

The following is a brief outline of the method hitherto employed in the separation of the graphite from the material in which it is disseminated. It is the one which was adopted at the Lochaber Plumbago Company's works, and more recently, at the Canada Plumbago Company's works. The little information that could be obtained on this subject differs but in few particulars from the description of the process given by Sir W. E. Logan.* It will be seen that the dressing is based entirely upon mechanical principles.

Mode of extracting the graphite from the "Disseminated graphite."

The works include a stamping mill, round buddles, slime pits, etc., etc. The crude ore is stamped fine in water and then put through the buddles, by which the graphite and the rock matter associated with it are separated from one another according to their specific gravities. The former, being the lightest, gradually reaches the outer ring; while the latter, being heavier, remains in the centre. The graphite is, subsequently, charged into a reverberatory furnace and ultimately passed through the bolter; the gauze of which is of various degrees of fineness, according to the size required in each special grade.

CANADIAN GRAPHITE—DRESSED GRAPHITE.

The following seven examples of "dressed graphite" were received from the works of the Dominion of Canada Plumbago Company for the special purpose of examination. The material from which they were prepared was taken from a bed of "disseminated graphite," occurring on the twentieth lot of the eighth range of Buckingham. The results of the analysis of what was regarded as a fair average sample of this bed will be found given under analysis 3. The "A 0" grade was in the form of an impalpable powder, and from this they uniformly increased in size of flake up to "A 6" grade, which was the coarsest.

5. *Dressed Graphite.*

Grade known as "A 0."—Designed employment: electrotyping, pencils. After drying at 100° C. this specimen was found to contain:

Analyses of "Dressed graphite."

Ash per cent. 17.682.

Colour of the ash light-brownish-red; a portion placed upon moist turmeric paper manifested an alkaline reaction.

Hydrochloric acid dissolved out of this graphite a considerable quantity of iron, alumina, lime and magnesia, especially of the first named; no other constituents were sought for. This graphite contains some calcite.

* Reports of the Geological Survey, 1863-66.