

columns. Down the centre of each of the bays, there is a 25 ft. wide peaked roof skylight, surmounted by a row of 24 in. copper ventilators, one over each section. The central bay is spanned by a 20 ton travelling crane, which has a 5 ton auxiliary, and which operates the length of the shop. The height to base of crane rail is 22 ft., which is approximately the clearance below the crane itself. The locker rooms and lavatories are contained in 20 by 49 ft. brick annexes, one on the north and the other on the south side, centrally located. The heating

shop layout, containing a full equipment of machinery for the handling of repairs to this rapidly increasing type of rolling stock. From the west end, there are three entrance tracks as in the other bays, the central one of which extends through the shop, the outer ones cutting off at 125 ft. through the first five sections of the shop. On each side

expansion to the full size of the shop.

The shop equipment is as follows:
 S1 Double angle shear, with shearing capacity up to 6 by 6 by 1 in. angles either square off or at an angle. Knives rectangular with four cutting edges. Mounted on a 6 ft. diameter turntable. Motor driven.
 S2 Double end punch, 24 in. throat on each end, with capacity for punching up to 1 1/4 in. holes in 1 in. steel, or to shear 1 in. plates, 1 7/8 in. round bars, or 6 by 1 1/2 in. flat bars. Each end has architectural jaw, and each sliding head has a three gaged

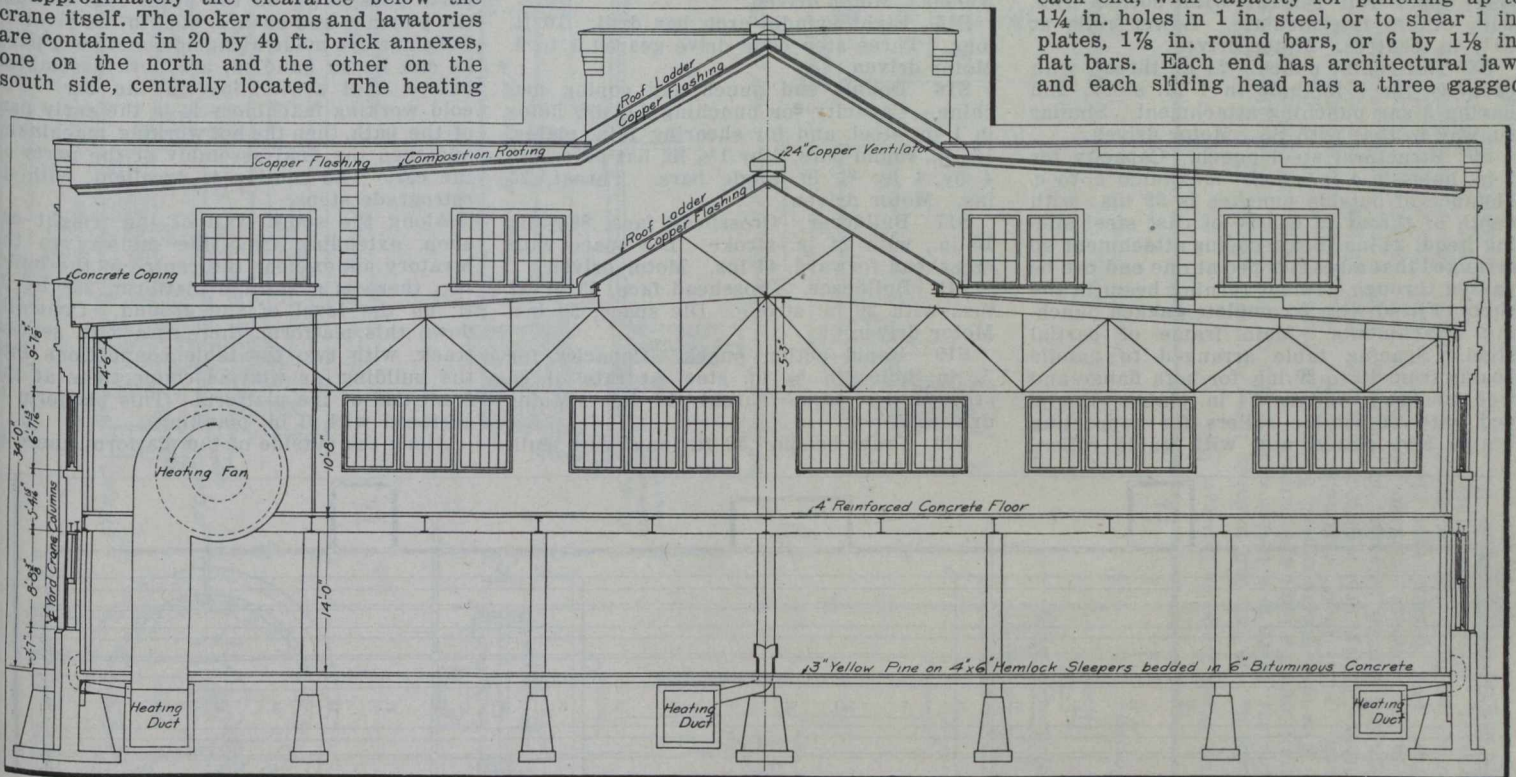


Fig. 3. Cross Section of One of the Passenger Car Buildings, looking towards High End.

plants are contained in two 22 by 25 ft. annexes on the north side, 60 ft. from each end. In each of these annexes, there is a 16 ft. fan, connecting with a concrete duct across the shop under the floor, with similar ducts branching off along the side walls, and along the row of columns, with outlet heads at each column.

The northerly and central bays contain three working tracks each, at 21 ft. centres, extending through the shop, and between

of the through track is located the machine equipment, which it will be observed is arranged in such a manner that the material on entering from the east end of the shop, passes in a natural path along a sequence of machines, depending on the particular member being fabricated, reaching the other end of the shop completely machined and ready for fitting to the car under repair. The two stub end tracks at the west end, will each hold three cars, giving

punching attachment. Motor driven.
 S3 Combination high speed cutting off saw, for structural shapes such as I beams, T and girder rails, and round and square stock. The table is so arranged as to facilitate the mitring of beams, etc. Equipped with two saws. Motor driven.
 S4 Gate shear, 120 in. between housings, with capacity up to 1 in. plates. Housing throat depth of 25 ins. 134 1/2 in. knives, with four cutting edges. Counterbalanced

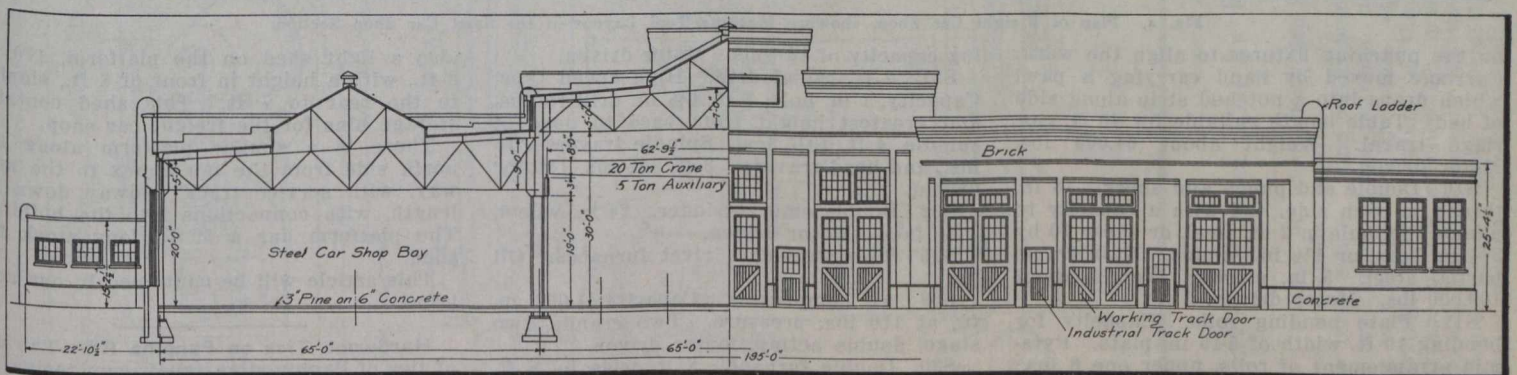


Fig. 5. Cross Section and End Elevation of Freight Car Shop.

these tracks in each bay, there is a 2 ft. gauge service track, with cross connections at nearly equidistant intervals along the shop length. The working track doors are 12 3/4 ft. wide, and the service track doors, 5 ft. The working tracks are laid on 7 by 8 in. by 8 ft. sleepers, and the service tracks, on 4 by 6 in. by 4 ft. sleepers. The flooring is of 3 in. yellow pine, on 4 by 6 in. hemlock sleepers, which, in common with the rail sleepers, are bedded in a 6 in. base of bituminous concrete.

The southerly bay is for the steel car

a normal steel car shop capacity of 6 cars, but it is obvious that the nearby tracks of the other two bays are quite accessible for steel car work. The tendency in modern rolling stock construction appears to be to get away from wooden construction, so that it is not too visionary to forecast the day, after the present stock of wooden equipment has been scrapped, when nothing but steel equipment will be in use. This shop has been laid out with that day in view, as while it meets all present requirements admirably, it at the same time is capable of

head, controlled by automatic stop. 90 in. flywheel. Total machine weight about 136,000 lbs. Motor driven.
 S5 Horizontal Punch. 36 in. throat, with capacity for 7/8 in. holes in 7/8 in. stock, with 3 gag punching attachment. Equipped with 40 ft. overhead runway, extending 20 ft. in either direction, and provided with two hand operated hoists. Motor driven.
 S6 Plate planer. Capacity of 1/2 in. feed on 3/4 in. plate at 40 ft. per min. 32 ft. cut at one setting, pneumatic clamps, holding up to 1 in. plate. Cuts in both directions.