

OUR LUMBER INTERESTS.

The seventh of the course of lectures on Canadian Industries and Commerce, under the auspices of the Montreal Young Men's Christian Association, was delivered in the Association Hall on Monday evening, December the 10th, by Mr. J. K. Ward, the subject being "The Lumber industry of the Dominion." The chair was occupied by Mr. William Little, who, in the course of a few introductory remarks, referred to the fact that there were few, if any, men in Canada more competent to deliver a lecture on the subject of lumber interests than the gentleman who was about to address them.

Mr. J. K. Ward then proceeded to deliver his lecture as follows:—

Mr. Chairman, Ladies and gentlemen—In coming before you on this occasion in the role of a lecturer, I do so with a good deal of diffidence, not because the subject on which I intend to speak is void of either interest or importance, but on account of my inability to treat it as it merits. However this may be I claim your indulgence, should I fail to make it as interesting and as useful as I would wish it to be. I have heard it said that long dull sermons have their uses as they sometimes call into exercise the virtue of patience. I trust, however, that none of you will be put to such a test to-night. I will therefore proceed with my paper on the Lumber Industry of the Dominion in the following order:—First, the quantity of lumber manufactured, and the extent of territory on which it is made, and from whence our future supply is to be derived; secondly, the importance of this trade in a commercial and economic point of view; next, some points in its history, and a short notice of some of those men who have taken a prominent part in developing the trade; and lastly, a few remarks of a personal nature, intended for the younger portion of my hearers should time and circumstances permit. It is estimated from statistics derived from Government returns and other sources that I have had access to, as well as having some personal knowledge of the business, that there is manufactured annually in the Dominion, east of the Rocky Mountains, lumber and timber approximating to 2,600,000,000 feet board measure—comprised of hewn timber and sawn lumber, railroad ties, cedar, round and flatted timber. The quantities quoted do not agree with those furnished by the census of 1881, being less. Take British Columbia; it is credited with producing 24,043,877 cubic feet of white and red pine in addition to 3,291,113 saw logs—at an average of say 150 feet each making nearly 500 million feet B. M., besides 86,000 cords of lath and firewood. The quantity of hewn timber is almost double that made last year in the older provinces, and one-fourth as many logs; that is certainly a large yield to be produced in a province credited with a population of less than 50,000 souls, the two districts of Yale and New Westminster, with a population of 25,000, producing nearly the whole of this large quantity of timber and logs. The total value of her forest exports was only \$362,874, or a small portion of the value of the timber and lumber placed to her credit in the census. I have divided the whole product of the provinces as follows:—Ontario furnishes 4,174,000 pieces, equal to 2,600,000 standard pine logs of 200 feet each, producing 520,000,000 feet of lumber, 6,790,000 cubic feet of white and red pine, or 81,000,000 feet B. M.; dimension-timber 23,000,000 feet B. M., hardwood, cedar, &c., equal to 5,000,000 feet, making in the aggregate 635,500,000 feet B. M., paying to the Provincial Government for timber dues \$701,000, and ground rents, &c., \$46,000, with eighteen thousand square miles under license. Quebec has under license, 48,000 square miles, producing 32,400,000 pine logs, equal to 3,000,000 feet B. M., and 1,308,000 spruce logs, producing 106,000,000 B. M., white and red pine timber 3,110,000 cubic feet equal to 31,100,000 feet B. M., hardwood 51,000 cubic feet, or 611,000 feet B. M., railroad ties 143,000 pieces, 32 feet each, making 4,576,000 feet B. M., cedar equal to 4,500,000 feet, pine and spruce round timber 7,760,000 feet B. M., tamarac 175,930 feet B. M., hemlock 5,000 feet, cordwood equal to 6,600,000 feet, making in all 549,976,000 feet, giving a gross revenue of

\$668,596 to the province. [New Brunswick cut on Government lands equal to 160,000,000 feet of all classes, principally spruce. The pine in this province, once so famed, is almost exhausted. There being a large extent of private lands in this province, I think it is safe to estimate that there is not less than 500,000,000 feet of lumber and timber produced, considerably more than three-fourths of which is exported, the balance being for home use. The extent of territory is 17,500,000 acres, 10,000,000 of which is granted and located, leaving 7½ millions still vacant, and giving to the province a revenue of \$152,000 for timber dues, ground rent, etc. Nova Scotia is estimated to produce about 250,000,000 feet, of which about \$1,500,000 worth is exported, this province furnishing a large quantity of birch and maple. Manitoba and North-West Territories produce say 75,000,000 feet. These figures give us a total of 2,010,476,000 feet. The difference between this total and 2,600,000,000 feet is made up by the product of private lands, principally in New Brunswick and Eastern Townships of Quebec, and including also the output of scores, if not hundreds, of small mills scattered through the country, known only in their own localities. Of the total there is about three-fifths exported, realizing \$24,000,000. I think there is hardly any person at all familiar with the business, who will admit that there is much forest product taken out of private lands as off the public domain. Yet we are led to believe by the census that there is in the aggregate three or four times as much. This may appear strange, but when we get into the region of thousands of millions, it may not be wondered at if people add to or take off a cypher or two occasionally. I find by one of our trade reports the estimate made of the output of timber is 83,800,000 logs. Now, the product of this quantity of logs at the moderate average of 125 feet, would make four times the quantity of lumber and timber made in the four provinces. The reports of the Crown Lands departments, the exports and quantity per head of population as compared with other countries will, I think, be a very fair guide to go by.

As to the extent of territory on which these lumber operations are carried on there are in the three provinces of Quebec, New Brunswick and Ontario 75,500 square miles under license, besides about seven thousand square miles owned by private parties in these three provinces and Nova Scotia, the whole being equal to 52,800,000 acres. This, however, is not all the timber territory from which we have to draw our future supplies. The older provinces of the Dominion embrace an area of about 360,000 square miles, which, after deducting the territory from which we have to draw our future supplies. The older provinces of the Dominion embrace an area of about 360,000 square miles, which, after deducting the territory under license, leaves an area of 270,000 square miles, or 180,000,000 acres. Only a small proportion—comparatively of this is occupied for agricultural purposes, thus leaving a very large extent of territory on which, no doubt, there are vast quantities of timber, not only for export, but for home purposes. I have no doubt whatever that more than half of the whole of this territory is unfit for settlement, and will remain for ages as bush land. This bush land, in a sanitary point of view, will be useful in attracting the rains, holding back the water in its natural beds, so preventing sudden rises and falls in the rivers, which often cause much damage by overflowing lands as well as loss by excessive drought, so that many streams that once afforded good water powers are now useless as such. The Province of Quebec in particular is highly favored by its numerous streams and magnificent lakes, many of which are turned to good account by lumbermen, who often build dams at the outlets of the lakes, thus creating great reservoirs of water which are held in reserve to be used when the streams go low, enabling the drivers to get down their logs and timber perhaps the first year, whereas, if the drive depended on the natural flow of water, it might not reach its destination in less than two or three years, entailing much loss of interest on capital as well as depreciation in the value of the logs or timber by their becoming sap-stained or worm-eaten. For the system

of dam building, making side quays, blasting boulders and introducing improved driving tools, such as the steel cant dogs, patent pick and pointed barge, we are indebted to the Maine lumbermen, daring and profane, if you will; many of whom found watery graves in St. Maurice and other rivers. Before their advent into our country what was known as rear limits, though ever so well timbered, were considered of little value, but by the adoption of the improvements referred to these limits became almost as valuable as those fronting the Maine river. Notwithstanding the great praise due to these men they tried to introduce methods of lumbering found to be not suitable to this country or profitable to themselves, such as hauling out the whole tree to the bank of the river and there cutting it into logs, in place of having done so in the woods, and thereby often saving the cost of hauling worthless timber; also introducing oxen on a large scale for hauling long distances, where horses from their speed would prove more profitable. The use of horses for lumbering purposes instead of oxen is now almost universal. I have heard it said that an ox team and men started for the Tique from Three Rivers with a load of provisions, oats, &c., and had to stop on the way, having run short of supplies, and were compelled to send back for a fresh stock to enable them to reach their destination. In coming back to the question of the extent of timbered territory, from which we are glad to draw out future supplies of merchantable lumber, you can hardly meet with two lumbermen who will correspond in their opinions. It is extremely problematical as to the average quantity of lumber which a given acre will yield. I have seen five, ten or even twenty thousand feet come off an acre; and have heard of as much as fifty thousand; but this I consider as very rare. It has been estimated that our timber territory in Ontario and Quebec would yield from one to two thousand feet per acre, which I consider not an unreasonable estimate. It would therefore be fair to adopt the medium estimate of fifteen hundred feet per acre, which would give, at the present rate of production, a thirty-seven years' supply. This in addition to a very large extent of territory not under license, would, it is reasonable to suppose yield enough to make fifty years' supply, as stated in my paper read before the Forestry Congress. This calculation refers exclusively to pine; spruce and hard woods, in which our country abounds, that have been comparatively neglected, will as pine grows scarce become more used for finishing purposes. As years pass by and the timber increases in size, the territory cut over by the lumbermen who in the past took nothing but the choicest, will be found to contain a large quantity of material that will be considered valuable. As to providing against loss by forest fires, we may reasonably hope that they will be less frequent than in the past, and that the natural increase in size will, as some argue make, make up for the loss occasioned by them. It may seem strange that to produce the annual output of wood goods, supposing the annual yield per acre to be 1,500 feet, that it requires 1,700,000 acres to be gone over, or equal to an area of sixteen times that of the Island of Montreal. Timber limits are sold in Quebec by auction or at private sale at so much per square mile. Licenses have to be renewed annually, and the licensee holder pays an annual ground rent of two dollars per mile. He pays four cents per cubic foot for oak and walnut, two cents for pine, twenty-two cents for pine log of thirteen feet long and of seventeen inches and up in diameter; eleven cents per log for those of less diameters, and five and one-half cents per piece for spruce logs. Pine trees under twelve inches in diameter are prohibited from being cut, also all hemlock and ash. The regulations are somewhat similar in Ontario, only pine and other saw logs are charged so much per thousand feet, board measure. In New Brunswick timber berths rarely bring over the upset price of \$5 per mile, and there is no charge for the cut or stumpage of timber, but the revenue is put on in the shape of an export duty, which simplifies collection. In Nova Scotia there are no rules under which licenses can issue. To procure a right to the timber the land itself has to be purchased from the crown. The Quebec

Government receives on an average \$11.50 per square mile per annum for all territory under license. The Upper Ottawa yields \$18.50 per square mile, the Lower Ottawa \$10, and the St. Maurice only \$4. Ontario receives annually about \$26 per square mile for territory under license. The Federal Government own extensive and costly works on various rivers in Quebec and Ontario to facilitate the descent of timber and logs. The works are to be found in the Saguenay district, St. Maurice, Ottawa, Gatineau, Madawaska, Conlonge, Petawawa, Dumoine, and Trent. They embrace 5,071 feet of canals, 22,063 feet of slides, 112,670 feet of booms, 2,440 feet of bridges, 21,402 feet of dams, 346 bulkheads, and 274 piers, most of which involve a large annual outlay for repairs. The tolls collected on these works go to the public works of the Dominion. Before closing this part of my subject, I would refer to that portion of my paper mentioned in which I remarked that to the untutored traveller through the woods, he would hardly know that the shanty men had been there, except for seeing an occasional stump or few chips, or the top of a tree. This may require a little explanation. In my experience of nearly forty years' lumbering, it has been my fortune to work mostly in what is called a hard wood country, where the best pine is usually found in very scattered quantities; but where, in a few cases, I have worked in what is known as a green country, where pine mostly prevails, it has generally proved so faulty that but a small proportion of the whole was considered as merchantable, so that the country, to a casual observer, looking from a distance, appears to be covered with timber. It is a matter of congratulation that, through the efforts of the Forestry Congress, held in this city in August, 1882, the attention of our provincial governments has been aroused to the necessity of legislative action for the preservation of our forests, and that they have taken some steps for the prevention of forest fires and for the detection of those who carelessly or wilfully destroy that which is the principal source of revenue to our province, as well as affording the greatest amount of labor to the industrial classes, likewise the setting apart as timber reserves those portions of our territory not suitable or profitable for agricultural purposes. Objections have been raised by some, who contend that lumbermen carry on their operations over a too extensive territory, and that they should be constrained to cut clean as they go. I think that every lumberman who understands his business will recognize this as the right policy, but the law, as it stood up to 1868, actually offered a premium to license-holders to extend their operation over all their limits by compelling them to cut a certain number of logs on each limit held by them. Failing to do so, the rental doubled on all unworked limits until it reached a maximum. However, in 1868, the government adopted a wiser policy by establishing a fixed rental on all licenses, whether worked or not, thus inducing lumbermen to concentrate their operation and thereby lessening the cost of lumber and obviating the necessity for making additional roads, clearing streams, building shanties and numerous drives. Too much credit cannot be given to the present Commissioner of Crown Lands for the Province of Quebec, the Hon. W. W. Lynch, for his hearty co-operation with public sentiment, and his enlightened policy in the management of the Crown Lands, and also to the Hon. Mr. Joly, legislator and lumberman, for his efforts in calling the attention of the Government and people to the necessity of taking active measures to protect the source of so great an industry. It is to be regretted that in the last report of the Surveyor General of New Brunswick for 1882, no steps are recommended to be taken for the prevention of forest fires and the enforcement of all possible means for the protection of the source of one of her principal items of provincial revenue. Otherwise the land policy of New Brunswick is fair to the settler, and affords all necessary protection to the Government, inasmuch as the Governor-in-Council has the right to set off and have surveyed such lands as are fit for settlement, and reserved for actual settlers in lots of 100 acres each; such settlers must be eighteen years of age, or over, and not possessed of any real estate or land acquired