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peculiar British customs and terms, but knowing them to exist, has been content to dispose of his product to a middleman, who, by means of a large annual turn-over, is enabled to establish a branch in Great Britain, and is likewise in touch with prevailing methods there. Importers who are seeking for direct shipments from Canadian mills may do much towards accomplishing this end by striving to have eliminated the old-fashioned and tedious British method and to obtain the adoption of the American board measure rule.

#### EDITORIAL NOTES.

THE question of wood paving for streets is being much discussed in England at the present time. It has been advocated that suitable Canadian woods could be obtained which would be much cheaper than jarrah or red gum, which have been largely used in the past. A few years ago pavements of Canadian white pine were put down in Cardiff. These have, it is said, worn better than the more expensive hardwoods. Spruce has also been put forward as a suitable paving wood the supply of which would be abundant. As against this wood it is claimed that it will not take creosote, which is applied as a preservative. The Douglas fir of British Columbia has also been mentioned, and is likely to be experimented with by some municipalities. Now that it is a live question the opportunity should not be lost of proving the merits of Canadian timber for paving purposes.

We cannot but doubt the figures sometimes set forth in the prospectuses of pulp companies. While the cost of manufacturing pulp depends to some extent upon local conditions, there are certain fixed charges which keep the maximum and minimum cost within certain limits. That mechanical pulp can be manufactured at six dollars a ton, and sulphite pulp at sixteen dollars a ton, is, to our mind, extremely doubtful. Perhaps these estimates are intended to represent only the cost of wood and labor, without considering interest on plant investment, depreciation, insurance and other items which enter into the actual cost of turning out the manufactured product. If such figures are intended to represent the actual cost, the pulp companies of Canada are to be congratulated upon having reduced to a very low limit the cost of manufacture.

We are glad to observe that the establishment of departments of forestry in connection with our universities is being given consideration. Hon. Mr. Harcourt, Minister of Education, in a recent speech at Kingston, expressed the hope that in the new buildings now being built at Queen's University, accommodation would be provided for a forestry department. He also stated that the Government stood ready to assist in laying the foundation of such a department. The assistance thus promised is extremely timely. While we cannot hope in the immediate future to develop our forests along highly scientific lines as in Germany and some other countries of Europe, the time is coming when the services of scientific foresters will be required, and there seems no reason

why they should not be graduates of our own colleges. Lumbering is quite as important as agriculture and mining, and the question of the preservation of our forests should not be overlooked by those at the head of our educational interests.

THE railroads of this country have not as yet experienced any difficulty in obtaining a supply of ties at a reasonable figure, owing to the large quantity of hemlock timber to be found in our forests. The quantity of timber cut each year for railway ties is exceedingly large. While the figures for Canada are not obtainable, it is estimated that in the United States something like five billion feet are required annually. This requirement is gradually making inroads on the hemlock supply, and it is only a question of a short time when steps will have to be taken to preserve this timber, as has been done in the case of pine and spruce. It may be that the experiments which are being conducted to find a suitable substitute may eventually be successful, but the metal tie, owing to its excessive cost, is not likely to solve the problem. A few of the large railway corporations in the United States, anticipating the decline in the hemlock supply, are establishing forest reserves for the purpose of cultivating the growth of hemlock trees. The lesson from this is that manufacturers of ties should not sacrifice their timber, but should endeavor to obtain a price commensurate with its value, keeping in view the increasing demand and declining supply.

AN American engineer who recently built a pulp mill in Eastern Canada in which Canadian machinery was installed gives his opinion to the CANADA LUMBERMAN that our manufacturers should give greater attention to the finish of their machines. He states that in this respect alone do they compare unfavorably with machines manufactured in the United States. Another expert contends that the weakness of Canadian machinery is in the design. This, he claims, is due to the fact that in this country the English practice of building massively is followed. To use his own words, "English manufacturers build machines to last forty years, while the Americans build for five years only." His argument is that in about five years the machines of today will have become obsolete and be superseded by others more up-to-date. Much of the money which the English manufacturer expends in making his machine solid and massive is expended by the American manufacturer on design, with the object of securing the maximum efficiency of production at lowest cost. Perhaps there is some truth in this argument, and Canadian manufacturers may profit thereby.

#### PRIZES AT THE FAIRS.

The Massey-Harris Company, of Toronto, have donated the sum of \$1,000 as prizes at the Toronto, London and Ottawa Exhibitions. The prizes are given for the benefit of the agricultural and horticultural community, and most of the competitions are open to farmers and their sons and daughters only. The competitions for which prizes are given include natural history, photography, architecture, poultry, horses and grain.

#### MAKING HARDWOOD FLOORING.

A writer in the Wood-Worker describes his method of making hardwood flooring as follows: First, the lumber is brought into the mill and ripped to even widths on a one-saw edging table, allowing  $\frac{3}{8}$ -inch for matching; that is, ripping  $\frac{3}{8}$ -inch wider than I want my flooring to show on the face. Then it is put through a single surfacer, the worst side up, thereby knocking off all humps and inequalities in thickness. Lastly, the material goes to the planer and matcher and is fed through with the dressed side down, the top cylinder taking a light cut off the face of the stock, the side heads cutting the tongue and groove, and the bottom cylinder at the tail of machine hollowing the back. After an experience of several years in getting out hardwood flooring, mostly oak, I have found this to be the best way for me with the machines mentioned. My top cylinder on planer and matcher carries only two knives, and I set them out from the lip of cylinder not to exceed  $\frac{1}{8}$ -inch, being very careful to get them as nearly alike as possible. My matching heads are of the expansive pattern and carry four bits to each head. I would not like to undertake to match hardwood flooring without the improved head with this expansive feature. They are much easier kept in order, more readily adjustable to the different kinds of matching and to the different kinds and conditions of material than anything of the kind I have ever used or seen.

#### LUMBER IN THE WEST INDIES.

TORONTO, May 7, 1902.

Editor CANADA LUMBERMAN:

Before leaving for the West Indies you asked for certain information regarding the lumber used in the West India Islands. In the year 1900 the importation was a little over forty-one million feet. Of this amount thirty million was provided by the United States and eight and one-half by Canada. These figures, however, do not represent the true proportion, as practically all the white pine that goes into the Islands is Canadian pine, and merchants in nearly all the Islands asked me why it was that they had to buy their Canadian lumber through New York houses.

Since returning I have made enquiries about this matter and find that our lumber exporters say that such are the facts. The reason is that the whole output of the mills is sold to one dealer in New York and is sorted by him.

The class of lumber that goes to the West Indies is the lowest grade, and all of the Canadian lumber which goes through New York is given credit in the Blue Book to the United States. At the present time the most of the lumber which goes direct from Canada is from the Maritime Provinces. A considerable portion of the above figures consists of pitch pine, which is taken to the Island in schooners from Florida.

As to freight rates, there is an agreement between Canadian and New York boats whereby the same prices for transportation are charged to the different Islands. This is about all the information I can give you with regard to freight rates, as considerable of the lumber is carried through by sailing vessels, which is, of course, a cheaper way.

Yours faithfully,

J. M. STEWART,

Asst. Secretary Canadian Manufacturers Association.

An authority on power transmission gives an estimate of 10 per cent. for the power necessary to run loose pulleys. That this amount of power is saved where the belts are run loose with a binder to start and stop the machines, is a logical conclusion, if the statement is true.