

turbines of 100 horse power, driving a four pole compound dynamo made by the General Electric Power and Traction Company. The house is large enough to duplicate this plant when necessary, and pipes, watercourses, &c., are already laid for this purpose. The electric current is conveyed by two bare copper conductors on poles for six furlongs, to where it enters the mine at an elevation of 1,850 ft. above the sea level. The conductors from this point are insulated, and covered with lead. About three-quarters of a mile in the mine, or one and a-half miles from the dynamo, a 9 horse power series motor is employed to wind ore from a set of sinkers. Further into the mine another quarter

wire, and the current is fed to the locomotive by four contact pulleys. The difficulties encountered in fixing this plant and wiring the level can only be appreciated by the practical man. All main stations in the mine are lighted by incandescent lamps in series of six.

### Our Mineral Exhibits at the World's Fair.

The display made by Canada at the World's Columbian Exposition, has been one that, on the whole, did her credit in the eyes of the world. Nevertheless, it is to be regretted that the

these, there were also displayed an excellent exhibit of economic minerals, among which stood out prominently the very fine trophy of graphite and its manufactured products sent by Mr. W. H. Walker, of Ottawa.

The collection of rock specimens, exhibited by the Geological Survey, in charge of Dr. Selwyn, contained upwards of 1,400 exhibits of rocks from definite localities and formations in Canada—from Labrador and Nova Scotia, on the East, to Vancouver Island, on the West; and from the international boundary line on the South, to the most northerly districts of this continent. Every province and known or explored district was represented.



The Exhibit of the Canadian Copper Company, Sudbury, Ont., at the World's Fair, Chicago.

of a mile, and down 120 yards at the bottom level, is fixed another 9 horse power motor, working a three-throw pump, forcing the water 360 ft. in height. About midway between these motors there is fixed a dynamotor, which reduces the pressure from 600 to 250 volts for working an electro-locomotive in the lowest day level of the mine, through which runs the water pumped from the 120 yards level and the whole of the water used by two hydraulic winding engines. four horses formerly worked this level. The locomotive runs with twelve wagons, the total weight when loaded being 18 tons, and does the work of the four horses with the greatest ease. The conductors in the level are phosphor bronze

natural and economic products exhibited by the Canadian Geological Survey in the Mines and Mining Building were not shown in a more compact form and to greater advantage, as might very well have been the case. The Geological Survey, the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick and British Columbia, together with the North-West Territories, were all represented within the Fair grounds. Manitoba had an interesting exhibit, but just outside the grounds. Of these—the Geological Survey collections may be described as being systematic and orderly—of a more technical and scientific character than any of the others, as can readily be expected. Yet, with

A notable collection of fossil remains, comprising some 2,400 specimens, illustrating the life history of the various formations in the earth's crust, as it is known in Canada from earliest Cambrian times was also shown. These fossil remains enable the prospector or geologist to tell whether he is above or below the coal line or in the neighbourhood of the petroleum or gas-bearing rocks, etc. It was the most complete collection of fossil remains observed in the Mining Building and was a credit to Canada.

Apart from valuable economic minerals we have, in Canada, an almost inexhaustible supply of gems, precious stones and semi-precious stones that are an interesting study in themselves.