

ARTICLES OBTAINED IN LONDON FOR EXHIBITION.

COAL.

Dr. Hector, C.M.G. F.R.S., Director of the Geological Survey of New Zealand—

TYPE SPECIMENS, ILLUSTRATING THE CLASSIFICATION OF NEW ZEALAND COALS:

A. Bituminous Coal (caking).

Specimens from Brunner Mine, Nelson. Much jointed, homogenous, tender, and friable; lustre, pitch-like, glistening, often iridescent; colour, black with a purple hue; powder, brownish; cakes strongly, the best variety forming a vitreous coke, with brilliant metallic lustre; average evaporative power of several samples, $7\frac{1}{2}$ lbs. of boiling water converted into steam per each pound of coal. Occurs with grits, and conglomerates of upper Mesozoic age, Buller, Grey, and Collingwood Coal Fields on the west coast of Nelson. In seams from 2 to 20 feet in thickness.

B. Semi-Bituminous Coal.

Specimen from Pakawau, Nelson. Compact, with laminae of bright and dull coal alternately; fracture irregular; lustre moderate; cakes moderately, or is non-caking. Occurs in thin irregular seams in sandstone of upper Mesozoic age. Kawa Kawa and Wangarei, Auckland, Pakawau, Nelson, Mount Hamilton, and Waikawa, Otago. Rarely cakes strongly. Evaporative power, commonly $6\frac{1}{2}$ lbs.

C. Glance Coal.

Specimen from Hill's Drive, Selwyn, Canterbury. Glance coal, is non-caking, massive, compact, or friable; fracture cuboidal, splintery; lustre, glistening or metallic; structure, obscurely laminated; colour, black; does not form a caking coke, but slightly adheres. A variety of brown coal, altered by faulting or igneous rocks, and presenting every intermediate stage from brown coal to an anthracite. Preservation Inlet, and Malvern Hills.

D. Pitch Coal.

Specimen from Upper Buller, Nelson. Structure, compact; fracture smooth, conchoidal; jointed in large angular pieces; colour, brown or black; lustre, waxy; does not desiccate much on exposure, nor is it absorbent of water; burns freely, and contains resin disseminated throughout its mass. Waikato and Wangaroa, Auckland; West Wanganui, Nelson; Shag Point, Otago; Morley Creek, Southland. Evaporative power 4.2 lbs.

E. Brown Coal.

Specimen from Kaitangata, Otago. Rarely shows vegetable structure; fracture irregular, conchoidal, with incipient laminations; colour, dark brown; lustre, feeble; cracks readily on exposure to the atmosphere, losing 5 to 10 per cent. of water, which is not re-absorbed; burns slowly; contains resin in large masses. Occurs generally throughout the islands. Evaporative power 4.2 to 5.6 lbs. Saddle Hill, Otago. Evaporative power 5 lbs.

Graphite.

Specimen from Collingwood, Nelson. In the crude state, as extracted from veins adjacent to granite, and also manufactured and made into packets for sale by the New Zealand Plumbago Company.