

adopted, but I can see no reason for Mr. Butler's resolution."

R. A. Ross urged that all the existing committees be dismissed for the time being, subject to reappointment by council. The by-laws are being radically changed, the society is broadening out, and the council should have a free hand in appointing committees. There should be standards, but when applied to structures instead of materials, where was the society going to stop? Some committees are redundant and might be discontinued.

M. J. Butler said that standard specifications should prevail throughout the whole allied world. Societies here should work in co-ordination with British standard committees. Replying to Mr. Vaughan, he agreed that the American Society for Testing Materials is doing work of the utmost value to all engineers, and he said that is all the more reason why we should abandon our own committees, and, instead, accept the work of such standard committees. The only work for which specifications have been absolutely standardized is aeronautics. In building aeroplanes, the same words mean the same thing throughout all the allied countries.

The meeting voted in favor of Mr. Butler's resolution, and decided to discontinue all committees, subject to council's reappointing or reconstituting any that it might deem desirable.

Report of Conservation Committee

James White, deputy chairman of the Commission of Conservation, Ottawa, presented the report of the conservation committee, of which he is chairman. He said, in part:—

"Stimulated by the war and conditions created thereby, Canadians are to-day recognizing in greater measure than hitherto, that our resources are not as we so frequently designate them—'illimitable' or 'inexhaustible.' On the contrary, our wastefulness, our carelessness and our inefficient methods have, in some instances, made such inroads upon them that all but the ignorant and unobserving can see that nothing but the practice of economic and efficient methods will permit us to hand down to our posterity an inheritance that will suffice for their needs.

"One of the outstanding achievements of the year is the elimination of the curse of patronage in the matter of appointments by the Dominion government.

"The development of hydro-electric power in Ontario has been phenomenal. At present, the Hydro is delivering 296,000 h.p. and still is short 70,000 h.p. There is also a shortage of power in Eastern Ontario, although upwards of 60,000 h.p. is being exported from the Cedars Rapids plant to Northern New York State. The Cedars power is used by the Aluminium Co. of America in their Massena plant and by municipalities in the vicinity of Massena.

"Eight years ago the Commission of Conservation actively opposed the granting to private interests of the privilege of developing power at the Long Sault Rapids of the St. Lawrence. Recently the Commission has also opposed an application by private interests for permission to develop the Coteau Rapids power.

"In his annual address to the Commission of Conservation, November 27th, 1917, Sir Clifford Sifton referred to the Niagara Falls situation where we are exporting 125,000 h.p. and are unable to take it away from the manufacturing and other interests in the United States. He also advocated the development of the international water powers of the St. Lawrence 'by an international commission, under which the greatest and best use of the

powers will be made, the most economical development will be effected, a just and equitable division of the power will take place and the governments concerned will be able to administer the power as the Ontario Hydro-Electric Commission administers the power of Niagara for the benefit of the people who are directly concerned in its use.'

"This pronouncement will appeal to the engineers of Canada as a progressive, a constructive and a statesman-like policy.

"Sir Clifford also voiced a sentiment that will doubtless receive full assent and hearty approval from the members of our society. He said:

"We are still largely dominated in Canada by the idea that any ordinary capable amateur can do the work which ought to be done by a trained scientific man, and, until we eradicate this fallacy thoroughly, and, in its place, implant the view that men who are technically trained are the only men competent to deal with technical problems, we shall not begin to attain to general success in making the best use of the materials which are at our disposal.'

"In connection with the development of the water power of the rapids of the St. Lawrence an estimate of the power available is of interest. A. V. White, consulting engineer to the Commission of Conservation, estimates that the total maximum low-water, 24-hour horse-power is 2,395,000, and the average 24-hour, low-water horse-power is 2,150,000. Assuming an equal division of international powers, 1,955,000 h.p. of the maximum low-water power belongs to Canada and 440,000 to the United States.

"If we use the experience of the Ontario Hydro as a basis, we get a diversity factor of 30 per cent., which increases Canada's resources to the equivalent of 2,541,500 h.p. for maximum low-water power.

"The great conservation dam at La Loutre on the St. Maurice River is approaching completion. It will impound the third largest artificial reservoir in the world, being exceeded only by the Asuan dam on the Nile and Gatun Lake on the Panama Canal. The St. Francis River dam at the outlet of Lake St. Francis is also, nearing completion. The low-water flow of the St. Maurice will be doubled and the minimum potential horse-power will be increased by 550,000 h.p."

Mr. White reviewed successively the present conditions of Canada's forests, lands, minerals, fisheries and game, and also discussed the fire waste problem. "The United States is thoroughly scared over its declining pulpwood supply," he said. "We are so ignorant of our own supplies that we do not now whether to be scared or not."

Mr. White said that the white pine blister rust threatens with total destruction the most valuable forest tree in Canada. Our white pine has been valued at \$200,000,000. The fungus lives alternately on the pine and on currant or gooseberry, wild or cultivated. If either be wanting, it cannot exist. It is a question, therefore, which is the more valuable and whether we should eradicate currant and gooseberry growths in order to save the pine.

"An example of wasteful methods is the coking of coal," said Mr. White. "At present there are in Canada approximately 1,700 beehive ovens with an annual production of 443,460 tons and 910 by-product ovens with a production of 1,005,322 tons. The beehive ovens waste all the valuable by-products.

"E. T. P. Shewen suggests the importance of commencing on an adequate scale the distillation of domestic coal, to recover the by-products, using the coke as domestic and other fuel.