specially purified for these experiments, in order to bring them into some accordance with the other graphites, as regarded percentage of ash. In selecting the standard, the choice lay between 20 and 22, for the reason however, that the latter was understood to be the most expensive, it was concluded that it would be scarcely likely to meet with such an extensive application in the manufacture of crucibles as the former, to which, in consequence, the preference was given. The figures given under method I. and II. are in both instances the mean of two closely concordant determinations; they represent the amounts of graphite burnt off as compared with 1·00 of that of the graphite employed as standard (Ceylon 20) when ignited under precisely identical conditions. In appearance the Ceylon graphites were, with one exception, undistinguishable from the Canadian, the exception being 19, the structure of which entirely differed from that of any of the Canadian specimens, the only one of the latter at all approaching it in this respect being 18, and this only in parts, the remainder of the structure being much coarser. As will be seen, these two specimens were the most combustible of the Ceylon and Canadian graphites. A specimen of Canadian graphite from Grenville, and closely resembling the Ceylon variety 22 in appearance, was unfortunately omitted from the experiments. There appeared to be some, if indeed it may not be said, a close connection between the combustibility of the graphite, and its resistance to mechanical division (pulverisation); those most difficult to pulverise being the least combustible.

Relative value of Canadian graphite as compared with that of Ceylon for the manufacture of black-lead crucibles.

From these experiments it will be seen that in respect to incombustibility the Canadian graphite may claim perfect equality with that of Ceylon; and that consequently—apart from any consideration of the proportion and nature of the associated foreign matter—it is in no wise inferior to the latter as a material for the manufacture of crucibles.

Prepared according to the present process, the "dressed graphite" (analyses 5 to 14 inc.,) obtained from the beds of the disseminated mineral (analyses 1 and 3) is apt to contain more or less carbonate of lime and oxide of iron; it has however been pointed out, experimentally, (analyses 12 and 14,) how readily these admit of removal by a very simple and inexpensive chemical treatment, leaving the graphite with a very small amount of ash, and that of a nature in no wise prejudicial to its application for the purpose here under consideration. That the graphite from this source, in itself compares favourably with that of Ceylon, will be seen from the above table, 1 and 3.