

STORIES of New Jersey

fore long the large scale manufacture of zinc oxide was begun in America. Zinc oxide could thereafter be made directly from the ore.

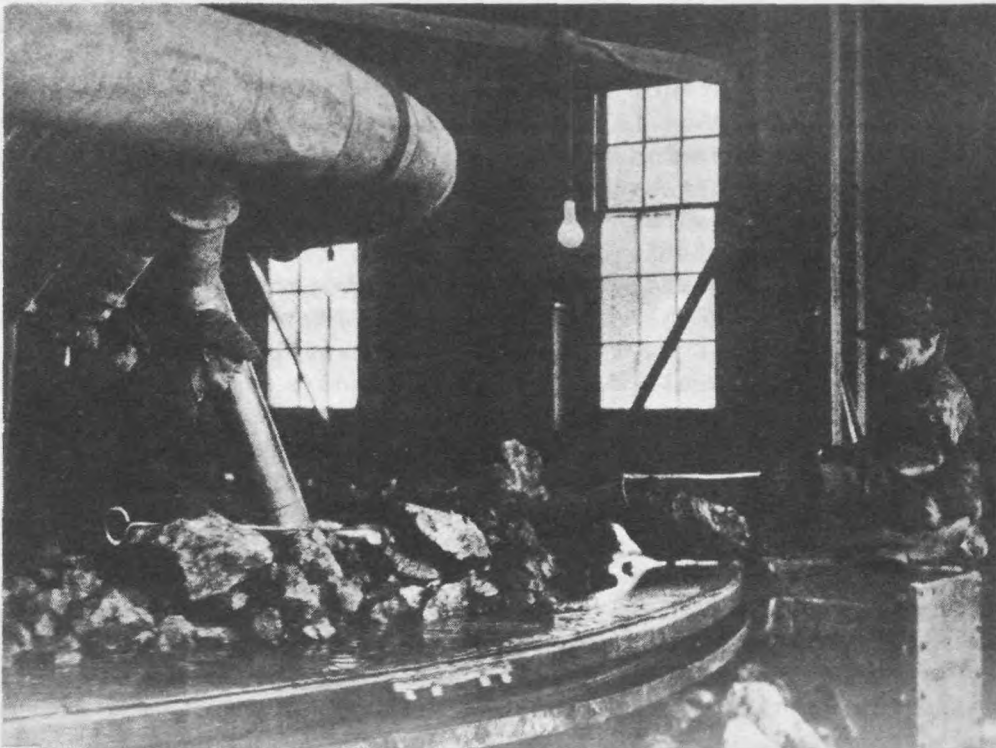
Wetherill invented the process used since 1852. Zinc ore mixed with coal is distributed over burning coal on a perforated grate, and a strong air current is sent up through the grate. White zinc oxide is formed. From the furnace these powdery floating particles of zinc oxide move through a system of cooling pipes to what are known as bag rooms. Here the zinc oxide, which looks somewhat like ordinary flour, is caught in muslin bags, about 45 feet long and 20 inches in diameter. This collecting apparatus has been changed very little since Samuel Jones invented it for use with Wetherill's furnace process.

Plants for making zinc oxide were opened in Bayonne and Jersey City. They took most of the output of the Jersey zinc mines for this purpose. The ore was mined slowly and laboriously by men toiling in faint candle light or the glow of oil lamps in the pits at Franklin and Ogdensburg. With crude explosives, picks, shovels and crowbars they crumbled the tough rock into pieces small enough to be carried to the surface. Piled on heavy wagons, the ore traveled over the hills to the canal boats at the northern end of Lake Hopatcong, from where it was shipped slowly along the Morris Canal to Jersey City.

For fifty years property rights and mining concessions in Sussex County were in a muddled state. Lawsuit followed lawsuit to determine ownership. The rights to sections of land had been leased to one company for mining zinc, while on the same property another company had bought the right to dig for manganese. No one realized that the two metals were combined in the same ore.

By 1897 all these cases had been settled by the courts, and in that year the various small mining companies and their refineries consolidated with the New Jersey Zinc Company, which was formed in 1848 at Ogdensburg. The company built a large zinc-refining plant at Palmerton, Pennsylvania, close to the coal fields, and the ore from Sussex County was carried there by railroad.

At Franklin and Ogdensburg the veins of zinc ore lie in the earth like



Separating waste rock from zinc ore at the "picking table."