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TRANSPORTATION OF LUMBER BY MEANS OF SLUICES.

One of the most interesting features in connection with the lumber business in the vicinity of Epsom, N.S., is the method by which lumber is transported from the mountains and hills to the coast. Sluices are constructed of plank by rough lumber using two-inch plank on the bottom and one or one and one-half inch on the sides. The sluices are usually about six feet wide and 7 inches deep, being canted every three feet. They have an incline which varies according to the lay of the land, being perhaps one inch to the rod at the west, and in other places ten inches to the rod and often steeper.

The sluice turns and twists about the hills, following the mother earth wherever possible, or defying her close embrace, leaps into space over chasms and valleys with perfect skill.

A few years ago the writer, wheeling from Acadia Mines at Epsom, suddenly saw before him, down a long, broad, deep valley, what seemed a gigantic spider web deftly stretched from ridge to ridge, and strong enough apparently to waft the breezes. A cautious and slow approach proved most instructive in results. The skeleton structure of round and rough poles, ingeniously framed and spiked together, floated aloft to nearly 150 feet above the ground, supported far up there by the breezes which gently lifted it a strip of wooden planks which here and there

dropped water upon the wayfarer beneath. I gazed in wonder at the innocent cob-web holding aloft a thread of water, which floated on its surface thousands of feet of lumber. At the hour of the day, from its home in the recesses of those blue hills to the decks of vessels on the sea shore many miles away.

The illustration given with this article is of one of the fairy structures in the neighborhood of Epsom Brook, on the Moose River, and at this point 135 feet in height. Last spring it was torn down and rebuilt, and in the summer 1,000 feet of lumber passed over it. It is well braced that it can resist great wind stress, and is an example of the skill and ingenuity required in modern lumbering. The sediment from the streams of water flowing into these sluices soon fill up all cracks and make the troughs very water-tight. Sometimes, as in the case of the Canaan sluice, which is 4 miles long, no feeders are necessary, but on small streams are led into the sluice at convenient points on the line, supplying any deficiency

which may be made by leakage. At the head of the sluice the deals are simply placed in the stream of water flowing down the trough, and left to their own sweet will in finding their way to the foot of the mountains or to the sea shore, as the sluice may lead them to. Of course, the precaution has to be taken that no jams occur, and if the deals went singly this would very easily happen, owing to the varying grades and the different depths of water and speed.

On a suddenly increased incline the water flows very swiftly and thins out greatly, so that a deal behind could easily mount upon one in front, causing a jam. To guard against this the deals are tacked together, butt to butt in piles of some dozen or more, usually with five-link chains. Two-inch nails are attached to the end links of the chains, and the work of tacking the deals together is slight. Occasionally lath and

renewing usually being necessary at expiration of that time. They are often over a hundred feet high, and again may tunnel beneath an intersecting lumber road or highway.

It is most interesting to watch the stream of water beneath one flitting swiftly past, bearing presently on its surface from around a neighboring curve a single deal which passes silently and in a moment tops a rise and flips from sight. Then a string of deals may follow, with joined hands as it were, by reason of their connecting links, and they, with equal celerity and silence, swirl past and downwards without a sound save the gentle swish of water and an occasional nudge to the side planks. Of course, the route must be watched, for a jam soon multiplies, and they are not entirely avoidable. Shelters are built here and there for the men along the sluice, and these are nothing if not

picturesque, as they perch high upon the end of a long trestle, but once the sluice is built and in operation the mill is almost equal to being located at the wharf, the expenditure for transportation being limited to the care of the line and its watching, and amounting to perhaps 25 cents per thousand feet of lumber.

A. B. P.



TRESTLE SUPPORTING LUMBER SLUICE OVER HUMMING BROOK, N. S.

AN ELECTRIC PLANING MILL.

A writer in Barrel and Box expresses his pleasure in inspecting a planing mill plant which was electrically driven from stem to stern. Every planer along the line, he says, had a motor right on the planer counter shaft of such size as the individual machine required, and there was no shafting in

sight whatever, except these little short counters which go along with, and are essentially parts of the machine. There were eleven motors in this place, each swing crosscut saw had its little individual motor, which was set on an overhead beam and belted directly to the counter shaft at the upper end of the swing frame, and over in one corner was the grinding machinery, which also had its little individual motor. All through the place it was impressive of the statement made in the first of the series of articles, that it seemed as if electricity would crowd the heavy belts and long strings of line shafting to the wall—lay them in the fence corners—for this plant had a general appearance of not having any machinery of this kind about it. The power for the plant was supplied from the engine room of the saw mill, which was some distance away, and it was doing its work silently and unobtrusively.

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