

smith the required stock, charging it in the usual manner. The object of this arrangement is to obviate the necessity of a couple of men making several trips back and forth between the blacksmith shop and the stores department to bring over a few bars of stock, the stock being now kept in the place where it is required. It is unloaded directly from the supply car into the rack just as conveniently as in the stores building.

The machine shop adjoins the blacksmith department to the south, occupying the

the right in fig. 9, and three armature tables, one of which is in the immediate foreground, and the others in the left background. Along the west wall are fitters' benches, and along the south wall, on two benches, are mounted the taping machines, and other equipment for finishing the armature and field coils. The end of one of these latter benches is shown in the left foreground of fig. 9.

Circling the armature department is an overhead I beam trolley, shown in fig. 9, which travels around over the armature

and direct connected, and the other is 20 h.p. and geared. The air storage tank, 37 ins. diameter and 12 ft. high, is located in the corner. The compressed air from the compressors in the original installation was forced directly into the tank, but as trouble was experienced with condensed water in the air, a cooler has been introduced, consisting of two cast iron headers between which the air flows in small piping, the heat radiating, and the water distilling and collecting at the bottom, where it can be drawn off. This

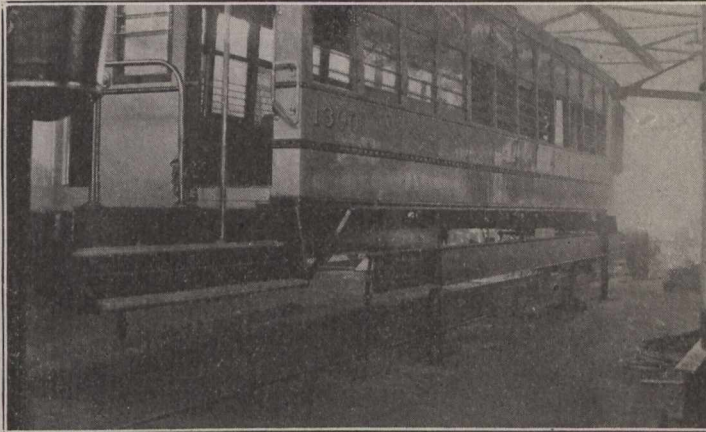


Fig. 6.—Car Hoist supporting Car Body.

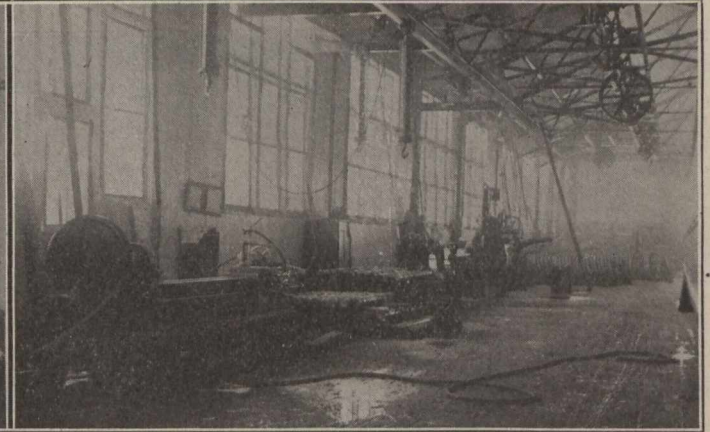


Fig. 7.—Arrangement of Wheel and Axle Shop.

whole central portion of the east side of the shop, in an area 71 by 100 ft. The machine equipment consists of the following tools: 3 spindle drill, 24 in. lathe, three 20 in. lathes, 15 in. lathe, wet tool grinder, 24 in. lathe, horizontal boring and milling machine, grindstone, power hack saw, 34 in. drill, 26 in. drill, double head bolt cutter, 20 in. drill, single head bolt cutter, 3 spindle drill, shears, 2 babbitt melting pots, two 24 in. shapers, planer, buffer, turret lathe, and speed lathe, all arranged as laid down in fig. 3. The drive for these several machines is from over-

tables and stands in the path shown in fig. 3. The armature to be repaired is brought in from the left in the direction indicated, from the track leading from the transfer table, and placed on the first armature table. The armatures from there are picked up as required, and placed on the stands, and when repaired, removed to the second armature stand, ready for removal to the point of entry, and thence to the awaiting trucks by way of the transfer table. The armatures thus make a complete belt line, with a constant forward movement.

cooler is located in the connection between the compressors and the tank on the outer wall of the room. These compressors deliver at a pressure of 80 lbs. For rivetting, 100 lbs. is required, so the shop is provided with a car set for boosting the air from the line pressure of 80 lbs. to 100 lbs.

The room adjoining is the tool room, and in addition to carrying the usual assortment of small tools, etc., contains a tool room grinder and a drill grinder. The entrance is from the shop, and in that wall, there is a delivery window for hand-

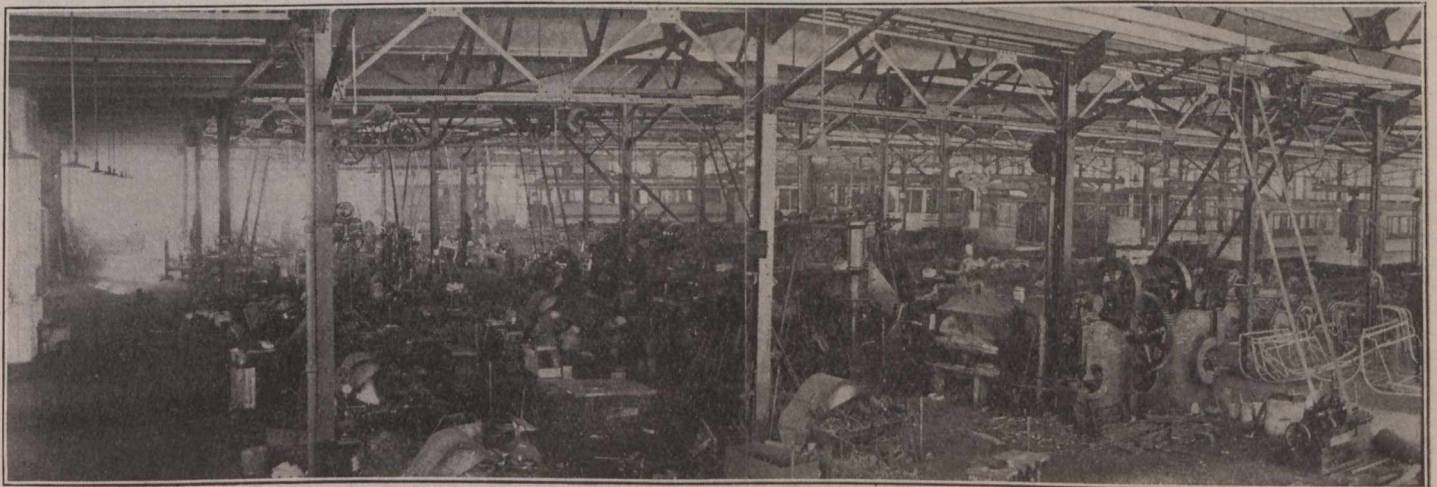


Fig. 8.—Interior View of Main Building, showing Blacksmith Shop, and Overhauling Space in Background.

head shafting, the machines arranged in groups for group drive.

The armature department occupies the south easterly section of the shop, and is the portion shown in the immediate foreground in fig. 9. The tool layout in this shop is shown in fig. 3, and includes the following machines: 18 in. lathe, 22 in. lathe, wet tool grinder, commutator slotter, 2 spindle drill, 20 in. drill armature bander, printers' cutter, and universal miller. In addition there are seven of the usual armature stands shown to

Built out from the south east corner of the shop, there is a small room containing two impregnating tanks and an oven for the treating of the armature and field coils.

About midway along the east wall, fig. 3 shows a projecting wing, which is divided off into rooms. The southerly room contains the heating equipment for the part of the shop east of the transfer table. This is made a local power room, for along the south wall of this room are located two compressors, one of which is 19 h. p.

ing out the tools.

The foreman's office is housed in the room adjoining, which it will be noticed is bayed out into the shop, giving a more comprehensive view of the shop interior. Adjoining the foreman's room to the north, is the lavatory, which is a splendid example of shop accommodation. Down the centre, next to the windows, is a double row of washbasins, provided with hot and cold water, and along each wall is a row of urinals, with the balance of the wall length taken up by closed in water