

## Lignite Briquettes or Imported Coal?

**Cost of American Coal used in Western Canada—Methods of utilizing Lignites—Producer Gas for Power**

Why should Western Canada import American coal and disregard the fact that the time is not far distant when the United States will require all her supplies of coal at home?

The greater portion of domestic fuel used in the Provinces of Manitoba and Saskatchewan is Pennsylvania anthracite, costing from \$11.00 to \$15.00 per ton. Soft coal, also mined in the United States, is used as far west as the western boundary of Manitoba. This coal finds a market in these provinces notwithstanding the fact that 5,500 square miles in Saskatchewan is estimated to contain 18 billion tons of lignite coal, and 48 square miles in Manitoba to contain 160 million tons of lignite coal.

### Character of Coal of Western Canada

The reason is this: The coals of Manitoba and Saskatchewan are of low fuel value and contain about 28 per cent. of moisture when mined; on exposure to the air for 24 hours, the coal loses its moisture and disintegrates. These facts, together with the high freight rate on the coal, prevents its shipment over any great distance.

In order to overcome these difficulties it is necessary to make the value of the fuel greater by putting it into such shape that it might be easily transported without great loss. This could be brought about by briquetting the lignite and selling it as a domestic fuel and by generating electricity either by gas producers or by means of steam engines at the mines, and transmitting the electricity for power and lighting purposes.

### Work of U.S. Bureau of Mines

It is of interest to know that the United States Bureau of Mines has demonstrated that suitable briquettes can be made from low-grade lignites and that three samples of lignite, one from Texas, one from North Dakota, and one from California were made into satisfactory briquettes without the aid of a binder.

With regard to the production of cheap power, the following is taken from Bulletin No. 13, United States Bureau of Mines:

"These tests in the gas producer have shown that many fuels of such low grade as to be practically valueless for steaming purposes, including slack coal, bone coal, and lignite, may be economically converted into producer gas and may thus generate sufficient power to render them of high commercial value.

"Practically every shipment tested in the producers, including coals with ash as high as 44 per cent. and lignites and peats high in moisture, has been successfully converted into gas that has been used

in operating gas engines. It is estimated that on an average each coal tested in the producer-gas plant developed two and one-half times the power that it would develop if used in the ordinary steam-boiler plant. Such relative efficiency probably holds good for the average installation of moderate power capacity, but the ratio is smaller when large steam plants of the most modern type are compared. It was found that the low-grade lignite of North Dakota developed as much power when converted into producer gas as did the best West Virginia bituminous coal when utilized under the steam boiler. Thus, through these investigations, lignite beds underlying 20,000,000 to 30,000,000 acres of public lands, supposed to be worth little, have been shown to possess a large value for power development. As a result the money value of this Government land has been increased to the extent of probably \$300,000,000 or more."

## Fires on Private Lands

The broad interest of a general government in the forest fire question upon privately owned lands is well illustrated in the United States by the provision of the Federal Law for co-operation of the Federal Government with States for the patrol of forest lands upon the headwaters of navigable streams. The Week's Act became law March 1, 1911, and in addition to provide for the acquisition of lands by the Government, carried an appropriation of \$200,000, available until expended for co-operation with the States in fire-protection work. During the summer of 1911 co-operative agreements were entered into with a number of States, principally in the East, the western watersheds being already for the most part protected by the establishment of National Forests. One of the first States to enter into co-operation with the Federal Government under the new law was New Hampshire. An efficient system of fire patrols, supplemented by the use of lookout stations and telephones, was established in the northern district of New Hampshire, comprising an area of about one million acres, at a cost of less than one and one-half cents per acre.

## Placing Responsibility for Forest Fires

**Something about What is Being Done in British Columbia**

In the past, forest fires have generally been regarded as acts of Providence, which could not be prevented, but must be accepted in a spirit of more or less patient resignation. More recently, however, it has been shown conclusively that forest fire damage can be practically prevented if proper measures are taken. The rapid rise in timber values has made owners less willing than formerly to submit to unnecessary loss, and this in turn is bringing about the adoption of protective measures not only by railroads but by owners of timberlands. The latter are in part inspired by the desire to save their own property and in part to eliminate carelessness which might result in damage suits by neighbouring owners. The rigid enforcement of the law of responsibility for carelessness in setting forest fires will perhaps go further in preventing damage from this source than any other measure. As long as it is cheaper to continue careless methods than to take proper precautions, fires will continue to devastate our forests.

### Cases in British Columbia

An example along this line is the suit recently heard before the Supreme Court at Vancouver against the Paterson Timber Company, for \$10,239 damages caused by fire spreading from the defendant's lands. The Court held the Company liable and the amount of damages to be recovered will be determined at a future hearing. The responsibility of railroads for fires spreading from their rights-of-way is clearly established in two cases also recently heard in British Columbia.

In *Clarkson vs. Nelson and Fort Shephard railway*, is involved the largest claim for damages ever entered in a British Columbia timber case. The original claim for \$375,000 involved 8,320 acres of timber limits, and now another area of 4,210 acres has been brought into the case, in respect of which, additional damages of \$408,000 are claimed. The defendant company has been held responsible for the

fire, but the award for damages has not yet been made.

The suit of the King Lumber Mills, Limited, located near York, B.C., against the Canadian Pacific railway is similar in principle. The amount claimed in this case is \$140,000. The jury was unable to determine positively the source of the fire, which spread from the company's right-of-way. It found, however, that the company was negligent in failing to maintain a clear right-of-way, and in failing to properly attend the fire when reported by its employees. It also finds that the railroad did not take reasonable precautions to prevent the fire spreading. The amount of damages to be paid to the plaintiffs has yet to be decided by the Supreme Court.

A few such cases as those will go further toward preventing the occurrence of fires, than any amount of legislation.

## "Chicken Feed"

The highest conception of a nation is that of a trustee for posterity.—*Jas. J. Hill.*

Conservation is progress without the loss of essential values.—*Dr. Hibben, Princeton.*

The health of the individual is a national, as well as a personal asset.

Let us cast our minds twenty or twenty-five years ahead, and see what will then be the condition of affairs.—*Jas. J. Hill.*

Conservation does not consist in hoarding, but in wise investment.

Why should the back yard be dirty, even if man is made of dust?

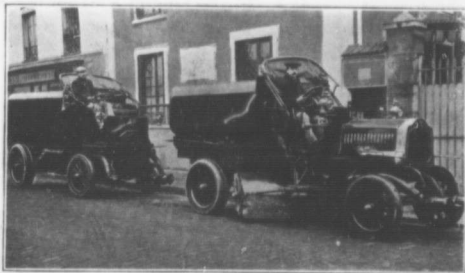
National efficiency is the result of natural resources well handled, of freedom of opportunity for every man, and of the inherent capacity, trained ability, knowledge and will, collectively and individually, to use that opportunity.—*Roosevelt.*

The average length of human life in different countries varies from less than twenty-five to more than fifty years. This span of life is increasing wherever sanitary science and preventive medicine are applied. It may be greatly extended.—*Rept. of National Conservation Commission.*

The permanent welfare of the nation demands that its natural resources be conserved by proper use.—*Rept. of National Conservation Commission.*

## Regina is Looking Ahead

Regina has set out a large number of shade trees on its streets this spring. Cottonwoods alternate with elms, the intention being to remove the former when the elms grow large. It's a wise city that sees into the future.



Types of Motor Sprinklers and Sweepers in Paris