

The trans-Atlantic shipments from the Province of New Brunswick for the past ten years were :

Sup. feet.	Sup. feet.
1885—292 millions.	1890—293 millions.
1886—276 "	1891—253 "
1887—250 "	1892—325 "
1888—277 "	1893—312 "
1889—369 "	1894—326 "

SHIPMENTS FROM NOVA SCOTIA, 1894.

Ports.	No. Vessels.	Tons.	Sup. ft. deals &c.	Tons Birch Tbr.
Outports of Amherst.	Pugwash 13	8,649		
	Northport 9	8,209	15,262,020	
	Tidnish 4	2,667		
Halifax	52	36,430	31,631,250	
Jordan River	1	474	422,798	
Parrsboro	40	43,496	39,519,639	
Pictou	10	8,259	5,491,000	1,180
St. Mary's River & Liscomb	15	10,565	10,151,760	
St. Margaret's Bay	3	1,481	1,454,295	
Ship Harbor	2	1,030	942,120	
Sheet Harbor	3	1,560	1,452,368	
Totals	152	122,820	106,327,250	1,180

The shipment of deals from Nova Scotia to trans-Atlantic ports for the following years were :

1883	77,918,000	1889	92,605,488
1884	69,159,000	1890	99,512,924
1885	79,647,765	1891	78,603,742
1886	87,280,125	1892	87,861,398
1887	82,959,589	1893	109,252,930
1888	85,070,005	1894	106,327,250

MANITOBA AND THE NORTHWEST.

No large amount of business was done in lumber in Manitoba and the Northwest in 1894. The consumption of lumber for the year is given at 40,000,000, which is from 25 to 50 per cent. of a reduction over the previous year. Trade in Manitoba and the Northwest depends, to a large extent, upon the condition of the farming community, and the disposition in 1894 was to withhold expenditures for buildings and improvements. After the change in the tariff, increased quantities of lumber were brought in from the United States, and it is, perhaps, to be expected that that thing will continue. Lumbermen in the Lake of the Woods district are pursuing a policy of restriction, not anticipating a large trade 1895.

BRITISH COLUMBIA.

The lumbering industry in British Columbia in 1894 was much depressed. Domestic trade, at the best, was not large, and what was done was not of the most profitable character. It was hoped early in the year that business would brighten up in Australia, and as an important export point for Pacific coast lumber that some gain would come from that source. This improvement, however, did not take place, nor did the trade of South America develop as was expected, though conditions there have been better than in the Antipodes. Another unfortunate feature of the trade was the unprofitable price at which lumber was sold. It is calculated that in the case of vessels loading for foreign points that a considerable loss was effected on some of the shipments. A policy of economy was practised by mill owners, the wages of employes and other items of expenditure being curtailed. After the tariff bill had been passed in the United States an opening was made for the shipment of stocks to California and some impetus was given to business in that direction. Quite a number of shipments were made during the closing months of 1894, and it looks as though a fair trade, at least, would be cultivated between British Columbia and California. If one turns to the shingle trade, which is a large item of manufacture on the coast, there is nothing of encouragement to be gleaned. All through the year the shingle market was in bad shape, and the product of the mills was, in many cases, sold without a profit. The situation is summed up in a sentence by a large shingle manufacturer of New Westminster: "We certainly are tired of consuming our handiest timber and wasting our work and energy in doing business without adequate profit, and if the truth be told, our bankers are just as tired of it as we are." Mill men are slow to speak of what the outcome will be for 1895. They are hoping for an improvement, and the year will likely show up better than that of 1894, but to what extent it is hardly safe to predict at this time.

Mr. Joseph Smith, a prominent lumberman of Ottawa, Ont., died early in January, aged 75 years.

SHOP TESTS FOR BELTS.

THERE are mechanics who believe that belts will sometimes get tired and cranky, and refuse to work. Whether that is actually true or not, the writer operated a little cross belt at one time that acted very much like it. At intervals of several days the belt would fly off without any provocation. I would put it on, and immediately it would fly off again, and would keep so doing for a number of times.

Finally, however, it would resume operations in a regular way without any more breaks, for days at a time, when it would take another fit and do the flying-off act again. I got used to it, and when it took the notion to fly off I curbed my temper, and drew upon my reserve of patience, and as often as it flew off I would quietly put it on, knowing that when the fit was over it would resume work, and it always did. I did not know then what caused the trouble, and do not know yet, unless it was of a cranky disposition, or was tanned from the hide of a Texas steer.

Speaking of that reminds me of cross belts in general. Take for instance, a cross belt running off a large driving to a small driven pulley. The first thing it does, when put to work, is to crowd over on the small pulley, and before the operator is aware of it, it will be running one-half on the pulley and the other half off. If not accustomed to the tricks of cross belts, he at once jumps to the conclusion that the pulleys are not in line, and so stops the machinery to investigate. A one-eye glance shows the pulleys to be all right, and he tries it again, thinking perhaps the first time was an optical or some other kind of a delusion. The second trial proves there was no delusion, for there it runs half on and half off. There being no other alternative, the pulley is moved on the shaft to accommodate the belt, and although the belt resents this interference with its right to run as it pleases, by trying to crowd still further over, still, if the pulley is moved far enough it can be kept fairly on it so long as it runs just that way.

By and by, however, it gets slack and needs taking up. It is unlaced, a piece cut off one end, and the belt is laced again. When put on the pulley this time, much to the astonishment of all hands and the engineer, it flies entirely off the little pulley on the other side, and no matter how often it is put on, it will just as often fly off.

In nine cases out of ten the parties operating it cannot tell what is the matter with the belt. They all think it is cranky, but in this case it is not; on the contrary, its actions are perfectly natural.

When a cross belt runs from a large to a very small pulley, the cross comes close to the latter and the taut fold of the belt presses hard against the slack side and crowds it over on the pulley, much as a shifter moves a belt from a tight to a loose pulley, or the reverse. That was the trouble in the first instance. In the second instance the belt had been crossed the other way, and hence the reason why it ran off on the other side of the pulley.

There was nothing cranky about the belt. It was simply obeying natural law. It is the mechanics who are cranky for crossing a belt on a large driving and small driven pulley. It should never be done when it is possible to avoid it. It is practically enough to cross belts on pulleys that are near the same diameter, or at least the small pulley should be large enough to throw the cross so far away from it that the tight side of the belt could have no effect on the slack side.

When so arranged a cross belt will work about as evenly as an open belt, and is a better transmitter of power, because it increases the lap of the belt on the pulleys. It is better not to cross a rapidly running belt except when actually necessary, as for reversing motion, etc.

Controversies as to the adhering and transmitting qualities of various kinds of belting are common, and makers of new kinds often take advantage of this difference of opinion among experts, and the users of belting in general, to make loud claims for the superior transmitting qualities of their belts; and without some way of demonstrating the truth or falsity of these claims the purchasers of belting have to take the word of the makers. It is, however, not necessary for any user of belting to take anybody's word on a question of that kind if he is

not afraid of a very small expense and a very little trouble.

Every shop and every mill can have a very simple tester rigged up in this way. Select a short piece of shafting, say three feet long, on which fit a pulley of from sixteen to twenty-four inches in diameter and six inches face. Fasten the pulley securely to the shaft, as is ordinarily done for work; then fix clamp supports as substitutes for journal boxes, and hang the shaft about four feet above the floor at any convenient place that will be out of the way. Clamp the shaft tightly so that it cannot turn, and the tester is ready for business.

Throw a piece of six-inch belt over the pulley and attach a tension weight to one end of it with the weight resting on the floor. To the other end, by means of a hook, hang a small platform on which all sorts, sizes, and descriptions of weights can be piled. Pieces of iron of any kind can be used, or lead, or anything that has weight to it. With these odds and ends the platform is to be loaded until the belt slips and raises the tension weight from the floor. The platform weights can then be weighed, and a record made of the weight.

The standard test should be made with a piece of new leather belt of good quality, and by its record all other belts should be measured. The bottom of the platform ought to be at least one foot from the floor when empty, so as to have some distance to fall through when a belt is being tested.

By this standard all other kinds of belts may be measured, and every dealer in belts desirous of placing his goods should be asked to furnish a short piece of six-inch belting with which to make a test. If it requires more weight to slip the belt on the pulley, with the same tension, then it is a better power-transmitter than the leather belt. If it slips with less weight, then it is not so good. In this simple way all kinds of belts can be tested in relation to each other, and records kept for convenient reference.—R. J. Abernathy, in Power.

PUBLICATIONS.

Albert Lynch, the famous French artist, who received the highest Salon prize for his panel of "Spring," has been engaged by the Ladies Home Journal to draw a series of designs for the cover for that magazine, which, as the reading public knows, changes its cover design every month.

Give credit where credit is due, and acting out the principle in this axiom, we have pleasure in complimenting the Tradesman, of Chattanooga, Tenn., in the appearance and character of the Tradesman Annual of 1894, which has come to our table. We have seen special issues of trade journals that evidence more glitter, but rarely has there come into our hands a trade annual so brimful of useful information, covering the particular field the journal represents. The Tradesman Annual is a complete cyclopedia of the manufacturing interests of the southern states. Every department of trade seems to have been covered, the special articles touching each being written by such men as Edward Atkinson and other recognized authorities on business and statistical topics.

TESTING OILS.

AN authority on oils gives the following easy method of testing lubricating oils: "Place single drops of each oil to be tested near the end of a piece of plate glass about two feet long, one end being about six inches higher than the other. The quality of the oil for lubricating purposes is shown by the distance travelled by each drop. Thus, on the first day sperm oil will be found in the rear, but it will pass most of the others in time and retain its power of motion after the others have dried up. A light-bodied oil flows quickly, like water, but soon dries, whereas, what is wanted is a good body combined with liquid flow. Many oils have a good body but tend to gum, which will be shown on the glass." This shows just one thing—to our mind—that is, the relative qualities of different oils for running down glass. As a test of lubricating value it seems quite unreliable. The conditions of an oil running down glass and of working upon a running bearing are widely different. No one would think of using sperm oil upon heavy work because it ran down a piece of glass quicker or better than some other oil!—Engineer.