most part confined to the months of late spring, summer and early fall. This, and not a low rate of wages, accounts for the comparatively small earnings of brick-makers, which last year averaged only $303.

The activity in building operations last year is reflected in the increased output of lime, of which 2,633,500 bushels were made, as compared with 2,442,331 bushels in 1908. The value also went up to $470,858, as against $448,596.

The value of the building and crushed stone produced last year was $660,000, of which $228,000 worth was limestone used as flux in blast furnaces. The output of the stone quarries in Ontario varies from year to year, not only in accordance with the fluctuations in the building trade, but also in accordance with the demand for large public works. It is also adversely affected by the growing use of cement, which is being more and more applied to uses for which stone was formerly employed. The greater part of the product is limestone.

The only kind of cement now being made in the Province is Portland cement, the manufacture of the natural rock variety having come to an end in 1907. Of Portland cement, however, the output has been annually increasing since 1891, when the industry began. Last year there were made 2,303,263 barrels, valued at $2,897,348, as against 2,022,877 barrels, worth $2,417,769 in 1908, the average price for last year being $1.257 per barrel at the factory, as compared with $1.195 in 1908, an increase of $0.061 per barrel.

The number of drain tile made last year was 27,418,000, having a value of $363,550. Tile drainage is being more and more practised by the farmers of Ontario, who recognize the advantage of freeing their low-lying lands of surplus moisture, which retards the growth and maturing of their crops and invites early frosts. The production in 1908 was valued at $338,658.

The production of natural gas has much increased of late years. In value it amounted in 1909 to $1,188,179, an increase over the yield of 1908 of $199,563, and being the largest output yet recorded. For the last four years the quantity produced has been as follows: In 1906, 2,534,200 thousand cubic feet; in 1907, 4,155,900 thousand; in 1908, 4,483,000 thousand; and in 1909, say, 5,388,000 thousand cubic feet.

Calcium carbide is made by two companies, the Willson Carbide Company, Merritton, and the Ottawa Carbide Company, Ottawa. Together they produced 2,349 tons in 1909 as compared with 2,364 tons in 1908. The principal use of calcium carbide is, of course, the production of acetylene gas for illumination purposes, for which it finds considerable employment in small or isolated places where ordinary lighting gas is not available.

The production of corundum, which had been discontinued by the largest operating company in 1908, was resumed last year, and 1,508 tons of this mineral, crushed and graded to size, were turned out during the twelve months. The Manufacturers' Corundum Company, lessees of the works of the Canada Corundum Company, Craigmont, and the Ashland Emery and Corundum Company, Burgess Mines, were the producers.

The chief employment of corundum continues to be for abrasive purposes, for which it is eminently suitable, though in certain special uses it has to compete with such substances as carborundum, an artificial compound made by fusing silica and carbon in the electric furnace, also with garnets, etc. Notwithstanding its high contents of aluminium, no feasible method has yet been brought forward of reducing this metal from corundum.

Peat fuel was made to the extent of about 60 tons by J. McWilliam, M.D., at a plant in the township of North Dorchester, Middlesex county. Dr. McWilliam reports: "We spent the whole season putting in new machinery and collected 600 tons of dust, but only pressed about 60 tons, when the frost got too much for us."

High hopes have at various times been entertained of a successful solution of the problems presented by the manufacture of an acceptable fuel from peat, and many promising attempts have been made to realize these hopes. The crux of the question undoubtedly lies in the removal of the moisture, of the retention of which peat is extremely tenacious. If artificial heat must be resorted to for this purpose, the cost is usually raised to a point at which the resulting fuel is unable to compete with coal, regard being had to the calorific value of each. Probably the most hopeful method of utilizing the fuel value of peat is by the producer gas process, but this puts it out of the field of domestic fuels, and restricts its employment to manufacturing or industrial plants, which can be located near the bog from which the peat is taken. An immense quantity of carbon is lying dormant in the peat bogs of Ontario, and there is little doubt that some day an efficient fuel will be produced from them. It may not be, however, until coal and wood are higher in price than they now are.

We have only given in this article excerpts from Mr. Gibson's review. The purely mining features we have entirely neglected. The report clearly indicates Ontario's position as one of the first mining Provinces of the Dominion.

EDITORIAL NOTE.

In 1899 the Engineers' Club, of Toronto, was organized, and in 1902 incorporation papers were taken out enlarging the powers of the club. The object of this club, as given in their constitution, shall be the professional improvement of its members and the encouragement of social intercourse among them. Recently the Provincial Secretary has seen fit to again increase the power and privileges of this corporation, and shortly we hope to learn that the engineers of Toronto and Ontario will have at their disposal one of the most complete club quarters, a club that will not only include the social but the professional life of the engineer.

CRITICISM OF THE ENGINEERING SCHOOLS.

Science prints in a recent number the thoughtful and stimulating **Criticism of the Engineering Schools,** given before the Stevens Engineering Society by Professor Dugald C. Jackson, of the Massachusetts Institute of Technology,—a criticism which chiefly bears upon the fact that engineers display too little public spirit and are not so conspicuously associated as are other public men with political movements tending toward the general welfare. Have the engineering school curricula in this country been adequate in this particular? asks Professor Jackson, and have they brought to their students the breadth of human vision and the altruistic motives required to these activities. He hesitates to answer in the affirmative, and, the situation standing as it does, inquires what truly humanistic studies can be rightfully excluded from the list useful as preparation for engineering professional life. Our solicitude need only be exercised to see