

give them for what they are worth.

The importation at London of Canadian timber during the year compares as follows:

	1889. Loads.	1888. Loads.	1887. Loads.	1886. Loads.
Oak	2,136	2,264	2,175	3,074
Birch	6,067	2,154	2,976	2,625
Ash	7,078	1,666	645	1,632
Elm	4,459	941	737	622
Yellow Pine	3,195	4,114	2,716	2,651
Red Pine	244	274	216	259

The timber trade at Glasgow during 1889 has been active, the records of import and consumption showing an expansion compared with former years. The increase in the imports of Quebec timber as compared with 1888, is chiefly in hard woods, oak, elm, ash and birch, and as a result the stock of those now held is larger than the amount a year ago.

The Greenock timber trade, and in fact most all the Scotch ports show an increased volume of business compared with recent years, and is due almost entirely to the great boom in shipbuilding.

The timber trade of the Irish south and west coast ports shows a large increase of business over the preceding year.

It is early yet to predict just what the result of the coming season's trade with Britain will be; but with a prospect of lower freights, and with continued industrial prosperity in Britain, we may expect the trade of the present year will not come far behind that of 1889.

CORRESPONDENCE.

MADAWASKA, N. B., Feb., 1890.

Editor Canada Lumberman.

No doubt in many cases, it will entail considerable expense upon mill-owners to enable them to get rid of their saw dust and waste about their mills if the law is enforced, and no doubt there are party prejudices which makes it very difficult for a minister to know where exceptions should be considered, and in my opinion, the only true way to handle the question is to serve rich and poor alike.

The throwing of sawdust and mill rubbish into our streams is a nuisance to navigation and to fish, and the want of fish-ways into dams on our streams is a greater nuisance than saw dust to the fish when they want to pass over.

From inquiries made by your correspondents leads me to think the scarcity of soft wood in Ontario is beginning to be felt. Our pine has become an article of the past, and our spruce lands on the St. John river are well stripped. The cutting of trees down to 12 feet, 8 and 9 inches in diameter, leaves it only a question of time when there will be none to cut. Our politicians seem to think that our timber lands will last for ever, by the reckless manner in which they strive to get rid of them to speculators. Lumber sold to be manufactured out of our country is a suicidal policy, and the next generation will regret the shortsightedness of their political predecessors.

Our forests are fortunes at our feet, and we allow Americans to come and take away. A few years ago the timber reserves of Michigan were considered endless. Where are they now? On the St. John river a few years ago, nothing could be seen floating down it only magnificent pine timber 16x18 inches average. Where is it now? Now we see no pine and spruce logs cut down to 9 inches and less at the top end—on the other hand in many cases they are not worth hauling to the mill, and with all this slaughter our country is no better off than it was before.

Lumbermen do not study the future prosperity of our country, all they think of is self and make their jack while the lumber lasts. Now-a-days the lumber rings and railway rings, whenever any favors are wanted, whip the politicians into line and their requests are granted; but if the pioneers of our country deem it essential to protect our lumber and local mills that are depending upon our forests for supplies to enable them to build up the country, no notice is taken of them.

If subsidies were given to large manufacturing concerns to enable them to manufacture anything from a tooth-pick to a parlor set, to meet the domestic wants of foreign countries, and by the utilization of our magnificent water-powers, it would do more to create a market for our hard and soft wood than many imagine. It would, furthermore, encourage labor, turn our wild lands into agricultural fields, open up a channel of trade for land and water carriage, greater than any other scheme. But some would cry out that this would be taxing the poor to make the rich richer, whereas it would only be taking from poor and rich alike to enable the poor man to get a home and improve his condition in life. Too little attention is paid to the local wants of our pioneers, who are generally poor, and who need local industries to give them employment. The trader's motto is, there is no friendship in trade, and the lumberman's motto is, monopolize all the lands you can get, and as this is a free country, those who have no shoes can go barefooted.

P. O. BYRAM.

PIECE LUMBER.

(By George Fisher.)

The demand for cheap goods, and the strong competition that many lines of goods have to meet, have caused careful men to put on their "thinking cap." There are so many ways in which the cost of goods can be increased or decreased, that only those who are giving the closest attention to their business can make any profit outside of the regular cost for material and labor. Freights are no small part of the real cost of goods that have to be delivered and every way that the weight can be lessened adds materially to a small margin.

Lumber that is being shipped a long distance should be planed if possible, thus saving weight, and the utmost care should be exercised in selecting the lumber, that nothing is shipped that is not to be utilized. The average country mills saw their lumber so it will vary in thickness nearly or quite one-quarter of an inch. Their 12-foot lumber is all kinds of lengths, some being an inch or two less than 12 feet, while the logs will vary from 11 feet 10 inches up to 13 feet or even more than that. If the purchaser is going to cut this lumber up into short lengths this may not be a serious objection, but for marketable lumber the very looks of the long and short boards is enough to hurt the sale—at least for the best market price.

If these odd lengths can not be utilized, along with the extra thickness, is a matter that has arrested the attention of manufacturers. Of late many manufacturers of small articles have fallen in line with the idea of buying piece lumber—that is to say, if they are manufacturing any article where duplicate pieces are used so they can ask for bids for 1,000 or 10,000 pieces of certain sizes and qualities, to be delivered at certain specified times, they are saving in both freight and in price. So many of these small articles are saved by mills that are utilizing pieces too small for their regular work.

The writer's attention was called not long since to a mill which saved from the slabs and the good part of the culls, over a car load a month of their lumber 3 1/2 inch thick for fruit crates, and at prices with which no manufacturer could saw up whole lumber and compete. Tent pins and tent slides are made by the car load by mills which have an eye upon utilizing their scrap. Hame sticks are made by the car load by hardwood mills which save the good, sound lumber from between knots and defects. Wagon felloes also are simply a utilizer of rough lumber. These goods and many others are contracted for by the piece, in car lots, enabling the mill man who has learned the real value of a dollar, and the value of a piece of wood, even though it contains but a fractional part of a foot, to get every cent out of his material.

The piece lumber enables the saving mill man to utilize everything in his lumber. It brings the lumber to the least possible waste, making a great saving in weight by shipping only stock that is to be used, reducing the freight to the lowest minimum, and a saving of labor to the manufacturer from cutting this material from boards or planks, which can only be done with more or less loss in the various widths. Chair factories, toy factories, plow factories and many of the furniture factories are buying nearly all of their lumber cut to certain sizes—piece lumber. We predict it to be the future system of supply where it is possible to utilize it. It enables mill men who depend upon the forest for their supply to take every advantage that near timber will afford them, in working rough logs, small timber, cutting out defects, making first-class lumber out of common. It also is an advantage to the mill man who has a long distance to haul his lumber, by selecting only such stock as he can handle to advantage and with profit.

A peculiar feature of this piece lumber is, the consumer does not make the price, yet he controls it as far as supply and demand will admit him to. He asks for bids in large quantities, thus placing the order in the hands of those who are willing to work the cheapest or are the most desirous for work, only as freight rates may favor the near; we might add, placing the orders in the hands of those who read the wood-working journals—not one, but several, so that they keep themselves posted with the wants of the consumer.

In fact the writer thinks that next to his boiler and engine he wants the lumber journals as a part of the plant, looking upon them as an essential part, for lumber that is not well sold is akin to lumber poorly manufactured.

Poor lumber and poor prices have dragged many a mill man to ruin. The best is the cheapest, let it be machinery, help, logs, market or what it may, and the man who does not travel, visit the market, his competitors, read the journals and see what the people want, what improvements they have to offer to the world is a manufacturer of the past, not of the present.

BRITISH COLUMBIA FIR.

In quantity, quality and general utility, says the *Daily Columbian* of recent date, the Douglas fir of British Columbia stands the acknowledged king of all merchantable woods. In every test that has been made between it and other woods the Douglas fir has always come out victorious. Where strength, beauty of grain, and lightness combined are required, this noble wood never fails to be the chosen article, and the leading lumber dealers in all the large cities of the east find that the demand for it becomes general when once its great usefulness is known, and they are consequently obliged even now to keep a stock on hand. It is a safe prediction that a few years hence the Douglas fir will be added to all quotations in the eastern lumber markets. Of course this will not be until freight-rates are so reduced that the lumber can be laid down at a reasonable cost—the present rates militate strongly against an immediately large market for it. But notwithstanding the manner in which the Douglas fir is handicapped, it still finds its way into all the important car manufacturing companies in America—a class of work which requires the very strongest and best wearing kinds of timber. The Canadian Pacific Railway Car Works in Perth and Montreal use the Douglas fir for car sills and frame work; so does the Crossen Car Works, of Cobourg, Ont., and the great Barney & Smith Car Manufacturing Co., of Dayton, Ohio. Many million feet of this lumber is used annually by these companies, and they all pronounce it the finest car timber in the world.

The strength of the Douglas fir is surprisingly great, and the old idea that oak was the strongest and most lasting of all woods is completely exploded by recent tests of this wonderful timber. The English Admiralty gives the Douglas fir the greatest tensile strength of any known wood except oak. The Northern Pacific Railway Co.'s tests, give Douglas fir the greatest resistance to breaking strain, and pronounce it the best bridge timber in the world. The Canadian Pacific Railway bridges through the mountains are constructed of Douglas fir, and are acknowledged to be unequalled in strength and durability of any similar structures in the world. The Imperial Government specify spars and masts of Douglas fir as the best known.

A number of tests were made last May by the Northern Pacific railway. The experiments were made with 2x4 inch sticks, four feet long laid edgewise on supports 3 ft. 10 inches apart, being in proportion one-fourth of a regular bridge stringer. By applying a concentrated weight in the centre, they were all loaded down until breaking.

The following table shows the result:

Description	Total Breaking Load in Centre Pounds.	Breaking Strain per Square Inch in extreme Fibre, Pounds.
1. A piece cut from a stick, having been exposed to the weather for 5 or 6 years and partly decaying broke at	3,050	6,400
2. A piece cut from a soft, sappy, fine grained, yellow fir	3,060	6,400
3. A piece cut from a green coarse grained butt of fir	3,630	7,600
4. A piece cut from an old, seasoned, medium grained stick, having been exposed to the weather for several years	4,320	9,100

Tests were also made as follows:

5. A piece of Eastern white pine	1,610	3,400
6. A piece of green Eastern oak	2,430	5,100

Taking Nos. 3 and 6 as being fair comparative pieces, it will be seen that the fir is about half as strong again as oak when green, while the fourth piece shows that the fir gains enormously in strength by seasoning. But the comparisons between Nos. 1 and 2 and 6 are still more remarkable. In the case of No. 1, a partially decayed piece of fir is capable of standing a strain greater by one-fourth than sound, green oak, and soft, sappy yellow fir stands equally as great a strain. White pine, of course, cuts a very poor figure as compared with fir, and will bear no comparison of any kind with the latter for any purpose where great strength is needed.