

been estimated that from the waste sulphite liquor of Canadian pulp mills, 5,000,000 gallons of alcohol of 95 p.c. strength could be obtained yearly at a cost of under 35 cents per gallon. It is also a well-known fact that wood waste from our saw mills could be utilized for this purpose. This method should be particularly profitable in British Columbia, where it is estimated that several thousand tons of wood waste are burned daily. In view of these and other facts, and as a result of the representations of various bodies interested in the Canadian chemical industries, the Research Council gave prolonged and careful consideration to this question, and formulated definite recommendations to the Sub-Committee of the Privy Council on Scientific and Industrial Research.

**Western Lignites.**—After making a thorough survey on the subject of the utilization of the low grade lignites of Western Canada as domestic fuel, the Research Council recommended the Dominion Government to erect a demonstration carbonizing-briquetting plant capable of turning out 30,000 tons of briquettes per year, practically equivalent in thermal value to anthracite. After extended consideration of the proposal, the Federal Government, in co-operation with the Governments of the provinces of Manitoba and Saskatchewan, agreed to make an appropriation of \$400,000 and to put the conduct and control of the experiment in charge of a Board which was appointed on August 22, 1918, and which has, since its organization, been carrying on investigations and tests preliminary to the erection of the demonstration plant in Saskatchewan.

**Industrial Fatigue.**—In modern industry the question of the efficiency of the worker in relation to the hours of labour, in conjunction with the amount of his output and the conditions under which he operates, is one to which a great deal of attention has been given in Great Britain, France, and the United States. This is a question which affects in a large measure the social welfare of the entire industrial population and, while much may be learned from investigations carried on elsewhere, there are special conditions which must be considered in Canada, such as differences in climate, food, etc. Realizing the importance of this work, the Research Council has appointed a Committee under the chairmanship of Prof. J. J. R. Macleod, of the University of Toronto, to carry on investigations in Canada on industrial fatigue. This Committee will also endeavour to co-operate with similar organizations abroad in order to prevent duplication of effort.

**Forestry.**—The Research Council regards forestry investigations as of fundamental importance in determining the data which must be ascertained regarding the rates of growth and the possible quantity of reproduction of our more valuable timber trees, in order that a comprehensive and successful attack on the problem of reforestation in Eastern Canada may be undertaken. The results already obtained through the Petawawa Forest Survey, which has been conducted on behalf of the Research Council by the Forestry Branch of the Department of the Interior, have enabled this Branch to elaborate a system of forest organization which is specially adapted to conditions in Eastern Canada and which will permit of the inauguration of the