

### W. J. Dick Suggests Improved Methods of Utilizing Our Fuel Resources.

W. J. Dick, Mining Engineer of the Commission of Conservation, spoke upon the rational development of Canada's coal resources. "Canada," he said, "has 16.4 per cent. of the world's coal, Great Britain 2.4 per cent., and the United States 51.8 per cent. The coal fields of the United States and Canada have the largest proportion of the world's resources of coal and with the exhaustion of the coal fields of Europe those countries will have to look to North America.

Mr. Dick stated that production of coal in Canada had doubled every twelve years since 1874, yet had not kept pace with the increase in consumption. Mr. Dick was of the opinion that while in the east and the west Canada had large deposits of bituminous coal, she had little anthracite for domestic use. To make up that deficiency he suggested that the future would bring with it the production of artificial anthracite made from bituminous coal with gas, ammonia and tar as valuable by-products. The municipal gas plants of to-day would form the basis of a new organization.

"It is not beyond the bounds of reason," he said, "to foresee the day when the householder, in place of his \$10 ton of coal and slate, will receive a ton of smokeless artificial coal, gas for a month, enough ammonia to fertilize a small garden and enough tar to cover the road in front of his home, all for less money than he is now paying for inferior coal." Mr. Dick contended that two million tons of coke had been used in the United States for domestic purposes, and the fact that the gas companies with small plants could produce quantities of coke showed the possibilities of the coke industry.

Mr. Dick suggested that the area to be served from the Western Canada coal fields could be enlarged by special railway rates during the season when the grain was not being moved, the coal being stored at delivery points. This would ease the drain upon imported coal and would give steadier labor conditions at the mines, an important consideration in securing increased production. Mr. Dick also advocated a pooling of interests by the mines in order to secure economic development of the coal fields.

### John Blizard Discusses Utilization of Peat.

Mr. John Blizard, Technical Engineer of the Division of Fuels and Fuel Testing, of the Mines Department, in dealing with peat, expressed his opinion that it was to assume an important role in Canadian industrial life in the future. Mr. Blizard discussed at some length the methods of taking raw peat, extracting the moisture and making it commercially profitable. He gave the gathering an idea of the tremendous resources of peat that are to be found in various parts of the Dominion, particularly in Ontario. A peat bog to be a commercial proposition should be at least five feet deep. A square mile of bog, ten feet deep would contain about 800,000 tons of dry peat, or 1,100,000 tons of air dried peat with 25 per cent. moisture.

In commenting upon the possibility of peat competing in price with coal and other fuels, Mr. Blizard stated that peat, if produced in any quantity, could be made cheaply since most of the labor required was unskilled. In concluding his address, Mr. Blizard declared that the inauguration of peat fuel as an important industry in Canada could not be long delayed.

The concluding address of the Tuesday afternoon session was by E. Stanfield, of the Division of Fuels and Fuel Testing of the Mines Branch at Ottawa, on

low temperature carbonization and briquetting of bituminous coals. At the evening session, George F. Porter, Engineer of Construction for the Quebec Bridge, gave an illustrated address on the erection of the bridge.

The efforts which Ontario is making to relieve the fuel situation were dealt with by Mr. Albert Grigg, Deputy Minister of Lands, Forests and Mines. The use of wood as an emergency fuel was taken up by Mr. E. J. Zavitz, Provincial Forester, who said it was vitally necessary to educate the people in rural districts to the importance of cutting wood during the summer for winter use. Mr. Zavitz showed that fuel wood costs \$12 to \$15 a cord, and that a cord of wood in heating capacity was equal to only half a ton of coal, so that at this rate the people will be paying from \$24 to \$28 for the equivalent of a ton of coal.

### Arthur Hewitt on Uses of Gas.

The importance of manufactured gas among the economic fuels on which Canada may rely was explained at the convention by Mr. Arthur Hewitt, general manager of the Consumers' Gas Company, of Toronto.

Mr. Hewitt estimated that the percentage of efficiency obtained from coal in a gas works is between 60 and 70 per cent., while that of a ton of the same fuel burned in an open fire is less than 20 per cent. In addition to the gas, many gallons of tar, from which toluol, benzine, fuel oils, acids, and dyes can be made, is recoverable. There is also retort carbon, which is used for the manufacture of carbon electrodes for searchlights, electrical steel furnaces, and other uses. Mr. Hewitt said that if gas were used for cooking exclusively in Toronto, compared with anthracite coal, there would be a saving of \$2,000,000 a year.

### F. G. Clarke Points Out Advantages of Central Heating System.

Mr. F. G. Clarke, chief engineer of the Toronto Electric Light Co., advocated the use of central heating plants for towns and cities. Mr. Clarke's up-to-date heating system would necessitate steam mains laid in city streets. He says: "A well designed system as, for example, one covering that part of Toronto between the bay and College Street and from Sherbourne to Spadina Avenue, if supplied from a central plant, such as the Scott Street station of the Toronto Electric Light Co., would be able to furnish all of the heat required in the district at a cost to the users from 10 to 30 per cent. less than their present expense."

Mr. Clarke predicted that gas and briquettes made from powdered coal will replace the coal now used in Canadian cities. The powdered coal could be delivered in pipes just as oil is now being conveyed from the well to the seaboard in the United States. "The cost of the gas and the briquettes will be less than one-half, and possibly one-fourth, the present prices for gas and coal."

### Canada's Water Powers Should Be Used More Fully.

"Cheap power promises to be one of this country's greatest assets in the post-bellum industrial rivalry of nations for world trade," pointed out Mr. J. B. Challes, Superintendent of Dominion Water-power Branch, Department of the Interior, in dealing with the relations of Canada's water-powers and their relation to the fuel situation. The great fuel reserves of Canada, supported by the water-power resources, represent a sure source of cheap power, and should, he claimed, guarantee Canada her share in world trade, provided