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MODERN METHOD OF BREAKING A

The accompanying illustration shows, in eration, a contrivance arranged by Mr. Samuel agham, of Ottawa, for the speedy loosening a jam or other accumulation of logs, pulp fod, ties and so torth. Mr. Bingham is obably one of the best known and most sucsful logging contractors in Canada, having arge of all the logs on the Gatineau river for distance of 100 miles, from the river Desert to Ottawa.

The view shows an accumulation of 250,000 w logs and an equal number of pieces of pulp rod and ties. The "tie up" is located at the taining boom on the Gatineau, situated at the scades. The logs are piled a distance of half mile and to a height of 28 to 30 feet, extending entire width of the river,

out three-quarters of a ile. A sudden rise of ater in the tributaries used the accumulation of s. In 10 days last ring over 500,000 pieces ere swept in from a disnce of 60 miles up stream. he current in the Gatineau this stretch runs 20 miles hour, and as the logs ere swept down to the illection at the boom, they ere forced under water. nd thus coming to the rface under the other gs, raised the entire lot a great height. The gs presented an unbroken

font, and hence were even more difficult to and the total the shape of a jam.

Under ordinary circumstances, months, and erhaps an entire season, would have elapsed efore the logs could have been released and ent on to the different mills. Mr. Bingham, lowever, decided to put into operation a scheme hat suggested itself to him last season. He ecured a 60 horse power steam hoist and placed on a platform 120 feet long and 36 feet wide. from this hoist a three-quarter inch steel cable as worked over a drum 27½ inches in diameter. the cable was 550 teet in length, and a second ne was provided for cases of emergency. A umber of ordinary jam dogs or hooks, single nd double, were provided, as well as log tongs. When it was decided to release the logs, the longs were first used on single logs, a number of which were taken out to make channels. The ongs, of course, were fastuned to the cable, thich was operated by means of the steam hoist ver the drum. Atter the necessary channels ad been cleared, the dogs and hooks were rought into play. The latter were so placed that the release of one log brought thousands with it. Thus in the operations pictured, as many as 5,000 and 10,000 were brought out at a time. The use of the tongs in the first instance gave a more direct purchase on the single logs it was desirable to release. The engineer can regulate the strength and speed of the pull as demanded by the position of the logs, number of logs to be released, etc. The contrivance is, in short, to the log stream what the reaper is to the wheat field. The latter, when compared to the sickle, does not do one-tenth the work Mr. Bingham's contrivance accomplishes. Its advantages are manifold; speed and safety to the men are important factors in its workings.

The float with the hoist can be so placed that when the logs are released it can be readily swung clear of danger. Another advantage it

METHOD EMPLOYED ON THE GATINEAU RIVER FOR BREAKING A LOG JAM.

has is in the sorting of the different owners' logs from the jams along stream or collections at the retaining boom. As soon as one firm's logs are located, the hoist and cable are set at work there, and all are speedily released. By the old method, when the logs were released purely by the efforts of the river men with their cant hooks and pike poles, there could be no such choice or discrimination. Confusion reigned when the logs were released and they had to be sorted afterwards.

Mr. Bingham states that by the use of his contrivance, a gang of 2 jam dog men, 6 river men, an engineer and a fireman, can release an ordinary jam of 25,000 logs in a day or two. By the ordinary method this would mean perhaps months, or even a season's work on the part of scores of men whose lives were constantly being endangered and sometimes sacrificed in breaking the jam.

It took six weeks to release the 500,000 saw logs, ties and pieces of pulp wood that became wedged at the Cascades retaining boom. This was the largest collection of logs and good

wood ever brought together on the Gatineau, and it was held back by one of the strongest booms in the world. At this point there are four piers stretching across the river. The largest one in the center, is 100 feet square at the base and tapers to a crown 46 feet square. It is 96 feet high. These were built by Gilmour & Co., under the direction of Mr. Bingham. Owing to the frequent change in the level of the water most of the other booms are made permanent.

The Gatineau is known as a rough river on which to run logs. In the 100 miles from the river Desert to the Ottawa, there are 47 rapids and 22 chutes. In this distance from the Ottawa upwards there is an elevation of about 1200 feet. Mr. Bingham has the river divided into 37 sections, varying in length according to presence of rapids, speed of cur-

rent, etc., from one-half to three miles. These sections are patrolled by permanent men.

The present is one of the busiest seasons Mr. Bingham has had in his 26 years' work as river contractor. He has delivered 850,000 logs, measuring from 13 to 16 inches in diameter. Last year he handled 500,000 logs. Each year he handles large numbers of ties and pieces of pulpwood, as well as the saw logs. This is the first season he has not had at least one raft of square timber down the Gatineau. Mr. Bingham

handles all the logs on the Gatineau, and supplies the following mill-owners: W. C. Edwards & Co., Ottawa; Gilmour & Hughson, Hull; Rideau Lumber Co., McLaren & McLaurin, East Templeton; Logan Estate, Maniwaki. He employs 350 men during the season, which extends from about May 1st to October 15th. Mr. Bingham oversees the work personally and knows the river thoroughly. He now handles the logs off limits extending 240 miles from the Gatineau. When he first started the logs were cut much nearer.

Mr. Bingham states that the reason for the decline in the production of square timber is the advance in the prices secured for finer grades. The Gatineau mill owners, seeing better financial returns in the latter, adhere to it. The Gatineau, however, was never improved for the passage of square timber as were the Coulonge, Black river and other tributaries of the Ottawa, and hence more was cut along the banks of the latter streams. Mr. Bingham cites his present season's business as proof that the Ottawa lumber business is not declining, although