The product of copper in Canada is, it will be seen, very small, but there are indications that the output will soon be materially increased ; the copper is there, and considerable capital has lately been attracted to its development.

666. In 1883 the first discovery of a deposit of nickeliferous pyrrhotite was made while the Canadian Pacific Railway Company was making a cutting through a small hill near Sudbury, in the district of Algoma, Ontario, and since then, though the first discoveries were very much exaggerated, about twenty promising deposits have been discovered in the district, and there is no doubt that this ore is present in large quantities. Operations at present are principally carried on by four companies, viz. :—The Canadian Copper Company, H. H. Vivian & Co., the Dominion Mineral Company and the Drury Nickel Company. The ore, which contains on the average about 2·25 per cent of nickel, is roasted and smelted into a copper-nickel matte, the usual composition of which, from average analysis, is about as follows :— Copper, 26·91 ; nickel, 14·14 ; iron, 31·335 ; sulphur, 26·95, and cobalt, ·935. The matte is also said to contain some ounces of platinum to the ton. The amount of fine nickel in the matte produced at and shipped from the Sudbury mines in 1891, was 4,626,627 pounds, which at 60 cents per pound was worth $2,775,976 ; in 1892 the quantity was 6,057,482 pounds, valued at 58 cents per pound, or $3,513,339, and in 1893, 3,992,982 pounds, valued at 52 cents per pound, or $2,076,351. The world's annual consumption of nickel has been estimated at about 800 tons, and, previous to these discoveries, the supply came almost entirely from the French colony of New Caledonia. The consumption of nickel, however, is likely to be very materially increased by the use of it in alloy with steel, to increase the strength and quality of the latter. Experiments have been made in France and Germany, which have all been successful, and some very important experiments have also been made at Annapolis, U.S., more particularly with reference to the use of nickel steel for cannon and armour plate, which seem to have successfully established the superiority of nickel steel for these purposes. Further tests made at Pittsburg showed that the elasticity and tensile strength of nickel steel were almost double the limits reached in the best grades of boiler-plate steel, and the new metal seems likely to be used, not only for armour plate, but for hulls and engines of ships, and indeed for all purposes where a high grade of steel is now used. It is also said to be much freer from both corrosion and fouling, for hulls of ships. As a result of the experiments,