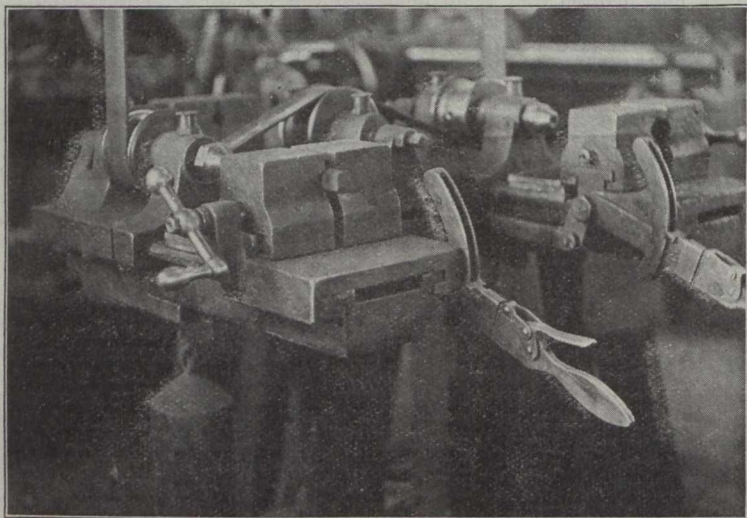


Railway Mechanical Methods and Devices.

Twin Tell-Tale Hole Drilling Machine at Pere Marquette Railroad Shops.

The P.M.R. shops at St. Thomas, Ont., have in use a tell-tale hole drilling machine for drilling tell-tale holes in staybolts, which is illustrated herewith. It is of the twin type, each machine alike in



Twin Tell-tale Hole Drilling Machine.

all particulars. The two parts are mounted on a cast iron frame, and both are driven from a common belt, running over a spindle pulley and intermediate idler wheel. The head is similar in construction to that of a light lathe. On the near end are carriages, each equipped with a double vise jaw, operated by a cross screw and handle. A weight suspended from the under side feeds the carriages forward automatically, and

Wheel Lathe Features in Grand Trunk Railway Shops.

On the passenger car wheel lathes in the G. T. R. shops at Stratford, Ont., there are several interesting departures in the equipment for expediting the work, four of which are shown in the accompanying illustra-

tion at d. The wheels to be turned are brought in on the entry track, raised by the jack a, moved forward on the latter until in a position to be lowered on the elevated rails c, rolled into the lathe chuck, the inner ends of the elevated rails raised, when the journals can be chucked, and the machine set up as usual.

The tools are chucked in an air chuck

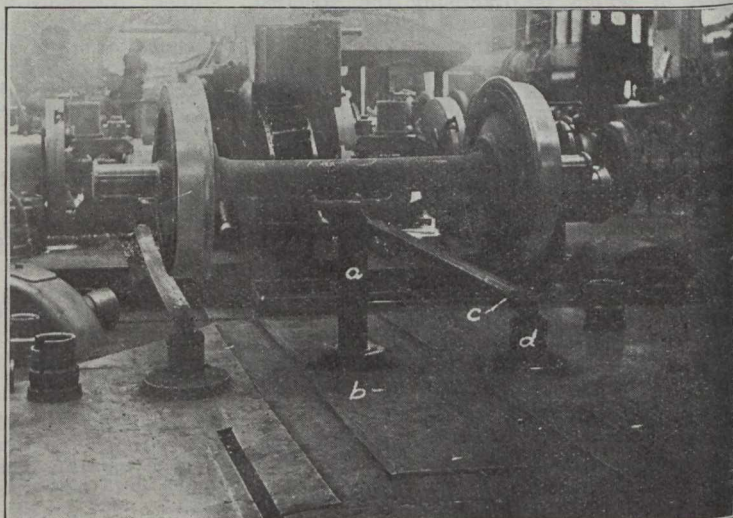


Fig. 1.—Mounting Wheels in Passenger Car Wheel Lathe.

tions. For mounting the wheels in the lathe for turning, the arrangement shown in fig. 1 is employed on one of the lathes. The whole floor in front of the lathe is laid with steel plating, with rails leading up to within about 8 ft. of the lathe as shown in the foreground. Between the tracks there is the travelling pit jack a, which moves in a floor channel covered by the plate b, which travels with the jack. The limits of

of somewhat different design from the commercial pattern of air chuck, and which was made in the shops. The chuck consists primarily of an air cylinder a, mounted on a bracket on the rear of the tool carriage as shown in fig. 2. On the front of the tool stand there is a heavy screw and nut b, bearing down on a clamp c. The latter is prevented from dropping when the tool d is not in position, by the coiled spring

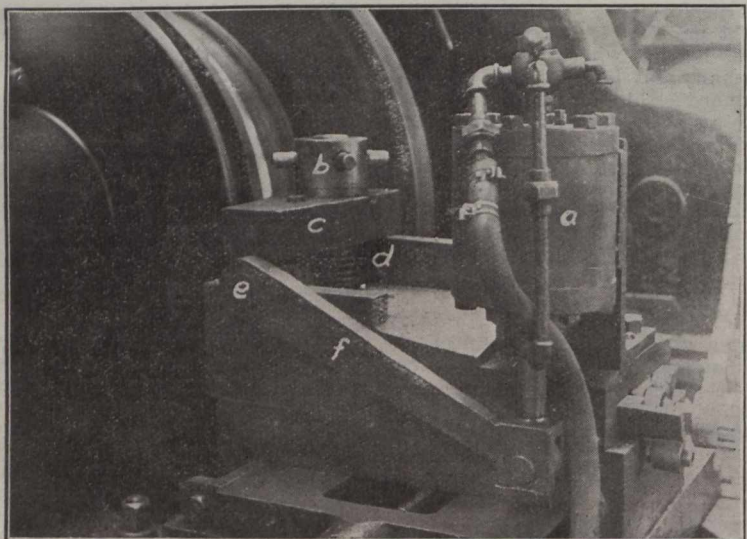


Fig. 2.—Air Clamp for Tools in Passenger Car Wheel Lathe.

when the drill has entered to the correct depth, the carriage is run back by hand by means of the handle on the quadrant, and is locked in the back position by a finger on the quadrant, when the staybolt is inserted. It is then released, and the carriage feeds forward, the one operator being kept busy feeding one head while the other is drilling, so that the process is practically continuous.

the jack movement are from a position over top of the far end of the entry tracks, and the near end of the elevated tracks c, which are T iron sections, hinged at the near end on pedestals d, the far ends terminating on the other side of the centre line of the lathe. In the bed of the lathe under the end of these rods there is an air cylinder by means of which the elevated track may be raised or lowered, pivoting about the



Fig. 3.—Tools for Tire Turning in Passenger Car Wheel Lathe.

around the bolt b under the clamp c. Under the near end of the clamp c there is a short rod e, on the far end of which there is a small cam, bearing up against the under side of the near end of the clamp c, and actuated from the air cylinder through the lever f. The introduction of the cam and rod in conjunction with the air cylinder is a novel departure from the usual air clamp design with the air cylinder directly under