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THE CANADA LUMBERMAN

Wood-Workers', Manufacturers' and Millers' Gazette

VOLUME XXII.
NUMBER 4

TORONTO, CANADA, APRIL, 1902

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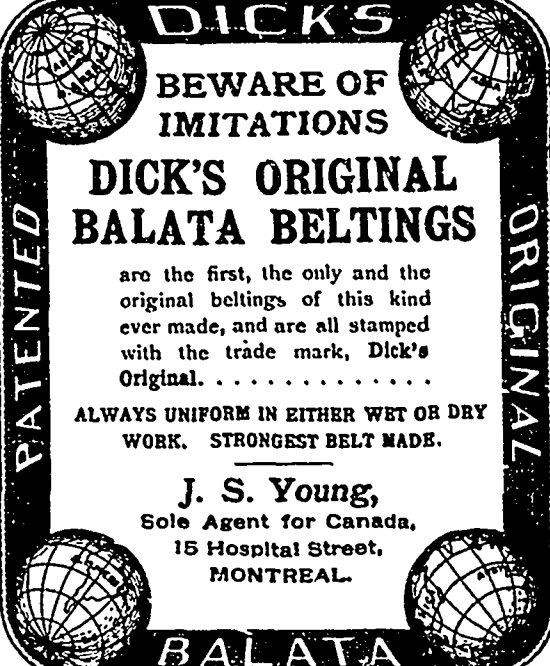
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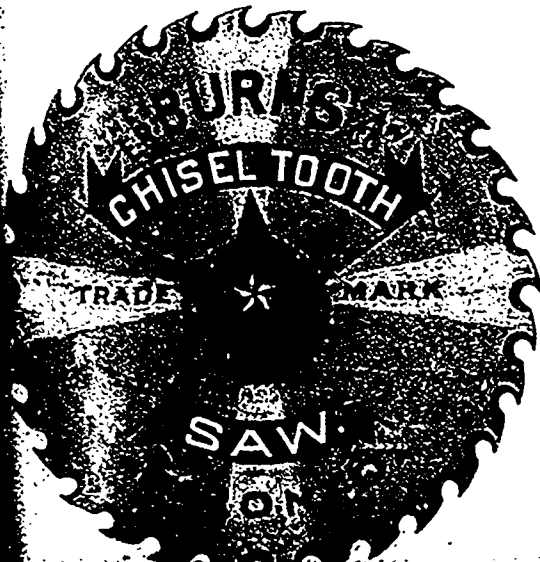
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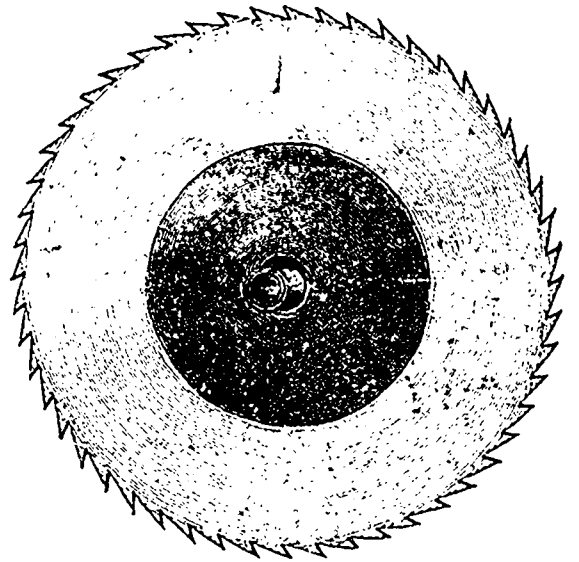
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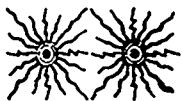


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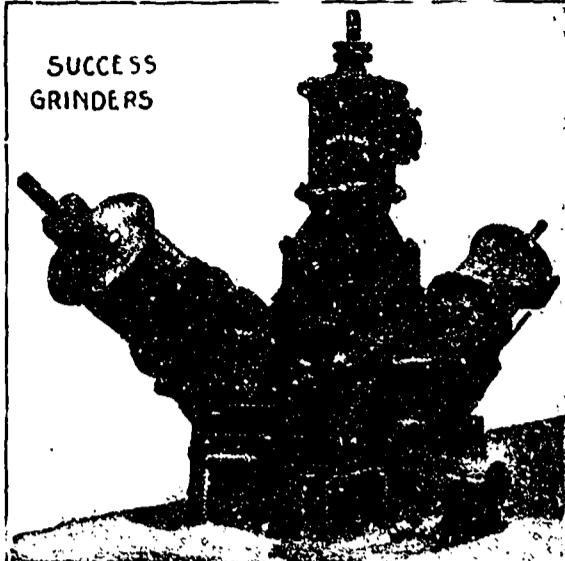


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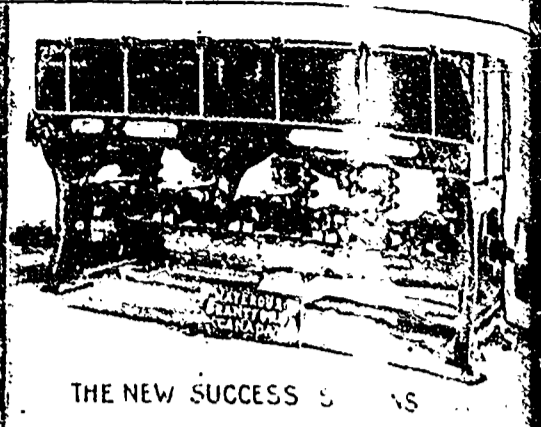
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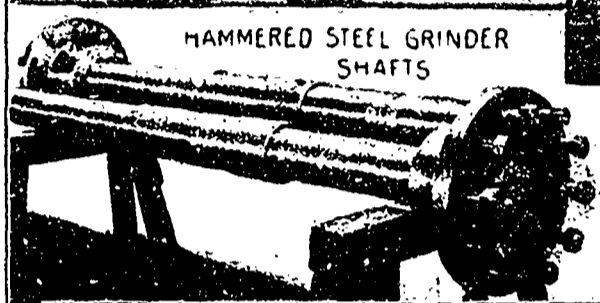
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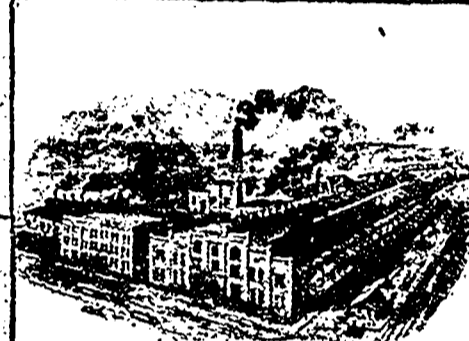
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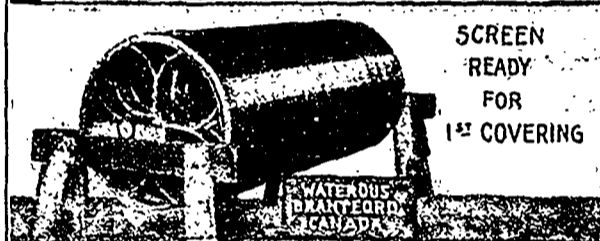
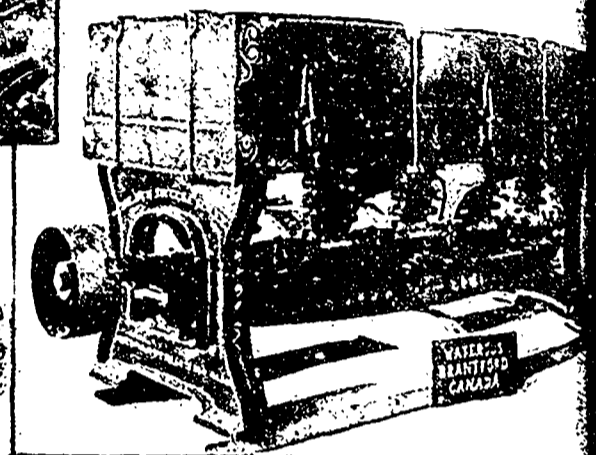
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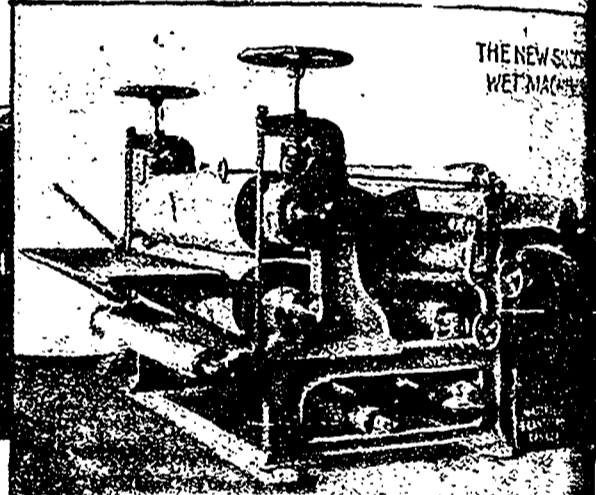
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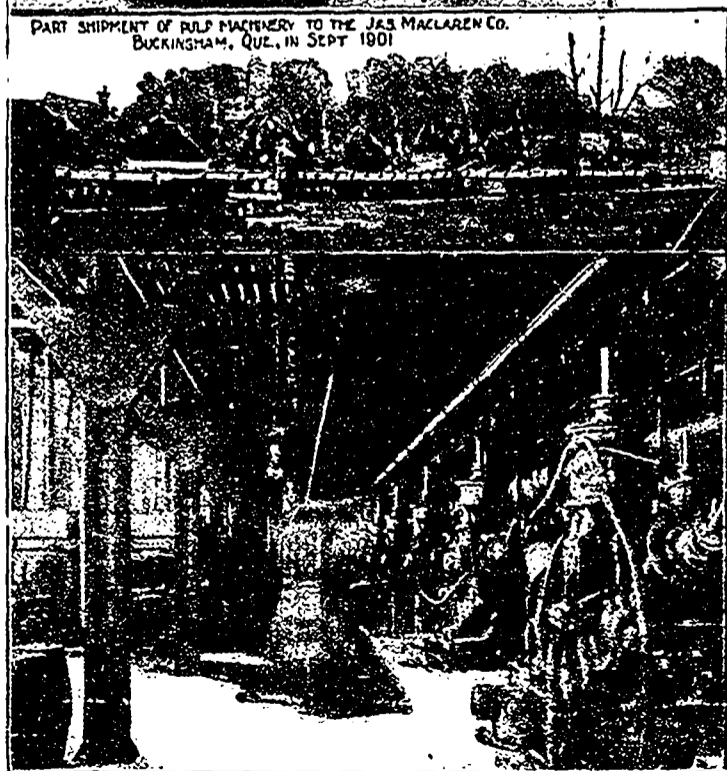
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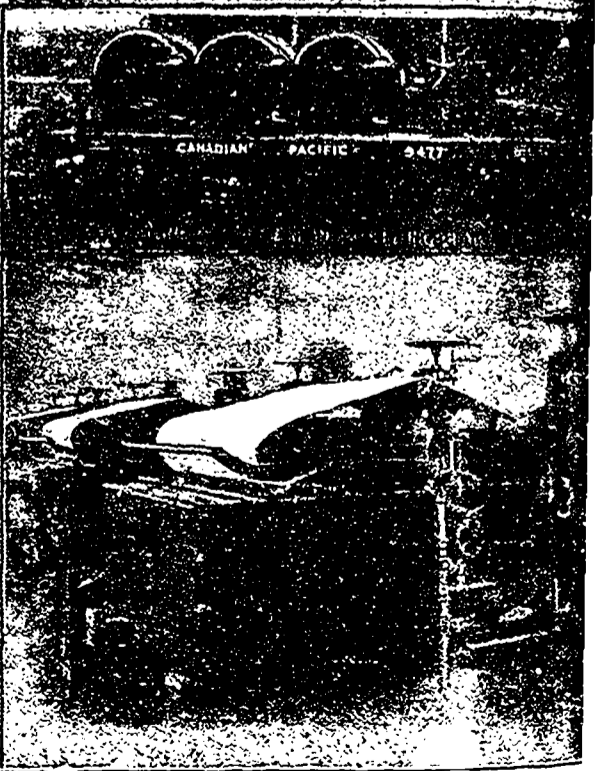
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THE CANADA LUMBERMAN

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TORONTO, CANADA, APRIL, 1902

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CANADIAN FORESTRY ASSOCIATION

Third Annual Meeting of the Organization at Ottawa.—The Various Aspects of Forestry Discussed in a Most Practical Manner.—Three Interesting Papers Relating to the Pulp Industry.

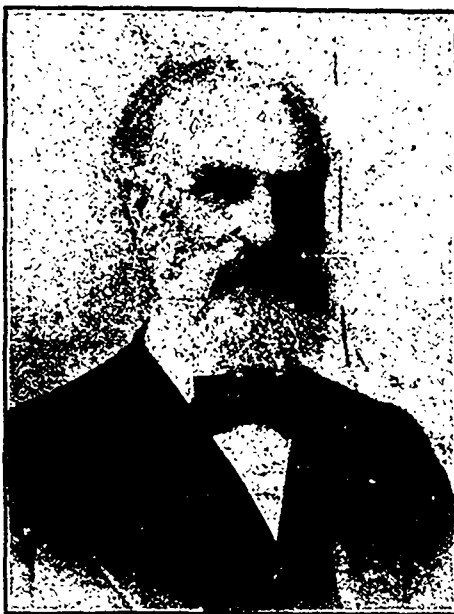
NOW that the third annual convention of the Canadian Forestry Association is over, it is admitted to have been the most interesting and practical meeting yet held. The first session convened in the Railway Committee Room of the House of Commons, Ottawa, at 10 a.m. on Thursday, March 6th. Mr. Hiram Robinson, in the absence of the president and vice-president, occupying the chair. The attendance included the following:

William Little, Westmount, vice-president; E. Stewart, Superintendent of Forestry, Ottawa, secretary; R. H. Campbell, Ottawa, assistant secretary and treasurer; Dr. William Saunders, Director of Experimental Farms, Ottawa; Dr. James Fletcher, Dominion Entomologist, Ottawa; Thomas Southworth, Ontario Director of Forestry, Toronto; D. Lorne McGibbon, manager Laurentide Pulp Co., Grand Mere, Que.; Dr. B. E. Fernow, Principal New York State College of Forestry, Ithica, N. Y.; A. A. Wright, M. P., Renfrew; Prof. John Macoun, Geological Survey, Ottawa; George Johnson, Dominion Statistician, Ottawa; J. B. McWilliams, Superintendent of Ontario Forests, Peterborough; W. N. Hutt, Southend; E. G. Joly de Lotbiniere, Quebec; A. Broder, M.P., Morrisburg; Senator Power, Halifax; Hon. Sydney Fisher, Minister of Agriculture; Senator Primrose; T. B. Flint, M. P., Yarmouth, N.S.; W. J. C. Hall, Quebec; Mr. Davies, Prof. Robertson, Mr. Drummond, W. T. Macoun, Hiram Robinson, A. C. Campbell, J. R. Booth, C. Jackson Booth, Robert Gorman, H. C. Ross, A. M. Campbell, O. D. B. Dowling, R. B. White, W. H. Boyd, S. Stewart, J. Kiel, F. C. King, F. W. Cowie, Colonel Neilson, Mr. Clark, E. L. Grant, A. Gibson, Ottawa; Roland D. Craig, Ithica, N.Y.; C. J. Thompson, Virden, Man.; Professor W. L. Goodwin, Kingston; W. R. Ross, Montreal; C. E. E. Usher, Montreal; T. S. Young, CANADA LUMBERMAN, Toronto.

The secretary read the minutes of the last meeting, also letters of regret from the president, Sir Henry Joly de Lotbiniere, and others. The president sent a very instructive paper giving the results of experiments of growing eastern trees in British Columbia. It was read by his son, Mr. E. G. Joly de Lotbiniere, and stated that the results accomplished had been quite satisfactory.

REPORT OF DIRECTORS.

The secretary read the report of the Board of Directors, which showed the membership to be as follows: Ontario, 117; Quebec, 28; New Brunswick, 9; Nova Scotia, 6; Manitoba, 73; Assiniboia, 17; Saskatchewan, 4; Alberta, 58; British Columbia, 16; Yukon, 2; United States, 15; England, 1; Germany, 1; Prince Edward Island, 1; a total membership of 347, as compared with 244 at the annual meeting



MR. WM. LITTLE, WESTMOUNT,
President Canadian Forestry Association.

last year. The revenue for the year ending December 31, 1901, was stated to be \$454.60, and the expenditure \$140.74, leaving a balance of \$313.86. There were, however, outstanding liabilities which would considerably reduce the balance. The account for subscriptions to the official organ was not received in time to be dealt with before the close of the year. In view of the forest fires in British Columbia and in the Temiscamingue district, the directors prepared and communicated to the Governments of the various provinces a general resolution on the subject, and urged the inclusion of an amended penalty clause in the British Columbia Fire Act. During the past summer the Forestry Branch of the Department of the Interior made a forestry exhibit at the Winnipeg Industrial Fair at Winnipeg and at the Western Fair at Brandon, the purpose being to

afford an object lesson to the settlers of Manitoba and the Territories on the possibilities of growing trees in these districts. The system of co-operation with the settlers of the western prairies in forest tree planting adopted by the Dominion Government was developing into large proportions. Upwards of five hundred farmers prepared their land last season under instruction from the agents of the Forestry Branch and would be supplied with seedling plants this spring. The work of guarding the forests from destruction by fire had been attended during the past season with very satisfactory results, although in the province of Quebec the measures taken were not effective in preventing a serious loss in the Temiscamingue district. In New Brunswick the Government and the lumbermen were taking up seriously the work of forest protection with good success, and it is hoped that in Nova Scotia and Prince Edward Island steps will be taken in the near future to make the forests a greater factor in the wealth of the provinces. With the object of assisting this work, it was proposed to hold a forestry meeting in Halifax in the near future. The directors in conclusion congratulated the Association on the representative character of its membership, as well as on the lively interest in the forestry problem that it is fostering in all parts of the Dominion.

Mr. R. H. Campbell read the treasurer's report, which was referred to the auditors.

Mr. A. C. Campbell enquired what steps had been taken to increase the membership of the Association, to which the secretary replied that he had written to lumbermen and other interested persons and had distributed 3,000 copies of the annual report. Mr. Southworth suggested that each member should submit the names of persons likely to become members of the Association.

Mr. R. H. Campbell brought up the question of continuing the present arrangement with the official organ, *Rod and Gun*. He was not certain that *Rod and Gun* was the most suitable medium that could be found, as in it the forestry problem seemed to be placed subordinate to sporting, etc. After considerable discussion a committee was appointed to report on the question of a forestry propaganda, including the publication of an official organ for the Association.

Referring to the growing of eastern trees in British Columbia Dr. Saunders said that he was struck when visiting the coast in 1886 with the scarcity of hardwoods, and decided that the Experimental Farms should begin experiments to determine how far the hardwoods of the east would grow in British Columbia. The first experiment was in sending out black walnuts and butternuts, which

were planted on the mountain side, many of them coming up. Then several thousands more were sent out, also elm, maple, hickory and oak, with equal success. He had thought that the rapid growth might make the trees less tough and valuable, but Dr. Fernow had said that the rapidity of growth did not affect the strength of wood. He said that trees would grow after they got a good start without much saturation. The whole Pacific coast was covered with a coniferous forest, but that did not prevent the growth of hardwoods.

AFTERNOON SESSION.

Mr. William Little, vice-president of the Association, having arrived, presided at the afternoon session. The first business was the reading of a paper by Mr. Thomas Southworth, on "Forestry in Ontario," an abstract of which is given:

Forestry in Ontario.

BY THOMAS SOUTHWORTH.

At the outset Mr. Southworth explained the sylvicultural conditions existing in the different sections of the province. The most interesting division to the forester, he said, was the central division, extending from a short distance west of Ottawa to Rat Portage, about 1,000 miles in a straight line east and west, as it was in this district that the great permanent forest of the province is likely to be maintained and a field afforded for the skill of the trained forester. To explain the progress and present condition of the movement for the more systematic working of the provincial forest, Mr. Southworth gave a summary of the development of the Crown timber regulations from the earlier days up to the present time. From the outset of the system the principle was adopted of giving to the licensee merely the right to cut timber while retaining in the Crown the title to the land. The main consideration which actuated the government in reserving the title to the land when disposing of the timber was that they might be able to offer the inducement of free or cheap land to settlers. The conditions of the timber licenses were drawn so as to leave the government free to withdraw from the territory included such land as might be required for settlement and allow homesteads to be located. In a large portion of older Ontario the lumberman thus became the pioneer of settlement and civilization, and in every locality where the character of the soil gave promise of successful agriculture the removal of the more valuable timber was followed by the opening up and cultivation of the land.

As lumbering operations were pushed further to the north a region of a different character was reached, where the larger portion of the land being sterile, rocky or broken, was unfit for settlement. With the exception of a few isolated districts there was nothing to attract population or allow the development of industries, the land once stripped of its timber being valueless. As a rule extensive and devastating forest fires followed the operations of the lumberman and completed the work of clearance. In a country destined to become the home of an agricultural community this was not a matter of vital consequence, though frequently entailing heavy losses. But the rough broken lands to the north of the settlements were worthless except for the production of timber, and repeated bush fires, destroying not merely such mature trees as had been spared by the axe but the young undergrowth, the seedlings, and frequently the thin covering of forest soil which clothed the rocks, rendered large tracts of country valueless for the only purpose for which they could be utilized.

These conditions rendered necessary the adoption of an entirely different system of management of the Crown lands from that pursued in dealing with the timbered land which it was intended to clear in order to make preparation for agricultural settlement. The chief difficulty in the way of maintaining any territory in which lumbering was permitted as a permanent forest was the liability to loss by fire, which furnished the lumberman with an incentive to rapid and thorough clearance and encouraged wasteful and reckless meth-

ods of cutting. To remedy this evil the fire ranging system was adopted in 1885, the subsequent extension and development of which has greatly lessened the danger from this source and thus rendered practicable the management of the Crown forest on forestry principles. Fire being kept out, the forest will perpetuate itself, and in the process of time even the waste lands will be gradually reclothed with trees. Experience has abundantly demonstrated that—excepting in cases in which repeated fires have destroyed old and young trees and the seeds in the ground—a pine forest when cut down will be succeeded by a young growth of the same species. They may at the outset be dominated by other varieties, the early growth of which is more rapid, but will eventually overtake and subdue them. This process of natural reproduction is now at work in very extensive tracts of burned and lumbered over territory where all that is necessary to be done to secure a valuable crop is to protect the young timber from fire.

We quote in full from Mr. Southworth's paper on the subject of forest reserves and reforestation:

The government has adopted the policy of withdrawing from settlement and setting apart as forest reserves, extensive areas which have been found upon examination to be manifestly unsuited for cultivation. The first step in this direction was the creation in 1893, by a special act of the Legislature, of the Algonquin National Park, which with subsequent additions comprises 1,109,383 acres.



MR. MIRAM ROBINSON, Ottawa,
Vice-President Canadian Forestry Association.

This park is not strictly speaking a forest reserve, as it was primarily designed for a game preserve and much of its area is under license, but as no settlement is allowed within its limits it largely partakes of that character. In the year 1897 the Director of Forestry drew attention to the subject, urging that both for economic and climatic reasons much of the territory that had been lumbered over and found unsuitable for tillage should be set aside as forest reserves.

In accordance with his recommendation, a Royal commission was appointed the same year to enquire into and report on the subject of restoring and preserving the growth of white pine and other timber trees on lands not adapted for settlement. The commissioners made a careful personal examination of large areas of cut and burned over land and their report strongly sustained the report of the Bureau. In accordance with their recommendation the Legislature in 1898 passed the Forest Reserves Act empowering the administration to set apart tracts of such land as might from time to time be deemed advisable. The first action taken under this measure was the setting apart of 80,000 in the counties of Frontenac and Addington, which was followed by the withdrawal from settlement as a forest reserve of 45,000 acres in Sibley Township, on the north shore of Lake Superior. Both these tracts had been lumbered over and subsequently swept by fire and in each case a new and promising growth of young pines had made its appearance, which it

adequately protected from fire will replace the original forest.

In 1901 a more important and decisive step was taken by the setting apart of the pine bearing region around Lake Temagami, having an area of 1,400,000 acres. Unlike the previously constituted reserves this territory is virgin forest and has never been under license. The quantity of pine timber now standing within its limits is estimated at from 3,000,000,000 to 5,000,000,000 feet board measure. It is altogether probable that had this region been dealt with in the ordinary way followed in cases where forest-covered land is presumed to be available for settlement, the presence of squatters and others following upon the opening up of the country would have resulted in extensive fires. The influx of large numbers of tourists and sportsmen who resort to Lake Temagami in increasing numbers during the summer months rendered it all the more advisable to place it under strict regulations to anticipate this danger.

With the progress of settlement and industrial development in New Ontario, resulting in more accurate and detailed local information as to the character of the land, further action in the same direction will be taken from time to time, keeping in view the principle that tracts which can only be advantageously utilized in the production of timber ought to be permanently devoted to that purpose and operated on such a system that they do not lose their distinctive forest character, which can only be recovered by slow degrees after a long interval of non-productiveness.

There is no doubt that in the adoption of the Forest Reserves Act, the Commissioner of Crown Lands had in view the creation of a large permanent forest, and in order to be sure that the territory would remain in that condition it was necessary to pass a special Act. Under the ordinary regulations, the Lieutenant-Governor in Council may withdraw land from sale and settlement, but another Order-in-Council may re-open it. Under the Forestry Reserves Act, while an Order-in-Council may place territory within its operations, the land cannot afterwards be re-opened for sale or settlement by Order-in-Council, or by any means except a special Act of the Legislature. Under the ordinary regulations, if land upon which there was any considerable growth of timber were withdrawn from settlement, there would be a constant pressure upon the Government to have it re-opened in order that so-called settlers might enjoy the privilege of removing the timber, without the inconvenience of paying timber dues.

Over much of the territory in the central division the forest reserve system may be extended as far as money is provided to protect and care for the reserves.

In the case of the Temagami Reserve the time had arrived when the timber must either be sold or protected until a more suitable time arrives to dispose of it to good advantage. Hence the creation of the reserve and the consequent protection of the timber. Extensive additions to its area can and probably will be made to the west. A considerable extent of land might also be added on the east, comprising the country bordering on Lake Temiskaming, except for the reason that the territory in question is under license. This brings us to one of the problems confronting the administration in the extension of the Forest Reserve System. Under the tenure of land under which the license holders operate their limits. Although timber licenses are only issued for one year, it has been the regular practice to renew them as a matter of course from year to year, so long as the conditions were complied with and the annual ground rent paid, excepting only in cases where the land was needed for agricultural settlement. Relying on the good faith of the Government, licenses have been transferred from one holder to another, the same as bank stocks, without fear that the Government might exercise its undoubted legal right of cancelling the license at the end of the year. No better evidence of confidence in the continuance of this course could be adduced than the transfer of a license at Ottawa a few days ago covering 129 square miles of territory, which had been lumbered over in intervals during the last 40 years. It was sold I believe for no less a sum than \$655,000 by the then holder to Mr. J. R. Booth, of Ottawa. Incidentally this also affords evidence that the cutting off of the original crop of pine on so called virgin territory does not

the chapter, in Ontario at least. In this connection, it might be urged, "Why not take in these licensed areas as an addition to the forest reserves?" I am of the opinion that this would be unfair to the province in that it would give the present license holders practically a perpetual tenure of their limits without securing to the public a fair proportion of the value of the stumpage. Take the case of the limit before referred to: The right to cut timber on this territory was sold many years ago, the original limit holder paying 50 cents per mile for the exclusive right to cut, the timber itself being subject to dues of \$1.00 per thousand feet, when cut. After the limit had been operated for 40 years this exclusive right to cut changed hands at the rate of over \$2,000 per square mile. It is safe to assume that the original commercial timber has all been removed, and that the holder is now cutting timber matured since the original issue of the license. The value of the stumpage is probably at least \$6 per thousand feet, of which the public treasury only receives \$1. From this it is easily seen that if the Government were to include lands under license in the Forest Reserves System it would remove any doubts as to their intention to continue the present tenure perpetually, unless it were done with some clear and distinct understanding as regards the future position of these holdings. On the other hand, the present condition of the tenure of licenses is an uncertain one, and it is probable that some readjustment may be eventually made, satisfactory to the limit owners and to the province, by which the provincial revenue may be increased and the present uncertainty of tenure in limits in non-agricultural areas removed.

Whether these areas come under the operation of the Forest Reserves Act or not, the non-agricultural country included in them will remain in forest to be operated, if not for the financial benefit of the province, at least for the profit for the holders and with good results to our industrial life and incidental advantage to the climate and water supply. It is fair to say that the difficulty arising from the vested rights or claims of limit holders is not likely to obtain in regard to the territory included in future timber sales. While the auction system has been retained by the government a definite term is fixed beyond which licenses will not be renewed. In the sales of the past two years the term has been fixed at seven years, and although licenses are thus limited, I cannot see the selling value has been affected to any great extent.

One of the important questions immediately confronting the government in its forward forestry policy is the exploitation of the timber wealth in the Temagami reserve. I have stated that there exists a large quantity of pine timber in this reserve, but only in part of the territory is the pine timber fully matured. A great deal of the northern part of the reserve contains timber only partially grown. How best to harvest the crop ready to cut is the problem immediately pressing. In the other reserves so far created the timber is all young, as they have been for the most part lumbered over and in some cases burned over, consequently they do not require any further consideration than one of fire protection for the present. While the timber in the southern part of the Temagami reserve is fully matured it is not dying so far as I have been able to see, and therefore our interests are not suffering from delay, as in fact there is very little of it that is not growing slowly yet. As we have felt that these forests are now reasonably safe from fire, there is probably no immediate necessity for harvesting this timber until we are fully prepared to do so. At the same time some plan for operating the reserve with less wasteful and extravagant methods than have been followed elsewhere needs to be adopted in the near future.

Two plans have been suggested. One is to sell the logs after having been cut by the Department, and the other is to sell the timber on the stump. I of course assume that under this latter plan the timber will not be sold in the same way as has been the case in the territory now under license, that is to say, paying a lump sum in advance as a bonus with fixed stumpage charge, but to be disposed of by public competition at the highest price possible per M on the stump, the whole of the price to be paid to the Government as the timber is cut.

As to these two plans I am afraid that just at present

we are scarcely far enough advanced or in a position to put in our own men to remove this timber, and while if we had a scientifically trained staff of men it might be done effectively, such a policy would encounter strong opposition owing to the popular impression that no Government can conduct industrial enterprises as successfully as can be done by private individuals. I apprehend it will not be many years before there will be a change of sentiment in this respect, but at present it has considerable weight and for that reason I doubt whether it would be advisable to harvest this timber in this way, but that is merely my individual opinion.

The other plan proposed seems to me to possess many advantages. The lumbermen paying for the timber would have to do so on the understanding that he would be allowed to take from a certain territory so many million feet of timber within a specified time, paying therefor when cut the price agreed upon at the public sale and the timber to be cut subject to the supervision and control of the officers of the Department. One objection to the present system under which the limits are bought at auction with a cash bonus, is in the fact that although the lumberman may not have taken into account in estimating the value of the limits the small but growing timber on the territory, when he comes to cut the large timber, if there happens to be a quantity of young stuff worth the amount of the small fixed stumpage charge, there is a strong temptation to remove it, although it could more profitably be left to grow. Under the plan to which I have referred, the tendency would be in the other direction. If this timber were bought for \$6 or \$7 per M on the stump the purchaser would not be over anxious to take out stuff that was only worth half that figure, in fact the difficulty would rather be in the forest officers insisting on the removal of ill-shapen and small timber that ought to be removed.

Whatever plan may be adopted for disposing of this timber it is evident to thoughtful men that the time has arrived when we need more highly trained men in our forests than are now available in any considerable number. So long as lumbering was considered an ephemeral business and not a permanent industry the need of scientifically trained men was not so apparent as now, and I believe the need will not only be appreciated generally in a short time but will be supplied.

To sum up briefly what has been done in the direction of establishing a practical system of forestry in Ontario, it is sufficient to say that we have established a fairly effective system of fire protection. The fee simple of our forest lands remains in the Crown. We have definitely inaugurated a system of forest reserves intended to form part of an extensive and permanent Crown forest from which the province may derive a large annual revenue and from which the individual people of the province may obtain wealth and employment. To the scientific treatment of this Crown forest we are only gradually approaching, but we are steadily ascertaining the problems to be solved and there is no doubt that the solutions will be found.

DISCUSSION.

The chairman referred to the tenure of license and to the fact that one lumberman had recently paid \$655,000 just for the good faith of the government. He was delighted to know that the question of how to protect the timber was such a live question.

Mr. J. R. Booth said that he had attended the meeting in the hope of hearing from the government of some plan whereby agriculture and lumbering could be carried on satisfactorily in the same district. He could not see how the forests could be preserved when the government allowed settlers to go into the forests and start fires. The government should decide how far they would allow settlers to go into sections of country not suitable for settlement. Last year many fires in the Kippewa district were originated by settlers, and if the government continued the practise of allowing settlers in this country, it would be disastrous.

Mr. Joly said that colonists should not be allowed to take up little tracts of land all over they should be confined to settlement along the colonization roads. It should be the policy to group colonization.

Mr. Hiram Robinson thought the first thing to be considered by the government should be whether the land was fit for settlement. If not, then it should be reserved. He had in mind a place on the Gatineau river where one fire had burnt over four hundred million feet of pine. One great difficulty in the province of Quebec was that so many members of the legislature represented the agricultural interests; they pressed upon the government to open up certain districts. He understood that the government was seriously considering the appointment of a commission to report upon the land fit for settlement.

Mr. Stewart said that certain areas should be set apart for forestry purposes. Much land that was not suitable for the purpose had been opened for settlement. The government should undertake a thorough exploration of the country.

Prof. Macoun urged that the government should more rigidly enforce the laws that now exist.

Mr. N. W. Hutt, of Southend, gave an interesting address on "The Management of Wood Lots," outlining a plan by which farmers could successfully cultivate forests.

Mr. R. H. Campbell read a paper on "The Forest Fires of 1901." Mr. Campbell evidently gave much time and attention to the collection of the data contained in the paper, which reviewed the fires of the year and their causes. He was tendered a vote of thanks, and it was resolved, on motion of Prof. Macoun, that a similar report should be prepared each year in future.

Mr. J. B. McWilliams said that in 1874 he had recommended the Ontario Government to adopt a system of fire protection. Eleven years later a system was adopted. In his opinion lumbermen could blame themselves to a great extent for the losses sustained by fire, owing to the class of men they employed as fire rangers. He advocated exploration and the appointment of a committee to take up the question of settlement with the Government.

Mr. Booth said that the only way that the settlers could be prevented from doing harm was to keep them from going into the country not fit for settlement. It was not fair to the settlers to allow them to settle in a district where they could not make a living. Vermont, New Hampshire, Massachusetts and Maine had more pine to-day than forty years ago. Then what would our country be worth, he asked, if the forests were allowed to grow up. This winter he was taking out logs in a district that was cut over perhaps one hundred years ago.

Mr. Stewart suggested the setting aside of certain sections for timber and certain sections for settlement. There had been set apart one million acres of forest reserves in Manitoba and the North-West. It was suggested that the governments should employ a greater

number of fire rangers. The meeting then adjourned until the following day.

SECOND DAY.

Upon resuming at 10 a. m. on Friday, the chair was taken by Mr. Robinson, the president being unable to remain for the second day. A paper on "The Second Discovery of the West" was read by Prof. Macoun. In it he reviewed the early history of the west, which fifty years ago was looked on as a desert. Prof. Macoun was one of the first to make the transcontinental trip. He endeavored to show that there were no reasons why the cultivation of trees could not be carried on in the west with equal success as agriculture.

Mr. W. T. Macoun asked whether it was necessary to conserve moisture after the trees had a good start, say three years, to which Dr. Fernow replied that after that time moisture was not necessary. He said no general rule could be laid down for tree planting owing to the existence of different conditions.

Work of the Experimental Farms.

A paper on "Tree Planting on the Experimental Farms" by Dr. Saunders followed. He prefaced his paper by pointing out the large districts that are unfit for agricultural settlement, and showed the effect of trees upon the yield of grain in the west. In 1900 the yield of spring wheat on plots partly protected by tree growth was over thirty bushels per acre, while unprotected sections were in most instances totally destroyed by rain storms. On examining the fields at Indian Head which had been more or less protected by forest belts, it was found that every foot in height of tree growth had afforded protection to from fifty to sixty feet of grain in the field. Also forest growth frequently helped the crops on the western plains by bringing about more favorable conditions of moisture. Continuing Dr. Saunders said:

While the work of establishing tree growth mainly with native trees was in progress on the Western Experimental Farms, the more purely experimental side of this work, that of the testing of all sorts of trees and shrubs, for the purpose of finding out those which were suitable for the country, was carried on with vigor. Many thousands of young trees and shrubs were sent up from Eastern Canada, and many more imported from the colder parts of the United States and Europe and planted out under many different conditions, using considerable quantities of each variety, so that the test might be a thorough one. This was done both with forest and fruit trees, and the results widely published. In this way much of the importation of unsuitable material has been stopped, and a large and useless expenditure prevented. The experiments conducted on the Farm have been extensive and thorough, and the settler has been convinced of the futility of his expending money on unsuitable trees when they have been tried in numbers of from 50 to 500 or more each, on the Experimental Farm, and have utterly failed. These experiments have been exceedingly useful. Many varieties after thorough trial have proven hardy and the number of useful sorts of established hardiness is now ample to give great variety and attractiveness to new plantations. Similar work with like results has also been carried on during the same period at the Experimental Farm for Manitoba, located at Brandon. There, however, the conditions for tree growth are more favorable than at Indian Head. The success in tree growing has been great at both Farms, and those who visit these interesting places will find a very large number of species and varieties of trees and shrubs which have now been sufficiently tested to justify the recom-

mending of them as hardy. In the annual report of the Experimental Farms for 1901, now in press, a list is given of over 130 different species and varieties of trees and shrubs which have been found hardy at Indian Head.

Careful records have been preserved of the cost of growing forest trees at Indian Head, account being taken of all the labor which has been devoted to the plantations and other expenses from the time the trees were put out until they were large enough to shade the ground so as to need no further cultivating. In some instances hoeing had to be continued for four years; in other cases, where the trees were slower in growth, for five years. The trees have been planted at different distances— $2\frac{1}{2}$, 3, $3\frac{1}{2}$ and 4 feet apart each way; and leaving out the cost of growing the young seedling trees, which is very trifling, the total expense of planting and care for four or five years has varied from \$12 to \$18 per acre.

While the work of clothing the bare prairie section at Indian Head has been in progress, what has been done to help the individual settlers, many of whom live too far from sources of supply of native trees and tree seeds to procure them for themselves? For the first year or two, the erection of buildings and the organizing of the work occupied the entire attention of the staff; but in the spring of 1889 the work of distribution to settlers was begun. That season 700 1-lb. bags of tree seeds were sent out, chiefly of box elder and green ash. These were distributed in response to requests received from farmers in different parts of the country. There were also sent from Ottawa, through the mail, 131,600 young forest trees and cuttings in 1,316 packages of 100 each. These were all forwarded free and circulars accompanied them containing instructions as to the preparation of the soil and the sowing and caring for the seeds and trees. In 1891 200,000 more young forest trees were sent out from the Central Farm in 2,000 packages of 100 each, and 4,053 1-lb. bags of tree seeds. Similar distributions were made from year to year up to and including 1893; but since then the chief distribution to settlers in the North-West Territories has been made from Indian Head, and to those in Manitoba from the Experimental Farm at Brandon.

The total distribution which has been made to date to settlers in the Canadian North-west is as follows:—

	Young Forest Trees & Cuttings in 1 lb. bags	Tree Seeds
From Experimental Farm, Ottawa..	600,000	10,040
" " Indian Head	290,000	4,564
" " Brandon ..	610,200	2,742

This makes a total of one million five hundred thousand trees and cuttings distributed in fifteen thousand packages, and the total quantity of tree seeds distributed has amounted to about 8 tons and three-quarters. Specific instructions have accompanied all this material to guide the settler as to the proper preparation of the land and treatment and care of the seeds and young trees. In the meantime, the trees planted and now growing on the five Experimental farms number about 245,000.

The teaching and example of the Experimental Farms, associated with this large distribution of young trees and seeds, have produced results in the Canadian North-west which are now everywhere apparent. On homesteads in almost every part of Manitoba and the Territories there are small plantations of forest trees which furnish more or less shelter to buildings and stock, also for the growing of garden vegetables, fruits, and flowers, and at the same time add beauty to the surroundings and make the dwellings of the settlers more attractive and homelike.

Since the establishment of a Forestry Branch by the Department of Interior, the Experimental Farms have rendered willing help in the collection of seeds of trees and shrubs and have set aside a sufficient area of land for the growing of a large number of seedlings for this special branch of work. During the past year over 200,000 young trees and shrubs have been grown from seeds and cuttings for this Forestry Branch, and preparations have been made for the further development of this useful work. It is not, however, proposed, on this account to lessen the good work the Experimental Farms have so long had in hand, but to vigorously carry on the propagation and distribution of useful

trees as in the past, sending them out with tree seeds as far as is practicable, to all who apply for them.

Many of the plantations of young trees established with the Experimental Farm several years ago, are now bearing seed, and with these seed centres increasing in number from year to year, the quantities of seed conveniently available annually will give an enormous and increasing impetus to tree growing on the North-west plains.

Mr. Stewart read a paper by Mr. Norman M. Ross, Assistant Superintendent of Forestry for the Dominion, outlining the work of the forestry branch in tree planting on the prairies. Mr. Ross studied with Dr. Schenck and spent some time in Germany with him.

Mr. R. H. Campbell submitted a paper on "Forestry in the Schools" by Mr. William Pearce, and another on "Forestry in Prince Edward Island" by Rev. A. E. Burke.

The four papers above mentioned were discussed conjointly. Prof. Robertson said that under the present system of manual training in the schools 8,000 pupils received instructions every week regarding woods, and 600 teachers were engaged in explaining the uses of trees, etc. He thought that one of the best methods of promoting forestry was by instructing school children.

Dr. Fernow urged the thorough co-operation of the Experimental Farms and the Government with the Forestry Branch. He was in charge of a nursery growing two million seedlings annually, and in his opinion it was advisable to establish nurseries where trees can be most easily grown, as the matter of distribution presented no difficulties.

Hon. Sydney A. Fisher, Minister of Agriculture, then entered the room and was asked to address the Association. He said the work of the Association was one of the most important in Canada. He was glad to know that in recent years some efforts had been made to check the destruction of timber. The Dominion Government, however, could not work very effectively, owing to the timber being largely owned by the provinces. He believed the great and chief method of reforestation was the education of the people, and the Canadian Forestry Association could do much in awakening public opinion. This, of course, was a slow process, but he urged the members not to get discouraged.

There was some further discussion in which there was exhibited a strong feeling in favor of the Government assisting the Forestry Branch, and adjournment was made for lunch.

AFTERNOON SESSION.

The meeting in the afternoon might be termed a wood pulp session, as three papers bearing upon the pulp industry were submitted. The first was by Mr. D. Lorne McGibbon, manager of the Laurentide Pulp Company, Grand Mere, Que., and will appear in our May issue. The second paper was "The Management of Pulp Wood Forests," by Mr. Austin Cary, forester of the East Mills Company, Brunswick, Maine. It was read by Dr. Fletcher. The last paper on the programme was by Mr. E. G. Joly de La Biniere, pointing out some of the defects of the Quebec pulpwood regulations. This paper contains much of interest to pulp wood opera-

ors and lumbermen and will be found on page 17 of this issue.

Mr. Drummond opened the discussion on these papers by expressing his sympathy with the sentiments contained therein. He thought we had been viewing the matter in the wrong light by allowing logs to be exported. This remark applied to many other raw materials of Canada. Mr. Cary's paper brought up the question of the employment of trained foresters, and in Mr. Drummond's opinion that is what is required in this country. We had been looking at forestry from a theoretical point of view, while we should look at it from the practical side. He thought the time was coming when lumber and pulp companies would have to employ trained foresters, and he believed it would be found extremely profitable. He understood the matter would be taken up by one of our colleges.

Dr. Fernow said he must admit that there were hardly two sides to the question of allowing the export of raw material. It had always struck him as a piece of stupidity to allow the export of timber. Speaking of the cutting of pulp wood, he said that the diameter limitation was merely a make-shift for something better. There were various methods of getting a new crop of timber, but he had come to the conclusion that where there are culled woods it would be better to cut off the entire old crop and replant. No fixed rule could be applied for all forests, as the question of cutting would be governed by conditions. In giving instructions to his inspectors he allowed them to deviate from the limit wherever they found it advisable for sake of reforestation. Under certain conditions more harm was done in cutting as low as 12 inches in diameter than in cutting to 7 inches under other conditions. In a case cited he had found the 12 inch diameter a failure. The establishment of a diameter, therefore, did not solve the problem of reforestation. Many things that are right to do could not be accomplished owing to the necessity of respecting other conditions.

Mr. Southworth inquired as to denudation. He said that Dr. Fernow proposes to remove and replant, whereas Prof. Macoun says to remove the debris and let nature do the rest. He asked Dr. Fernow which system he would recommend for pine forests.

Dr. Fernow replied that the time was not yet ripe to undertake replanting in many lumbering operations. He did not advocate replanting as a method to be adopted everywhere. Each case should be diagnosed and advice given accordingly.

GENERAL BUSINESS.

In accordance with a notice of motion given a resolution was passed providing for the addition of a patron to the officers of the Association. A resolution expressing sympathy with the family of the late Hon. G. W. Allen and referring to the loss sustained by the Association by his death was carried.

The secretary introduced Mr. C. J. Thompson, of Virden, Man., who pointed out the necessity of furnishing the farmers of the North-West with an ample supply of trees. He submitted a resolution calling the attention of the government to the fact that the

appropriation of \$15,000 voted last year was inadequate to carry out the forestry work, and asking for a larger appropriation in future. The resolution was carried.

Mr. J. B. McWilliams moved that the Association urge upon the Federal Government the necessity of greater attention in opening up land for settlement, that the newer and unsettled portions of the country be explored in advance of settlement, and that the Lumbermen's Associations be asked to co-operate with the Canadian Forestry Association in urging upon the government that all lands unfit for agricultural purposes be reserved from settlement. Carried.

Mr. Southworth spoke regarding the tenure of land, squatters, etc. The Ontario Government, he said, recognized the difficulty in controlling the land so as to best protect the interests of both lumbermen and settlers.

Votes of thanks were tendered to the railways, the Dominion Government, authors of papers, and the press, after which came the



DR. B. E. FERNOW,

Director New York State College of Forestry, Ithaca, N.Y.

election of officers. To the new office of patron His Excellency the Earl of Minto, Governor General of Canada, was elected by acclamation. The other officers elected were:

Honorary President, Sir Henry Joly de Lotbiniere, Lieutenant-Governor of British Columbia.

President, William Little, Westmount, Que.

Vice-president, Hiram Robinson, Ottawa.

Secretary, E. Stewart, Ottawa.

Assistant secretary and treasurer, R. H. Campbell, Ottawa.

Directors, William Saunders, Ottawa; Prof. John Macoun, Ottawa; Thomas Southworth, Toronto; C. Jackson Booth, Ottawa; W. C. Edwards, Ottawa; E. G. Joly de Lotbiniere, Quebec; C. E. E. Ussher, Montreal.

Through the kindness of Mr. J. R. Anderson, Deputy Minister of Agriculture, Victoria, splendid specimens were exhibited at the meeting of the woods of British Columbia, including Douglas fir, yellow cedar, red cedar, willow cedar, western larch (tamarac), western spruce, canoe spruce, broad-leaved maple, red

alder, western white pine, scrub pine, cherry and western white oak.

Lecture by Dr. Fernow.

On Thursday evening a most interesting and instructive lecture, illustrated by stereopticon views, was delivered in the Normal School by Dr. B. E. Fernow, principal of the New York State College of Forestry. He first took up the original formation of forests, explaining how they established themselves, and stated that only those which endured the shade survived and finally formed the virgin forest. He pointed out the great difficulty and expense which France had experienced owing to the clearing of the mountains. This had resulted in landslides which had destroyed villages and towns which it required millions to replace. Illustrations were shown of trees in Africa six thousand years old.

Speaking of the reforestation of Canada, Dr. Fernow explained that it was impossible to introduce the same system in Canada and the United States as was now in vogue in Germany. He pointed out that in Germany every section of the tree was put to some practical use, while in this country a large portion of the branches was destroyed. The large number of persons present apparently greatly enjoyed the lecture.

Dr. Fernow is one of the leading authorities on forestry on the continent of America. He is a native of Prussia and the son of a high government official. He received an education in the classical gymnasium, studied forestry at the Forest Academy of Muenden, and law at the University of Koenigsberg, and entered the Prussian Forestry Service. He participated in the Franco-Prussian war, and became a lieutenant in the reserve of the German army.

Dr. Fernow came to the United States for a visit to the Centennial Exposition, but remained in that country, becoming engaged in the metallurgical business, and later in the management of wood lands. In 1883 he was elected secretary of the American Forestry Association, and remained its moving spirit for many years. In 1886 he was appointed to the position of Chief of the Forestry Division, United States Department of Agriculture. Being a forester by profession, he was able to direct the work of the division with a knowledge of the requirements of the office as well as from the standpoint of a forester. He held this position until 1898, when he accepted the directorship of the New York State College of Forestry in Cornell University, a position for which he is eminently fitted. The work of the college, besides educating professional foresters, includes the management of the college forest, a tract of 30,000 acres, located in the Adirondack Mountains, on which forest management is to be demonstrated.

Dr. Fernow is a Fellow of the American Association for the Advancement of Science, first vice-president of the American Forestry Association, and a member of many other learned societies and of the Academy of Science of St. Petersburg. He holds the degree of Doctor of Laws (L. L. D.) from the University of Wisconsin.

He has written a large number of reports in his official position, and has been lecturing continuously for twelve years in many parts of the United States and Canada for the advancement of the forestry idea. Personally he is a pleasant conversationalist, with an individuality and a vein of humor that is most attractive.

THE Canada Lumberman

MONTHLY AND WEEKLY EDITIONS

PUBLISHED BY

The C.H. Mortimer Publishing Company
of Toronto, Limited

CONFEDERATION LIFE BUILDING, TORONTO.

BRANCH OFFICE:
IMPERIAL BUILDING, MONTREAL.

The LUMBERMAN Weekly Edition is published every Wednesday, and the Monthly Edition on the 1st day of every month.

TERMS OF SUBSCRIPTION:

One Copy, Weekly and Monthly, One Year, in advance... \$ 1.00
One Copy, Weekly and Monthly, Six Months, in advance... .50
Foreign Subscription, \$1.00 a Year.

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Special pains are taken to secure the latest and most trustworthy market quotations from various points throughout the world, so as to afford to the trade in Canada information in which it can rely in its operations.

Advertisers will receive careful attention and liberal treatment. We need not point out that for many the CANADA LUMBERMAN, with its special class of readers, is not only an exceptionally good medium for securing publicity, but is indispensable for those who would bring themselves before the notice of that class. Special attention is directed to "WANTED" and "FOR SALE" advertisements, which will be inserted in a conspicuous position at the uniform price of 25 cents per line, for each insertion. Announcements of this character will be subject to a discount of 25 per cent. if ordered for four successive issues or longer.

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THE VALUE OF HEMLOCK.

Of late years the production of hemlock timber has increased both in Canada and the United States, and with this increased production has come about an appreciation in the value. It is beginning to be realized that the difference between the price of hemlock and white pine is too great, and that the former has been selling below its real commercial value. A prominent lumberman made the statement at the recent meeting of the Ontario Lumbermen's Association that in a short time the position of hemlock would be where white pine is to-day.

In the year 1897 the production of hemlock in the States of Michigan and Wisconsin was 462,000,000 feet. This, with the growing scarcity of white pine, has increased each year until in 1901 it was 1,264,000,000 feet. In the States of Pennsylvania and New York, however, the production has declined from the maximum of 1,200,000,000 feet to 600,000,000 feet last year. Hemlock is cut for two purposes, for lumber and for bark. In most cases in this country the two operations are combined, and the person who cuts hemlock trees realizes from the lumber and from the bark. Frequently the timber is cut, however, owing to the necessity of obtaining bark, and the timber is accordingly sold below its market value. This has been a distributing element in the lumber trade, and has also made it difficult for lumbermen to estimate the quantity of lumber in the market. In the face of this situation, however, hemlock prices have advanced until sales of lumber have been made during the past winter at \$10 at the mill. Lumbermen are recognizing its enhanced value, and timber limits of which the pine had been cut off have recently changed hands for the sake of the hemlock thereon.

A process has been discovered for making certain kinds of leather without the use of tan-bark. It cannot be said as yet how far the new process will be found successful and will replace leather made by means of tan-bark, but if it should come in general use it might depreciate the value of hemlock timber. At the present time, however, there is a large demand for tan-bark from the tanners of the Eastern States as well as from local manufacturers, one Ontario lumberman recently receiving an order for five carloads for immediate shipment.

COLONIZATION VERSUS LUMBERING.

One of the perplexing questions calling for solution by the governments of Canada is in respect to the privileges which should be accorded to colonists and lumbermen. It is not an easy matter to define the rights of the settler, giving him the scope which he believes he should have, and at the same time properly protect the interests of the lumberman. The various phases of this subject were discussed at the recent meeting of the Canadian Forestry Association in a manner that shows the great public desire for the most practical and equitable laws that can be framed to govern the relation of the one to the other. Doubtless it is in the interest of the country to encourage settlement, but it should not be done, as we fear has been the case in the past to some extent, at the sacrifice of our timber wealth.

The complaint is made by lumbermen that the safety of their timber limits is often jeopardized by the carelessness of settlers; in fact, it is known that destructive forest fires have been caused by settlers. They have been allowed, it is claimed, to enter districts not suitable for settlement, and to take up land which afterwards was found to be not adapted for agricultural purposes. This contention has arisen chiefly since lumbering operations reached the more northerly limits of Ontario and Quebec and brought about, as it were, a new condition of things calling for a different system of managing Crown lands.

We are glad to observe the apparent appreciation by the Provincial Governments of the necessity of remedying some of the grievances which exist. How this can best be done is a question calling for much earnest thought. On one point, however, opinion is agreed, to wit, the necessity of having the country thoroughly explored with a view to ascertaining what land is fit for settlement and what should be reserved for lumbering operations or forest reserves.

Within the last fortnight the Quebec Legislature has brought forward a measure dealing with this subject. It provides for the appointment of a commission of four persons, whose duty shall be:

1. To make a critical study of the law and regulations respecting public lands, woods, forests, colonization societies, works and roads, and the protection of settlers, as well as the carrying out of such laws and regulations.
2. To inquire into the number of causes of the difficulties between settlers and holders of timber licenses, and to devise methods for their prevention and removal.
3. To find out what are the sections of the country most suitable for colonization.

4. To ascertain whether the present colonization roads are sufficient to give access to the good farming lands, whether the extent of the surveyed lands is large enough, and the work performed by colonization societies deserves encouragement.

5. To enquire whether, in the interest of the colonization of the Province, it is expedient to contribute towards the building of certain bridges, and to grant subsidies in lands to certain railway companies.

6. To study the new proposals or systems which may be submitted to it, and whilst taking into account the financial resources of the Province, to recommend those which tend to amend the laws and regulations so as to foster colonization and the development of forest industries.

The above measure is most commendable and would seem to cover the ground thoroughly. It should be the initial step towards the adoption of laws which will be of great benefit to the Province and bring the settler and the lumberman more into harmony with each other.

Associated with this subject is the question of reforestation, which brings up the important matter of the method of disposing of Crown timber. The policy most generally adopted by the Provinces of the Dominion is to sell the timber by public auction, the purchaser paying a certain sum at the time of the sale, and the balance as the timber is cut, the latter being known as stumpage dues. In addition he agrees to pay a certain annual ground rent. This system has in the past been considered fairly practical and satisfactory to all concerned, but the changed conditions existing of late years have brought to the surface one or two of the weak points of the policy. One of these is the difficulty of establishing forest reserves on timber areas now under license. In the case of the Ontario Government the limits are sold to the lumberman with the understanding that the licenses will be renewed from year to year so long as the purchaser desires and pays the necessary dues and ground rent; consequently it has transpired that in few cases, if any, have limits reverted to the Government, the lumberman choosing to retain them after they had been cut over if only for investment or speculative purposes. Should the Government wish to incorporate as a forest reserve areas now under license, it would be necessary to cancel the license, which, to say the least, would be resented by the lumberman as an unjust procedure. At the last two public sales, the Ontario Government restricted the time of the license to ten years. This cannot be said to be an entirely satisfactory method, as it is open to the objection of stimulating the cutting of the timber and causing an over-production of lumber, as the buyer will doubtless aim to remove all the merchantable timber within the specified time.

In an unofficial paper read at the Forestry Association meeting Mr. Thomas Southworth, who has given some study to the effects of the various systems of disposing of Crown land, refers to the tenure of lands and points out the chief objection to establishing forest reserves where lands are now under license as being the fact that a perpetual franchise would be given the licensee, and that the Crown would receive but a small revenue from the timber. The licensee would then be the owner of the timber beyond all doubt, whereas if the reserve were not established there would exist

the possibility that the Government might cancel the license. The right of the Government to do so, however, has never yet been exercised, and buyers of timber limits consider that they hold a perpetual franchise, as witness the large sum recently paid for a limit that had been purchased from the Government fifty years ago.

The management of our timber lands has in the past been executed in a satisfactory manner. The retention of the title of the lands in the hands of the Crown has been of inestimable value, and we look for the exercise of the same degree of caution and wisdom in the future. It may be found, however, that in order to secure for the people the full benefit of the vast forest resources and at the same time judiciously foster the lumber industry, a radical change in the manner of disposing of the timber may need to be adopted.

EDITORIAL NOTES.

While we are apt to look upon lumbermen as a class of citizens whose attention is engrossed by their particular industry, it is a mistake to assume that the social side of the lumberman's life is neglected. He, perhaps more than any other business man, seeks pleasure and recreation in intercourse with competitors. It was a pleasure the other day to hear the remark of a lumberman who had passed three score and ten that his nature seemed to yearn for the company of those engaged in the same branch of industry. The decision of the Lumbermen's Association of Ontario to hold monthly luncheons is a manifestation of this desire for social intercourse. That these informal gatherings will be found both pleasant and profitable is a foregone conclusion, and it should be the aim of the members of the Association to participate in them as frequently as possible. Monthly luncheons have been held for some time by the lumbermen of Buffalo, who have found them of great value. It is proposed that the luncheons shall be of an informal character, matters affecting the trade to be discussed in an open and off-hand manner.

The proposal of the Canadian Manufacturers' Association to establish an office in London, England, as headquarters for Canadian manufactured goods, is one which calls for careful consideration. With movements of this kind, and all legitimate steps destined to extend Canadian trade, we are in entire accord; but it is necessary that the project should be inaugurated and carried out in such a manner as to accomplish the specific purpose in view. We are inclined to think that the results obtained from the so-called "sample rooms" have not always been satisfactory, chiefly for the reason that they have not been properly directed and that the persons in charge have not been sufficiently familiar with the trade of the countries they represent; in fact, the main object of the office has sometimes seemed to be overshadowed by the attention given to social functions. An office of this kind should be of a most practical character. It will, of course, be a difficult matter to place an official in charge who is thoroughly familiar with Canadian trade and also with the requirements of the British

market, but it might be found advantageous to appoint a deputy who has the necessary knowledge of British requirements and business methods. If a practical and aggressive policy is pursued, we have no doubt as to the benefits to be derived from the establishment of a Canadian sample room in London.

BRITISH COLUMBIA EXPORT LAW.

It is understood that the Government of British Columbia has made an announcement that the law prohibiting the export of timber from the province will not be repealed. Representations were made by the Loggers' Association seeking to have the law set aside, but the Government is said to be well satisfied with the course of events and to believe that the province will be benefitted materially by home manufacture of timber. Already several representatives of Puget Sound concerns have visited British Columbia with the object of selecting sites for mills.

ONTARIO FORESTS.

The report of the Commissioner of Crown Lands for the year 1901 has been issued. It shows that the total revenue collected from woods and forests during the year was \$1,479,847.35. Of this \$571,383.59 was derived from bonuses, \$63,042.72 from ground rent, \$2,272.38 from transfer fees, and \$843,148.66 from timber dues. The revenue from timber dues and ground rent was, with two or three exceptions, the largest in the history of the province.

The report states that a step in the direction of bettering the condition of the lumber employee is the establishment among the camps of a system of travelling libraries, for which the sum of \$1,200 was voted by the Legislature at its last session. Some twenty-eight or thirty reading and recreation rooms for the purpose have been built by the lumbermen.

As a further result of the prohibition of export of pine logs cut on Crown Lands in Ontario, there was during the year a substantial extension in the sawing capacity of the mills of the province. Several Michigan mill men removed their plants to Ontario, while others erected new mills on this side of the Great Lakes. Examples of this can be seen at Blind River, Sarnia and Sandwich, where mills have been built which have a combined sawing capacity of 150,000,000 feet annually.

It is stated that the number of licensees who had fire rangers on their limits last year was seventy-six. The number of rangers employed on licensed land was 236. In addition to the rangers in the Temagami and Eastern Forest Reserves, there were 10 rangers employed on the Crown domain in the Wahnapiata, Jocko and Rainy River districts. The total expenditure of the department for fire-ranging, covering one-half the cost of the staff on licensed lands and the whole cost on unlicensed lands, was \$29,624.62.

Referring to the pulp wood industry the report states that the progress made during the year by the several companies which are under agreement with the government to build pulp and paper mills was on the whole satis-

factory, though in some cases, perhaps, it did not reach so advanced a stage as was expected. The Sault Ste. Marie Pulp & Paper Company operated its mechanical mill throughout nearly the whole year, and has under construction a chemical mill of immense proportions. The Sturgeon Falls Pulp Company have let contracts for the immediate construction of paper mills, and the Spanish River Pulp & Paper Company expect to have a 100-ton pulp mill in operation during the coming summer. The Blanche River Pulp & Paper Company and the Nepigon Pulp, Paper & Manufacturing Company experienced some difficulty in the selection of suitable sites for their respective mills, but have had plans prepared and expect to proceed immediately with the erection of their mills. The Keewatin Power Company has expended \$500,000 on their water power on the Winnipeg river, but nothing has yet been done in the construction of mills. Owing to heavy freight rates they will probably be unable to market their product in the east, and accordingly have recently been directing their



THE LATE JOHN HARRISON, OF OWEN SOUND.

attention towards the markets of Japan, New Zealand and Australia.

Following is a comparative statement for two years of the area under license and the quantity of timber cut on Crown lands :

	1900	1901
Area under license ...	16,732	18,191 acres
Pine saw logs	643,510,766	598,433,058 ft. B.M.
Other saw logs	36,721,998	40,216,917 ft. B.M.
Boom and dimension timber	34,724,488	38,011,800 ft. B.M.
Square white pine	1,919,230	1,755,881 cubic ft.
Birch timber	2,380	5,023 cubic ft.
Ash timber	555	2,229 cubic ft.
Pile timber	524,387	719,107 ft. B.M.
Cedar	135,008	170,826 lineal ft.
Cordwood	29,184	37,724 cords.
Tanbark	1,253	7,948 cords.
Railway ties	1,143,374	1,449,427 pieces.
Posts	5,309	5,319 cords.
Telegraph poles	9,784	24,238 pieces.
Shingle bolts	1,145	1,087 cords.
Head blocks	164	660 pieces.
Pulp wood	65,051	44,738 cords.

Malloch's saw mill at Arnprior, Ont., will be operated this season by J. R. & J. Gillies.

The Canada Shingle Company have been operating a small shingle mill near Hastings, B. C. As a result of the provincial legislation prohibiting the export of logs, the company are building a large mill at Vancouver, utilizing as far as possible the old Buse mill. Twelve improved Dunbar shingle machines are being installed.

WESTERN RETAIL LUMBERMEN'S ASSOCIATION.

The annual meeting of the Western Retail Lumbermen's Association of Manitoba and the Northwest Territories was held in Winnipeg on February 19th. There was a large attendance of members, and the chair was occupied by the president, Mr. Henry Byrnes, of Winnipeg. At the first session consideration was given to the question of mills holding honorary membership opening retail yards within the jurisdiction of the association. It was pointed out that this was contrary to the by-laws. The matter of price cutting between members of the association was also taken up and ventilated to the evident satisfaction of a number of members who have suffered to some extent from this sort of disadvantage. The questions of competition from non-members and wholesale dealers selling retail were taken up and as a result of the discussion a better understanding was reached.

At the evening session honorary members were also admitted. The president read his annual address, as follows :

PRESIDENT'S ADDRESS.

Gentlemen and Members of the Western Retail Lumbermen's Association :

For the esteemed honor you have conferred upon me by electing me as your president for three consecutive years to preside over such a large and intelligent body of business men, I desire to express my heartfelt thanks, and I assure you I rejoice greatly in again having the privilege of greeting you with a hearty welcome in attendance at this, the eleventh annual meeting of this association, and I am sure its affairs will receive full and complete deliberation.

I am glad to be able to congratulate you as well as myself upon the bountiful harvest of the past year, which our Almighty Creator in His divine providence has blessed this country with, which has brought prosperity to our business along with the other business avenues of the community.

I have to report to you that the board of directors, having received pressing requests from the lumber dealers in the Territories to extend our association to the dealers in the Northwest Territories, and upon receiving authority from the board of directors to visit that district for the purpose of meeting such dealers, I, along with the secretary, proceeded early in May west to Medicine Hat, Calgary and the outlying places north of Edmonton. We were everywhere met with a desire to become members of this association, resulting in a much increased accession to our membership. It has, however, been found, owing to the great distance from here, to be necessary to form a special board or executive committee and a secretary at that district, with power alone to deal with matters pertaining to that district, and to arrive at such an arrangement, a delegate, Mr. Cushing, of Calgary, has been appointed to confer with this meeting on the matter. Mr. Cushing at present is with us.

During the year some complications of an arbitrary kind arose, which came before the directors, but the peculiarity of the circumstance rendered such beyond the control of the board. The fact was this, that the Winnipeg Association, which has hitherto been affiliated with this association, has a member who was not also a member of our association. This precluded us from taking any action to discipline him. The party in question disregarding our association, shipped in car lots to points where price list was established, and sold his lumber at cut prices, thus being detrimental to the active member at the point in question. This is a very disturbing element to be contended with by active members not very far distant from Winnipeg.

The board of directors becoming aware of the fact that the reciprocal clause of the by-laws was not generally adhered to by some active members, and in some cases by the honorary members, it was resolved to deal more severely with such cases, and insist upon

reciprocal buying and selling to and from members only. This is a matter of great consequence to the beneficial working of the association, and it does not appear to me that any good reason exists for violating this clause, considering the large number of honorary members on our list.

I now wish in conclusion to offer my grateful thanks for the many courtesies extended to me as your president, by both yourselves and the very capable board of directors, which it has been my good fortune to be associated with during the year.

HENRY BYRNES, President.

The address of the President was adopted, as was also the report of the Secretary-Treasurer which follows :

SECRETARY TREASURER'S REPORT.

Mr. President and Gentlemen :

I am glad to be present with you to-day and as your secretary I along with the worthy president extend to you a hearty greeting, and I am sure your attendance and deliberation at this meeting will be found to be of much advantage to this association.

In making the annual statement I have to add thereto for outstanding dues as follows :

1900	30.00
1901	332.50

\$362.50

Out of this amount I estimate \$300.00 will be paid and I have already received \$80.00 since making the financial statement. I estimate that there will be about six delinquents who have withdrawn from the association or are about to do so, being in part some of the Winnipeg active members, who have refused to pay, but may do so later on. I think it quite safe to state that our surplus up to the end of the year may be given as \$3,000. The membership now stands at 244 active and 37 honorary members.

The interest in the association throughout continues unabated, and is regarded as an important feature in the lumber business. Indeed I find that any party who desires to enter the lumber business the first thought is to obtain membership of this association, and from the many applications of such nature which I receive I am prepared to give much to the credit of the loyal influence of honorary members and their representatives in suggesting this course to parties contemplating the lumber business.

During the year several instances have been brought to our notice when active dealers have been wrongfully interfered with by the wholesale dealers, some of whom were honorary members.

Along the line of the Glenboro railway, and in one case on the main line, an honorary member was led to ship to a non-member through the interest of a poacher, to the injury of a few of our active members. I was able, through correspondence and personal interview, to get the honorary member to stop further shipments to non-member, and so far as I know has not done so since the spring months.

There have been, perhaps, a few flagrant cases of this nature by the honorary members who are dealers in white pine, and I am sorry to have to state that we were unsuccessful in having a commission paid to the dealer interfered with in such cases but a promise was given that shipment to non-members would not be made further. However, I think the honorary members have been sinned against by the active members in making purchases from non-members to a greater degree, in many localities, than the active members have been sinned against by the honorary members in selling to non-members. It is a poor rule that does not apply both ways.

Now, while on this point I wish to emphasize and impress this fact: that the dealer need not violate this rule long, as should he decline to buy from a non-member such wholesaler as may be non-plussed in not being able to make sale will very soon realize that it is to his own interest to become an honorary member so as to secure the desired trade. As to this, I again ask your thoughtful consideration and appeal to a sense of fairness one to another when tempted with a chance of making a few dollars by violating the rules in purchasing.

Again I am sorry to state that I have had before me a couple of cases in which one member has been ship-

ping lumber to a point of another member at the established price. In the one case a bill was arrived at between the dealers concerning another case a shipment of lumber was made by an active member to the point. Two other active members at cut prices. In this case a penalty of \$500 was levied and paid out to the dealers interfered with in proportion as they were affected.

The active members of Winnipeg are out of harmony with each other in their business interests, with an ominous outlook for trouble, from which country are likely to suffer in a similar way as some of the dealers suffered last year, through one of the dealers of the Winnipeg Association, but not a member of the association, shipping in lumber to non-members at a point than the established price at a point in the year. During the year we had to expect a member for sale lumber for sale at a point where he was not a member and refusing to withdraw from that point. We also for similar reasons compelled to suspend a member, who, however, undertook to withdraw from point and his suspension was removed.

The president has referred to the extension of the association to the Alberta district as far west as Calgary and north to Edmonton. In that direction we received an accession of 30 members to our list. The dealers are very enthusiastic members, but as yet not on the whole quite as familiar with the rules and by-laws as many of our old members are.

They certainly should have a special board secretary for that district to investigate and dispose of their local grievances. The matter will be brought for discussion at your hands and an amendment should be made to the by-laws to meet this special circumstance of the great distance from here.

The charge often meets me that some dealers do not keep sufficient stock for the requirements of the territory and I should like to hear your views as to what should govern as to a sufficient stock. I know that the condition of the volume of business to be done should be considered.

I have to thank the president for valuable assistance given me in his keen interest in the welfare of the association.

I also thank the board of directors for their valuable advice, cheerfully given at all times when requested.

ISAAC COCKBURN,
Secretary-Treasurer

A memorial was presented to the meeting asking the members to purchase only from members of the British Columbia Lumber and Shingle Manufacturers' Association when obtaining supplies from British Columbia. This matter was referred to the board of directors.

W. H. Cushing, of Calgary, was present as representative of the retail lumber dealers of Alberta and the western portion of the Association. He stated that the dealers of his territory desired a local committee or board to consider membership proposals and other matters of interest to the far western members. In motion it was agreed to allow the western members to have a committee of five.

Mr. Cushing next brought up complaints against three British Columbia manufacturers, who had sold bills of lumber to consumers or others not entitled to purchase wholesale, to the detriment of the retail dealers.

Mr. Campbell, of Melita, administered a lecture to those charged with this offence, and was agreed to leave further action in the matter to the new board of directors.

Election of officers was next taken up, and resulted as follows: President, J. L. Campbell, Melita; vice-president, A. M. Street, Morden; board of directors, Thos. Turner, Manitou; J. K. Robson, Treherne; T. McDith, Yorkton; W. H. Duncan, Regina; W. Ireland, Carberry; D. E. Sprague, Winnipeg.

For the above report of the meeting we are indebted to the Winnipeg Commercial.

THE NEWS

Duffy has established a portable saw mill at ... N. B.

Other saw mill at Langley, B. C., has been ... by Dan Smith.

... & Sons have completed a new saw ... Essington, B. C.

Yale-Columbia Lumber Company has di- ... business at Rossland, B. C.

... Bros., of Owen Sound, Ont., will likely ... their mill next year.

... & Davidson, lumber dealers, Manitou, ... dissolved partnership, Mr. Turnbull retiring.

... K. Wallace was killed by rolling logs while ... for Donald Fraser & Son at Temiscouata,

British Columbia Shingle Manufacturing Com- ... ncouver, B. C., recently suffered a slight loss

saw mill of the Goderich Lumber Company at ... nd, Ont., has been purchased by Keenan

Blonde Lumber & Manufacturing Company, ... Ont., has been incorporated, with a capital

... Bros., of Pinkerton, Ont., advise us that ... sold their business to Messrs. Campbell &

... said that John Stinson intends building a ... and matching mill at Seely's Bay, Leeds

... Taylor, of Seattle, was recently in Vancou- ... for a suitable site on which to build a

... movements have been made this spring to the ... mill of the J. D. Shier Lumber Company at

... usick & Company are making extensive altera- ... their saw mill at Buckingham, Que., and put- ... new boiler.

Meaford Manufacturing Company, Limited, ... ncorporated at Meaford, Ont., with a capital of ... to carry on a lumber and saw mill business.

Pacific Coast Lumber Company expect to have ... shingle mill at Vancouver in operation early ... The daily capacity will be 250,000 shingles.

... order has been granted for the winding up of ... Manufacturing Company, Limited, manu- ... of bicycle rims, skewers, etc., Clarksburg,

Arbuthnot, lumber dealer, Winnipeg, has ... ed property which will give him accommodation ... ch larger yard. He will build a planing mill on ... site.

... Sinnott has retired from the Swan River Lum- ... pany, of Grand View, Man., and the business ... ure be carried on by A. M. McCutcheon and ... sborne.

... learned that as a result of the prohibition of ... of timber from British Columbia, W. Wilson, ... Bros. and F. Robertson are erecting shingle ... Revelstoke, B. C.

... M. Beecher, of the British Columbia Mills, ... Trading Company, states that his company ... ate the Moodyville mill, on Burrard Inlet, op- ... ncouver, which they recently purchased.

... A. T. Dunn has introduced a bill in the New ... k Legislature to establish a forest reserve ... ncial park, near the head-waters of the ... rier. It is proposed to set apart a tract of ... o square miles.

... dissolution is announced of Byrnes & Campbell, ... ers' agents for lumber, shingles, etc., ... Man. The business will be continued by ... mes, who will represent the Canadian Pacific ... npany, of Port Moody, B. C.

... union charter has been granted to the W. J. ... npany, of Montreal, to carry on business as

... contractors and saw millers. The capital is \$300,000, ... and the incorporators include W. J. Poupore, of ... Montreal, and J. C. Malone, of Three Rivers, Que.

... John M. Swan and other residents of Tweedside, ... N. B., are building a large saw mill at that place. ... They own a large tract of timber land near the south ... shore of the Big Oromocto Lake, and are taking out ... logs for lumber, shingles and excelsior, which they in- ... tend to manufacture.

PERSONAL.

Mr. J. B. Miller, president of the Parry Sound Lum- ... ber Company, is at present on a trip to Europe.

Mr. H. S. Brennan, head of the Brennan Lumber ... Company, Hamilton, has been requested to stand as ... the candidate in the Reform interest in East Hamilton ... at the forthcoming provincial election.

Mr. John Kennedy has been appointed Crown Tim- ... ber Agent at Pembroke, Ont., to succeed the late Mr. ... Russell. Mr. Kennedy has been in the employ of the ... Government for some years as ranger, and is regarded ... as eminently fitted for the position.

Mr. A. J. Burton, who is known to many Canadian ... lumbermen, has accepted a position with the Atlantic ... Coast Lumber Company, of Georgetown, South Caro- ... lina, and now has charge of their No. 2 mill. This ... mill contains two double cutting bands and a gang. ... It is reported that Mr. Burton is receiving a salary of ... \$12 per day.

PUBLICATIONS.

The February number of the West Coast and Puget ... Sound Lumberman is a special annual issue in which ... appear figures and other information concerning the ... lumber and shingle industry of the Pacific coast during ... the year 1901. It is carefully prepared and endowed ... by a liberal advertising patronage.

Three hundred and sixty-six pages are contained in ... the twenty-ninth annual special issue of the Timber ... Trades Journal, of London, England, recently to hand. ... This number is perhaps the most extensive work of the ... kind ever issued. It is profusely illustrated and ... contains a complete review of the timber trade of Great ... Britain and foreign countries, as well as many special ... articles. In connection with the review of the timber ... trade of Liverpool and Manchester and the Tyne, there ... appear colored supplement maps showing the Liver- ... pool and Mersey docks and the Manchester ship canal. ... One of the most interesting features of the number is ... pen and ink sketches illustrating a Liverpool mahogany ... sale and the Manchester Exchange, in which are shown ... portraits of many prominent British timber dealers. ... Altogether, the number is most creditable and indica- ... tive of the enterprise of the publishers, Messrs. Wil- ... liam Rider & Son, Limited, 164 Aldersgate street, ... London, E.C.

TRADE NOTES.

The Albion Iron Works, of Victoria, B. C., are ... supplying the boilers for the new shingle mill to be ... constructed at Vancouver by the Hastings Shingle ... Manufacturing Company.

The Ottawa Saw Company, Ottawa, Ont., are ... making a large shipment of band saws to Australia. ... This is the first shipment they have made to that ... country, and the saw are made of Sanvik Swedish ... steel. The company are this year doing a larger ... band saw trade than ever.

James W. Woods, manufacturer of lumbermen's ... supplies, Ottawa, has opened an office and sample ... room at 90 York street, Toronto (opposite the Rossin ... House), for the benefit of his Western Ontario ... customers. This office will be in charge of Mr. P. J. ... Loughrin, who is thoroughly posted as to the require- ... ments of the lumber trade and personally acquainted ... with a large number of lumbermen. The goods ... manufactured by Mr. Woods are so well known to the ... lumber trade as to need no recommendation in these ... columns. He has recently built a new factory in ... Ottawa which is perhaps the most up-to-date establish- ... ment of its kind in Canada.

The tendency to employ iron and steel in the con- ... struction of buildings has in late years extended to saw ... mill building. This is in large measure due to the

efforts of the Metallic Roofing Company, who were ... the pioneers in the sheet metal business. One of the ... greatest advantages in the employment of sheet metal ... is that its application to a building reduces the in- ... surance rate, in some cases, we are told, as much as ... one-third. Thus the saving in insurance will soon ... repay the cost of metal covering even for the cheapest ... kind of structure. The various lines of sheet metal ... goods manufactured by the Metallic Roofing Company, ... and illustrated in their catalogue "S," would seem to ... meet every conceivable condition. Some of these ... lines are V-crimped iron roofing, rock-faced steel ... siding, "Eureka" diamond tiles, "Eastlake" steel ... shingles, steel clapboards, etc. What is known as the ... "Manitoba" siding is especially adapted for covering ... the sides of large buildings, such as elevators, mills, ... storehouses, etc., where there is liable to be consider- ... able settling of the building. Mill men who have under ... consideration the erection of new mills or remodelling ... of old ones should investigate the merits of sheet metal ... construction and obtain prices from the Metallic ... Roofing Company, who have the largest factory of the ... kind in Canada.

PULP NOTES.

U. P. Tanguay, Mayor of Weedon Centre, Quebec, ... is interested in the proposed pulp mill to be built at ... Lake Weedon, Wolfe county, Que.

The Brompton Pulp & Paper Company, Brompton ... Falls, Que., are said to have spent \$170,000 in building ... operations, chiefly hydraulic and foundation work.

The Belgo-Canadian Pulp Company, of Shawinigan ... Falls, Que., has appointed the firm of Laimmelet &



THE LATE WILLIAM HAMILTON OF PETERBOROUGH

Cornet, Paris and Antwerp, as sole selling agents for ... their product.

E. G. Murphy is reported to have secured options on ... several water powers in the vicinity of St. George, ... N. B., and it is believed locally that the erection of a ... pulp mill at that place will be commenced at an early ... date. American capitalists are at the back of the ... project.

D. G. Mills, for some years connected with the ... management of the pulp mills at Sault Ste. Marie, Ont., ... has resigned his position there to take charge of the ... ground wood pulp mill now being built by the James ... MacLaren Company at Buckingham, Que. This mill ... will contain three lines of grinders, of four each, and ... will turn out 75 tons of pulp per day. Each line of ... grinders will be driven by a pair of 45-inch special new ... American turbines of a total capacity of 1,800 h. p. ... The mill was designed by Chas. H. Vogel.

The North American Pulp Company was recently ... incorporated in New Jersey, the members of the com- ... pany being A. L. Meyer, 25 Broad Street, Benjamin P. ... Moore, 25 Broad Street, and F. G. Smith, 2077 Lexing- ... ton avenue, New York. The capital stock is placed at ... \$2,500,000. It is stated that the company already ... owns 265,000 acres of timber lands in Nova Scotia. ... The object is to establish pulp mills and to engage in ... the pulp and paper industry on an extensive scale. ... Most of the pulp will be exported to England.

The organization of the Atlantic Pulp & Paper Com- ... pany, which has been going on for some months, has ... been completed. The capital is \$3,000,000, and the ... board of directors includes W. C. Edwards, M. P., ... Ottawa, president; C. H. Waterous, Brantford; E. C. ... Eckardt, Toronto; R. H. Thompson, Buffalo. The ... company propose to acquire the limits, water power ... and saw mills at New Richmond, on the Bay of Chaleur, ... Bonaventure county, Quebec, and to erect mills for the ... manufacture of pulp and paper. The limits comprise ... 300 square miles of almost virgin forest principally ... spruce.

CANADIAN BAND SAWS IN AUSTRALIA.

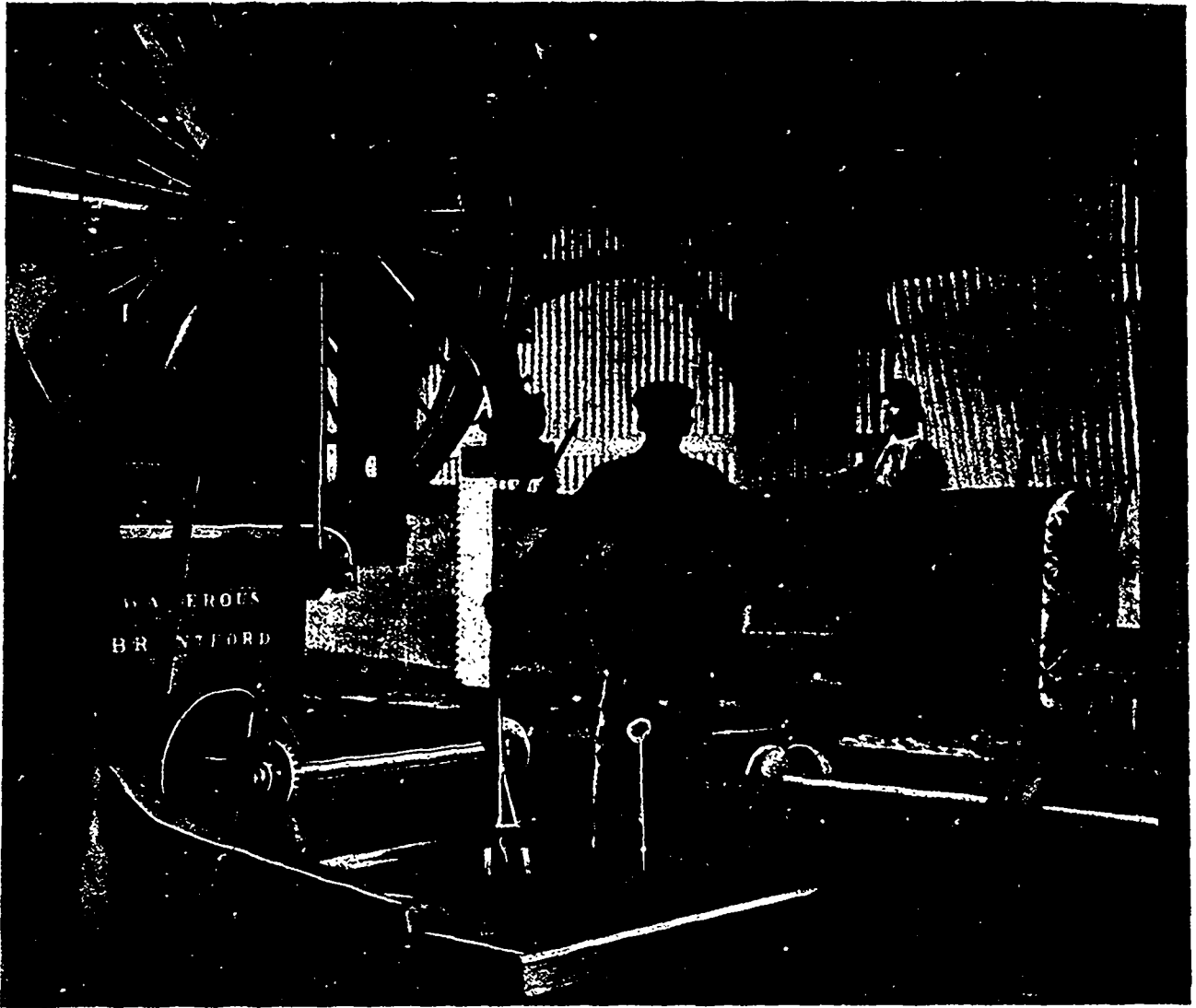
The Waterous Company, Brantford, Ont., have sent us a copy of the Sydney Mail, published at Sydney, Australia, containing some particulars and an illustration of one of their band mills which was shipped to Australia a short time ago. We reproduce herewith the illustration and description of the mill:

"On the 22nd ultimo there was opened at Pymont what may be termed an up-to-date saw mill. A party of gentlemen interested in the timber trade, to the number of about 40, accepted the invitation of Mr. H. M'Kenzie, proprietor of the Australian saw mills at Pymont, to witness the starting of the first vertical band-saw on a large scale which has

riage by powerful set works, and the operator can easily set it to any thickness required for the planks. The log is held in its place on the carriage by what is known as the boss-dog, which grips the log, making it impossible to move when the saw is in the cut. The log carriage has an automatic device which throws the log clear of the saw three-quarters of an inch when gidding back. After the log is cut the knees of the carriage are automatically receded by large coiled springs. Buffers are provided at each end of the track to obviate any jar should the carriage run further than the length of the stroke. The sawyer, who stands behind the saw, has complete control of the carriage and can adjust the feed to any degree

TENSION IN BAND SAWS.

Tension in band saws signifies the expansion of the metal throughout the central portions of the blade, so as to stretch the outside edge and particularly the back edge. A saw when strained on the wheels must be the tightest on the cutting edge, so as to not let the saw run in or out of the cut. The speed of band saws has very little to do with the tension, although it has much to do with the work and life of the saw; either too much or not enough speed will have similar influence in inducing cracks. Some band saw filers believe a band saw must not be open closer than an inch or an inch and a half from the edge. They claim a saw will crack if it is opened any closer than an inch



WATEROUS BAND MILL IN AUSTRALIA.

been erected in the colony. The machinery has been put up at considerable expense on the first floor of Mr. M'Kenzie's saw mill. The saw, which is capable of cutting 30,000 feet of log timber per day into inch boards, completely revolutionizes the system adopted for many years in this and other colonies, viz., the use of the log brake down frames, and afterwards boarding the sitches on deal frames. In the new invention one handling does the lot, consequently more than six times the quantity of work is got through with less labor. The saw, comprising a 9 inch blade, runs over a 9 foot wheel. The carriage on which the log is placed is propelled by a direct-acting steam feeder, consisting of a cylinder 42 feet long and 10 in. in diameter. This moves the log to and from the saw. The log is set over the car-

riage by powerful set works, and the operator can easily set it to any thickness required for the planks. The log is held in its place on the carriage by what is known as the boss-dog, which grips the log, making it impossible to move when the saw is in the cut. The log carriage has an automatic device which throws the log clear of the saw three-quarters of an inch when gidding back. After the log is cut the knees of the carriage are automatically receded by large coiled springs. Buffers are provided at each end of the track to obviate any jar should the carriage run further than the length of the stroke. The sawyer, who stands behind the saw, has complete control of the carriage and can adjust the feed to any degree of speed. As the boards drop from the log they are, by means of live rollers, sent to be stacked at the other end of the building. Any boards requiring edging are quickly passed through a gang edger and made to any width required. The logs are turned on the carriage by a friction log turner. They are first brought from the harbor below to the mill by means of an endless chain running into the water. The filing room is on the second floor, where all the latest machinery for filing and keeping saws in order is seen. The automatic band-saw filer is a most ingenious machine. The machinery is driven by an engine of a new saw mill type, making 160 revolutions per minute. The whole plant is most complete and was supplied by Mr. W. Fleming, 24 Clarence street, Sydney."

from the edge. My saws are opened from edge to edge, and I am not bothered with cracks; but I find that if a saw is open from edge to edge the tension must be put in evenly. If a saw is wide open and the tension not even the saw will chatter in the cut and is most likely to come off the wheels, cracked. It is well-known among practical band saw men that a hand saw will not do good work without tension. The back of a saw must be looked after as well as the tension. The back of a saw should be crowned so as to not allow the cutting edge to dodge and make snaky lumber. I find that a saw crowned about 1/32-inch in every five feet gives good results where the wheels are in good shape and in perfect line.—"B. S. F." in Wood-Worker.

WOOD PULP DEPARTMENT

THE DANGER THREATENING THE CROWN LANDS FORESTS OF THE PROVINCE OF QUEBEC.

By E. G. JOLY DE LOTBINIERE.

Mr. Chairman and Gentlemen:—

I feel convinced that all those who have given the subject serious consideration will agree with me that the manufacture of pulp wood on our Crown Lands, as at present sanctioned by the regulations concerning Woods and Forests, constitutes a serious menace to the continuous supply of timber from that source.

It is also a matter of notoriety that the revenue derived from our Crown Lands is by far the most valuable of our Provincial assets, and consequently, all those who have at heart the prosperity and welfare of the Province, should unite their efforts towards securing such legislation as will safeguard our most important heritage, and so secure for future generations the same advantages we now enjoy.

The great and steadily growing expansion of the pulp wood industry renders it imperative to draw public attention to the condition of things which now prevails in the Province, in so far as pulp wood making on the Crown Lands is concerned.

Let me assure my hearers that I fully recognize the importance of this great industry to the Province. We have an enormous supply of the raw material on our Crown Lands, and it is but right that it should be turned to profit, but, in doing so, should not every possible care that science and experience can dictate be taken to preserve our forests for future generations, for whom we but hold them in trust.

When one takes into consideration the enormous area of forest land destroyed every year by fire, the extensive and much to be deplored waste of forest land, absolutely unfit for cultivation, which is going on under the specious pretext of colonization, as well as the roads of the lumberman, doubly dangerous nowadays when the manufacture of pulp wood has given an incentive to cut timber which a few years ago would not have paid the cost of production, it is manifestly our duty to give the subject of forest preservation our most serious consideration, and not allow ourselves to be lulled into fancied security as to the inexhaustible condition of our forest wealth.

And now comes the question: Do the existing rules and regulations affecting "Woods and Forests" of the Department of Lands, Mines, and Fisheries of the Province of Quebec afford such necessary protection to our forest lands as will guarantee, for the future, continuous and inexhaustible supply of timber fit for pulp wood? In my humble estimation they do not, for consider that license holders are permitted to cut spruce and other timber fit for pulp wood at too low a standard.

Denuded or depleted tracts of forest land can be restored in two ways, either by "artificial reforestation" or "natural renewal." I do not propose to deal with the first method, though it is of vital importance at the present moment in certain treeless sections of the country, such as, for instance, the prairie lands of Manitoba and the North-West Territories and no doubt many sections nearer home. It is gratifying to see that the Federal Government appreciates this fact, and that the Department of the Interior is prepared to assist farmers and others residing in the above sections in the growing of forest plantations and shelter beds. We notice with pleasure that the Local Government has also taken the matter up, and that it offers certain inducements to proprietors and those in possession of land to encourage them to utilize the unproductive portions of their properties, by planting forest trees. They will come, and perhaps sooner than we expect,

Paper read at third annual meeting of Canadian Forestry Association, Ottawa, March 7th, 1902.

when "artificial reforestation" will have to be resorted to on our Crown Lands, but for the present "natural renewal," if Nature is only permitted to do her work, should be sufficient to ensure us a lasting supply of timber for all purposes.

Now to assist "natural renewal," to allow Nature to repair the ravages of man, what is necessary? The answer to me seems evident. Stringent regulations should be made and strictly enforced by the Department of Crown Lands, so that a sufficient crop of young timber of proper dimensions be left on a tract to replace that which has been removed, and sufficient time should be given such timber to attain a proper growth before the limit holder be permitted to take off a new crop.

Now what are our Crown Land regulations as to the cutting of white spruce and other timber fit for pulp wood?

Paragraph 12 of the Regulations concerning "Woods and Forests" for the province of Quebec is as follows: "Licentiatees are forbidden to cut on Crown Lands



MR. E. G. JOLY DE LOTBINIERE, Quebec.

pine trees measuring less than 12 inches in diameter; spruce trees less than 11 inches in diameter; and trees of other descriptions measuring less than 9 inches at the stump; but they are permitted to cut black spruce, balsam, poplar, hemlock and other small timber intended for the manufacture of paper pulp at a diameter of 7 inches at the stump."

The idea is generally prevalent that a tract of timber land, denuded of timber such as license holders are allowed to cut, renews itself naturally in from 15 to 20 years at the outside.

Let us take for instance a tract of land where all the white spruce has been cut at 11 inches on the stump (such a tract, where pulp wood making has been going on would, I fancy, be hard to find, for I question whether the lumberman pays much attention to the diameter restriction in such a case), the tamarac, black spruce, aspen, hemlock and balsam at 7 inches on the stump. We will, however, suppose that what remains of the above mentioned varieties average, for the white spruce, 10 inches and less, tamarac, black spruce, aspen, hemlock and balsam 6 inches and less. Now, would this tract under the best of conditions be able to stand another crop in 15 or 20 years, if spared by fire and wind?

Professor Fernow, at one time Chief of the Bureau of Forestry at Washington, and now Director of the New York State College of Forestry, whose opinion

carries the greatest weight, gives me his views on this question, as follows:

"The idea of 'renewal' in 15 to 20 years, where the cut is down to 7 inches, is ridiculous. What is meant is that after 15 or 20 years some and enough of the left over trees will have attained a diameter which it pays to cut. This was perhaps true under some conditions, when the diameter to which the cut was made did not go below 12 inches, but even then it was not renewal. It stands to reason where spruce is culled and hard wood left, it is hardwood that renews and not spruce. Your Government, having control of the forest, should certainly limit the diameter to which trees may be cut, but the size must be variable according to local conditions, for even 9 inch trees would not stand up under the winds if left standing singly without the support of neighbours. The time is ripe for something better than diameter restrictions."

It is, of course, a well-known fact that where a crowded stand of timber has been judiciously thinned, the trees that remain grow more rapidly than they did before, as the survivors have a greater amount of nourishing material at their disposal; the sun's rays reach the smaller timber, the circulation of the air is better, and the tree has more room to spread its roots and branches; consequently trees in a virgin forest are of slower growth than those on tracts that have been cut over with discrimination.

Henry S. Graves, in his work on "Practical Forestry in the Adirondacks," has come to the conclusion, after most careful study and investigation, that it takes an average of nine years for spruce to grow one inch in diameter on lands that have not been cut over, and seven years for timber on "cut over" lands.

No hard and fast rule can be laid down for the growth of spruce in our Province, as our forests cover such a vast area that the conditions of soil, site and climate are necessarily most varied. As a natural result, the growth of timber cannot be absolutely uniform in all sections.

The differences in the rates of growth, however, are not likely to be such that a fair general estimate may not be arrived at by selecting a centre for one's observations where spruce is generally conceded to thrive well. I consider the Seigneurie of Lotbiniere such a centre and my observations have been made there. The fact that we have steadily cut spruce on this property for the last half century and that we hope to continue doing so for many years to come (with due regard to the principles of "natural renewal") should be accepted as a proof that I have selected a favorable section of country for my observations.

I lately measured 100 white spruce (*abies alba*) in order to find the number of years required to grow one inch, with the following results:

No. of trees.	1 grew 1 inch in diameter in 4 years
1	5 "
8	6 "
12	7 "
24	8 "
23	9 "
18	10 "
3	11 "
4	12 "
1	13 "
100	

The average rate of growth of these 100 trees to gain one inch in diameter would therefore be eight years.

Leaving average growth aside and taking individual growths, it would follow from the above that on a tract from which all the 11 inch spruce had been removed, a tree 10 inches on the stump, growing one inch in six years, would take 18 years to attain 13 inches diameter.

- One growing 1 inch in 7 years would take 21 years.
- One growing 1 inch in 8 years would take 24 years.
- One growing 1 inch in 9 years would take 27 years.
- One growing 1 inch in 10 years would take 30 years.
- One growing 1 inch in 11 years would take 33 years.
- One growing 1 inch in 12 years would take 36 years.
- One growing 1 inch in 13 years would take 39 years.

Taking for granted that the above statements as to the growth of spruce are fairly correct, it will be readily admitted that the regulation allowing spruce to be cut at 11 inches on the stump is most hostile to the scheme of "Natural Reforestation," as at least 65 per

cent. of our spruce takes from 8 to 10 years to grow 1 inch in diameter.

The cutting of spruce should therefore be absolutely prohibited under 13 inches on the stump.

A spruce cut at 11 inches diameter on the stump, if converted into logs 12 feet long, would give two logs, the first having a diameter of 9, and in some cases 9 1/2 inches at the small or culling end, the second a diameter of 7 inches. These two logs would together contain, according to the table of contents of saw logs upon which the Crown Lands collect their dues, 52 ft. B. M. A tree cut at 13 inches diameter on the stump, made into logs 12 feet long, would also give two logs, the first of 11, the second of 9 to 9 1-2 inches diameter at the small end. These two logs, according to the tables I have already alluded to, would give together 82 feet B. M., or 32 feet more than the contents of a tree cut at 11 inches on the stump.

Logs 9 and 7 inches in diameter are hardly the kind a mill owner hankers after for sawing into deals and boards, and, as a result, a large percentage of this small timber is cut into pulp wood. On the other hand, a tree felled at 13 inches on the stump gives at least 1 fair sized log of 11, and a second of 9 inches. The 11 inch log is suited for deals and boards, and the 9 inch, should it pay better, can be converted into pulp wood. The benefit to our Crown Lands of a change in the felling diameter of spruce from 11 inches to 13 inches on the stump is so manifest that it is needless to insist any further on the subject.

BLACK SPRUCE (abies nigra). This tree, which is generally considered the most valuable for pulp and paper making, hardly ever attains a large size in the province of Quebec. A tree from 10 to 12 inches diameter on the stump is a rarity. Its growth is also very slow, taking an average of about 15 years to grow 1 inch in diameter. Under the circumstances, the diameter at which it may be felled, 7 inches, is not too low, were it not for the difficulty, when piled and corded, of distinguishing white from black spruce, and consequently, the opportunity afforded unscrupulous pulp wood makers to cut white spruce below the government's restriction of 11 inches.

TAMARAC (Larix Americana). Under favorable conditions, that is, when found on slightly elevated ground and not in swamps, the growth of tamarac is about equal to that of white spruce, and the tree attains a very large size. When found in the vicinity of swamps and low damp soil, its growth is exceedingly slow, and the tree never attains a large size. I have measured tamarac found on moderately elevated ground that grew as much as 1 inch in diameter in 6 years. The swamp tamarac takes from 20 to 24 years to grow 1 inch. I regret to say, that as far as tamarac is concerned, the government might as well withdraw all diameter restrictions, for this valuable wood (alas! that its commercial value was not appreciated sooner), in most sections of the province is now dead or dying and found in various stages of decay, due to the persistent ravages for many years past of the "saw fly grub." Under the circumstances all tamarac which may yet be fit for any industrial or domestic purpose, should be made use of irrespective of any diameter restrictions.

HEMLOCK (abies Canadensis). It is generally conceded that hemlock, when properly and economically worked, is as valuable as white spruce. It is one of

our few forest trees that can be thoroughly utilized, horns, hoof and hide. The bark commands, as a rule, a high price; the boards and deals find a ready market at remunerative figures; ties are made from that part of the tree unfit for logs and cord wood from log buttings, whenever the rate of transport to the nearest market allows a margin of profit. And yet our Crown Lands regulations allow the felling of this valuable timber at a diameter of 7 inches on the stump, classifying it (one of our largest forest growths) among the "small timber" intended for the manufacture of paper pulp. The measurement of 25 hemlock trees gave the following result:—

No. of trees.		1 grew 1 inch in diameter in 7 years	
1	"	"	8
1	"	"	9
3	"	"	10
4	"	"	11
3	"	"	12
5	"	"	13
5	"	"	14
1	"	"	15
1	"	"	19

From the above measurements, the average growth of hemlock would be one inch diameter in 12 years. A seven inch felling restriction for hemlock is ridiculous, as a tree at that diameter cannot yield sufficient bark to pay the peeling, let alone the handling, loading, freight and other expenses. The timber is not fit for logs or ties, and could only be utilized for pulp wood. The marketable value of this tree, when of sufficient size, at least 13 inches on the stump, entitles it to the same measure of protection as that which should be afforded white spruce.

BALSAM (abies balsamea). Among pulp woods, balsam comes next in value to spruce. Under favorable conditions it takes from 5 to 7 years to gain one inch in diameter. Notwithstanding its satisfactory growth, the cut should be limited to nine inches on the stump. Were this wood only fit for pulp, measures should be taken to assure a continuous supply, by increasing the diameter at which it might be felled, but apart from its value for the pulp manufacture, balsam logs, fit to be cut into boards, deals and other merchantable timber, command a price on the market equal to that of white spruce.

ASPEN AND POPLAR. Aspen and poplar, under favorable conditions, are of rapid growth and take but from four to five years to grow one inch in diameter. I measured an aspen, 24 1/2 inches diameter, which only took 55 years to attain this respectable size. Were it not for the damage resulting to continuous growth by felling large timber and only leaving unprotected pole wood, which falls an easy victim to the winds, no great objection could be found to cutting aspen and poplar seven inches on the stump, but, for the protection afforded the young growth, aspen and poplar should not be cut at a smaller diameter than balsam, viz., nine inches.

The result of my investigations, such as they are, lead me to conclude that, if we are to secure a continuous supply of pulp wood and at the same time give our forests a proper measure of protection, so as to permit "natural renewal," paragraph 12 of the Regulations concerning "Woods and Forests" should be amended by prohibiting the felling of white spruce and hemlock under 13 inches and that of black spruce, balsam, aspen and poplar under 9 inches on the stump. Tamarac, whenever it is dead, dying or suffering from the ravages of the "saw fly grub," should be cut irrespective of any diameter restrictions.

If, however, I am wrong in my views as to the time necessary for a forest to recover from the ravages

caused by the ill-regulated cutting of pulp wood, after twenty years can offer the lumberman a second crop of a remunerative nature, well, let us be thankful; but on one point, which I now wish to mention, I confidently expect to have the support of all those who take an interest in the development of our forest resources, and that is, "the absolute prohibition of the export of pulp wood in its raw or unmanufactured state."

If nature has supplied us with a vast quantity of the valuable wood, infinitely more than we need, or ever need, for our own use, by all means let us dispose of our surplus; but in doing so, let those who need it come to the Province of Quebec to get it. Let them purchase their limits, erect their mills and manufacture the raw material here. Their millions should be spent on Canadian soil. By adopting such a policy, we will, at least, derive the largest possible benefit from the impoverishment of the Provincial Domain. We have a right as Canadians and inhabitants of the Province of Quebec, to protest in every legitimate way open to us against the export of our pulp wood; more, it is our duty to do so, and we should never be satisfied until the manufacture of our raw material takes place on our own soil.

On the 18th January, 1900, the Government went to the fact that measures should be taken to check the export of our pulp wood, and a charge of \$1.00 per cord was imposed on all stuff destined for export. Had this wise provision been adhered to, foreign capital, to a very large extent, would have been attracted in the Province, and thousands of Canadians now earning a living in the United States would have returned to their homes with the assurance of a constant and remunerative employment in their own country. But it was not to be. The Government's wise and conservative policy was evidently regarded with disfavor by parties possessing large political influence. The welfare of the Province had to give way to private interests, for on the 1st of June, 1900, the charge was reduced from \$1.00 to its present rate of 65 cents, which is hardly of a nature to discourage export.

Ontario has been far wiser than Quebec in the management of its pulp wood lands. In 1900, by the report of the Honorable Commissioner of Crown Lands for Ontario, an Order-in-Council was passed absolutely prohibiting the export of pulp wood cut on the lands of the Crown. From the 30th day of April, 1900, every license or permit to cut spruce or soft wood suitable for manufacturing pulp or paper on the Crown lands, was issued subject to the condition that all such timber be manufactured in Canada, into merchantable pulp or paper, or into sawn lumber, wooden ware, utensils, or other articles of commerce or merchandise, as distinguished from the said spruce or other timber in its raw or unmanufactured state. As a result of this wise restriction, several large American companies have already taken up Crown pulp lands, and have spent vast sums in the erecting and working of their mills.

The Province of British Columbia has also been wise enough to insert the following clause in all timber leases of Crown lands:

"Provided further, that all timber cut from the land must be manufactured within the confines of the Province of British Columbia; otherwise the timber cut may be seized and forfeited to the Crown, and the lease cancelled."

Why should not Quebec be able to do what Ontario and British Columbia have done? This question is of importance, not only to the Province of Quebec, but to the whole of Canada, and the earnest efforts of the Association and of all those who take an interest in the prosperity of the country should be directed towards opening the eyes of our Provincial Government to the advantages which will accrue, not only to the provincial exchequer, but also to the working and industrial classes at large, by the absolute prohibition of the export of our pulp wood in its unmanufactured state.

This much needed reform could be brought about by the insertion in all timber licenses and permits

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clause forbidding the export of pulp wood, or by raising the dues on wood for export to a practically prohibitive figure. Should the Province of Quebec refuse to take action in the matter, pressure should be brought to bear on the Federal Government to impose an export duty on the unmanufactured article of such a nature as would render the export impossible. Efforts, I am aware, have already been made in this direction, so far without success, but that is no reason why the agitation should not be continued and more earnestly than ever, until the desired end is secured.

I have translated into English a letter written by my father in 1894 on the pulp wood industry. My father at that time was completely opposed to the cutting of pulp wood on Crown lands. Since then his views have become somewhat modified, for the cutting of pulp wood on proper economic and scientific principles need not necessarily endanger the existence of a forest to any greater extent than would any other form of lumbering. May I be permitted to read a portion of this

letter, which bears directly on the subject I have the honor to address you on to-day.

QUEBEC, 17th Nov., 1894.

To Ernest Pacaud, Esq.,
Proprietor of l'Electeur, Quebec.

My Dear Sir, I have just read in yesterday's edition of l'Electeur an article on the pulp wood industry, in which you give extracts from a most interesting letter written by Mr. J. H. Lefebvre.

He speaks of the advantages which will accrue to the settlers from the establishment of pulp mills in the regions lately thrown open to colonization, as the settler now, when clearing lands, after taking off all timber fit for logs, is obliged, in order to prepare his lands for cultivation, to burn all small spruce and balsam, whilst should a pulp mill be in his vicinity he could sell such timber as pulp wood at a profit.

I strongly approve of this project, provided the lands thrown open to colonization by the Government are really fit for agriculture, and not, as too often has been the case in the past, poor and sterile lands, whose value consists simply in the timber which they may produce, lands which settlers are compelled to abandon after having wasted on them, all to no purpose, the best and most precious years of their lives.

But what I really object to is that the Government should allow the cutting of pulp wood on the Crown Lands. Our forests are our principal sources of revenue, apart from the annual subsidy that the province receives from the Federal Government.

By destroying the young trees, which in a few years would replace the mature wood fit for log making, one condemns a forest to a speedy death, just as a nation would be swept out of existence if every child that was born was done away with whilst in its infancy.

If, at least, the country derived from this pulp wood all the profit that it should—were the pulp manufactured in Canada, it would be but half an evil; but the greater part being exported to the States, to be there converted into pulp, Canada not only loses the legitimate profit she should make by manufacturing it at home, but our working population, from lack of employment in Canada, has to go to the States to find work there in the American pulp manufacturing and other branches of industry.

The Provincial Government appeared to appreciate this fact, when, this summer, an Order-in-Council was passed increasing the stumpage on pulp wood on Crown Lands when not manufactured in the province.

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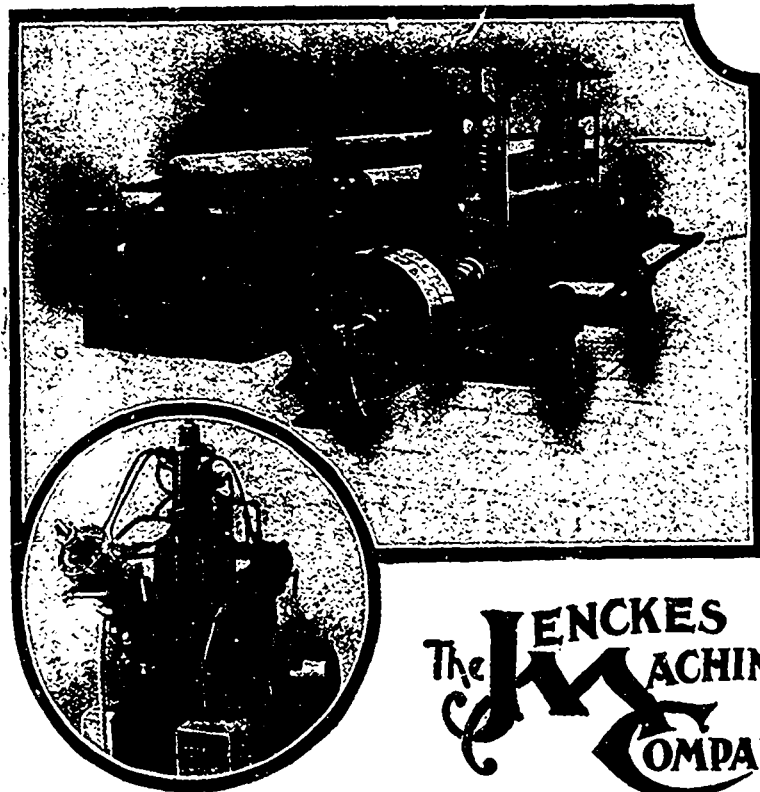
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COMPANY.

Unhappily, after a few weeks the Government, giving way no doubt to the pressure brought to bear against it by the pulp wood exporters, cancelled this Order-in-Council.

If England, instead of working her own coal and iron mines that Providence has so liberally endowed her with, had invited the nations of Europe to come and work them for her, and carry off the raw material to be used and manufactured in their own country, she would have acted with as much madness as Canada is now doing by permitting our neighbours to cut and carry away our forest wealth; to grow rich at our expense, manufacturing it at home, with the aid of our fellow-countrymen, who are obliged to exile themselves so as to find a living in a foreign land, etc., etc.

Believe me, Sir,
Your devoted servant,
H. G. JOLY DE LOTBINIERE.

In conclusion I wish to draw the attention of this Association to the thoroughly unreliable data furnished the public by the Provincial Government as to the quantity of pulp wood manufactured annually on the Crown Lands.

It would appear by the annual statement of spruce and pulp wood manufactured on Crown Lands that in 1895—213,237,200 ft. B. M. spruce were cut and 7,111 7-10 cords pulp wood.
1896—270,156,800 ft. B. M. spruce were cut and 11,778 3/4 cords pulp wood.
1897—276,482,200 ft. B. M. spruce were cut and 4,015 cords pulp wood.

1898—371,628,571 ft. B. M. spruce were cut and 4,451 1-2 cords pulp wood.

1899—303,393,832 ft. B. M. spruce were cut and 3,806 3-8 cords pulp wood.

1900—308,914,039 ft. B. M. spruce were cut and 6,926 cords pulp wood.

Now these returns are clearly erroneous, as far as pulp wood is concerned, and there is but one rational explanation of these misleading and insufficient statements.

The Department evidently only keeps account of whatever timber is made into pulp wood on or near the spot where it was cut, piled and measured. All spruce and other wood destined for pulp, which is floated to the mills in logs and there cut into pulp wood, is completely left out of its calculations. This condition of things should be remedied at once, for not only the Department of Lands and Forests, but the public as well, should be in a position to know how many cords of pulp wood are annually made on the Crown Lands, how many find their way to foreign markets, and how many are manufactured at home.

The government should take the necessary steps to oblige limit holders to declare what proportion of their cut was converted into pulp wood, what used at home and what exported. In no other way can a true and accurate account be kept of the annual cut of pulp wood on our Crown Lands.

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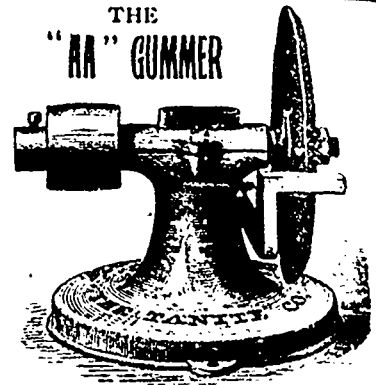
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Owing to the rapid wholesale manner in which we move and handle lumber we do not consider it practicable to issue a stock sheet or make standing quotations, for which reason we solicit your inquiries for any material that you are in the market to buy or will use in the future, and if you will take the time to furnish us the above information, we will make you some interesting quotations.

Respectfully yours,

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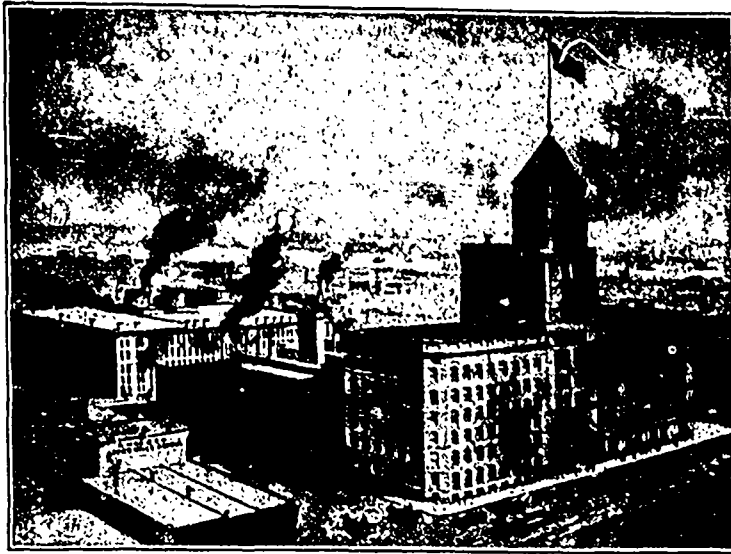
The firm of R. Hoe & Company, New York, have been engaged in the manufacture of circular saws for nearly a century. They were the first to make circular saws from cast-steel, and later originated the inverted tooth saw, one of the greatest inventions ever made for the millman's benefit. Their entire works, including the manufacture of the famous Hoe printing presses, give employment to 2,500 men and have a floor area of over fifteen acres, occupying two blocks in the heart of the city of New York. Their saws are in use everywhere in the United States, and in many parts of Canada.

The Hoe establishment is a land-mark of New York city, the accompanying illustration being a bird's eye perspective of the works. The buildings stand on somewhat elevated ground, declining to the water front of the East river. The works face on Grand, Broome, Sheriff and Columbia streets. The most important feature is the clock tower, which can be seen from almost any point on Lower Manhattan Island or Brooklyn.

The great demand for the Hoe saw is illustrated by a review of the work going on in the vast buildings. In the saw shops, going from one department to another, the first seen an almost endless line of shanks where in the hands of skilled artisans hundreds of saws are being put into shape under the hammer, after coming from the machines. These saws are of the best Sheffield steel. The machines in the manufacture of the plates have done their work well, but there still remain the final touches of the expert mechanic to give them their recognized excellence.

Further on are the punching machines for toothed saws, and then we come to a room where fine milling machines are engaged in grooving the shanks or bit holders for the patent chisel tooth saw, which is a specialty with this firm. The chisel bit room is filled

with emery grinding machines which finish the bits for this saw. About six millions of these bits are made in a year, and as showing the skill and care required, each one is handled seventeen or eighteen times before leaving the factory. In the blacksmith shop are immense trip hammers under which the chisel-bits are forged at a single blow. The dies used in these hammers are all made on the premises.



WORKS OF R. HOE & Co. NEW YORK.

There is another important department where the "V" for receiving and holding the chisel-bits and shanks is put in the saw plate. As the "V" must be exactly in the center of the plate, this is a very delicate operation. Then there are the grinding shops where the circular saw grinding machines made under patents held by the firm are in ceaseless operation.

The greatest achievement of R. Hoe & Company in the manufacture of saws is their patent chisel-tooth saw brought out by them after long experimenting.

As an inverted tooth-saw it is a marvel of simplicity and effectiveness. At its earliest introduction its merits were at once recognized by millmen, and, we are advised, the demand for it with its added improvements, has overtaxed the resources of the establishment. The saws as now made are guaranteed for any work from the half-inch feed of a small country mill to the enormous feeds cut in the regions of hemlocks, red woods and pines. This saw, it is claimed, will run with two-thirds the power taken to run a solid saw of the same size, while the lumber made by it is smoother.

BERMUDA LUMBER IMPORTS.

Mr. Robert Munro, president of the Canadian Manufacturers' Association, who recently visited the West Indies to investigate trade possibilities, writes that the island of Bermuda last year imported 274,425 feet of box material from Canada, and 11,700 feet from the United States. In 1901 the quantity of lumber imported was 464,970 feet from Canada and 2,813,663 feet from the United States, compared with 241,231 and 2,640,529 feet respectively in 1900. Concerning lumber he writes: "Imports of building lumber are mainly by schooner from Florida. Importers desire to be put in communication with Canadian mills for building lumber, as well as for doors, sashes and mouldings. The largest importer has sent specifications to the secretary for the use of shippers. No wooden houses wanted. The native (coral) stone cut square costs only \$7.50 per 100 cubic feet delivered on the site. The same stone is sawn into slabs for roofing. The standard roofing must always be the native stone, because rain is the one source of water supply."

R. H. Williams, lumber dealer at Yellow Grass, N. W. T., has sold out to W. A. Hunt.

PRACTICALLY STRETCHLESS

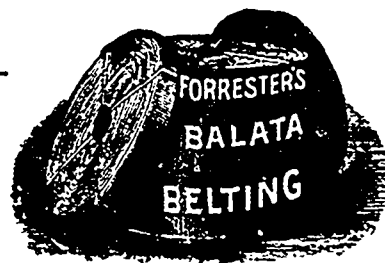
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UTILIZING PINE WASTE.

OSHAWA, February 18th, 1902.

Editor CANADA LUMBERMAN:

DEAR SIR,—In the February issue of the LUMBERMAN I saw an inquiry as to the best way to use up cuttings around a planing mill. Possibly there are not many who can give the necessary information, from the fact of not knowing just what the cuttings are like. I have had the honor, if honor it is, of growing up in a planing mill and lumber yard from a boy. I am in my present position over 22 years, so I think I am in a position to speak perhaps.

In an ordinary planing mill and jobbing shop anything from one-half inch square up to four inch strips is useful; of course, I mean in the way of strips, but if the cuttings spoken of are short ends of 1, 1½ to 2 inch lumber, one would need to see them, I think, before giving an answer that would cover the case. Now, from my experience I would say never cut up anything unless you know your business, never allow men to go and cut and slash into lumber as they like, because most men don't care, leave alone know how to be careful in cutting up lumber. I have know men who, if they wanted a piece of lumber 2 feet long, would cut it off a piece 3 or 4 feet long and leave a short end rather than just look around; and if the piece was not just to hand better to cut a piece from a long board, say in. 12 feet long, then the piece that is left is of some use. I saw an example of the fruit of men cutting up lumber like this in the city of Toronto. I was attending the exhibition for two or three days and was stopping at a friend's house. I went out with him to his wood-shed one morning to see the amount of kindling wood that he got for one dollar a load, and there were pieces of clear 1½ by 5 inches, from 14 to 18 inches long and some 2 feet long. "What do you hirk of that?" said he. I said "the firm you get that wood from is not for very long, there is no firm can stand the likes of that to waste lumber in that way." The men who cut that lumber do not know their business or they would not do it, and in less than two years he told me that the planing mill had gone up, and I didn't wonder at it. A man to cut up lumber

as not to waste it must have a head on his shoulders, and know a board when he sees it.

Some men think that there must be a lot of short ends left after cutting up stuff, but I can't see it; of course there will be pieces from 8 inches long down to nothing, but there is no need of having a lot of ends that are really no use if a man knows what he is about. If you have to leave an end let it be long enough to be of some use and then you can use it to good advantage.

I could go on talking for a while yet, but perhaps it is not wanted, but I just want to say that this is my first attempt to answer or give any information in this way. If I were face to face with my man I would feel more at home.

Your truly,
"READER."

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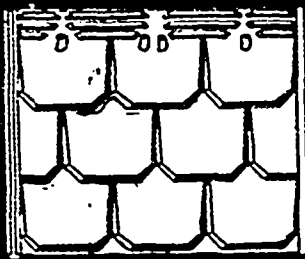
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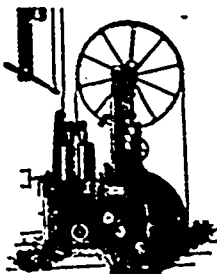
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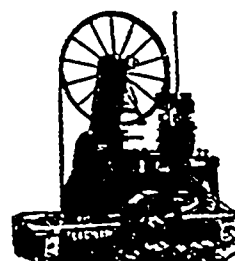
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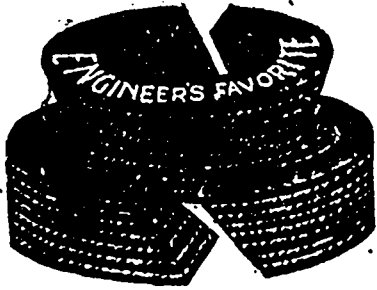
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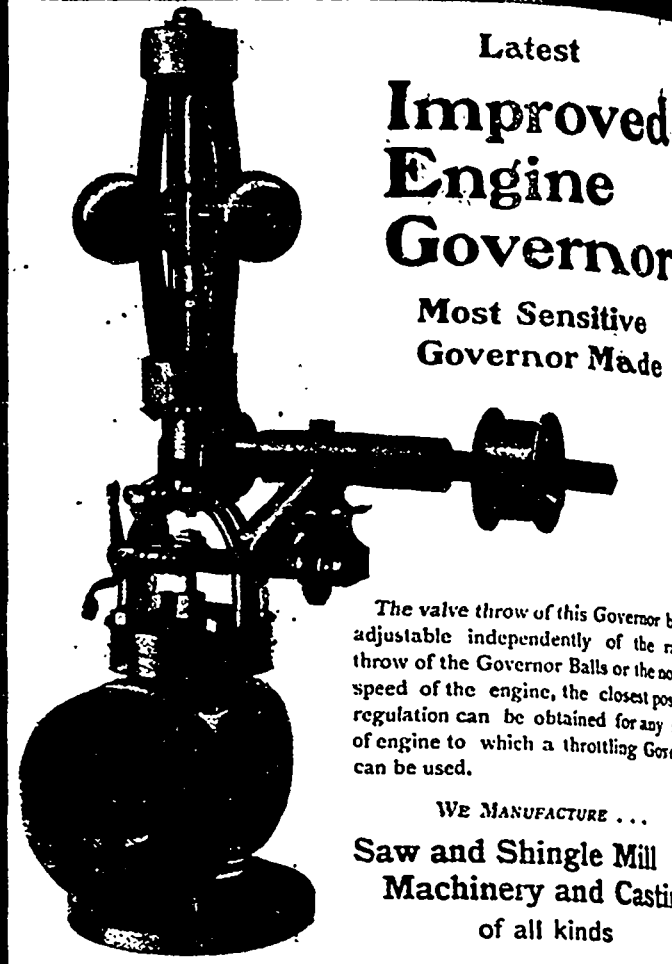
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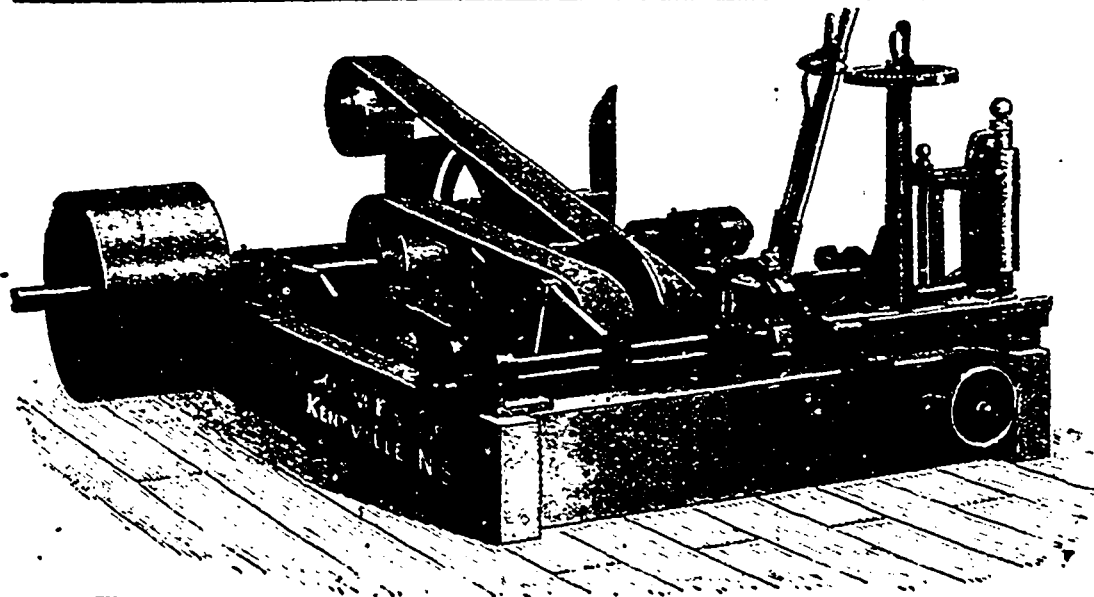
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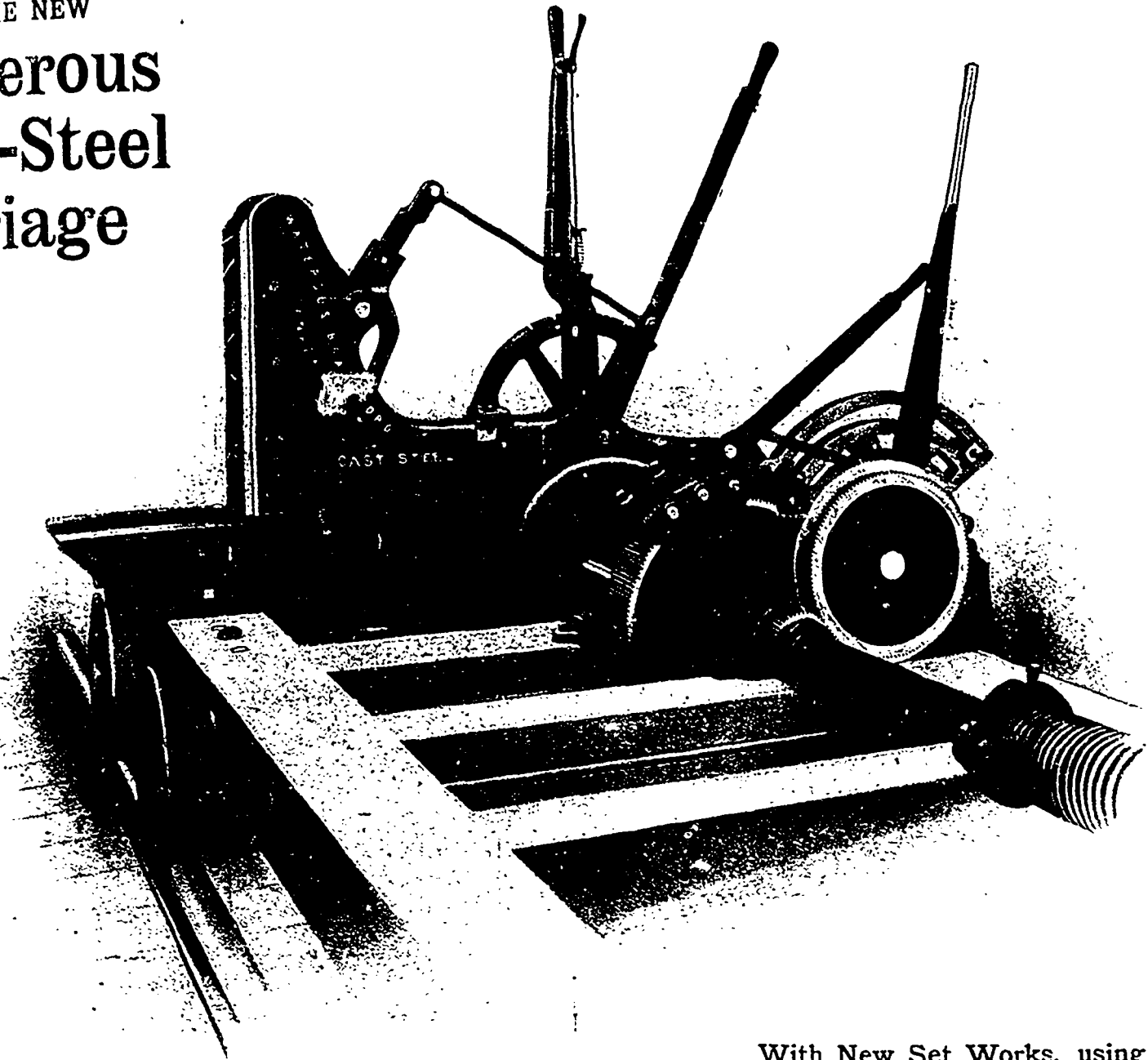
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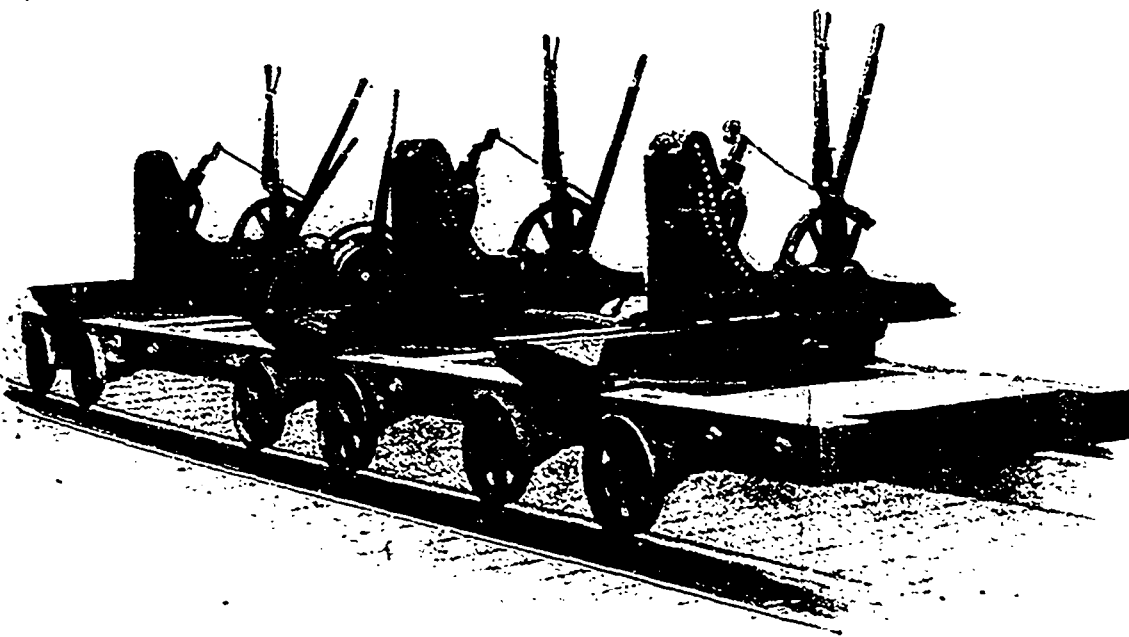
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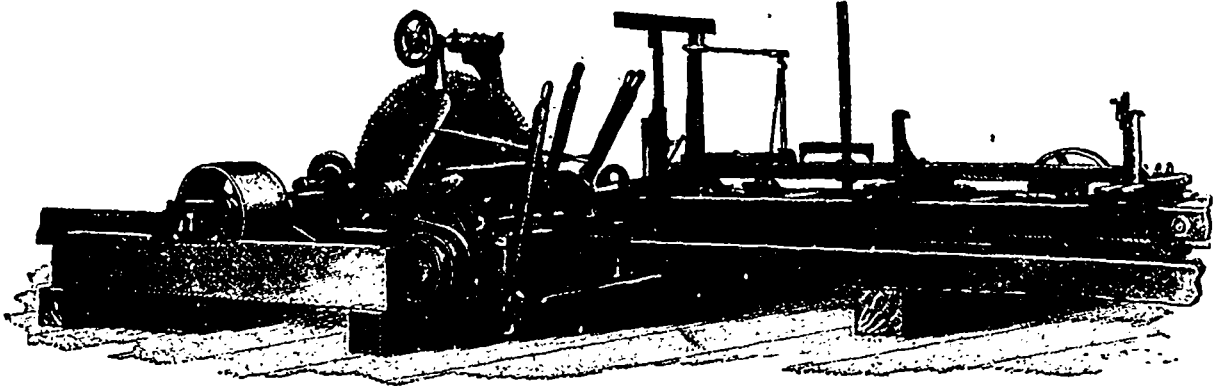
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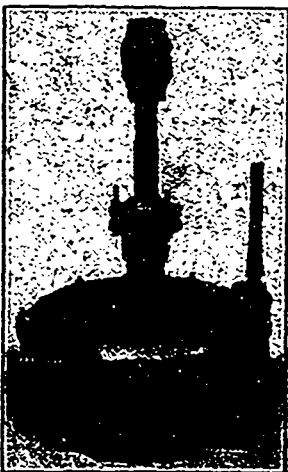


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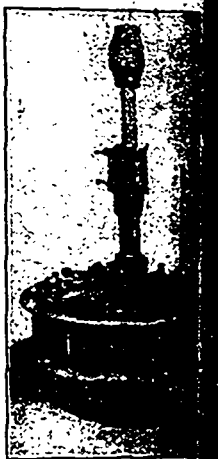


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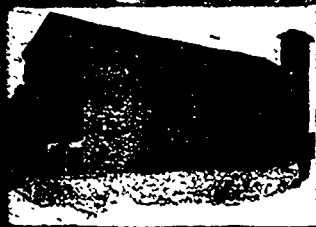
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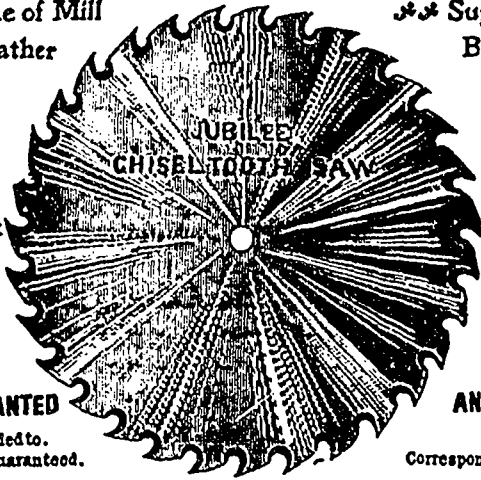


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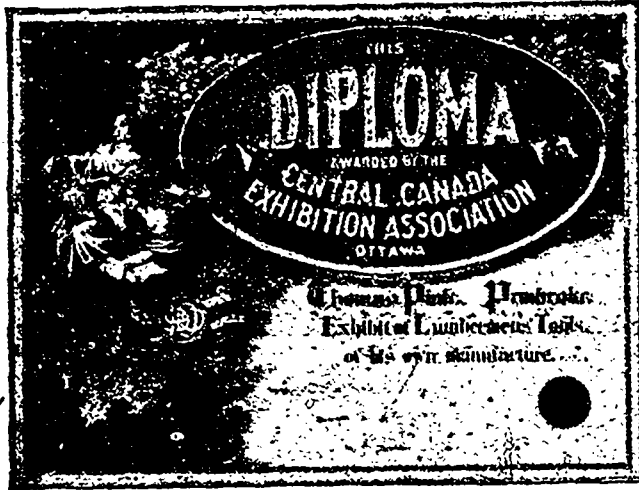
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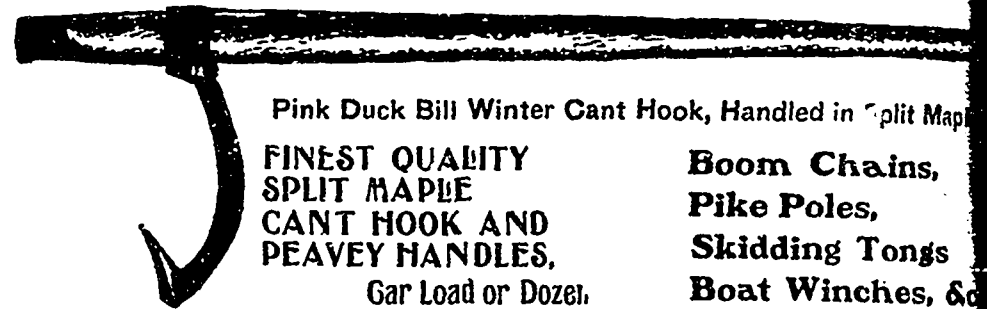
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