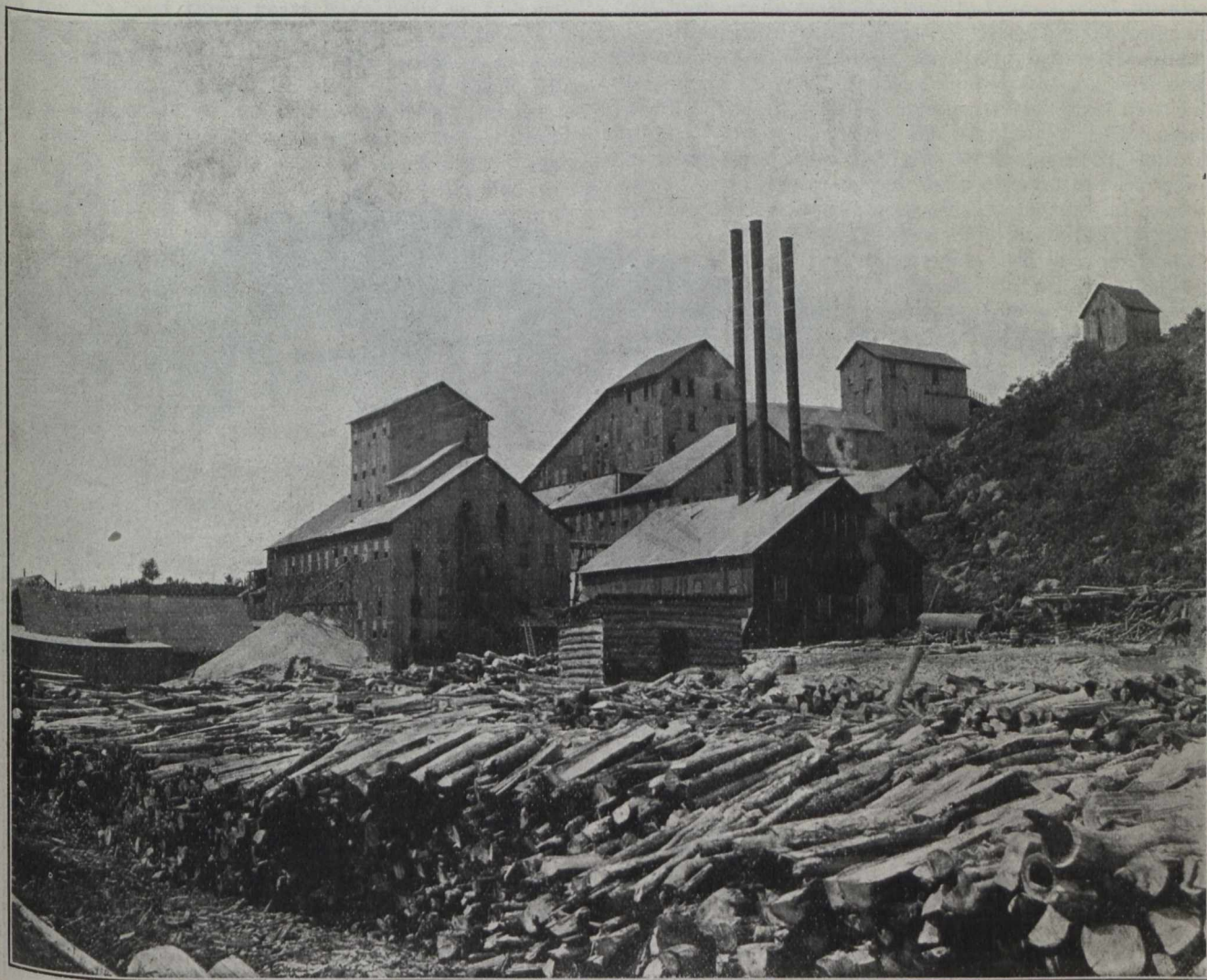


the assay results the bags are stocked in position in the finishing department. The finishing department performs three functions. It thoroughly mixes the product so as to give a uniform material complying closely with fixed standards. It re-screens each size so as to eliminate the results of carelessness in the grader. It automatically samples every lot of thirty bags. The finishing foreman, knowing the assays of the contents of his bags, mixes thirty hundredweight at a time in a hopper. From this hopper the corundum passes in a thin flat stream past a draft of air, which blows away the mica. It then passes over a set of shaking screens, which screen out both undersize and oversize, and from this it passes to a bin whence it is drawn off past an automatic samp-

sion of the Grand Trunk Railway, and in summer to the same place by barge and steam tug. From here they are shipped to all parts of Canada and the States, and to stock storehouses in Manchester, Paris, Antwerp and Hamburg for distribution in Europe.

In 1906 the mill produced 2,900 tons of finished grain corundum, and is being constantly improved and added to, to handle both larger tonnage and lower grades of ore. During April and May a little short of 7,000 tons of rock were crushed each month. Rock containing as low as three per cent. corundum is successfully treated.

Corundum is the second hardest mineral, the only other equalling or surpassing it being the diamond. On account of this hardness, and on account of its peculiar



THE MILL OF THE CANADA CORUNDUM COMPANY

ler direct into canvas bags, which are filled to contain 100 pounds of corundum. These bags are then sewn up by machinery and marked for size and lot number. The samples are tested by hand screens for accuracy of sizing, by the eye for pyrites and hornblende contents, by a magnet for magnetite contents, and in the assay office for both corundum and iron content. On the receipt of the assay results, the bags are marked G or G1, G grade being for silicate wheels and the polishing trade, and G1 for the vitrified wheel trade. A sample weighing about half a pound representing each lot of thirty bags is stored for reference. In the winter the bags go by sleighs 21 miles to Barry's Bay on the Ottawa Divi-

form of fracture, it makes an ideal abrasive material and is used as such both for grinding and polishing all over the world in all classes of work. As with nickel, cobalt, mica and asbestos, Ontario holds a unique position in regard to corundum. She has practically unlimited deposits. The Canada Corundum Company has extensive areas in six townships, besides the one on Craig Mountain, and produces from this one deposit considerably more than all the rest of the world.

Before 1900 the hard abrasive field was held almost entirely by emery, which is a natural product, consisting of a mixture of corundum and magnetite and hematite. Carborundum, the trade name for carbide of sili-