

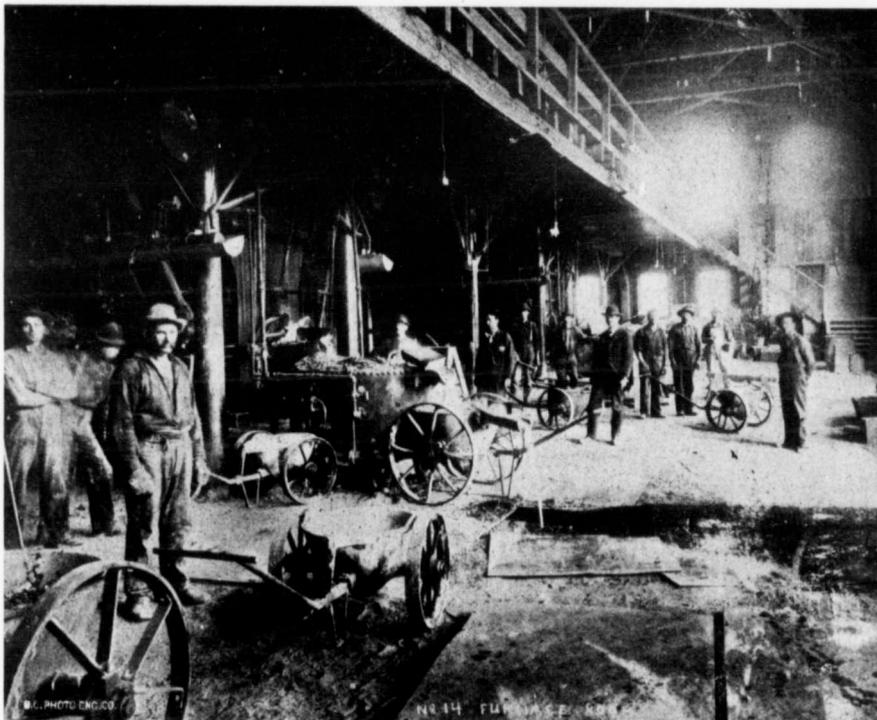
serve. There is room in the building for another blower which has been ordered with the new plant. Each of these blowers is driven by an 88-horse-power variable speed Westinghouse induction motor, which is belted directly to the motor.

It is well to mention just here that the entire smelter and works have been duplicated and are now in process of erection. It is unnecessary to add the Gates Iron Works have been the makers of the duplicate plant as well as the original.

The main sampler building is 64 x 70 feet, and is surrounded on three sides by ore bins. The ore train as it comes into the smelter will be carried by an incline to a series of receiving bins parallel to the front of the samp-

again sampled by a Snyder sampler and then delivered on steel plates, where it is again cut by hand, and then goes to a fine sample grinder.

The matte will soon be treated by a complete matte-converting plant now on order, but up to the time the new plant is installed the matte will be shipped after being brought up to 45 or 50 per cent. copper. This shipping matte, after having been cooled is crushed by a 7 x 10-inch Blake crusher, which is placed in one corner of the furnace building on the furnace floor. This crushed matte is raised by an ordinary cup elevator to a special matte sampler. This matte sampler building is built on the corner of the furnace building and is 26 x 30 feet. The building is so arranged that the crushed matte can be sampled automatically or by hand.



THE GRANBY SMELTER—FURNACE ROOM.

ling works, 23 feet above the main floor, and 33 feet distant. These receiving bins will have a total capacity of 1,000 tons. The bins are filled directly from the cars, which have a bottom dump. During the day the ore is taken from the receiving bins by small iron cars, which dump into No. 5 Gates gyratory crusher. This crusher has its opening a little below the floor of the sampling works and crushes a ton at a time. After this rough crushing, which reduces the ore to the size of a man's fist, it is elevated to the top of the building by a continuous steel bucket elevator. It is next sampled by a Snyder automatic sampler. The bulk of the ore is distributed to the bins on three sides of the sampling works by a special cast-iron spout. After being cut the sample passes to a 7 x 10-inch Blake crusher. Once more it is cut by a smaller Snyder sampler, and the sample is delivered to a set of 18" x 10" rolls after which it is

The lower part of this building contains four bins holding about one car of matte each.

When the works are increased in a year or two it is proposed to put in a matte-converting plant and to ship converted copper. Next spring a roasting plant and, if it is deemed desirable, a Briquette machine will be installed. Plans have already been drawn up for a roasting building and Briquette plant 60 x 128 feet, but nothing will be done until it is known exactly what capacity will be required. In any case roasters cannot be delivered for six months. For the present 50 per cent. of the ore will be roasted in piles.

The works contain a carpenter shop, and planing mill 42 x 48 feet. The machine shop, 28 x 50 feet, contains two lathes, drill press, planer, bolt cutter and pipe machines. There is also a blacksmith and repair shop 28 x 40 feet, containing punch, shears, forges and steam