

quantities of the various graphites, and compressing them into cylinders of equal length. The cylinders, which weighed, as near as possible, two grammes each, were twenty-six millimetres in length and seven millimetres in diameter. They had a beautifully smooth glassy surface, and were perfectly firm. The experiment was conducted in a precisely similar manner to that described under method 1. A cylinder of the standard graphite invariably accompanied a cylinder of the specimen under trial, being laid abreast of each other—one in either compartment.

CANADIAN GRAPHITE—DISSEMINATED GRAPHITE.

1. *Disseminated Graphite.*

From the twenty-eighth lot of the sixth range of Buckingham, The property of the Montreal Plumbago Mining Company. An exceedingly important deposit. The specimen examined was regarded as a fair average of one of the largest and most extensively worked beds of disseminated graphite in this whole section. The bed averages eight feet, and runs across the whole of this lot and into lot twenty-seven in the seventh range, (the property of the Buckingham Mining Company),—authority, Mr. H. G. Vennor.

Analysis of
"Disseminated
graphite" from
Buckingham.

The graphite, which occurs in scales, is so closely and evenly distributed through the rock as almost entirely to mask its nature. The mineral contains some calcite; the presence of a small quantity of pyrrhotite or magnetic pyrites, was also established. The powdered rock is attacked by hydrochloric acid; this acid, with the aid of heat, dissolved out 17.539 per cent.; the solution was found to contain:

Silica.....	very small quantity.	Lime.....	large quantity.
Alumina.....	very large	"	"
Iron.....	rather large	"	"
Manganese.....	small	"	"
		Cobalt.....	trace.
		Alkalies.....	not sought for.

The rock contains:

Graphite	27.518
Rock matter, soluble in hydrochloric acid.....	17.539
Rock matter, insoluble in hydrochloric acid.....	54.899
Hygroscopic water.....	0.044

100.000