

Fig. 8.—Machine Shop.

set adjoining the 15 cwt. and 7 cwt. steam hammers. While situated alternately down the western side are a series of heating furnaces, each in juxtaposition to a (1) bulldozer for forming 10" x 1" truck bolsters; (2) forming machine for street car end sills; (3)  $\frac{1}{2}$  to  $1\frac{1}{2}$  inch bolt heading machine (Acme Machinery Company, Cleveland, Ohio); (4)  $\frac{1}{2}$  inch. to  $1\frac{1}{8}$  inch rivet forming machine (American Machinery Company, Willoughby, Ohio); (5)  $\frac{1}{2}$  inch to 1 inch nut-making machine (National Machinery Company, Tiffin, Ohio); (6) triple "rider" hammer for forming insulator pins (made by Canada Foundry Company—Harkom's patent); (7) 1 to  $1\frac{3}{4}$  inch nut-making machine (Ajax Machine Company, Cleveland, Ohio). This blacksmiths' shop is a well conceived and admirably planned department.

At the south end of blacksmiths' shop is a four story building 100 x 60 feet, on the ground floor of which is the general stores office, together with racks and bins for nut

and bolt iron, tool steel, brass, lead, etc. The second floor is reserved for the storage of smaller parts of hydrants, pumps, compressors, Locos; while on the third floor are machines for threading, grinding and finishing nuts, screws, and cap screws; and shelves, bins, and other receptacles for storing same.

On the top floor is the general screw and nut factory (Fig. 11) and tool room for this department, where 50 hands are employed in the making of nuts, screws, studs, tap bolts, etc.

In close proximity to the screw and nut factory is the power house, equipped with a 350 horse-power 16 x 23 x 20, Robb-Armstrong tandem compound steam engine, and D. C., 300 horse-power, C. G. E. generator; also an 8 x 13 x 20 x 15 vertical, triple expansion steam engine (Madison, N. Y.)

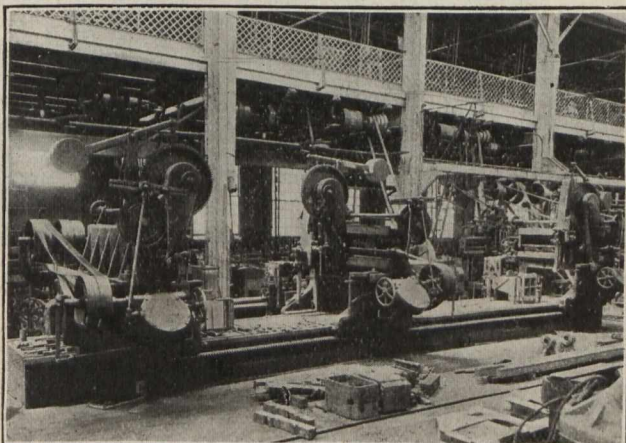


Fig. 9.—Triple-Headed Slotter.



Fig. 10.—Blacksmiths' Shop.