, and a ton, if the roll which weighs that were spread out like a carpet, would cover any city pavement to the length of three and a half miles.

The pulp comes out in the shape of a cardboard two yards wide, rolled up just like matting. A day's output of the mechanical part of that mill alone would carpet every sidewalk in Washington city, and leave enough to put a clean coat on the chief highways of Boston. It would, in fact make a carpet, six feet wide, 350 miles long, or long enough to cover one track of the Pennsylvania railroad from Washington to New York, and pave the New York Central from the latter city to far beyond Albany. One year's output of that mill, estimating 300 working days to the year, would carpet a track, six feet wide, four times around the world and across our continent and back again.

A LOAD OF NEWSPAPERS IN EMBRYO.

SPRUCE LOGS CUT UP FOR PAPER.

Photographs Taken Specially for the Saturday News by Frank G. Carpenter.

It is several centuries since Shakespeare found

"Tongues in trees, books in the running brooks,
Sermons in stones and good in everything."

It remained, however, for our age to make these tree-tongues speak, and preach their sermons to all the world. I felt that as I went through the big pulp mill watching the machines yank newspapers out of saw logs. The spruce timber is cut in the forests during the winter and floated down the rivers to Lake Superior and thence brought to the Sault.

The logs are of various diameters. Those worked during my stay were a foot or a foot and a half thick. The bark was taken off by planing machines and they were carried on endless belts to the mill. All the machinery was moved by water and the books really floated in the running brooks on their way to their readers.

The mills in which these logs are ground are about eight feet high. Each has a great grindstone in it, against which the logs are pressed by machinery in such a way that they are gradually pulverized as the stones move around at the rate of 200 revolutions per minute. As the wood grinds off the dust falls down into the water inside the mill, and when it comes out it looks like chewed paper. It is now wood pulp, and has only to be purified and dried into a sort of a cardboard before it is ready for the market. I opened one of the mills and took up a handful of the pulp, then grinding. It was clean, but hot; and I asked the engineer whether hot water was needed for making it. He replied that the water went into the mill ice cold, but that the friction of grinding was so great that it soon boiled and steamed.

After the pulp comes from the mill it is forced through wire strainers and then carried over wide belts of the finest woolen felt. It is so thrown upon these belts that it coats them. The particles stick together, forming a kind of card board, which dries as it goes on to the various machines, and finally comes out in great rolls ready for shipment over the world, to be made into the newspapers which we have served up to us every morning at our breakfast tables.

CHEMICAL PULP.

The best wood pulp, however, is made by a chemical process. In this manufacture there is no grinding whatever. The logs are cut into chips and put into an enormous steel tank, which is filled with sulphurous acid and steam. This works on the wood as the stomach works on food, and finally digests it into a pulp. The difference between chemical pulp and mechanical pulp is about the same as the difference between short staple cotton and long staple sea island cotton. The chemical pulp has a longer fiber and it makes a stronger paper. The tank used for making chemical pulp at Sault Ste. Marie is almost 100 feet high, and the most complete of its kind in existence.

A large part of the wood pulp of Canada is shipped in rolls to different parts of the United States, and there manufactured into newspapers. Some of our newspapers have their own paper mills for this purpose. Indeed, several of our Sunday papers each consume as much as 100 tons of paper for a single issue, an amount which eats up something like 100 cords of wood and clears off about six acres of well-grown spruce land.

FRANK G. CARPENTER.

BRITISH NAVY STILL EMPLOYS CARRIER PIGEONS

Special Correspondence.

LONDON, March 21.—English statesmen are jubilating over having reduced naval estimates to the extent of some millions; and yet have overlooked the fact that many obsolete departments are still in full swing. One section of the service after another has been, to use a naval term, swept by broadsides; and yet the antiquated Pigeon Service—first instituted by one Noah of Ark notoriety—still remains in being. A number of protests have been made, through the press, and privately, against keeping up this branch of the service; yet the naval board clings to it as if wireless telegraphy were a mere figment of the imagination.

According to recent estimates, the birds employed by the English navy for carrier purposes, number no less than 1,000; and cost, approximately, something like $15,000 a year to keep in training. There are pigeons kept at each of the four home naval ports—Portsmouth, Chatham, Plymouth and Pembroke—and besides these, birds are installed at Malta and Gibraltar.

The training of these birds is carried on with great care and the services of many skilled officers—whose attention might be devoted to some more up-to-date part of the service—are employed in this work. This branch of the service is specialized, and staffs are appointed at each of the points mentioned to keep the service efficient. Each bird has a pedigree and history sheet, with a complete record of performances. A great deal of "office work" is connected with "keeping tabs" on the various birds, and both naval officers and laymen are asking—what's the use in maintaining at such expenditure both of money and brains an institution that is far behind the times. Perhaps, however, this is quite according to the fitness of things, for there is a fairly well grounded belief that the famous British navy is, after all, not what it is cracked up to be.

The pigeons are especially trained to fly certain distances in given directions, and each bird is, of course, instructed to seek out, in flight, one particular point of objective. Birds are taken at an early age and flown in distances divided between 100 and 150 miles; the distance being gradually increased as the bird learns more of the service and its muscles harden for longer flights.

In the forthcoming naval maneuvers it is said that "Naval Pigeons" are to be much in evidence, and it will then be proved whether or not they are of much use, either in time of peace or war. In the first place, the birds are not trained to fly at night; and, as their distances are limited, it is difficult to see just where they would come in from a ship moving two or three hundred miles in a few hours. In addition to the fact that the birds cannot fly at night, it has been found that weather conditions must be favorable for the best results; and, besides this, the wind must be in the direction in which it is intended to fly the carrier. In the event of war breaking out, and birds being placed on outward bound warships, there is no regular "boardship" coops for them, and no seamen trained to arrange the messages they would have to carry. At present, all the flights have been arranged from shore to ship; and none from ship to shore—the birds being kept at the naval bases already mentioned.

It is a rather singular thing, and is arousing not a little comment in naval circles in England—and abroad also—that, while the naval estimates have been smashingly dealt with, no one has blue-pencilled this obsolete and inefficient branch of service in the alleged "best navy in the world."