

**MOTOR DRIVEN ROTARY SLOTTING-MACHINE.**

The Union Pacific Railway has just been supplied with a double rotary slotting-machine, which was built specially for that road by the High Duty Saw & Tool Company, Eddystone, Pa. The machine is designed for use in slotting forged steel crank shafts, connecting rods and links, but

up with phosphor bronze tapered shoes. A removable table with screw adjustment for setting work to the line is a feature of the machine. On it are shown mounted special "V" stands and rest blocks with clamps and bolts designed especially for setting and firmly holding crank shaft work while being slotted. These fixtures are removable, so as to leave the table underneath clear for bulky work, or the

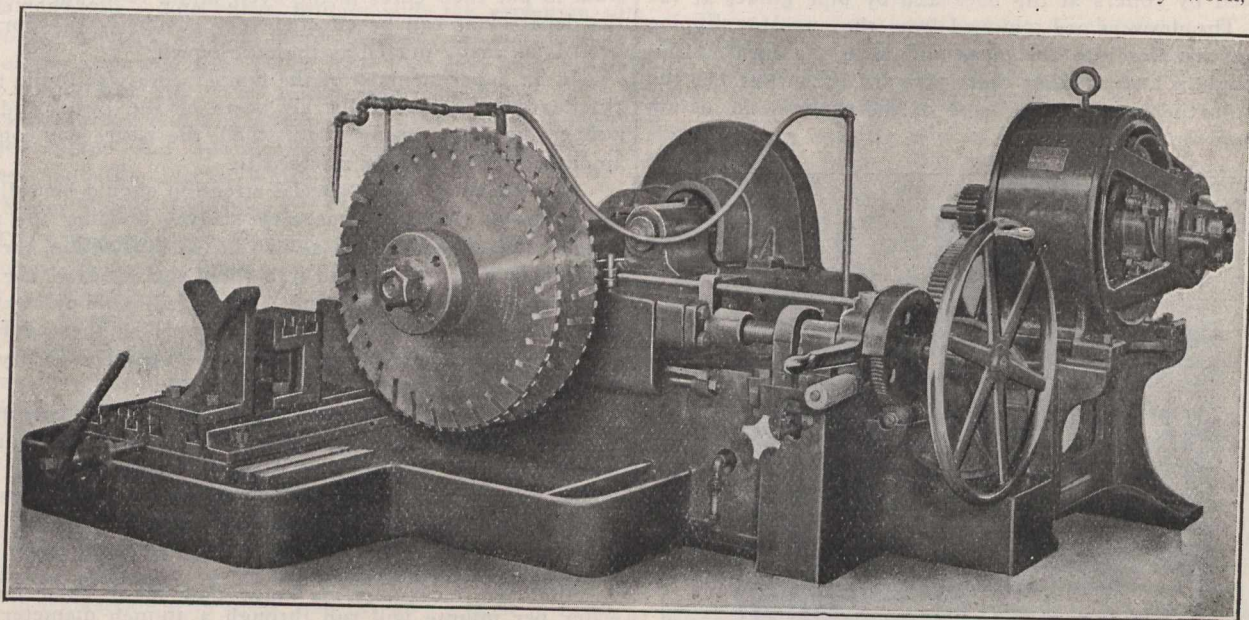


Fig. 1.—Front View of Machine.

it can also be used to cut off axles and miscellaneous straight stock by the removal of one of the saw blades. The machine operates two "Tindel" high duty, high speed steel inserted teeth milling saws. The milling blades are 36 inches diameter, and have sixty inserted cutters each of high speed steel. The slotter is directly connected to a Westinghouse direct-current 2 to 1 motor of 15 h.p. capacity. The

mounting of other special fixtures for holding a variety of work. A liberal reservoir for a supply of drilling, or other compound and an automatic pump with flexible piping keep a liberal stream for cooling and lubricating each milling blade while the machine is in operation. Troughs cast around the bed of the machine collect and return the lubricating fluid to the reservoir and pump.

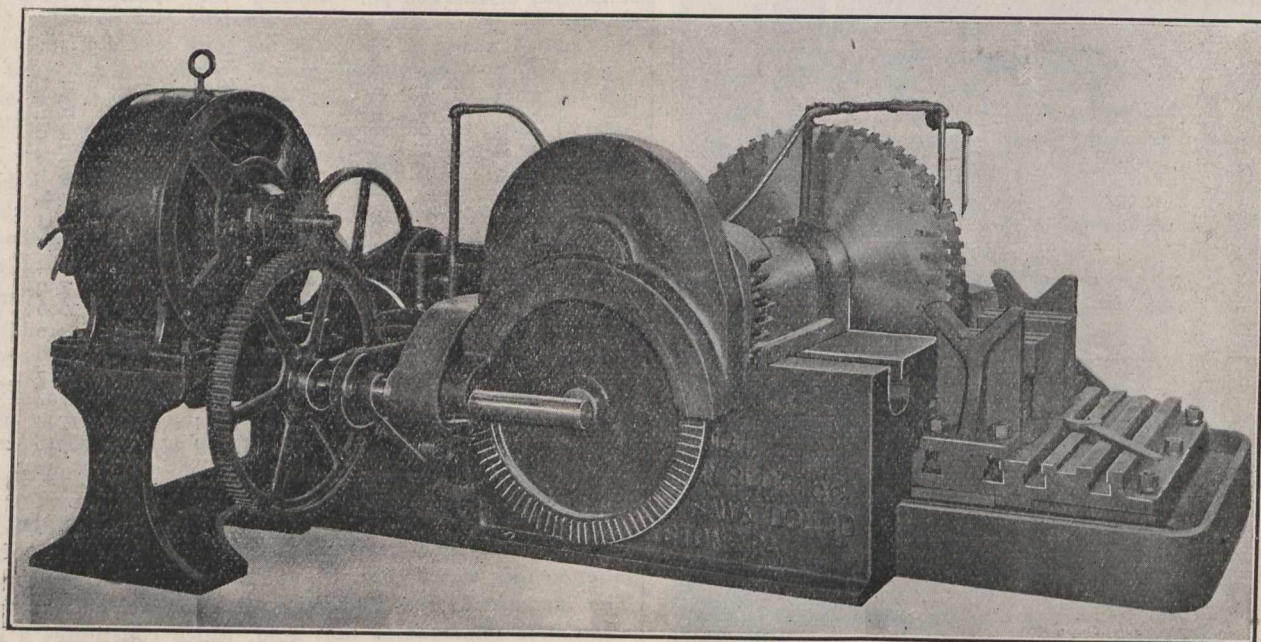


Fig. 2.—Back View of the Machine.

motor is attached to the driving shaft of the machine, through the gear and spur-pinion, as shown in the back view of the illustration, fig. 2. This arrangement gives power feeds ranging from  $\frac{3}{8}$  in. to  $1\frac{1}{8}$  ins. per minute, both saws feeding simultaneously.

Following this company's system, no worm or worm gearing is used in the drive. All driving power is transmitted to the saw blade through straight and bevel gearing. Thus the enormous friction generated by worm gearing under heavy feeds is eliminated, and the frequent renewals of costly worm wheels obviated. The housing of the machine is massive. The saddle carrying the arbor is heavy, has large surface bearing on the table and is fitted to it with underlock cast solid. All wear on saddle or table is taken

The machine has capacity to cut double slots spaced up to 10 inches wide and 11 inches deep. On steel up to .45 carbon the machine driven moderately cuts slots of these dimensions in fifteen minutes.

A project is on foot for the construction of a second Suez Canal, supported solely by British capital. It is said the project has passed the speculative stage, and has taken definite form. A concession will be granted in a few weeks. This will place the Bagdad Railway, which was intended to cut into British influence in Asia Minor, and be a menace to India, in a second place. The Germans consider the project a checkmate to their Asiatic ambitions.