

under gear of the car can be lowered, and run along to the centre of the overhauling pit, where the parts can be raised from the pit by the jib cranes on the adjoining posts, there being a jib for each pit. The jibs and overhauling section are shown in the background in figs. 8 and 9. It will be noticed that the trucks as run out from under the cars at the hoists, are spotted over the pits in the overhauling section, shown at the far end of the pit, fig. 6, and there dismembered when required. On low benches adjoining, the motors and equipment as

transfer table and brought down the shop to this track, adjoining the wheel and axle department. Between the axle straightener and the wheel boring mill, there is a space used for the interior storage of wheels before and after machining, stacked in piles out from the wall as in the background in fig. 7. A stock of wheels for this department is maintained in a small frame building across the outside track from the side entrance.

The blacksmith shop occupies that portion of the shop in the immediate fore-

The blacksmith shop is equipped with a liberal supply of machines for the efficient handling of all classes of repair work. This equipment consists of the following: cold saw, punch and shear, 4 by 2 ft. oil furnace, air hammer, 6 ft. square oil furnace, bulldozer, dry grinder, and 6 down draft forges. The forced draft and exhaust fans for these six forges are located along the north wall, driven from the line shafting of the wheel and axle department. The exhaust from the forges is discharged through a pipe that rises to the roof directly over



Fig. 4.—Covered in Transfer Table which centrally divides the Shops.

removed may be mounted and kept conveniently together while undergoing repair. The parts that require machine or forge work can be brought across into those sections in front of the overhauling department.

Along the north wall of the shop is located the wheel and axle department. The layout of this is shown in fig. 3, and the arrangement in fig. 7. Ranged along the wall in this department are all the machines, which include a steel wheel

ground in fig. 8, an area of 71 by 66 ft. The floor of this department is of the usual cinder form, in which it differs from that in the balance of the shop, which has a more solid construction. The original intention was to have a solid concrete floor, but this plan has been modified in the constructed building, the floor consisting of a layer of concrete on a cinder bed, the concrete being superimposed with a 2 in. layer of bitulithic pavement. This covering has the advantage of

the exhaust fan. The blast and exhaust of the forges passes through pipes bedded in the concrete floor so that the whole blacksmith shop is remarkably free from overhead obstructions. The air hammer used in the department is an upright steam hammer using compressed air as the operating medium instead of steam, the exhaust discharging into the shop over top of the machine.

Something new in the manner of handling the bar iron stock in the blacksmith

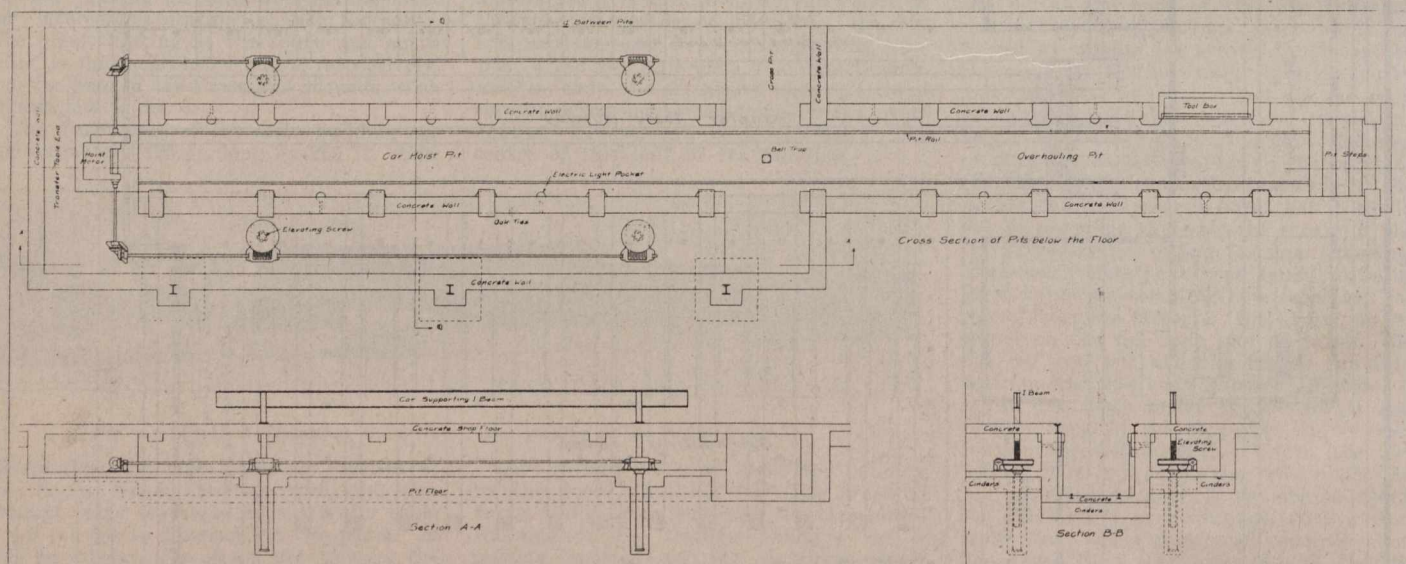


Fig. 5.—Details of One of the Twelve Car Hoists.

lathe, wet tool grinder, axle straightener, wheel boring machine, wheel press and an axle lathe. These machines are all on a group drive, with overhead shafting along the wall. In front of the boring machine and axle lathe are air hoists, suspended on an I beam parallel to the line of the machines, with local air hoists on cross I beams for the mounting of the work in the machines. Running over the first pit, there is also an air hoist for the carrying across of the axles and wheels, which are removed under the air hoist, run out on the

a longer life, and at the same time its plastic nature leaves it freer from breakage from parts falling on it, with consequent dire results to the falling parts. In the event of anything falling on the bitulithic floor, the resulting hole in the floor can be removed by the rolling over of the plastic material. A springy floor of this kind is also much easier on the operators who must stand on it all day, concrete floors being a fruitful cause of ailments, while the bitulithic, having less heat conductivity, never becomes as chilled.

shop has been introduced here. In the corner of the shop adjoining the blacksmith department, there has been constructed a bar iron rack of sufficient size to handle all the stock required to be carried for the blacksmith department. The ends of the rack are provided with expanded metal doors, of which there are three, these doors being kept normally locked. When the blacksmith requires some stock, the stores department is advised, and the stores attendant comes over to the rack and delivers to the black-