

SOCIAL AMENITIES AT MINING TOWNSHIPS.

It is most gratifying to be able to record that in addition to the provision of bathhouses, &c., for the health and sanitation of the employees at coal-mines some of the coal-mine owners have recognized the benefits that would be obtained by providing facilities for those engaged in athletic sports. At Rotowaro, Pukemiro, and Glen Afton tennis-courts and cricket and football grounds have been provided, and at Glen Massey tennis-courts have been laid down. At Runanga a tennis-court and bowling-green have been provided, and steps are about to be taken to make a croquet-lawn. At Blackball, Tuatara, Shag Point, Ngakawau, Millerton, Granity, Kaitangata, and Nightcaps, tennis-courts are available, and in addition bowling-greens at Kaitangata and Nightcaps. At some of the places not only the miners but the local residents were largely responsible for arranging to provide these facilities.

While much has been done to improve the conditions at many of the mines there is still room for improvement at some of the mining towns.

It may also be mentioned that where tennis-courts and bowling-greens, &c., have been provided such have been made use of to a considerable extent, and those responsible for making such facilities available are to be highly commended for their efforts.

INVESTIGATIONS, NEW ZEALAND COALS.

The experimental work on the briquetting of coals which had been commenced in the Dominion Laboratory towards the close of 1924 was continued during 1925. A large amount of work was done, most of the more important coals in New Zealand being examined. It was found that good briquettes could be made from most of the lignites tried (Mataura, Bannockburn, Charleston, Taratu, &c.) without the use of any binder, but that this was not the case with brown coal and bituminous coal. A large number of binding agents were tried with the latter coals, and it was found that the best and most economical briquettes were obtained by using coal-tar pitch or bitumen. Briquettes made from bituminous coal with either of these binders are of very good quality and of moderate cost. In the case of brown coals such briquettes stand handling and weathering very well, but crumble in the fire. Experiments showed that this defect could be entirely removed by mixing the brown coal with about 20 per cent. of a bituminous coal. Briquettes made with such a mixture and a suitable amount of pitch or bitumen are of moderate cost and of excellent quality in every respect for household use. If the proportion of bituminous coal is increased to 50 per cent. of the mixture, the briquettes are free from the tendency to sparking so characteristic of Waikato brown coals and should furnish an excellent locomotive fuel.

Full particulars of the work done in this investigation are given in Appendices I and IA to the Fifty-eighth Annual Report of the Dominion Laboratory.

With a view to investigating the possibilities of increasing the market for small coal, representative samples of coal from Waikato, Reefton, Otago, and Southland were forwarded for special investigation and report upon their commercial and economic uses to Professor W. A. Bone, D.Sc., Ph.D., F.R.S., of the Imperial College of Science and Technology, London, the recognized authority in the Empire on the low-temperature carbonization of coal.

Professor Bone has since completed his investigations and has reported upon the results obtained to the Government.

The samples selected by Professor Bone for his investigations were from the Kaitangata, Mataura, Reefton, Waipa, and Rotowaro Collieries, the coal from these mines being considered representative of the coal in the respective districts.

The major portion of such report refers to a description of the samples, the moisture contents thereof, the proximate analysis of the dry coals, etc., and it is not necessary to repeat the details thereof in this Statement, but merely to refer to the conclusions arrived at, in respect of which the report reads as follows:—

“In my opinion the best prospect of utilizing these coals commercially would be either (i) as pulverized fuels for the firing of boilers or reverberatory furnaces, or (ii) as briquettes, after being crushed and briquetted with the addition of some 4 per cent. or 5 per cent. of pitch or other suitable binder. Speaking generally, probably a