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First Prize, Provincial Exhibition..... Ottawa, 1875
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 First Prize, Provincial Exhibition..... London, 1877
 First Prize, Industrial Exhibition..... Toronto, 1879
 First Prize, Industrial Exhibition..... Toronto, 1880
 International Medal, Centennial Ex..... Philadelphia, 1876



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A Western greeting. James A. Allan, Omaha, Neb.
 Forest tree plantation. B. F. Peck.
 Trees, tree planting, etc. J. A. Matthews, Little Metas.
 Timber culture a national necessity. D. C. Scofield, Clynn, Ill.
 Rural Improvements. B. G. Northrop, Clinton, Conn.

SECTION C.

This section was under the presidency of Prof B. Saunders, of London, Ont., the secretary being the Rev. T. W. Fyles, of Montreal.

SCIENTIFIC PRUNING.

Mr. JOHN S. HICKS, of Roslyn, N.S., communicated a paper on the "Commercial Value of Pruning." If the lower branch of young trees are not cut off, then loose or black knots will appear on the timber. Often a branch will rot and the rottenness goes to the heart of the tree. Knots can be kept sound by the branches being cut off while alive and quickly overgrown. One hickory tree that was not worth splitting for firewood might have been worth \$30 or \$50 if a few hours had been spent in pruning. Hickory, oak and chestnut will show the result of decayed branches. Clear pine has nearly doubled in value in the past ten years, and is still increasing, while common or knotty pine has only risen a few dollars. We will not long have the old growth to draw from, and when the trees have to be planted the neglect of pruning will be severely felt. The increase in value of a wood free from decaying branches will be more than the expense of pruning.

PIONEERS' APOLOGY.

The Hon. J. W. CALDWELL, of Cincinnati, Ohio, President of the Cincinnati Pioneer Association, wrote affirming that none had done more for the advance of the country than the two first generations of pioneers, and asking gentle treatment for them. The pioneers had to clear the ground, and though they lost the forest they gained sustenance for increasing millions of population. There was no market for their lumber, so it was burned; those millions have now made a market. As to what is now to be done—each person must plant two trees for one that he fells. The writer is the first American born and oldest survivor of the first Irish immigrant family that settled northwest of the Ohio River, and his father kept one-sixth part of his 300 acres as primeval forest. As to legislation—the road tax might be remitted to farmers who plant their road sides with trees, or a portion remitted according as he plants trees on his farm. He was sorry he could not be present to give his vote in favor of tree culture.

ARBORICULTURE.

The paper by Mr. W. ROBB, of Montreal, on "The True and False in Arboriculture," dealt, like several others, with the scientific system of forest tree pruning, European countries being cited as examples.

There followed a brief but interesting discussion on the subject.

FOREST DENUDATION.

Mr. G. L. MARLER, Montreal, read his paper entitled "Some Notes and Remarks on the Denudation of our Forests." He said that of the two great forest belts in Quebec, that to the south of the St. Lawrence had been almost denuded, and the northern would rapidly follow. The Government's gross returns from

last year was \$24,802,064, a fourth of the whole Dominion exports, and an increase of \$2,000,000 over 1871. In 1871 the amount of timber cut, as reported to the Government, was—white pine—24,236,821 feet; red pine, 1,954,371; oak, 3,302,043; tamarack, 5,695,963; birch, 1,939,357; elm, 1,832,624; walnut, 117,589; butternut, 102,981; hickory, 197,827; other kinds, 26,290,264; pine logs, 12,416,408; other logs, 9,314,537; mast, 121,685 feet; staves, 64,706 m.; lathwood, 25,706 cords; tan bark, 162,521 cords; firewood, 8,713,083. This makes an aggregate of 22,271,384 trees. Putting 50 trees to the acre, this means 445,428 acres, equal to one township, denuded in one year. The ten years since then will have denuded about 3,240 square miles, or 30 townships. This, without counting the home consumption, which is greater than the exports. The Quebec Chamber this year passed an act giving \$12 to anyone planting and keeping one acre in trees, and an act forbidding the clearing of land by fire between July 1 and September 1. Government, when getting revenues from forests down as income, has been killing the goose that lays the golden egg. Everyone can help in replacing the trees that are being cut down. From 100 square feet sown with ash you can plant out 100 acres of ash trees and have a return in three years. Emigrants to Manitoba should take boxes of tree seeds with them; a plantation would break the winds as well as supply his much needed timber.

THE EASTERN TOWNSHIPS.

The Rev. W. FYLES read a paper of "How the forest of the Eastern Townships was broken up." The hilly district between the Seigniors and Lake Memphremagog was one of vast forest, broken here and there by lakes and beaver meadows. The elms first disappeared, as the early settlers found them best for pot and pearl ash, the pines followed, only the best being used and the remainder being destroyed. White ash, brown ash, and basswood were utilized for fences. The sugar maples were often tapped so violently as to make them an easy prey to insects. Splendid bass was split into sap troughs. When the Waterloo Railway was opened the hemlocks began to be stripped of their bark, and left to rot. The winds, too, wrought havoc on the forests at the edges of the clearings, and fire has damaged them ten times more. Then there were the insects which attacked the trees, and of these he gave a lively account. He concluded by asking editors and teachers to advocate greater foresight in regard to our forests, and farmers and others to preserve the trees.

OTHER PAPERS.

The following contributions were also submitted to this section:—

- Living Fence Posts. Win. H. Ragan.
- Roadside Tree Planting. W. H. Hale, Sherbrooke, P.Q.
- Letter on Forestry. Dr. Ailly, Malvern, Ark.
- Fungi Injurious to Forest Trees. Byron D. Halstead.
- Forests in Connection with Water as Aids to Climatic Amelioration. T. T. Lyon, South Hare, Mich.
- The Forests of the United States, as shown by the census of 1880. N. H. Egleston, Williamstown, Mass.
- Forest Culture, Surveys, &c. Gen. W. Burns, U.S. Army.
- Economic Tree Planting, How and Where? B. Galt.

THE MONTREAL SAW WORKS

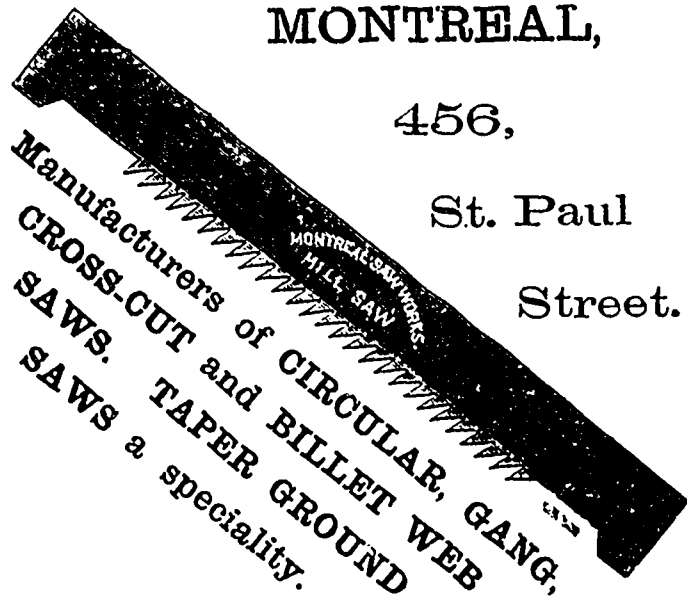
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MANAGER.

The mills of West York. J. Jenkins, Winona.

Individual effort in preserving and propagating trees. Dr. Reginald A. King, Compton, P. Q.

Profitable Forest Culture. E. E. Thorne, Springfield, O.

What to Plant for Forest Trees for Groves and Wind-breaks. Sam'l Foster, Mesquite, Ia. Canada's forests and her future as a steel producer. Edward Haycock, Ottawa.

Climatological range and geographical distribution of forests, and the climate favorable to them. E. Beaufort Hurlbert, J.L.D., Ottawa.

Plan of instruction in an American school of Forestry. Prof. Ad. Leuc, Cincinnati.

The relation of forests to Agriculture. A. G. Humphrey, M.D., Galesburg, Ill.

Forestry from a hygienic standpoint. Henry Howard, M.D., Montreal.

A PUBLIC MEETING.

In the evening of August 21st the Congress met as a body in the Queen's Hall, which was appropriately decorated. The public were admitted and were present in large numbers.

The MAYOR took the chair and welcomed the visitors. The Hon. Mr. Joly, Dr. Hough, and Mr. Beadle, of St. Catharines, Ont., gave able and interesting addresses on the subject of the meeting.

CONSOLIDATING THE SOCIETIES.

When the Congress was reassembled on Tuesday morning, the committee on the proposed amalgamation presented a report in favor of combining the American Forestry Association and the American Forestry Congress under the latter name, and the union was carried.

A FORESTRY JOURNAL.

The question of establishing a Forestry journal and other subjects of interest were then considered. The Chairman said it was proposed to publish a journal of forestry, and a strong publishing house in Cincinnati, Robert Clarke & Co., had offered to undertake it. But they required one hundred more members, and the agent of the house was present to take subscriptions. Another matter that should be discussed here was the necessity of Government devoting some of its revenue to the promotion of the interests of forestry.

A LUMBERMAN'S VIEWS.

Mr. J. K. WARD then read a paper to show the importance of preserving our forests. He stated that at present the production of lumber in Canada amounted to 2,000 million feet per annum, and 12 million saw logs eighteen inches by twelve. Nine-tenths of this lumber is exported, giving a return of some \$25,000,000. To produce the above quantity of lumber it requires a million acres of land to be gone over.

There can be no question as to the necessity of taking means to make the best use of our standing timber, and in utilizing it—first, in greater economy in manufacturing it, both in the mill and in the woods, discouraging as much as possible the making of square timber. Second, in government land the laws now applied to pine should extend to spruce and tamarac, that is, that nothing less than twelve inches at the stump should be cut down. Third, fires should be more carefully watched and prevented. In his thirty years' experience he had come to the conclusion that most of the forest fires were due to the fishermen and hunters. In view of this he would suggest that Government would employ as many men as necessary in each agency to look after and trace the origin of fires, and bring the offenders to justice. The quantity of timber land under license in the Province of Quebec to-day was 40,000 square miles. In the other provinces there was about the same extent. The quantity of timber land now in Canada was something like fifty million acres of land, and at the present rate of production this quantity of timber would last for about fifty years to come. It was beginning to be said now in Canada that cotton was king, but a glance at the present proportion of the lumber industry would show that lumber was king in Canada.

THE PRESIDENT SPEAKS.

The President, Dr. Loring, Commissioner of Agriculture for the United States, who had been unavoidably detained, but had now arrived and taken the chair, delivered an address which showed his mastery of the subject. He dwelt upon its great importance from many points of view, and spoke of the pressing necessity of putting a limit to the present destruction. He did not under-rate the magnitude of the work of preserving our forest, and spreading a knowledge of forestry.

FOREST FIRES.

DR. CHAS. MOHR read the report of the committee of the last meeting of the congress upon the injuries caused by forest fires, among which was mentioned the practice of circling trees in order to secure the gum that exudes from the wound, for purposes of commerce. Another cause of injury to forests is the partial burning over of timber lands by fires, which, though it may not kill the trees, almost entirely arrests their growth. Moreover, these frequent fires finally result in the total destruction of the organic matter in the soil. The pasturing of cattle in the woods, a custom very common in the country, is also a cause of gradual but sure destruction to the forests on account of the cattle browsing the leaves off the young and growing trees, so that when the old trees die out, there are no saplings to take their places.

(Continued on page 262.)