The water in the peat should be reduced to 25 to 30 per cent. before it can be used as fuel. The season for drying peat begins as soon as the frost is out of the ground and ends in September. The bogs should be drained and the turf removed from its surface. The peat is cut in blocks about 9 ins. by 4 ins. and from 3 to 6 ins. thick. At the end of about four weeks they are ready for storage. During this period they should be kept covered and should be frequently turned. The quality of such peat is inferior to machine peat, but in many localities it will supplement the insufficient supply of better fuel.

Peat has about one-half the heat value per pound of best anthracite and its specific gravity is about one-half that of anthracite. Therefore, to obtain from peat the same number of heat units as from a specified amount of coal requires about four times the volume of peat.

Wood Fuel

From a fuel standpoint, the principal trees of the Prairie Provinces, east of the Rocky Mountains, are, in approximate order of importance; the jackpine, spruce, poplar, tamarack and birch.

In British Columbia and the Rockies there are numerous fuel woods, most of the wood used as fuel being the refuse from the sawmills. Douglas fir, yellow or bull pine, spruce and cedar furnish most of the wood fuel in this area.

In a discussion by the Forest Products Laboratories, Montreal, of the heat values of dry wood, it is stated that the below amounts of wood have equal heating value to one ton of anthracite: 1.00 cord of birch, 1.15 cords of tamarack, 1.20 cords of Douglas fir, 1.50 cords of jackpine, 1.55 cords of poplar, 1.60 cords of hemlock and 2.10 cords of cedar.

The above comparison is based on the supposition that the calorific value of the coal is 13,000 B.t.u. but the grade of coal received in Canada last winter was much less, possibly as low as 10,000 B.t.u., which, in comparison, would decrease the above stated quantities of wood by 23 per cent.

Fuel Shortage

A fuel shortage next winter is highly probable. Dr. Garfield, United States fuel administrator, states that "an alarming shortage" faces the United States and Canada if the quantities of coal demanded by the various sections of the country are actually required. What will happen if they prove to be conservative statements?

The New England and Atlantic States will receive increased allotments of anthracite this year, to provide for the increasing concentration of industrial population in these States. Curtailments have been ordered in the Central and Northwestern States and Western Canada.

This year the requirements of Canada and the United States will be 100,000,000 tons greater than last year, whereas there will probably be a deficiency of 50,000,000 tons. To offset this deficiency, we have better quality of coal, conservation and restriction.

It is estimated that the coal mined in the United States last year contained 30,000,000 tons more impurities than in pre-war times, or, that 600,000 carloads were hauled and paid for both as to coal and as to transportation. This is half of the shortage predicted for this year.

It is estimated that each per cent. of impurity reduced the efficiency of the coal 1.5 per cent. more. According to these percentages the American railways did about 75,000,000 tons of useless hauling last year. Effective measures have been taken to avoid the wastes of last year.

ENGINEERING INSTITUTE OF CANADA ELECTIONS AND TRANSFERS

AT a meeting of the council of the Engineering Institute of Canada, held August 27th, 1918, in Montreal, the following elections and transfers were announced, in addition to those mentioned in last week's issue:—

PENROSE, JAMES ALEXANDER MUNROE, of Winnipeg, elected junior member. Mr. Penrose was born in 1892 at Kildonan, Man., and was educated at Manitoba University. In 1917 he became assistant engineer of the Good Roads Board, Winnipeg.

PORTER, JOHN WILLIAM, of The Pas, Man., transferred from associate member to member. Mr. Porter was born at Aberdeen, Scotland, in 1877, and educated at Gordon's College. In 1906 Mr. Porter was appointed assistant engineer of Coldwater-Victoria Harbor for the Canadian Pacific Railway, and a year later became assistant engineer of the Toronto-Sudbury line. He is at present chief engineer of the T. H. & B. R'y.

SLINN, WILLIAM HARMON, of Kingston, Ont., transferred from student to junior. Mr. Slinn was born in 1891 at Regina, Sask., and graduated in science in 1916 at Queen's University. He is assistant to C.R.C.E., Military District No. 3, Kingston, Ont.

STOCKTON, ROBERT SUMMERS, of Strathmore, Alta., elected member. Mr. Stockton was born in 1872 at Oquawka, Ill., and was educated at the Colorado School of Mines. After considerable experience in surveying work, he became professor of mathematics and surveying at the Colorado School of Mines. In 1903 he was appointed engineer in the U.S. Reclamation Service and from 1911 to date has been in charge of the western section, C.P.R. Department of Natural Resources.

WILSON, JOHN MELVILLE, of Toronto, Ont., transferred from associate member to member. Mr. Wilson was born in 1883 at Toronto, and in 1908 graduated from the University of Toronto in civil engineering. He became assistant city engineer of Toronto on construction of waterworks, and was placed in charge of the installation of the high-pressure fire system. In 1911 Mr. Wilson started business as a contractor, building subways and waterworks, and engaging in general municipal work. At present he is district engineer at Toronto for the Department of Public Works, Ottawa, in charge of all work in Central Ontario.

YARROW, NORMAN ALFRED, of Victoria, B.C., elected associate member. Mr. Yarrow was born in 1891 at London, Eng., and educated at the University College School. He served three years at apprentice with Napier & Son, of London. In 1914 he became purchasing agent of Yarrows, Limited, Esquimalt, B.C., shipbuilders and contractors to the British Admiralty and the Canadian Government, and later was appointed general manager of the company.

"Discovery of manganese on Vancouver Island is being hailed on the Pacific coast as one of the most notable finds of minerals that Canada has known for some time," says the Toronto "Globe." "Mineralogists who have made inspections of the area in which the discovery has been made have stated that the property near Cowichan Lake is one of the finest prospects yet uncovered. Hon. William Sloan, Minister of Mines for British Columbia, expressed himself as much impressed with the latest mineral development at the coast. The first discovery was made in the vicinity of Shaw Creek, near the upper end of Cowichan Lake, on Vancouver Island. A subsequent discovery of a deposit of this mineral was found in the divide between the Cowichan and Chemainus Rivers, at a point readily accessible by aerial tramway of the Cowichan branch of the Esquimalt & Nanaimo Railway."