reasonable limit, the quantity of logs which are likely to come out of a certain stream, the operators usually being known by the party or parties owning the improvements. Another point to which consideration was doubtless given is that a person should know what he is expected to pay for certain privileges before the liability is incurred, in this case before the improvements are used. It might be that, with advanced knowledge of what the dues are to be for the use of the improvements, he would find it more economical to have the logs floated on another stream.

The Beck Manufacturing Company, Limited, owning the improvements, and not having incorporated an improvement company for that purpose, are limited to the power which is vested in the County Judge, to whom the Ontario Act does not give authority to fix tolls for logs which have already passed over the improvements. If, however, the conditions are such as to make it advantageous to have the tolls fixed after the logs have been floated, a means has been provided by the incorporation of a company as owner of the improvements. The improvement company can then fix its schedule of charges, even after the work has been performed. If the charges are not acceptable to the persons having made use of the improvements, they may be submitted to the Commissioner of Crown Lands, who will take evidence and has full power to make such changes as he considers are justified by the circumstances. This is the law as we understand it.

## EDITORIAL NOTES.

Just as the single band saw succeeded the circular saw in many mills, so the double cutting band is taking the place of the single band in the larger mills. In British Columbia it has been installed in nearly all the new mills. Experience has demonstrated to the satisfaction of many lumber manufacturers that the double cutting band is capable of turning out lumber equal in every respect to that produced by its single competitor, while its capacity is very much greater.

The culling and measuring of lumber in the Province of Quebec was fixed by statute in 1886, and we are not aware that any changes have since been made. The Act as it stands is absolete. The market requirements have made it necessary to adopt a more defined classification, consequently some of the grades of timber and lumber now manufactured are not covered by the Act. Would it not be in order for the Government to appoint a committee to revise and enlarge the rules with a view to bringing them up-to-date?

The Douglas fir of British Columbia is finding increased favor in Eastern Canada, but it should be used to a still greater extent. Large quantities of Georgia pine and cypress and other southern woods are being used in construction work, the lower freight rates and free entry into Canada giving the southern product an advantage over British Columbia timber. Where quality is considered, however, the latter should be given the preference, as it is stronger and more durable and will withstand the effects of water admirably. Canadians should use more of the B.C. timber.

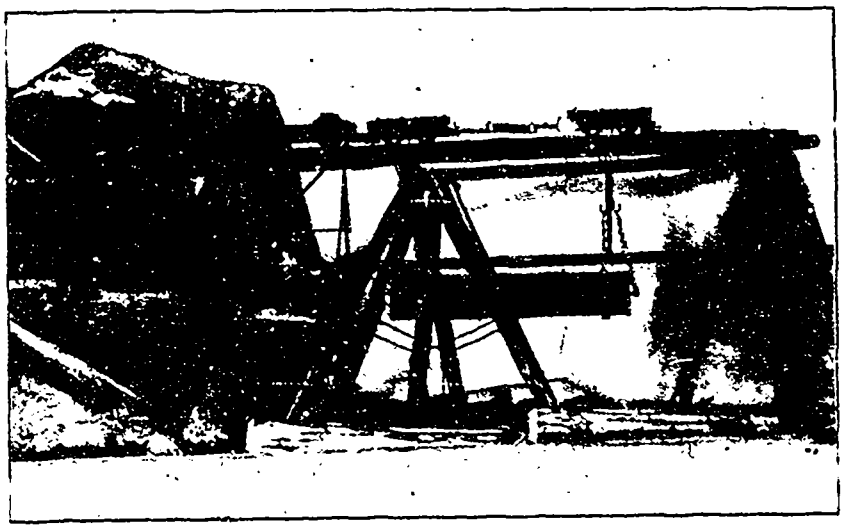
Doubtless many purchasers of Scribner's Lumber and Log Book have expected to find therein Scribner's rule for the measurement of logs. Instead the Doyle rule is given. It appears that some years ago J. M. Scribner published a small book which he called Scribner's Lumber and Log Book and which contained Scribner's rule. Later on Edward Doyle prepared a log table which he claimed was more nearly correct than Scribner's. George W. Fisher became the owner of the Scribner book and copyrighted it. After comparing the two log tables and taking advice of experienced saw mill men, he adopted the Doyle rule as being the more nearly correct. Hence we find the Doyle rule in the Scribner book. Scribner's log rules have been out of print for perhaps thirty years. George W. Fisher's copyright expires on the Doyle rule in 1910.

## ELEVATED LOGGING TRAMWAY.

All persons engaged in lumbering operations will be interested in the following description and accompanying illustration of an elevated mono rail logging tramway, invented by Mr. A. R. House, 556 Powell street, Vancouver, and the property of the Vulcan Company, of that city. The tramway is constructed of rough logs about 15 inches in diameter. A single track requires four logs, and a double track seven logs for the construction of the trestle work, and a single line of stringers to carry the rails. The stringers are placed continuously from trestle to trestle along the entire length of the tramway. The trestles are framed in a manner to receive the heavy strains on the ends of the timber. They are set up 25 feet apart with intermediate posts midway between them to support the centre of the stringers and prevent any sag. The caps of the trestles are projected three feet beyond the framework, strengthened by a raking log underneath resting on the ground. The stringers carrying the rails are placed at the extreme ends of the caps, scarfed and bolted thereto. On these timbers the rails are laid. Carriers running on the rails are in the form of the bicycle, with single grooved wheels at each end of the frame. Two iron rods, one at each end of the carrier, bent in the form of a hook, are attached to the carrier near the wheel, and pass downward outside and underneath the stringer, free from contact with any part of the sructures. On the ends of the blocks are two small wheels, which run on a guide rail, attached to the framework, and keep the carrier in an upright position and the load from oscillating laterally. The logs for transport are suspended to these hooks by chains.

The trains are drawn by a steam engine running on the rails, with a boiler car suspended underneath the line which acts as a counterpoise to the engine. By this system of tramway it will be seen that grading, removal of stumps, fallen logs, rocks, and other impediments are avoided.

A company has been formed in Vancouver to construct tramways, elevated or surface, for mining, logging, passenger, freight, etc., under the management of Mr. J. P. MacLean, mining, hydraulic and civil engineer.



ELEVATED LOGGING TRAMWAY INVENTED BY ALFRED R. HOWSE, VANCOUVER, B. C.

## NO. 3 CUTS.

We have been asked to state what constitutes the grade of No. 3 cuts in white pine. Although there are no printed rules that we can find covering this grade for Ontario, we would say that No. 3 cuts are supposed to cut about 33⅓ per cent. clear cutting, free from shake, knots, or any other defects. The balance of the piece may be knotty or faulty in other respects. Bright sap would not be considered a defect. The cutting should be either fit for panels, rails or stile. Panels should be 8 inches wide, 3 feet long; for rails, 6 inches wide, 7 feet long. Inch lumber would have to give panel cuts, as it would not answer for rail or stile.

A correspondent of the London Timber Trades Journal gives the following as the best speeds for band sawing machines: If saw pulleys are 30 inches diameter, speed should be 500 revolutions per minute; 36 inch pulleys, 420 turns; 42 inch pulleys, 325 turns; 48 inch pulleys, 300 turns. This list, he says, saves the trouble of working out the periphery speed, for the speed of the machine is determined by the size of the saw pulleys.