Felling a Big Fir on a B.C. Timber Limit.

The Lumber Harvest

How the Forest Primeval of British Columbia is being converted to the Needs of the Farmers of the Prairie Provinces

"TOOT, Toot!" shouted the donkey engine. Immediately from 700 feet back in the woods a huge hundred foot log came crashing towards the "yard." Another donkey engine seized it and threw it upon a locomotive car. Soon the locomotive started down the grade to the mill with a full load and a few minutes later what was once a giant of the forest became a pile of boards for the construction of barns and houses.

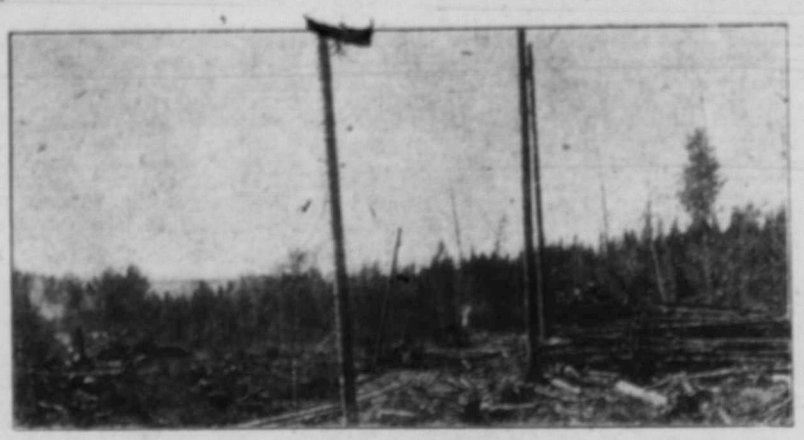
This scene is one of continuous enactment throughout the timber belt of British Columbia today. A few weeks ago the writer visited a large timber mill on the G.T.P. in northern British Columbia. Stretching over an area of 28 square miles is a crop of cedar, fir and spruce, from one to 200 years of age, that has never yet been violated by the hand of man. Here an army of 150 men were engaged in harvesting the bounty of Nature, so generously provided for the needs of man. A large mill was erected close to the railway track. A private railway line ran back into the timber and on either side of this track, for a distance of 700 feet the logs were being brought out to the mill.

Sawing and Yarding

The lumber-harvesting operation is one of great fascination. The engineer pushes the private railway forward into the selected area. Next follow the sawing crews, three men to a crew, with half a dozen crews at work. Two of them operate the cross-cut saw, while the third man in each crew trims the logs ready for the mill. All day long the crash of falling trees reverberates through the mountainous district. There is something pathetic in watching these great forest giants that have withstood the storms of perhaps 200 years, rudely thrown to the earth, but it is a part of the scheme of civilization.

The sawing crews first select the finest and tallest tree as a "spar-tree" and fall all the other trees towards this spar-tree. Sawing crews under normal conditions will fall from 40 to 50 trees each per day.

Close after the sawyers come the yarding crews. A powerful donkey engine is set up close to the giant spar-tree. The top of the spar-tree is cut off or blown off with dynamite from 90 to 100 feet from the ground. At the top of this tree is attached a pulley through which a one-inch steel cable runs from the donkey engine. The steel cable is attached to the logs lying throughout the woods, by means of a "choker" and the donkey engine snakes the logs with great speed to the yard along side of the spar-tree. This method of yarding is known as the "high lead" system, and one donkey engine with a yarding crew of three men will bring to the yard, about 150 logs daily. Once the donkey engine starts to bring in a log nothing can stand in its road. Trees of one foot in diameter that have not been worth cutting go down before the incoming logs like wheat before a hail-storm and the result is that little is left standing when the logs have all been yarded. Two donkey engines were steadily engaged in yarding and others were in the course of installation.



After the Trees are felled and cut into Logs a Donkey Engine hauls them together with cables. They are then carried on Log Trains to the Sawmills.

Hauling to Mill

These yards accommodated the logs for a radius of about 700 feet. The next move in the operation was to load these logs on flat cars on the railway and another donkey engine and crew were engaged at this work. Steel cables attached at two separate points on the log were connected by a derrick with the donkey engine and 12 to 15 logs piled upon the car which would contain from seven to ten thousand feet of marketable lumber. When the load is completed it is picked up by the steam locomotive, specially geared for lumbering operations. A few minutes only is required to pull in the load, for a mile or more, down the hill to the pond beside the mill. Here the logs were rolled off the car and down the skidway into the pond and the cars went back into the yards for further loads.

The logs as they arrive at the pond vary in length from 40 to 100 feet, which is too long either for the mill or for shipment. On the edge of the pond a steam drag-saw lies in wait for the logs and cuts them in lengths convenient for the mill to handle. The drag-saw does the work formerly requiring four men and is able to keep up with the demand of the mill.

Once the logs are cut into proper lengths they are started towards the jack-ladder which snakes them up into the mill and on to the roll-way, from which they go to the saw.

The Power of Steam

Cutting is done by a band-saw 15 inches in width, 54 feet in length, propelled by a nine-foot drive wheel and with teeth on both sides so as to cut with both the forward and backward movements of the carriage which holds the logs. Everything possible in the mill is done by machinery. The carriage stops in front of the pile of logs, a steam "kicker" throws the largest log with ease on to the carriage. A steam "nigger" pushes the log into its exact position and, believe me, it is some "nigger." It requires about one and three-quarter minutes to rip the largest logs into boards, while the smaller logs go through in about 45 seconds. From 10 to 12 seconds is all the time required to put a fresh log on to the carriage and start it running. As soon as the sawn lumber leaves the saw it is carried by "live rolls" to the edger, where the moving transfer conveys it along to the trimmer, after which it goes down the incline to the sorting table where the surveyor marks each piece as it passes by him. It is then loaded into "lumber buggies," which are ranged along side of the sorting table. Horses are used to draw these buggies out into the yards where the lumber is piled waiting for shipment or for drying.

When ready for shipment the lumber goes to the dry-kiln, where it is dried by steam heat at the rate of 50,000 feet per 48 hours. Passing out of the dry-kiln it is put through the planer and from thence to the cars on the G.T.P. siding for transportation to the prairie or wherever it is needed.

Half Million Invested

The mill and plant represents an investment of approximately $300,000, or including the timber limit, approximately $500,000, and is designed to prepare everything necessary for the construction of farm buildings with the exception of doors and windows. The main mill is operated by three 150-horse-power return tubular boilers with Dutch-oven setting and a 350-horse-power twin engine. In addition to the planing mill there are two shingle machines cutting 35,000 shingles daily and a lath machine cutting 40,000 laths daily. The planing mill has a capacity of 250 feet lineal per minute. In addition there is a moulder and a power-driven rip-saw. The planing mill has its own power plant with a 130-horse-power boiler and a 150-horse-power automatic engine.

Surrounding the mill are the homes of the workmen, and the small town is rapidly being developed in the heart of the woods. Electric light is provided for operating the mill at night and for the use of the town as well, and a good sized general store is conducted by the company for the convenience of the employees.

Labor is Scarce

The greatest difficulty in the lumbering business today is to secure efficient labor. The war has taken away many thousands of experienced lumbermen and lumbering is one of the skilled industries. The wages run from $4.00 per day for Chinese help to $7.00 a day or more for the foremen, but even these wages do not attract sufficient number of competent men to the work because they are not to be found today in Canada.

Although the scenery is something which cannot be turned into dollars and cents in the lumbering business, yet it is attractive and inspiring to the visitor. It must also have its effect upon the workmen when sweltering in the heat they can see only a few miles away the snow-capped peaks of the mountains. It will at least remind them that the heat is only a passing phase and there will be plenty of long cold winter days ahead of them.

Note.—The timber plant described in the above article is that of the U.G.G. Sawmills Ltd., at Hutton, B.C., but is a duplicate of many other saw mills that are harvesting the timber crop of British Columbia today.

Raw material entering the Mill where it is converted into Lumber for the Prairie Trade.

Another view of the same Mill with some of the finished product ready for shipping