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Canadian Forestry Journal

VOL. VIII.

SEPT.—OCTOBER, 1912.

No. 5



SIWASH ROCK, one of the points of interest near Vancouver.

THE CANADIAN FORESTRY ASSOCIATION.

Extends a cordial invitation to those interested in the forests of this country, from whatever point of view, to join its ranks, and help to spread knowledge of, and interest in, the forests of Canada in particular, and in general of the world. During the past few years the interest in the proper use and the protection and perpetuation of the forests has greatly increased, and to this increased knowledge and interest the Canadian Forestry Association, by its propaganda work, has contributed its share. Founded in 1900, with a membership of 12, it has in twelve years increased its membership to 2,700. During these years it has held conventions throughout Canada from coast to coast, in the Ancient Capital and in the bustling cities of the prairies and Pacific coast, in the manufacturing east and the agricultural prairie country. Its official organ, *The Canadian Forestry Journal*, was started in 1905 and is now in its seventh volume. But as forestry goes on, circumstances change and new needs spring up, and the Association is anxious to do its duty in arousing public interest and pointing out ways of getting things done. One object of the Association was achieved when forest reserves were established; but that is merely a beginning and now proper administration of these reserves, on the basis of the public good, irrespective of any private or partizan interest, must be secured. When that is done other problems will present themselves for settlement. The Association wants the interest and enthusiasm and, in some degree, the contributions of the public. The annual membership fee is \$1.00; this entitles the member to *The Canadian Forestry Journal* for a year, the annual report of the society, and other literature. Life membership costs \$10.00. Applications for membership should be addressed to James Lawler, Secretary, Canadian Forestry Assn., Canadian Building, Ottawa.

There are many ways in which we can serve our state and the future, but we can do it in no way as effectually as by growing trees in many places which are little adapted to other uses. It is possible to plant millions of trees in the ninety-two counties of Indiana, which will add millions of dollars annually to its wealth and, in the meantime, increase its beauty and the comfort of the people.—Former (U.S.) Vice-President Fairbanks.

CANADIAN FORESTRY ASSOCIATION.

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FORESTRY LITERATURE.

In reviewing the stock of literature on hand, the Association finds that there are a number of extra copies of certain issues of the *Journal* and Annual Report printed before the membership was as large as now. As these contain many excellent articles it has been decided to send them out as far as they will go. Members who receive such literature will know why it is sent.

The State Conservation Commission of New York has decided to use prison labor in advancing the forestry interests of the Empire State. It has directed the establishment at Comstock, where the Great Meadows prison is located, of a nursery large enough to bring the output of the state nurseries up to double its present amount; in other words, to increase the production to 12,000,000 trees per year.—*National Nurseryman*.

It is reported that an immense quantity of timber was destroyed by insects in the summer of 1911 in the neighborhood of Deer Lake, Newfoundland. The damage is estimated at over \$100,000, and the area covered is about 35 square miles.

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The Victoria, B. C., Forestry Convention.

Brief Report of the Proceedings of this important gathering.

What all agree has been the best and most instructive convention of the Canadian Forestry Association concluded last evening in the Alexandra Club. Despite the distance which the great number of the members had to travel, the attendance at the convention was not far short

of that at any of the sessions held in the east.—*Victoria Daily Colonist.*

The above complimentary reference shows that the Victoria Convention, to organize which a great many difficulties had to be overcome, was in the end eminently successful. Two things in the main contributed to this. One

was the enthusiasm and cordial support of the government of British Columbia, and the other the assistance of members of the Canadian Forestry Association in eastern Canada, who made long journeys in order to be present at this meeting. Among these may be mentioned the Hon. J. K. Fleming, Premier of New Brunswick; Hon. Jules Allard, Minister of Lands and Forests, Quebec; Hon. W. A. Charlton, M.P., Vice-president of the Association; Mr. Aubrey White, Deputy Minister of Crown Lands for Ontario; Dr. B. E. Fernow, Dean of the Faculty of Forestry of the University of Toronto; Mr. R. H. Campbell, Dominion Director of Forestry, and a number of leading lumbermen, timber-limit holders and forestry officials. From Manitoba came the Hon. Colin H. Campbell, Minister of Public Works; from Saskatchewan Mr. A. F. Mantle, Deputy Minister of Agriculture, and from Alberta Mr. Geo. Harcourt, who occupies a similar position in that province.

The United States sent a number of representatives, including Judge Flewelling, President of the Western Forestry and Conservation Association, and Mr. E. T. Allen, Secretary of the same organization; Mr. Joseph B. Knapp, Assistant United States Forester at Portland, Ore.; Mr. Geo. M. Cornwall, editor of the 'Timberman,' and others.

The names of those who attended the different sessions of the Convention will be found in the list of delegates at the end of this report.

The sessions of the Convention were held in the commodious and handsome hall of the Alexandra Club, one of the few women's clubs in Canada which possesses a building of its own. It was originally intended that Sir Richard McBride, the Prime Minister, and members of the Cabinet should receive the delegates on Wednesday evening in the Legislative Chamber, but, owing to the amount of work which had accumulated on the programme, it was decided to change this

for the opening session in the Alexandra Club on Wednesday evening. This was a most successful change, as it permitted time for welcoming the delegates and for their replies thereto, which would have been impossible had this been reserved until Thursday morning. The change was also appreciated by the citizens of Victoria, who were thus enabled to hear the addresses of the distinguished men attending the Convention.

On Thursday afternoon His Honour the Lieutenant-Governor and Mrs. Paterson were 'At Home' to the delegates at a garden party at Government House, and on Thursday evening the lumbermen, in conjunction with the citizens of British Columbia, entertained the Convention at a magnificent banquet in the main dining-room of the famous Empress Hotel. The social functions were thoroughly carried out in the true style of Pacific Coast hospitality. The programme was filled with papers of the most practical character, and the discussions showed that keen interest was taken in every item. Before and after the convention delegates from distant points journeyed to different points along the coast, motored through Victoria and adjacent parts of Vancouver Island, and thus got a good idea of the flourishing Pacific Coast and particularly of its great timber resources.

Wednesday Evening, Sept. 4.

The chair at the opening meeting on Wednesday evening was occupied by Mr. A. C. Flumerfelt, Chairman of the Citizens' Committee which made the local arrangements for the convention. It may be mentioned in passing that Mr. Flumerfelt not only devoted a large amount of his valuable time to this convention, but that it was especially fortunate he should take a prominent part in it from the fact that he was chairman of the Forestry Commission upon whose report the present Forest Law of British Columbia is based.



Hon. W. R. Ross, Minister of Lands for B.C.

With the chairman on the platform were Sir Richard McBride, Hon. J. K. Flemming, Hon. Jules Allard, Alderman Herbert Cuthbert, representing His Worship the Mayor, unavoidably absent on civic business in Ontario, Mr. J. J. Shallcross, President of the Board of Trade, and Mr. John Hendry, President of the Canadian Forestry Association. Mr. Flumerfelt, to use his own expressive phrase, 'touched the button' and the proceedings began.

Sir Richard McBride warmly welcomed the convention to British Columbia and spoke of the honor done the Province by the gathering in it of such a distinguished body of men. He recapitulated the circumstances

which led to the formation of the British Columbia Forest Service under the Hon. W. R. Ross; he reminded the audience that British Columbia had now the most modern legislation on forest matters on the continent, the result of careful enquiry by a Royal Commission on Forestry and an equally careful consideration given by the Government to this report. In organizing the Forest Service the greatest care had been taken, with the result that he believed they had a body of trained foresters not to be equalled on this continent. The results were shown in the wisdom of selection, and nothing would be left undone to make the Forest Service thoroughly efficient in every part of its work. He

acknowledged the assistance given to the Government by the lumbermen, timber-owners and the general public in enforcement of the laws; on every hand was evident a desire to protect the forests and husband the immense timber resources of the Province.

The citizens' welcome was conveyed by Alderman Cuthbert, and that of the Board of Trade by Mr. Shallcross. The first called upon to reply was the Hon. J. K. Flemming, Premier of New Brunswick. He thanked the Province and City for their warm welcome and complimented very highly British Columbia in showing the way to solve the larger problems of forest protection.

The Hon. Jules Allard, while he apologized with true French-Canadian politeness for his English, proved how little he needed to ask any indulgence. In eloquent terms he congratulated the Government of British Columbia on what it was doing for forestry and for the protection of the natural resources generally. He showed the progressive step taken by Quebec when it sent two young men to Yale to be educated as foresters, and that these men had been placed in charge of the work on their return, and he also spoke of the success of the new forestry school established in connection with Laval University, ten graduates of which were in the employ of the Quebec Government.

Mr. Aubrey White, on behalf of the province of Ontario, thanked the people of British Columbia for the welcome extended and spoke of the efforts of Ontario to conquer the forest fire demon by constantly increasing the organization since 1885.

The Hon. Colin H. Campbell said that this was the first forestry convention to which his province had been able to send a representative. Formerly Manitoba had been engaged in producing No. 1 hard wheat, but now, thanks to the extension of its boundaries, it was interested with

other provinces in forest problems.

Dr. Fernow spoke on this occasion as representing the Commission of Conservation. He congratulated the province on its remarkable advance in forest matters. He agreed with the Premier that he was right in considering the British Columbia legislation the most advanced in America. The thing that struck him most was the rapidity and effectiveness with which British Columbia had completed its work.

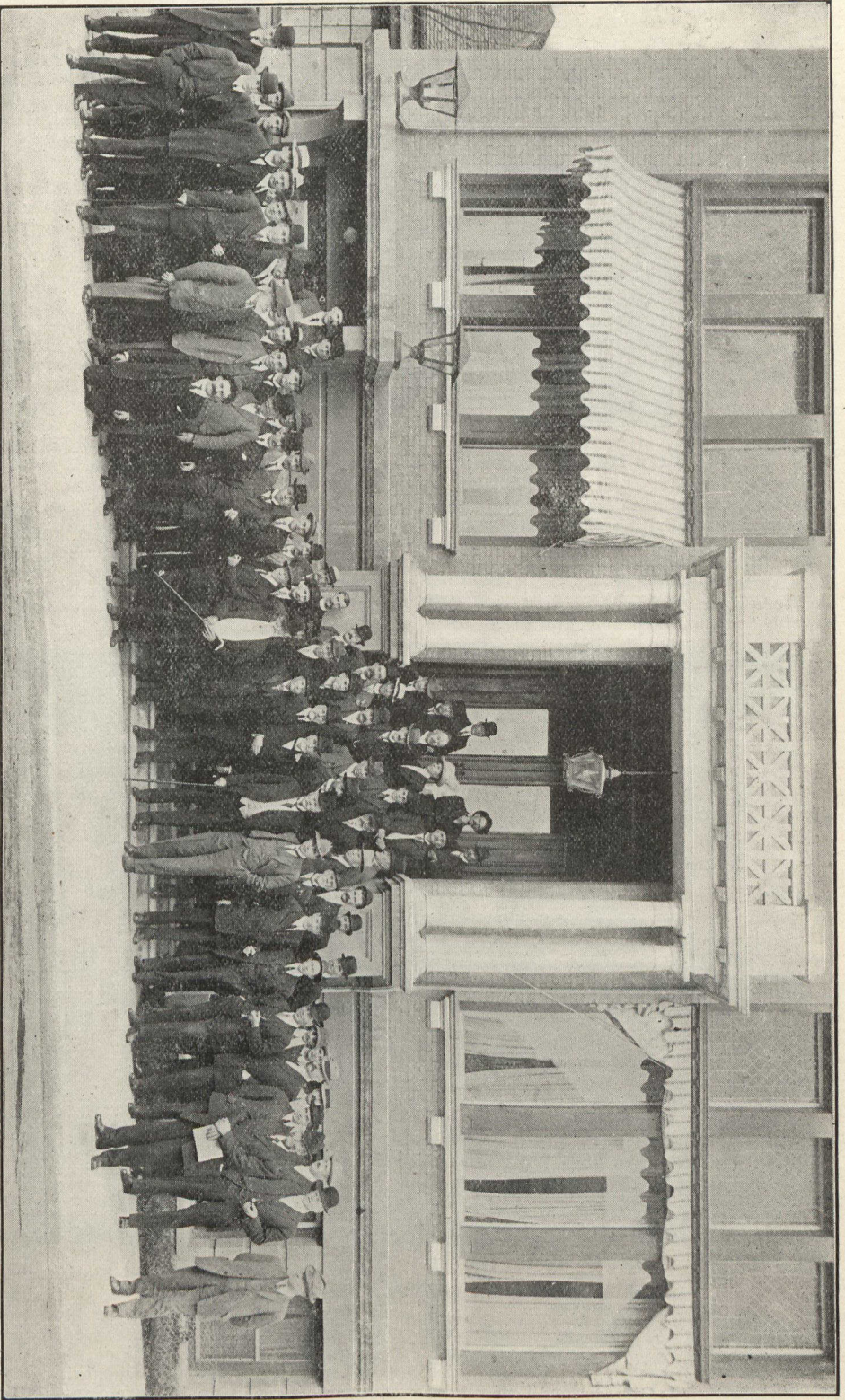
Mr. John Hendry brought the proceedings to a close by a speech in which he conveyed the thanks of the Association.

Mr. R. H. Campbell, Mr. James White, Secretary of the Commission of Conservation, Mr. A. F. Mantle and Mr. George Harcourt had promised to speak at the opening, but owing to the lateness of the hour it was decided to reserve these speeches for another session.

The Hon. W. R. Ross, Minister of Lands for British Columbia, who had made a race against time from New York in order to be present at the convention, arrived before the close of this session and was greeted with cheers.

Thursday Morning, Sept. 5.

The proceedings opened with Mr. Hendry, the President, in the chair, and he immediately proceeded to deliver his presidential address. In this he pointed out that the public was now coming to realize that the old idea that forests and lumbermen must disappear as time passed was giving place to the new conception that forests would continue forever on the lands unsuited to agriculture, and that the ideal was permanent saw-mills and wood-working factories supplied with timber from permanent forests on the non-agricultural lands. He emphasized the need of much greater exertions against fire, and also better laws to keep out 'fake' settlers from agricultural lands. To this end surveys should be made as rapidly as possible to ascertain what is absolute forest land, and the forest services all over Canada should be kept fearless and non-partisan by placing them under civil service regulations, whereby appointments, promotions and dismissals



Some of those present at the Victoria Convention.



What Fire has done in some British Columbia Forests.

should be made upon merit. Reference was made to British Columbia's great timber wealth and to the new Forest Law.

Sir Richard McBride and Hon. W. R. Ross were commended for their activity in the matter of forest conservation and development, and the delegates from other provinces welcomed in coming to assist in solving the forest problems not only of British Columbia but of all Canada, as the gathering would not lose sight of the national character of the Canadian Forestry Association.

HON. W. R. ROSS.

The Minister of Lands, in preface to his paper on 'The Guardianship of the Forest Wealth of British Columbia,' referred to the premier's remarks the evening before. Sir Richard, he said, had made it plain that this province, so far as the others are concerned, proposes to take the lead in matters affecting the modern policy of conservation of forests. It was particularly fitting that the present convention should be held in Victoria, as it gave British Columbia an opportunity to give firsthand notice to its friends from other provinces that from now on it would expect that for the latest word in forest conservation all must come here.

Mr. Ross, in his paper, traced briefly but concisely what has been done in British Columbia for the protection of the forests, and explained fully the composition and working of the forest branch of his department, starting his review from the appointment of the forestry commission, the work of which he praised highly. In the course of the paper he said:

TIMBER RESERVES.

'Since the end of 1907 no timber has been alienated by the government, and, while making provision for timber sales in the Forest Act last session, I was most

anxious to avoid burdening the new staff with much detail work of this description during the important organizing period of this year. The only sales we are putting in hand at present are those of small areas of timber that operators are anxious to take out while working on adjoining land, there being no question as to the desirability of disposing of these. In order to continue our policy of encouragement to the paper and pulp industry, we are conducting investigations of certain areas which are reported to be specially suitable for the production of pulp.

'Another duty falling to the forest branch is that of land classification. We have such enormous areas in this province that are extraordinarily fit—and fit only—for the growing of timber that every effort should be made to cut out from our timber reserves, as soon as possible, all land suitable for agriculture. Forest assistants with technical training have therefore been assigned to the examination of cut-over timber limits and leases in order that our departmental action may be based on accurate information. Fraudulent attempts to secure timber lands under cover of the Land Act will be balked by similar examinations.

'In the short time at my disposal, I but mention a few of the other matters that are receiving attention, for instance, the examination of certain regions in the interior, where it is feared that the forest is failing to reproduce itself; the special study by trained men into the effects and defects of the log scales in use in the province; the publishing of reliable information that will advertise our B. C. timbers and our forest industries; the study of waste in all its forms; and the campaign of publicity that we consider the most valuable, in fact, the fundamental, means of combating the public carelessness that

is chiefly responsible for the fire danger. And this, gentlemen, brings me again to that important phase of our work—forest protection.

FOREST PROTECTION MEASURES.

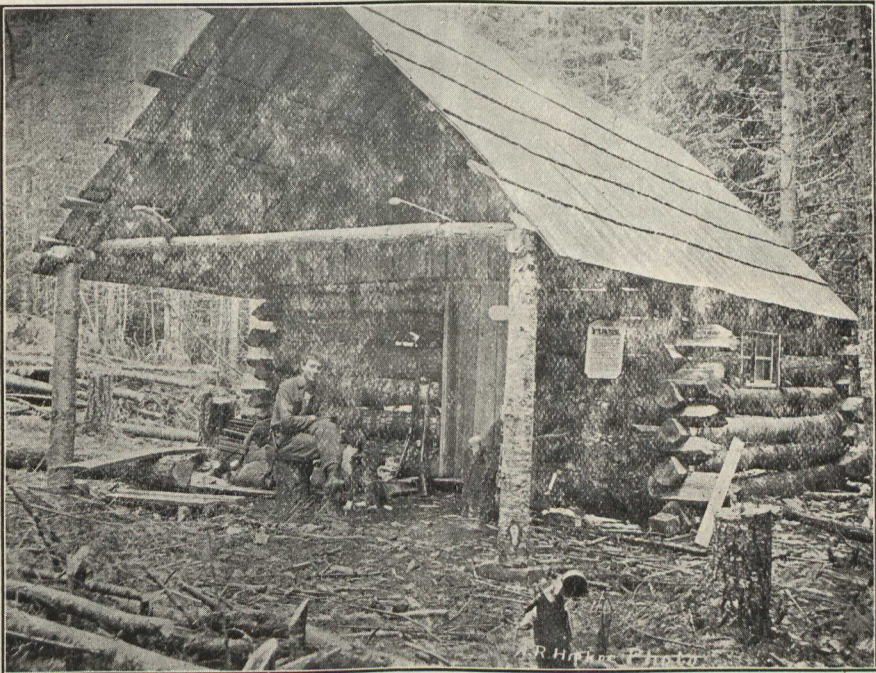
‘I have already mentioned the fact that we practically doubled the fire-warden force for the season of 1911. The government at this time was carrying on the work at the public expense, and it was very generally agreed that owners and holders of timber lands ought to be required to contribute their proper share. The Forest Act therefore, established the Forest Protection Fund, to which all owners, lessees and licencees of timber lands are required to contribute, the government putting up dollar for dollar. The standard levy is one cent per acre, with the proviso that whenever this proves insufficient to meet the annual expenditure there shall be an automatic increase to whatever figure may be necessary.

‘We have found it desirable to create new fire districts during the present season, chiefly on account of the rapid settlement that is taking place in the regions north of the railway belt, and in conse-

quence the inspection divisions have been increased from ten to fifteen; but owing to the frequent rains this summer, and the prompt attention that fires have received, the expenditure has been well within the amount available. By October 1, forest protection will have cost this year under \$180,000. Refunds from the G.T.P. of half the expense of patrol and fire fighting in the regions traversed by their line and from the C. N. R. of all expenses incurred in supervising their contractors will reduce the amount chargeable to the forest protection fund by nine or ten thousand dollars and as the income of the fund is about \$230,000 there will remain available for improvement work in the autumn a sum of about \$60,000.

DESTROYING ‘SLASH’.

‘I have watched with great interest the controversy that has raged in other provinces and states as to whether operators should or should not be compelled to burn or otherwise dispose of lumbering slash. The solution adopted by us has been to leave the matter in the hands of the forest service, which is empowered to deal with this slash at the expense of the for-



Ranger's Cabin in Chilliwack District, B.C.

The ranger's cabin shown in this illustration was built by Mr. A. R. Hipkoe, employed by the Forestry Branch as fire-ranger in the Chilliwack district of British Columbia. It was built during the summer months of 1911 at a cost (Mr. Hipkoe's time not being included) of \$43.50.

est protection fund, so as to favor the growth of the new crop of timber and to give it as much protection as possible against fire. This work and the clearing up of dangerous debris alongside public roads and in other specially dangerous localities will necessitate a slash-burning campaign in many portions of the province. Experiments already made by us in this line have proved most successful.

ATTITUDE OF PUBLIC TO FIRES CHANGED.

'We are all conscious of the remarkable change that has taken place in public opinion with regard to forest fires. Ten years ago people in the west looked upon the burning of entire watersheds as a natural alteration in the scenery that went with railway construction, mining or land-clearing as a matter of course. There was a good deal of wagging of heads at such wholesale destruction, but the prevention or controlling of forest fires seemed to be too big an undertaking, and there was consequently a general feeling of helplessness in the matter. That was so even five or six years ago. Today in this province there is an outcry if precautions are not taken to prevent fires in places where dangerous conditions exist, and when fires occur people expect the fighting of them to be organized promptly, and look for just as much money to be expended as the circumstances require.

'Public opinion, in other words, has been educated to higher standards, and this result has been accomplished almost entirely by the steady publicity that forest protection has received through the press, through public speaking, through the efforts of forestry associations, and through the enforcement of the permit law and other local work.

WASTE IN MANUFACTURE.

'Six years ago we in this province felt powerless to prevent the annual waste by fire; today we see our way with confidence. If one great problem can thus be solved, why not another? Today, for instance, each million feet of lumber manufactured on the Pacific Coast means the wholesale butchery of low-grade material for which our operators can find no market.

'Other waste there is that is preventable, for example, the using of high-class material in the woods for purposes for which inferior timber would suffice, and the cutting of lumber into even lengths only, on account of which trade practice investigation shows that two per cent. is lost; but before the main problem of the low-grade log, we are as helpless today as we were regarding fire protection a few years ago. I look to co-operation between the operators of this province and the forest service, in order that this disease of waste that affects our forest may be

studied as carefully as doctors study human diseases and that every possible way of improving matters be discovered and made use of.

'Time forbids that I should say more on this occasion, and I will confine myself to emphasizing one final point. The conservation movement has succeeded in making the public realize that, region by region, and state by state, many of the forests of this continent are being cut out. It is human nature for people to console themselves with the thought that the forests will last their time and that nothing much can be done.

'I think that it is just here that the failure to give people a real interest in forest business has occurred. . . . What we need to drive into the understanding of the people is that forestry, as we practice it, means the scientific management of the government's immense timber business, so that the citizen who would otherwise have to pay \$15 in taxes has only to pay \$10; so that in years to come the citizen will have to pay still less; so that while producing these effects on revenue, the system of forest finance will be so adjusted as to offer the maximum of encouragement to the growth of the lumbering industry; and, above all other considerations, so that our forest capital, the source of our prosperity, may be preserved intact.'

COMMITTEE ON RESOLUTIONS.

The Resolutions committee named by the president was composed of Hon. W. R. Ross, Mr. R. H. Campbell, Dominion Director of Forestry; Dr. Fernow, dean of the faculty of forestry of the University of Toronto; Mr. Aubrey White, deputy minister of lands, forests and mines of Ontario; Mr. Wm. McNeill, Vancouver, and Mr. A. C. Flumerfelt, Victoria.

LUMBERMEN APPROVE FOREST ACT.

Mr. T. F. Paterson, B.S.A., representing the British Columbia Lumber and Shingle Association, read a paper on 'The Forest Act of British Columbia as Viewed by the Coast Lumberman.' On the whole, he said, the lumbermen thought the act a good one, and were prepared to co-operate with the forest branch in carrying out a policy of conservation. Not knowing the members of the service yet, he refrained from any criticism of them, but accepted the minister's statement that the best men were being selected. In the appointment of fire wardens and log scalers, he said the lumbermen desired to see no man given a position unless he was a man of some ability and experience. They recommended an examination for scalers, and the appointment of fire wardens for the year round at adequate salaries.

From the experience gained in a recent trip to Ontario Mr. Paterson declared that he was satisfied British Columbia had a far greater amount of merchantable timber. A lot of timber from sixteen inches down was left in the woods here, but the time was near at hand when this would have to be utilized by the lumbermen.

THE NEW B.C. FOREST SERVICE.

Dr. Fernow assured the association that the young men who had entered the forest service of British Columbia were not only trained foresters, but men of common sense, whose work would result in benefit to the lumberman as well as to the country gen-

ment. Along railway construction work the government had staffs of rangers under supervisors and the companies paid half the expense. On Government reserves the Government appoints and pays all the rangers.

FOREST ENEMIES.

Mr. R. H. Alexander advocated the payment of all the cost of fighting fires out of the forest insurance fund. He opposed the allowing of settlement on or adjacent to any lands best fitted for timber growing. For the lack of market for lower grades of timber, Mr. Alexander blamed the consumer to a considerable extent and the habit of using clear lumber, that has taken eight



Cedar Forest on Columbia River, B.C.

erally. Dr. Fernow recalled that in the earlier days of forest conservation the lumbermen were not so friendly as they had now become. They did not have a vocabulary wide enough to say all the uncomplimentary things they desired about the foresters and their policy, and so they invented 'denudatics' — 'denude' with the same ending as lunatics (laughter). It was doubly pleasant, therefore, to see the spirit of co-operation now manifest.

Mr. R. H. Campbell and Mr. Aubrey White spoke along the same lines and congratulated the province on securing Mr. H. R. MacMillan as chief forester. Mr. White explained that in Ontario the lumbermen now pay the whole cost of fire protection, on their limits and appoint the fire rangers, these being under the supervision of five district rangers appointed by the govern-

ment. Along railway construction work the government had staffs of rangers under supervisors and the companies paid half the expense. On Government reserves the Government appoints and pays all the rangers.

Mr. Paterson warned the lumbermen against the bogus pre-emptor.

Chief Forester MacMillan thanked the gentlemen who had spoken for their kind references to the B. C. forest service and the lumbermen generally for their co-operation with the department. As the service became better organized, forest reserves would be established. These would be logged off as fast as the timber matured, would be protected from fire, and treated so as to ensure the reproduction as soon as possible of the most valuable timber trees.

A telegram of greeting was read from Mr. W. A. Anstie, secretary of the Mountain Lumbermen's Association.

ECONOMY IN MANUFACTURE.

Mr. E. J. Palmer, president of the B. C. Lumber and Shingle Association, read a paper on economical manufacture. He emphasized the need for utilizing the timber now wasted and declared that a market could be established for it. There was some education of the public necessary, however, and it would be well for governments also to take a hand and for railways to cooperate by granting lower rates for the transportation of cheap grades of lumber. The statement had recently been made to him (Mr. Palmer) by a prominent railwayman that coast mills annually wasted fifty thousand carloads of lower grades. Mr. Palmer cited numerous uses to which these grades could be put. He mentioned the case of limits logged over fifteen years ago, which his company is now logging again and getting twelve thousand feet an acre off, the reason being that there is now a market for the smaller timber which it would not have paid to cut when the limits were first logged.

FORESTRY IN QUEBEC.

Mr. G. C. Piché, chief of the forest service of the department of lands and forests of Quebec, congratulated British Columbia on having such a splendid forestry system now in effect. In Quebec the government is now engaged in a classification of lands which are suitable for agriculture, and those which are fit only for timber. There is strict control of logging operations, as to taking out all the merchantable timber and so forth. The disposition of debris is a matter still for the future, and will require lengthy experiment, Mr. Piché said. He gave the convention some interesting details of the forest service of his province, and the work which is being done in reforestation.

Mr. A. C. Flumerfelt urged the adoption of a resolution by the convention asking the Dominion government either to put the interpretation desired by the lumbermen upon the question of duty on common lumber, or else to change the tariff so as to preserve to the British Columbia lumbermen the prairie market for low-grade lumber that properly belongs to them.

Thursday Afternoon.

At the afternoon session, Mr. George M. Cornwall, secretary of the Pacific Coast Logging Congress, and editor of *The Timberman*, Portland, gave a paper on 'Logging as an Engineering Science.' He said that the profession of the logging engineer, though it had not been officially designated as a part of the service, was nevertheless a useful and honorable profession. He then went on to explain a course of study which he suggested should be made part of the university curriculum in order to fit young men for this occupation.

A general knowledge of the general principles of steam, electricity and hydraulics, he said, is essential; also the student should acquire an actual working knowledge of the cutting and removal of timber, and should be a man of broad sympathies, capable of looking after the men in camp. A man so trained would be very valuable for the reason that his skill would enable him to reduce the cost of logging. The difference of a dollar in cost is easily made, and would amply pay for the training involved.

The logging engineering course in a college should consist of three departments, which should be in charge of a practical logger, a cruiser and estimator, and an instructor in mechanical and civil engineering. The student should spend at least eight months in the bush and a certain time in a machine and blacksmith shop. He should learn to cruise and estimate timber; should have a practical knowledge of civil and mechanical engineering, and should be able to make topographical drawings with accuracy. A course of study of this kind would turn out an expert lumberman in the broadest sense.

The Pacific Logging Congress, in its recent sessions at Tacoma, appointed committees for the various coast states and British Columbia, with a view to having the subjects taken up in the universities, and he was glad to say that the government of British Columbia had expressed its sympathy with this.

Dr. Fernow opened the discussion and led on to a consideration of education in forestry matters. He recalled that the first graduate of Cornell school of forestry, over which he had presided, while not trained practically, was now a logging engineer and professor of that science in Yale school of forestry. The last student, because the school failed from political reasons, was in the audience.

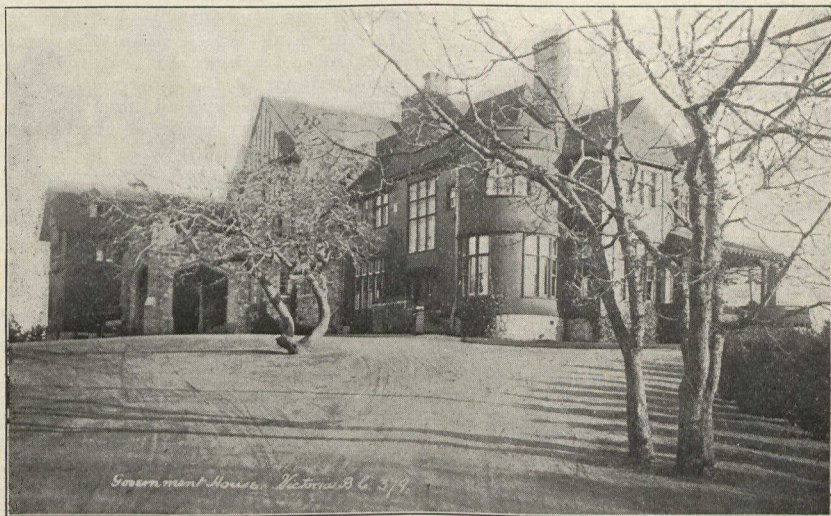
Mr. James Macoun, C. M. G., who had lately visited Strathcona park declared that British Columbia had every other part of the Dominion 'trimmed' in the matter of fire protection. Whoever was responsible for it, the fire wardens kept notices up so frequently and constantly that one 'got the habit,' and even when they had put fires out, they went back to see if they were out.

'That region is certainly the finest part of British Columbia,' said Mr. Macoun, in conclusion. 'Not that the trees are the largest or the best, but there is the largest primeval forest on earth, and it should be preserved. There are there the finest examples of Douglas you can find. The government is certainly to be highly commended for the steps it is taking to make this a national park.'

Rev. C. W. Houghton told of the work the Columbia Coast Mission is doing for the men in the logging camps. This mission aims to do for the loggers and fishermen of the Pacific Coast what Dr. Grenfell does in Labrador. It maintains a hospital ship, several hospitals and a staff of doctors and nurses, in addition to the mission staff and endeavors to assist the men in all ways. The need of \$10,000 for the purpose of assisting the medical work of the Columbia Coast Mission, was referred to by Mr. Houghton, who asked that the delegates do what they could towards assisting in the work. The mission, he said, had hospitals on the coast and had the medical boat Columbia well equipped, even with an X-ray appar-

of the Empress Hotel, was a great success, and one of the most imposing social functions in which the Association has been asked to participate.

As the leading lumberman of the province, Mr. John Hendry occupied the chair, and Mr. A. C. Flumerfelt, chairman of the provincial committee of arrangements, acted as toastmaster. Covers were laid for two hundred, and nearly every place was occupied, there being in fact 199 present. Owing to the large number of distinguished gentlemen present,—privy councillors, senators, members of provincial cabinets, administrators, etc.,—the speakers only were seated at the head table. On the right of the chairman were Sir Richard McBride, Hon. W. A. Charlton, M.P.; Mr. E. T. Allen,



Government House, Victoria, B.C., where the Delegates to the Convention were entertained on Thursday Afternoon.

atus. At Rock Bay, he told the delegates, 45 lives had been saved through the agency of the mission hospital.

The Garden Party.

The convention adjourned at four o'clock to allow the delegates to attend the garden party at Government House given by His Honor the Lieutenant Governor and Mrs. Paterson. The weather was most suitable, and a very pleasant hour was spent by the company in the beautiful grounds of the gubernatorial residence.

The Banquet.

The banquet tendered the delegates by the lumbermen, with citizens of British Columbia, in the magnificent dining-room

of Portland, Ore.; Mr. R. H. Campbell, Dominion director of forestry; Mr. C. H. Lugin, editor of the Colonist, and Mr. A. C. Flumerfelt. To his left were Mr. Justice Duff, Hon. C. H. Campbell (Manitoba), Mr. G. H. Barnard, M.P., Hon. J. K. Fleming, premier of New Brunswick, Mr. William McNeill, Vancouver, director of the Canadian Lumbermen's Association, and Hon. W. R. Ross, Minister of Lands.

The dinner was most elaborate; there were eleven speeches on the toast list, yet the service was so good and the speaking so much to the point that the last guest was out of the banquetting hall half an hour after midnight. It was noted on all hands that the speaking was of a very high order.

THE DOMINION OF CANADA.

The toast of 'The King' having been loyally honored, Mr. Justice L. P. Duff, of

the supreme court of Canada, proposed 'The Dominion of Canada' in a happy speech, which was worthy of the occasion and was also noteworthy in that it was his first public speech in British Columbia since his elevation to the bench. He preached the gospel of the solidarity of Canada as demonstrated by the developments of the past few years, and accepted the politicians' declaration that Canada was a nation; but doubted whether the average Canadian accepted all the responsibilities attaching to that status.

'Do we realize how much of the burden has been borne by other shoulders? I cannot, of course, infringe upon politics or political questions at all, but I am convinced that Canadians will always do their duty by their own country and by the Empire, and will never be actuated by the craven fear of being great.'

Mr. G. H. Barnard, M. P., responded on behalf of the Parliament of Canada, and after dwelling upon the commercial and national development of the Dominion, asserted that it would ever be the pride of Canadians to remain true to the traditions of the lands from which they sprung. He was glad to be able to say that the lumbermen of British Columbia had found a better reception in Ottawa within the past year than they had in previous years and promised them an equally welcome reception whenever they visited Ottawa again during the present political regime. The people of British Columbia recognized that the timber industry was the basis of this province's prosperity and many of them, like himself, lived in hope that eventually all the taxation of the province would be paid by the timber industry and thus relieve the ordinary man of the burden of taxation. Mr. Barnard paid tribute to the great work done for forestry by the late Sir Henri Joly de Lotbiniere, so long beloved in Canada and especially in British Columbia, and was convinced that if the late lieutenant-governor were alive today no one would have been more proud of the progress made in forestry in Canada, and especially in British Columbia, than he.

THE PROVINCE OF B. C.

The toast of 'The Province of British Columbia' was proposed by Hon. Colin H. Campbell, the minister of public works of Manitoba, who expressed his sincere pleasure in paying honor to the province which by its firmness had created itself the cement of the confederation.

British Columbia had manifested its faith in the unity of Canada in many ways, but in none more substantial than in its insistence upon the terms of the confederation agreements. It had taught Canada, as he hoped that Canada would

teach the rest of the world, that a country must stand by its treaties and obligations. British Columbia was the hope of the Dominion of Canada. Who could predict its future? What belonged to British Columbia belonged to Canada as a whole and he who would drive in the wedge of cleavage was an enemy to the country and to the empire. The country had difficulties to face, but it would face them with confidence and with courage, confident that so long as its destinies were confided to the hands of men like Sir Richard McBride they would be safe.

The toast was honored with enthusiasm, which was renewed as Sir Richard McBride rose to respond. The premier admitted his pleasure in having assisted Manitoba to secure its rights and legitimate claims, and promised that if there was anything which Manitoba wanted, 'even after it had now secured an Atlantic seaboard,' the province of British Columbia would be glad, now as ever, to assist her or any other of the sister provinces.

He might, he said, have dwelt upon the fisheries, the minerals, the fruit-growing possibilities and the climate of British Columbia, but the visitors knew of all these things.

'I would like you to think of this province,' said the premier, 'as the western part of the Dominion, and not as a distinct portion of the federation of provinces. We who are entrusted with the administration of affairs here feel that we are not trustees for this province alone, but that we are trustees for the whole Canadian people, and that we have a duty in the discharge of that trust to consider the interests of our brother Canadians dispersed east of the Rockies quite as much as we are bound to consider the interests of Canadians west of that mountain range.' (Cheers.)

The premier spoke of the consolidation of the forest and land laws which had been made by his colleague, the minister of lands, which would be found to embody workable enactments, reasonable arrangements and fair and equitable treatment of all who might be interested in the lumber industry. Those interested in the work in this province looked not only for inspiration, but for information to the gathering of the Forestry Association in the city. To the very extensive growth of business in the province and its capital there was now to be added all that was to be expected from the completion and operation of the Panama canal. The value of this new highway of the world's commerce to the lumber industry could not be overestimated, and nothing he could say would be extravagant.

Sir Richard repeated his belief, frequently expressed of late, that in the final result the American people would be found to act fairly and justly in the matter of the imposition of tolls and the treatment of British shipping on the Panama canal, and that as soon as the present political situation had passed, the United States would realize its treaty obligations and live up to them.

'We have the right to expect neighborly treatment from our neighbors, and we believe that we shall receive it.'

U. S. VISITORS REMEMBERED.

Mr. R. H. Campbell, the Dominion Director of Forestry, proposed the toast of 'The Forest Interests of the United States of America,' and, in doing so, laid emphasis upon the close relationship which existed between Canada and the United States, not only socially and commercially, but personally as well, and expressed his hope that this close relationship would always continue. Both countries had been equally prodigal in their treatment of their natural resources; but both had now awakened to a realization of the need for conservation of those gifts which God had given to both. Much of this knowledge had come about as the result of the labors of men such as Dr. Fernow, to whom both countries owed a debt which could never be repaid.

Mr. E. T. Allen, of Portland, Ore., U. S. A., replied in a happy speech which breathed the sentiment of brotherly love. At the outset he paid a compliment to British Columbia by describing its forestry law as the most advanced forestry legislation on the continent. While there had been an opinion in the United States that Canada had drawn largely upon American sources for its forest experts he was going back to tell his folks at home that they might well borrow a few Canadians to teach them some things. Much more was involved in such gatherings than sentiment. They involved business principles and business treatment of business questions and in that regard each could learn from the other.

'We may call our work forest conservation or forest preservation or what you will. I prefer to call it national and public insurance and it should be administered just as wisely and just as sanely as if it was a matter of personal insurance.'

Even though British Columbia had an excellent law, there were still some things which it might learn from the United States. One of these was to teach that all sections of the community had a common interest in the forestry movement, no matter whether governments, lumbermen or the ordinary public. In the states of Washington, Oregon and Idaho, the timber owners were patrolling 20,000,000

acres and doing their share in a common business contract with the rest of the community. The problems of the two countries were the same. Such problems respected no geographical parallel. They should be solved by the forest brotherhood of the Anglo-Saxon peoples in a spirit of comradeship and co-operation.

THE ASSOCIATION HONORED.

The toast of 'The Canadian Forestry Association,' was proposed by Mr. William McNeill, of Vancouver, Director of the Canadian Lumbermen's Association, who, in a witty and felicitous speech reviewed the growth of the association and the development of its work and emphasized the unity of interest which bound eastern and western Canada in the conservation of natural resources, such as forests, fish and lands.

'We are only beginning to people this province, but British Columbia has always been a dominant, a compelling province, and it will so continue to be. The most forward step in the conservation of the forests had rightly been taken by the province of British Columbia, the province which was the guardian of the interests of the whole of Canada.'

Hon. W. R. Ross responded, both as minister of lands of British Columbia and as a vice-president of the Canadian Forestry Association, and dwelt upon the expansion which was inevitable in the timber industry of British Columbia. He assured his hearers that the government of British Columbia was animated not only by the necessities of the day, but also by the requirements of the future. British Columbia was the Imperial province in regard to the forests. It had duties and obligations to central Canada, and it was with that knowledge and that ideal that the government had set its face against the debauchery of the forest resources of the province. He expressed the hope that the new provincial university would include a school of forestry engineering with practical tests of timber and timber conditions.

'I can see the yellow pine of California going down before the Douglas fir of British Columbia,' said the minister amidst loud cheers.

Hon. W. A. Charlton, M.P., the vice-president of the association, also replied, expressing the belief that, despite the hospitality of the people of Victoria, the association had no danger of being killed by kindness. The Victoria convention showed that the Canadian Forestry Association was no longer a youth, but had grown to manhood. He was especially glad to know that the provincial government had decided to make all appointments to the forestry service without regard to politics, and would take the mes-

sage back east that men of the east came here to sit at the feet of the giants of the west in forestry knowledge. 'The better we know each other, the better we shall love each other,' was now as ever the motto of the Forestry Association.

The final toast of 'The Press' was proposed by Hon. J. K. Flemming, the premier of New Brunswick, and responded to by Mr. C. H. Lugin, who dwelt upon the great asset which Canada possessed in its practically transcontinental forest, and urged that 'we should take as much care of that forest as we should of a transcontinental railway. If one of our railways were to be destroyed it could easily be replaced within a few years, but it would take generations to replace the great transcontinental forest which was the backbone of Canada.'

able timber and valueless for any other purpose, at 65,000,000 acres, this being a conservative estimate. Of this, he put down 25,000,000 acres as being rendered unmerchantable under existing conditions by fire, but containing considerable amounts of large timber and coming rapidly into second growth. It was certain, he said, that within ten years the forests would increase their annual cut to four or five billion feet, while in twenty years the production would be limited only by the supply. This limit of supply of six billion feet a year would be reached in fifteen years. This was worth to the government \$6,000,000, and to the community \$100,000,000 a year, and to win this stake fire must be kept out of an area of one hundred million acres.

Mr. Benedict explained in detail the or-



Burned-over Benchland near Revelstoke, B.C.

The proceedings closed by the drinking of the health of Mr. John Hendry, the president of the association, 'one of the greatest captains of industry in Western Canada,' as Sir Richard McBride described him.

Friday Morning, Sept. 6.

At the opening of the morning session, in the absence of Mr. R. E. Benedict, assistant forester of British Columbia, Mr. M. A. Grainger, chief of the department of records, read his paper on 'The Protection of the Forests of British Columbia From Fire.' Mr. Benedict placed the acreage capable of producing merchant-

able timber and valueless for any other purpose, at 65,000,000 acres, this being a conservative estimate. Of this, he put down 25,000,000 acres as being rendered unmerchantable under existing conditions by fire, but containing considerable amounts of large timber and coming rapidly into second growth. It was certain, he said, that within ten years the forests would increase their annual cut to four or five billion feet, while in twenty years the production would be limited only by the supply. This limit of supply of six billion feet a year would be reached in fifteen years. This was worth to the government \$6,000,000, and to the community \$100,000,000 a year, and to win this stake fire must be kept out of an area of one hundred million acres.

Mr. Benedict explained in detail the organization of the fire-fighting force and the fire protection fund of two cents an acre, half contributed by the timber owners. He insisted on the necessity of most thorough forest patrol. Despite all laws and their strict enforcement, fires would occur, just as in a city, and the complement of expensive city fire departments was necessary in the forests in well-organized patrols. This would cost money, but the stake was well worth all that could be spent.

Chief Forester MacMillan stated that the province now has 142 fire rangers and wardens, each having an average of 500,000 acres to look after. It would be ne-

cessary to reduce this area to something like 30,000 acres per man. To properly cover the province there should be 2,300 fire wardens per season, and this stage must be reached. The number might seem large, the chief forester said, but in Ontario there were over 1,000 wardens in service during the season.

Speaking after Mr. Benedict's paper, Mr. Maurice Quinn, of Saginaw, Mich., U.S.A., referred to the lack of fire protection in the Alberni district, where he said in the case of a recent fire on Cameron Lake mountain there was no one present to send word of the danger and no one appeared to be interested. He spoke of an urgent necessity for the education of the people in the vicinity in regard to the danger of forest fires. He asserted the work should be the combined care of lumbermen, farmers and railways. On Alberni Canal the speaker instanced the special difficulties met with. Alberni Canal, he said, was fifty five miles in length with high mountains on the shore line. Men found it impossible to climb the mountains, and to obtain assistance boats are necessary. In the event of a fire occurring at Great Central lake, he said, ten million feet of lumber would be destroyed before a fire-fighting force could be assembled to cope with it, and prevent its spread. The only remedy, said the speaker, was the expenditure of money in the provision of conveniences for transmission of information and the maintenance of an efficient fire-fighting force. His plea for efficiency in fire-fighting forces was supported by the other speakers.

RAILWAY FIRE SITUATION.

Mr. Clyde Leavitt, chief fire inspector for the Board of Railway Commissioners and Forester of the Commission of Conservation, read a paper on 'The Railway Fire Situation in Canada.' In part he said:

'While many fires have been attributed to the railways, for which they were not, as a matter of fact, responsible, the loss from this source has nevertheless been far more than the country could afford. Forest fires are practically preventable, but to accomplish this it is necessary to spend money for preventive measures.

'The Board of Railway Commissioners for Canada has had the matter of forest fires under consideration for several years and has issued regulations from time to time. The latest order of the board on this subject was issued May 22, 1912, and provides for the use of spark arresters, the non-use of lignite coal, the establishment and maintenance of fire-guards, the regulation of the burning of inflammable material along rights of way, the organization of special patrols by the railway companies and other measures by such

companies necessary to the discovery and extinguishing of fires along rights of way. The two latter are the most important new features of the new order, since most of the other provisions were previously in effect.

'For the administration of these provisions of the order and the inspection of the work of the railway companies under it, a co-operative plan has been developed with the forest branch of the department of lands of British Columbia, and with the forestry and parks branches, Dominion department of the interior. Certain officials of these departments have been appointed officers of the board with authority to deal direct with the railway companies and to vary the requirements up or down, as local conditions at any time or place may require or permit. In this way a perfectly elastic system is provided, so that efficient protection is assured at a minimum cost to the railway companies and with a minimum of red tape and loss of time.

'Patrols under this plan are now in effect at the cost of the railway companies on the Canadian Pacific, Canadian Northern, Grand Trunk Pacific and Great Northern railway lines in the forested sections of British Columbia, Alberta, Saskatchewan and Manitoba. The plan is working very satisfactorily so far. It is expected that a similar system of railway patrols will be established under the new order in the eastern provinces next spring. The railways are directly interested in preventing forest fires to a greater extent than any other single interest in the country.

'The patrols specified by the chief fire inspector have in every case been fully discussed in advance at conferences with railway officials, so there is no reasonable ground for a charge that arbitrary action has been taken.

'The gradual extension of the use of electricity and oil as railway motive power may be expected to materially decrease forest fire danger.

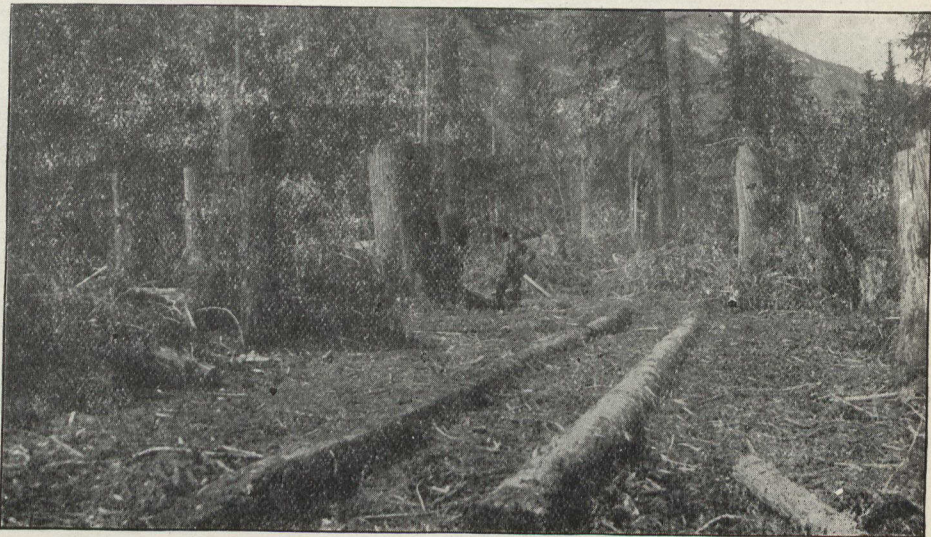
'In order to be thoroughly consistent and to secure the full benefit of the plan outlined for the prevention of railway fires, steps should now be taken by the Dominion and Provincial governments for the disposal of inflammable material resulting from the construction of wagon roads, and also for the disposal, either by burning or by lopping and scattering, of all brush resulting from logging operations. Old debris along railway lines should be removed as rapidly as possible. Only in this way can efficient fire protection be secured at a reasonable cost.

'The administration of the new fire regulations should give Canada the best system for the prevention of railway fires on the continent.'

Discussing Mr. Leavitt's paper, Mr. E. H. Finlayson, of the Dominion Forestry Service stationed in Alberta, Saskatchewan and Manitoba, told of the harmonious results obtained since the first arrangement of fire patrols on the prairies. Rangers are now established in sections that can be covered once a week. He said that patrols would be found cheaper than fire-guards.

Mr. James White, secretary of the Commission of Conservation, followed with a reference to the old law whereunder the onus of proof of fires from railway causes rested with the prosecutor, and spoke of its alteration by Hon. Geo. P. Graham, who caused amendments to the effect that railways should provide fire-fighting forces, and bear the onus of proof. The fact that British Columbia did not agree on the matter of oil fuel for rail-

ion Forest Reserves for Alberta, read a paper on 'The Organization Work of the Dominion Forest Service in Western Canada.' In this he sketched the size of the Rocky Mountains Forest Reserve of twelve million acres, one of the largest on the continent. He showed its resources in timber, minerals, water-powers and game, and spoke of its high value from a scenic standpoint. The reserve had been divided into five administrative units, varying in size from one million acres to four million acres, each in the charge of a Forest Supervisor. Some of the problems presented were given. There were no maps of the district, not even such as might be made by rapid reconnaissance. The Forestry Branch had neither funds nor equipment for this work, but was endeavoring to get the Topographical Surveys Branch to undertake it. There was no knowledge of



An Example of Wasteful Lumbering in British Columbia.

ways after 1914 was also mentioned, the provincial opposition being on account of the detriment to the coal-mining industry. Mr. White bore testimony to the value of the work being done by Mr. Leavitt and urged that in order to secure absolute control of all railways the provincial governments should adopt similar regulations to those put in force by the railway commission in regard to lines under federal jurisdiction.

Mr. Charles F. Lindmark, Revelstoke, intimated that he would later bring before the association a resolution recommending the placing of the forests in the control of an independent commission removed from politics.

Mr. W. N. Millar, Inspector of Domin-

the kind and state of the timber. While the reserve was under the Forestry Branch, the regulations as to cutting were under the Dominion Lands Office. When the making of these regulations was transferred to the Forestry Branch the latter must study carefully the question of disposal of 'slash' as related to reproduction and the keeping down of fires. A better standard of qualification for the rangers was advocated, and in this regard better terms and more permanency of employment and the separation of the service from politics.

REDUCING WASTE.

Mr. J. B. Knapp, assistant district forester in the United States Forest Service,

spoke on the closer utilization of Pacific Coast timber, and pointed out the many instances in which waste was allowed which was unnecessary, both in the woods and the mills. He placed a good deal of blame on the retailer and consumer for some forms of waste, as, for instance, in the insistence on lengths of even feet, which led to much waste in trimming in the mills. A recent attempt by saw-mill men to introduce the use of odd-foot lengths was defeated by the consuming public refusing to take these. Mr. Knapp also referred to the lack of science in the handling of dry kilns, which he charged with a waste of from ten to forty per cent., largely unnecessary, and to a great extent affecting Douglas fir.

Mr. R. D. Prettie, superintendent of forestry of the Canadian Pacific Railway, stated that that company was one of the largest users of lumber in the country, and its policy was to purchase Canadian product. He claimed that railways had been blamed for very many fires with the starting of which they had nothing to do. If the farmers, lumbermen, ranchmen, fishermen and others were educated in the same way the railways had been educated, some results would be secured. The company had secret service men out, and would trace up every fire that occurred. Mr. Prettie asserted that a number of saw-mills were not observing the law in regard to the burning of refuse in an enclosed burner, and produced photographs showing open fires burning, some in the vicinity of green timber. He assured the government and people of British Columbia that the C. P. R. desired to co-operate in the development of the province's resources along lines that would be in the best interests of all.

Mr. E. J. Palmer and Mr. R. H. Alexander told the visitors from across the line how the British Columbia saw-mills have succeeded in introducing odd lengths, having convinced architects, builders and owners that odd lengths were as useful in building as even lengths.

Mr. W. C. Gladwin, Supervisor of Fire Wardens, informed Mr. Prettie that one of the most destructive fires in the province, costing seven lives and millions of dollars in property, was the result of negligence of C. P. R. employes in not putting out a fire which started at New Denver, in the Slocan district, two years ago.

Mr. Aubrey White told the convention that in Ontario timber was now sold by competitive bids per thousand feet, and that in paying \$8 to \$10 per thousand the lumbermen were taking more interest in timber preservation than any other persons. The government had also placed the responsibility of selecting fire forces

on the lumbermen themselves and had done everything possible to prevent the appointments from being political.

Friday Afternoon, Sept. 6.

The first address of the afternoon was by Mr. E. T. Allen, forester of the Western Forestry and Conservation Association, of Portland, Ore U. S. A., on 'Methods of Forestry Campaigning.' Mr. Allen showed that the great aim was to get every man, woman and child to realize the situation as to the forests,—that they should be preserved, and could be. The general plan was to gain the good-will of the people—not to threaten them, but to tell in short, pithy sentences what damage a forest fire does and to ask them to prevent it. Placards were put up, showing a burnt forest, with this legend: 'Burnt timber pays no wages.' On the other hand, on the back of lumber company cheques were sentences like this: 'This money comes from the forests; help to preserve them.' Going on, Mr. Allen showed how they dealt with school children, the legislatures, the women's clubs, the boards of trade and all other bodies that could be reached. Mr. Allen's address was a revelation to those present of how to arouse public attention.

Dr. Judson F. Clark, of Vancouver, read a paper on 'The Financial Value of Forestry to British Columbia.' He showed the difficulty of putting a financial value on some of the advantages of the forests, such as an improved climate and the opportunities for rest and recreation for citizens which forests provided. He estimated the present cut of lumber in British Columbia as a little over a billion feet, board measure, and said that if the forests were properly cared for, they could produce four or five or possibly six billion feet yearly, which would mean forty million dollars spent in labor in the province, besides a great increase in the provincial revenue. This was outside of the benefits improved forestry methods would bring in providing a supply of fuel, fencing and poles and in regulating stream-flow. As to the possibility of decreased use of wood he doubted that because more wood per capita was being used to-day than ever before, even in shipbuilding. He closed with a reference to the value of the forest engineer to lumber companies in handling their limits.

Mr. H. Campbell, Dominion Director of Forestry, reviewed the forestry situation throughout Canada. He showed the state of the forests in all the provinces from Nova Scotia westward and in the Dominion government areas in the three prairie provinces. He pointed out the mistakes that had been made. The for-

ests of Canada might last indefinitely if the fire-fiend were conquered, but this was not being done in any province. It seemed likely that timber revenues would diminish from this onward and nothing was being done to secure reproduction. The fire-ranging systems, while extensive in some provinces, needed the adoption of a definite policy in order to get results.

'To sum up, in the eastern and prairie provinces, the supply of timber is decreasing without adequate means being taken to replace it; the Government revenues from timber are declining and, therefore, the ability to take proper means for saving the forest is decreasing, as the necessity increases. When these provinces awake to the need, they may find the financial strain too great. The Dominion Government while handling well the forests in its own jurisdiction, might fairly be asked to come to the help of the provinces, for forest assets are assets of the whole country as well as of the provinces. British Columbia is in the unique position of having large areas of fine timber and also a buoyant revenue. It is, therefore, in a more favorable position than any other province to inaugurate a good forest policy and it is a satisfaction to all citizens of the Dominion to know this is being undertaken in an adequate manner. The good features of the system being organized are the following:—

1. Advantage has been taken of expert knowledge in the laying out of policy and organization.

2. The staff is being placed on a civil service basis so that appointments will be made on considerations of merit.

3. A strong head-quarters staff has been provided.

4. Provision has been made for investigating the conditions affecting the forests and the timber industry.

5. This organization will administer all matters relating to the forests and timber, and not, as in other cases, separate timber administration from forest conservation.

Mr. H. K. Robinson, Assistant Forester of British Columbia in charge of forest surveys, pointed out the enormous work of securing data regarding the forests on an area 700 miles long and 400 miles wide which comprised British Columbia, and making timber maps of the same area. To do this as rapidly as possible, a number of parties were being sent out and ten were now in the field. The forest service of British Columbia was only three months old, but no time was being wasted and they were confident of completing the reconnaissance survey by 1915.

Mr. W. H. Breithaupt, C. E., of Berlin, Ont., read a brief paper, illustrated by diagrams, on 'A Lost Opportunity in For-

est Conservation.' The opportunity was in the western peninsula of Ontario. Here was a district with a rainfall of about thirty three inches with forests and swamps to retard the run-off and keep the rivers, in equable flow. It has been stripped, with the result that, while there has been no appreciable change in precipitation, the fluctuation of the streams has become so great as to destroy their use for power purposes. He instanced a case coming under his own observation in the Grand River, (Western Ontario) where the flood flow was 20,000 cubic feet per second, and the minimum summer flow forty cubic feet per second. He asked whether the destroying of rivers and forests had been paid for by turning all into cleared land when much of it was third and fourth quality agricultural land and some of it entirely useless.

Resolutions.

The Resolutions Committee reported through Mr. Aubrey White, and, after some discussion, the report was adopted as follows:

- (1) Resolved, that the Canadian Forestry Association endorses the suggestions submitted by the British Columbia Lumber and Shingle Manufacturers' Association in favor of the establishment of a course in logging engineering in the new British Columbia University.

- (2) Believing that actual working cooperation between public and private forest management is essential to mutual understanding and complete success, we urge upon Canadian lumbermen the study and emulation of the lumber-owner's cooperative fire associations of the Pacific Northwestern States which are proving of great value, not only in their own fire control but also in bringing about closer and better relations between all agencies engaged in forest preservation.

- (3) Whereas, the proper disposal of debris resulting from lumbering operation is essential to the effective protection of forests from fire, therefore resolved, that the association urges upon the Dominion and Provincial Governments, the advisability, as soon as practicable, of adopting measures to this end.

- (4) Resolved, that the Canadian Forestry Association is of opinion that it is in the public interest that squatting or settlement should not be allowed on lands that are chiefly valuable for their timber, and that all non-agricultural lands should be reserved permanently for timber production.

- (5) Resolved, that the convention of the Canadian Forestry Association desires to call attention to resolution No. 3, passed at the last convention of the Associa-

tion and again expresses the opinion that it is important that all appointments in the forest service of the Dominion and Provincial Governments should be based on capability and experience.*

(6) Resolved, that the Canadian Forestry Association would recommend that the fire acts of the Provinces of Manitoba, Saskatchewan and Alberta, which were enacted some years ago, be revised so as to provide more efficiently for the prevention of fire and the punishment of offenders.

(7) Resolved, that, recognizing our common bond and common aims, we desire to testify to the achievements and practical assistance to the forestry cause of the American Forestry Association and hope for increasing co-operation between our organizations.

(8) Resolved, that this Association congratulate the Government of British Columbia upon the excellent beginning it has made in the task of protecting the forests of the Province and is of opinion that the force employed should be largely increased, that there should be increased expenditure not only upon patrol but also upon permanent improvements, such as the construction of trails, telephones and lookout stations, all of which will tend to make forest preservation more efficient.

(9) Resolved, that this convention endorses the action of the Dominion Government in setting aside forest reserves, that it urges further reservation of suitable areas and the retention of existing reserves in their entirety with the object of affording to the surrounding districts the best results for all time in regard to fuel and timber supply, grazing, the protection of game and regularity of stream flow.

(10) Resolved, that the thanks of the convention be, and are hereby, tendered

those gentlemen from the United States who assisted by their presence and by their papers in the work of the convention.

(11) Resolved, that this convention desires to place on record its appreciation of the kindness of the Premier, Sir Richard McBride, and the members of the Executive Council, especially Hon. W. R. Ross, for the many kindnesses and abundant hospitality shown the delegates at this meeting.

(12) Resolved, that the thanks of this convention be tendered to His Honor, the Lieutenant-Governor, for hospitality shown the convention in the garden party given them at Government House.

(13) Resolved, that this convention desires to express its appreciation of the action of the lumbermen and citizens of British Columbia in tendering them the magnificent banquet which was the social feature of this convention.

(14) Resolved, that this convention desires to express its warm appreciation of the kindness of Mr. A. C. Flumerfelt, chairman of the local committee of arrangements, who, in a busy period of the year, gave up important engagements and spared neither time nor pains in order to do whatever was necessary to make the convention a success.

(15) Resolved, that the railways of Canada, and particularly the Canadian Pacific Railway, be thanked for their kindness in granting special rates which made possible the attendance of so many delegates from Eastern Canada.

(16) Resolved, that the thanks of this convention be tendered the press of Canada for its ever-ready support through its columns of the cause of forest conservation, both during this convention and throughout the year.

Friday Evening.

The convention concluded with a meeting in Alexandra Hall, where there were brief addresses and an illustrated lecture. The meeting was well attended and the audience most appreciative.

Dr. B. E. Fernow, dean of the faculty of forestry of the University of Toronto, gave some reminiscences of the early days of the movement. When he first arrived in New York and said he was a forester, the people did not know what that was, he said. Forestry was not even in the dictionary, so far as the American people were concerned. But not until the arrival of another German forester, one of the seven Von Steuben brothers, was an awakening possible. As the result of a visit of this gentleman to the city of Cincinnati a movement was started in that city and this culminated in the holding of the first forestry congress ever held in the country. This took place

*Resolution No. 3 passed at the Ottawa Convention (Feb. 7 and 8, 1912) was as follows:—

(3) Whereas, efficiency in the administration of the forests of Canada, which are one of the greatest assets of the national assets, can be obtained only by adopting a permanent policy carried out by a staff appointed on the grounds of special fitness for the positions which they are to fill, and removable only on grounds of inefficiency,

Therefore Resolved, that this association urges on the federal and provincial governments the necessity of providing a system of examinations to test the qualifications of appointees and of making appointments permanent during good behaviour, and that in the case of the federal government for this purpose appointments should be placed in the hands of the Civil Service Commission.

in April, 1882, and among those present were three delegates representing the Canadian government, two of whom are still alive. The convention was actually the best ever held, successful as succeeding ones have been. A second convention was held in Montreal the same year, and Sir Henri Joly de Lotbiniere was the first president. This convention passed off with as much aplomb as the one in Cincinnati, and from that time the fortunes of the international association which was known as the American Forestry Association, were unquestioned. In 1900 the Canadian Forestry Association was formed and its progress had been rapid and its influence immense.

'There is an antagonism between the forester and the lumberman,' said Dr. Fernow in conclusion. 'It is an antagonism that will never die, that can never die. The lumberman is the harvester and, like the harvesters whom the railways bring into the west at this season of the year, he is no more a forester than they are farmers. The forester is the farmer who is cultivating a crop and the lumberman is the harvester who is gathering it in.'

CANADA'S FOREST RESOURCES REVIEWED.

Mr. James White, secretary of the Commission of Conservation of Canada, warned the lumbermen as well as the public that the timber resources of the Dominion were not illimitable. No more dangerous idea, no more ruinous conception, could be entertained, he said. Instead of the forests of the Dominion being unlimited, they were absolutely the very reverse. One idea was that they were greater than those of the United States. They never were on a level with the latter. The forest resources of Nova Scotia, at the present milling capacity, were only enough for twenty years. In New Brunswick there were no definite figures, but no doubt between the cut made by the lumbermen and the devastation of fire their forest resources must be tremendously depleted.

To-day Quebec had no pine that was not in private hands. There were large areas of spruce, which would be of great value, but it was not the sort of timber that could be shipped southwards. In Ontario the estimate of the white and red pine that was still the property of the crown was ten or twelve billion feet, and if the present milling capacity was kept up it would not last more than twelve to fifteen years. Westward, in the territory of Keewatin, while there were large areas of spruce, there was nothing comparable to the great forests which formerly covered the whole of southern Ontario. In the great virgin forests which he had seen a quarter of a century ago in the Rockies there had been enormous devastation by fire.

In British Columbia there were vast forests, but the word illimitable was not applicable to them. Douglas fir was the most valuable tree, but a glance at the northern boundary of its growth showed that it was not unlimited. The other immense areas did not contain anything like the illimitable quantity popular fancy attributed to them. Mr. White said one of the features of the day was the endeavor to get at the truth in such matters, and this was part of the work the Commission of Conservation was trying to accomplish. The commission was getting as detailed and accurate a report as possible of what Canada had, and proposed to tell the truth as it found it.

Mr. R. H. Campbell, Dominion Director of Forestry, as a past secretary, commended the work of the present one. Taking up Dr. Fernow's story of early times he reminded his auditors of the work of William Little of Montreal in 1882 and onward, and of Mr. E. Stewart in starting the movement for the Canadian Forestry Association in 1899. He traced its growth until the present and saw a great field of usefulness before the Association.

THE VALUE OF B.C. FORESTS.

Mr. H. R. MacMillan gave a very interesting account of the formation of the provincial forest service in a manner which appealed to the general public. He reminded British Columbians that in their forests they had an asset, which thus early in the development of the service was yielding an annual revenue of \$2,600,000. As indicative of the small size of the logs with which the Eastern lumberman now has to be content, Mr. MacMillan mentioned that there are to-day in British Columbia dozens of Eastern lumberjacks who have come out here because there are no longer logs large enough in the woods to carry them in the rivers. Between Lake Winnipeg and the Rocky mountains there was no lumber beyond a small local supply, and it was certain that there would be developed in the prairies an enormous market for the forest products of this province. He believed that the tremendous extension of the lumber industry would not reach its limit until at least \$100,000,000 was brought in annually by the sale of forest products for distribution among the people of the province.

The chief forester explained very graphically the effect of denudation of hillsides on the storage of water and the maintenance of the flow of the rivers and streams, upon which depended the utilization of the water-powers, of which this province had so many. In the pictures which were thrown on the screen afterwards, the result which has followed the destruction of forests in portions of the States, in France and in other countries, was brought home. In concluding

his address, Mr. MacMillan said:

'As the Dominion chief forester pointed out to-day, the honor of organizing the first fully equipped forest policy in Canada belongs to the Province of British Columbia. It was Dr. Fernow who first planted the seed of forestry on this continent; it was Gifford Pinchot who first showed the men of western America that forestry did not mean the locking up of their natural resources, but meant their fullest, wisest development; it was Sir Richard McBride whose prophetic instinct saw that the whole future commercial life of this province depended upon the general policy adopted by his government; it is Hon. W. R. Ross who is giving to the details of the shaping and administration of that policy a degree of personal attention which forestry has never before received from any cabinet minister in Canada.'

CONCLUDING WORDS.

Hon. Mr. Ross, being asked by the president, Mr. John Hendry, to say a few words before the convention adjourned, expressed his appreciation of the many kind things said about the forest service of the province and of the testimony borne to the ability of the men whom the government had selected to carry on the work. The chief forester was a thorough enthusiast, and was preaching a gospel of conservation in such a way as to make it understood by the taxpayer. Mr. Ross said he was certain that the work the government had undertaken would become popular with the people of British Columbia.

A vote of thanks to Mr. Hendry, moved by Mr. J. B. White, seconded by Mr. R. H. Campbell, was passed, and responded to by that gentleman, who took occasion to voice the thanks of the members of the association to the people of Victoria for the welcome accorded them.

THOSE PRESENT.

Alphabetical List of those attending the Victoria Forestry Convention. Sept. 4-6, 1912:—

- Adair, Edward, Manager Adair Mining Co., 1143 Semlin Drive, Vancouver.
- Alexander, Byron C., 1232 Pender St. W., Vancouver.
- Alexander, Richard H., Asst. General Manager, B. C. Mills T. & T. Co., Vancouver.
- Alexander, R. H. H., Manager B. C. Lumber & Shingle Mfg. Assn., Ltd., Vancouver.
- Allard, Hon. Jules, Minister of Lands and Forests, Quebec, P.Q.
- Allen, A. E., 229 Government St., Victoria, and Mrs. Allen.
- Allen, E. T., Forester, Western Forestry & Conservation Assn., Portland, Ore., and Mrs. Allen.

- Allen, Robert B., Editor Pacific Lumber Trade Journal, Seattle, Wash.
- Anderson, Ald. G. W., 824 Kings Road, Victoria, B.C.
- Anderson, Harry, The Globe, Toronto.
- Anderson, Jas. R., Ex-Deputy Minister of Agriculture, Victoria.
- Andrew, Ethel C., Campbellton, N.B.
- Arbuthnot, John, John Arbuthnot Lumber Co., Victoria and Winnipeg.
- Ardagh, E. G. R., University of Toronto, Toronto, Ont.
- Ardagh, H. H., Barrie, Ont.
- Austin, J. B., Seattle, Wash., Office of the American Lumberman, Chicago.
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- Barbey, G., Vancouver.
- Barclay, S. W., Forest Branch, Victoria.
- Barker, Fred C., Norwich, Ont.
- Barnard, G. H., M.P., Victoria.
- Barnet, Jas., Vancouver.
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- Beasley, H. E., Supt. E. & N. Ry., Victoria.
- Beckett, E. W., Crown Timber Agent, New Westminster, B.C.
- Beckwith, His Worship J. L., Mayor of Victoria.
- Beecher, F. L., Sales Manager B. C. Mills T. & T. Co., Vancouver.
- Begins, C., 522 12th St. S., Lethbridge, and Mrs. Begins.
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- Birch, Miss Anne, Toronto.
- Bird, F. C., Accountant, Western Canada Power Co., Vancouver.
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- Boyd, E. M., Bobcaygeon, Ont.
- Boyd, W. T. C., Bobcaygeon, Ont.
- Breithaupt, W. H., C.E., Berlin, Ont., Mrs. Breithaupt and Miss Breithaupt.
- Brown, F.C., Rep. Calgary Board of Trade, 24 Florence Court, Vancouver.
- Brown, Guy S., Canadian Puget Sound Lumber Co., Victoria.
- Buchan, Ewing, Manager Bank of Hamilton, Vancouver.
- Buckley, F. L., Manager British Canadian Lumber Co., Vancouver.
- Burgess, J. P., Fisguard St., Victoria.
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 Ellison, Hon. Price, Minister of Finance and Agriculture, Victoria.
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 Sayward, J. A., Lumberman, Victoria.
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 Scutt, Frank S., Oak Bay, B.C.
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 Zavitz, E. J., Forester, Ontario Dept. of Agriculture, Toronto, and Professor of Forestry, Ont. Agrl. College, Guelph.

FIRE-RANGING SUGGESTIONS.

An Alberta clergyman, writing not long ago to the Secretary, expressed himself as follows:—

'I have grieved very often over the dreadful destruction of timber that we see on every hand. Then we have suffered so severely with fire from year to year in the Crow's Nest Pass, that I am very glad to be brought into touch with the Association.

'I have long felt that one of the first steps that the Dominion Government should take is to compel all loggers to burn their slash. This would make fire-fighting a very much more simple thing than it is now. It would work no hardship on the lumberman, as all would fare alike, and the increased cost would be borne by the public in the end.

'Again, from our experience this summer here, I feel that no fire-ranger should be appointed who has to defend property of some one who is heavily interested in only one section of the country, and who, receiving his pay in part from such a person, would naturally give himself to the care of his employer's timber to a greater extent than he otherwise would do if he were paid entirely by the government and under obligation to do his very best for the whole community.

'Again, such men should be appointed not for one or two months of the year, but for the whole summer. He should know very thoroughly the district in which he is located, be familiar with every point of vantage where a fire could be easily checked, be under obligation to prepare rough maps of the trails and creeks and ridges where fires can be most easily stopped.

'Further such fire-rangers should have the power to order out any man to assist to put out a fire.

'I am sure that if active, earnest men could be got for this work many millions of feet of timber would annually be saved to the country.'

Much of what is above advocated is precisely what the Forestry Branch is endeavoring to carry out, not only in the Rockies, but on all other forests under its jurisdiction.

FORESTRY IN KOREA.

The most visible misfortune of Korea is the loss of her forests, says President Starr Jordan, of Stanford University, writing in the *American Review of Reviews*. Except along the Yalu River in the north, where still remain the pine forests which the Russian promoters had taken, Korea is practically a treeless land.

Originally the forests were destroyed to get rid of tigers and leopards. Now every young tree or bush that springs up is taken for firewood. The people burn weeds and hay, and suffer greatly in the winter time. Good cattle are raised in Korea, being used mainly as beasts of burden, never for milk,

the chance-sown pines is forbidden. A complete and careful forestry map of Korea has been completed and every method known to forestry for bringing back the trees is in use.

Lt. Col. T. R. Atkinson, a member of the Ontario Legislative Assembly for North Norfolk, is a strong advocate of reforestation in Southern Ontario. In one of the debates during the session just passed, he discussed the situation. He argued that the province was not giving nearly enough money for this work of reforestation. He thought there should be three hundred or four hundred acres of waste land replanted each year. He also criticised what he called the 'cut-and-ash' policy followed in north



[Photo by Broadbridge.

The Heart of the Down-town District and Waterfront, Vancouver.

but the people cannot afford to keep them as they need all their hay to burn.

The loss of timber causes great waste of land by wash of the hills. One hundred and seventy thousand acres of land are taken to the sea every year. The wash of the land destroys the breeding grounds of herring.

The Japanese have taken the task of reforestation very seriously. O. Saito, the head forester, has in experimental cultivation nearly all the trees of value in temperate regions. This year three million pine trees were planted. Certain privileges are granted to farmers who rear the trees which are given them, while the destruction of the lit-

period. Ontario. He said all the land should be carefully examined, and where it is not suitable for farming it should be held for a permanent timber reserve. It should then be cut on such a plan that the young forest would have a good chance for rapid growth over the area. In this way the north country could be reforested at practically no expense.

During the seven fiscal years 1902 to 1908 inclusive the United States imported 776,289 tons of wood pulp from Canada. This was 70.3 per cent. of the total wood pulp imports of that country for that

OTIS STAPLES.

A sad circumstance in connection with the Convention at Victoria was the absence therefrom of one who otherwise would have been one of its most enthusiastic and active participants, Mr. Otis Staples, of Wycliffe, B.C., whose untimely and sudden death early in August deeply affected the lumbering community. Mr. Staples was fishing about twenty miles from home, when in casting the fly the hook caught in his left eye. The hook baffled Mr. Staples' efforts to extricate it, and as no one else in his party was able to run his motor car he was forced to drive the car home while suffering excruciating agony. He was then hurried to Cranbrook, where the hook was extracted. He was sent to Spokane Hospital, but in spite of everything that could be done, died after a week's suffering. His remains were taken for interment to Stillwater, Minn., his old home.

Mr. Staples was a native of New Brunswick, where his successful career is regarded with great pride. Starting out to seek his fortune in the lumber business, he went first to Michigan and then to Minnesota, where he spent the greater part of his working life, building up an immense business and becoming one of the leading lumbermen of the state. With the decrease of the timber in Minnesota he acquired interests in the Pacific coast states and later in British Columbia, where he made his home at a village which he created and named Wycliffe. Mr. Staples, who leaves a grown-up family to carry on his work, was keenly interested in all lumbermen's organizations, and his loss will be felt on both sides of the international boundary.

As showing a growing interest in forestry it may be noted that at a recent meeting of the Woman's Institute at Embro, Ont., Miss Effie Ross read a paper written by Mr. James G. Ross, C.E., of Montreal, showing the present status of forestry in Canada, and urging that greatly increased work for taking care of our forests be inaugurated by both provincial and dominion governments. The paper was published at length in the *Embro Courier*.

During 1911 the nurseries of the Pennsylvania Forestry Department produced approximately 2,000,000 seedlings. With the exception of 50,000 seedlings which were furnished to private individuals all these were planted on state reserves. In the same period the state provided 32,713 acres of land which were added to the state reserves. The department of the work having to do with campers and others securing health and recreation in the state forest reserves is rapidly increasing. According to the permits issued it is estimated that at least 10,000 people spent vacations on the reserves. This is an increase of about 2,500 over last year.

I have seen many places in Indiana where great damage will result to the future unless an enlightened system of forestry is employed. We owe it to ourselves, and particularly to those who shall come after us, to do our share to preserve all of the valuable resources of the state. We owe it to the state itself to make good the waste places and preserve her natural wealth, subject to our reasonable needs, for future generations. — Former (U.S.) Vice-President Fairbanks.

Dr. Stanley Mackenzie, Principal of Dalhousie College, Halifax, in lecturing before the Canadian Club in Ottawa, made a strong plea for a government laboratory to conduct exhaustive experiments in regard to the properties of the various Canadian woods to discover how they could be used to the greatest advantage. This laboratory would also conduct experiments to find the best methods of preserving woods. In this way a much wider range of usefulness would be given these woods, and many of the inferior kinds would be so improved by preservatives that they could be used for railway ties, fence posts, telegraph poles and cross-arms, and the life of the timbers in these exposed situations would be greater than that of the better timbers not so treated.

New York has added another nursery to its list of State forest activities. It has put under cultivation at Geysers, some two miles from Saratoga Springs, about six acres in charge of F. A. Gaylord, with M. D. Steele as local superintendent. Of the 1,400,000 seedlings transplanted, 1,100,000 were white pine, 250,000 Scotch pine, and 50,000 tamarack.

With the Forest Engineers.

IN THE B.C. FOREST SERVICE.

The Government of British Columbia has secured the services of nineteen foresters for the new Forest Branch of the Lands Department. The following is a statement of the present personnel and organization of the force:

Consulting Forester, Overton W. Price.

Chief Forester, H. R. MacMillan.

Chief of Records, M. A. Grainger, who has charge of the clerical staff and all office work.

Chief of Operation, R. E. Benedict, who controls the fire preventive force of the province, consisting of two Supervisors, nineteen Divisional Fire Wardens, and upwards of 140 District Fire Wardens, besides patrol men. He is also charged with the general field organisation.

Chief of Management, J. Lafon, who has under him the force of timber inspectors and government scalers, and attends to the commercial side of the forest business.

Chief of Forest Surveys, H. K. Robinson, who is in charge of the reconnaissance work.

Forest Assistants employed on special reports and investigations of lapsed leases, etc., under Mr. Lafon, are Messrs. Beard on the coast, and Prince in the interior.

There are employed on preliminary reconnaissance:—

G. H. Edgecombe, on the Upper Fraser with headquarters at Tete Jaune Cache. He is to do the work of a timber inspector and issue permits for timber for railway construction in addition to his other work.

H. C. Kinghorn, on the Upper Fraser at Fort George, and P. Z. Caverhill, at Hazelton, have the same work as Mr. Edgecombe.

The following are out for reconnaissance, but are available for any

special reports that may be required in their territory:—

J. B. Mitchell in the Omineca country, Fort St. James.

H. S. Irwin, Adams River, Kamloops.

T. H. Plumer, Okanagan East, Vernon.

L. S. Higgs, Vancouver Island North.

The following have been engaged but have not yet taken up their duties: Messrs. McDougall, Mumford, Gareau and Ingall. They will probably be detailed for reconnaissance.

In the absence of a systematic survey of the Province, and in view of the fact that very little is known about most of British Columbia, and that the little that is known is not available for reference anywhere, it has been decided to make a systematic reconnaissance of the province from a forest point of view. To do this in detail would require many years of work, and an enormous staff, and would give results such as are not at present required. What is required now is a fairly correct map, showing where the timber is and what it is like and where the roads, trails, lakes and rivers are and what they may be used for. In addition the reconnaissance officers have to take special note of land suitable for agriculture and to send in special reports of such areas for the information of the Minister of Lands.

The foresters in British Columbia had a very successful luncheon on the Saturday following the late Forestry Association convention. Mr. MacMillan, Chief Forester, writes enthusiastically of the gathering as follows:

We had a very good meeting of the Society of Forest Engineers here (Victoria). There were twenty-four foresters at the convention, and eighteen at the luncheon which we had on

Saturday noon. The luncheon was the best meeting that I have attended yet. It was not a business meeting in any way, but just a gathering together to get better acquainted.

NEW ZEALAND REFORESTING.

Persons who have recently visited New Zealand speak in warm terms of the success of tree planting on that island. The authorities have discovered that at the present rate of cutting the New Zealand forests will not last for more than thirty-five years, even if none of the standing timber is destroyed by fire. They have, therefore, begun the work of planting barren areas. Most of the districts now being planted are a very difficult field because they consist of the slopes of volcanic mountains from which all the vegetation was swept by an earthquake and volcanic eruption about twenty five years ago. This has left the hillsides covered with a deposit of ashes, underneath which is a stiff clay, too stiff to be swept away by the torrents of water from the upland lakes, which at the time of the eruption boiled over and eroded the hills. It was felt that the native trees would not live in this upland, but good success was met with in planting imported larch, and of these about 3,500,000 trees per year are being planted. The planting is being done by prisoners of the better class, that is to say, first offenders and men who can be, in a measure, put on parole. The officers over them carry no firearms. Every man is allowed eight credit marks per day for good work, and these credit marks go to shorten his term in prison. At the end of their prison term the prisoners may remain at planting work, and for this they receive two dollars per day. In this way many are enabled to earn sufficient to give them a new start in life. Up to the present New Zealand has spent \$930,000 in this work, and it is expected that within twenty years when the second thinnings are begun they will have a very considerable revenue from the poles taken out which will be used for railway ties, mine props and fence posts. The experiment is considered a success from the standpoint of both forestry and prison reform.

TREES ON HOMESTEAD.

On the average homestead of a quarter section does it pay to plant trees for wind-break? If so from what standpoint?—M. R. K.

Ans.—Yes, it pays any man who settles on the open prairie to plant trees as soon as possible. It pays in the matter of shel-

ter from storms, making the home more easily heated and the stock more easily kept; it pays in avoiding excessive loss of moisture from the fields incident to a straight sweep of the wind; it pays in affording shelter for stock from the hot sun. Such reasons can be given in any number. But chief of all from the money standpoint is the increase in value of the quarter section. If an anxious purchaser were to go to your locality he would pay considerably more for a farm on which stood a house and outbuildings surrounded by fine shelter belts than he would for similar land with similar buildings but lacking the trees. Then, do not forget the general satisfaction of a fine house among trees.—*Farmers' Advocate (Winnipeg).*

So serious has the chestnut blight become in the United States that there has recently been held in Harrisburg, Pa., at the call of the Governor of that state, a conference of representatives of the different state organizations to discuss ways and means of dealing with this danger. The blight upon chestnut trees was first noticed near New York City. It has now spread till chestnut trees are affected in New York, Pennsylvania, New Jersey, Delaware, Maryland, Virginia, West Virginia, Connecticut, Rhode Island and Massachusetts. It is estimated that it has already caused a loss of \$50,000,000. The damage is caused by fungi which work in the inner bark. The damaged area soon forms a ring about the tree and stops the flow of sap and causes death. The result of the Harrisburg Conference was a call to the governments, state and federal, of the United States and Canada to undertake a vigorous crusade against the blight. Already a number of the officers of various governments are searching for means to destroy this fungus growth and save the trees.

The *American Lumberman*, in pointing out the great need of education on the subject of conservation instances a case in the little town in the State of Washington in a district that had suffered somewhat from forest fires. A merchant of the town expressed to the representative of the newspaper in question the wish that the entire district should burn over, his view being that mills would have to be erected to cut the burnt timber as quickly as possible to save it from insects, and thus the prosperity of the town would be immediately increased. Washington is not the only part of the world where this erroneous idea prevails, but this instance emphasizes the need of educating the general public on this subject as rapidly as possible.