

is square. The ridge rail is also placed in position with the intermediate stringers.

While the latter members are being added to the roof frame, the corner and door posts are driven into the base castings, the roof frame having first of all been slipped to one side in order that the base castings might be exposed. Through the roof side plates, the tie rods are slipped by the workmen, leaving the roof structure and its fittings in the shape shown in fig. 9. It will be noticed in this illustration that there is an elevated platform near the level of

assembling of the roof frame and the putting together of the wall frame are carried out is nothing short of wonderful, and the observer is strongly reminded of the structures rapidly built up in the Arabian Nights.

SHEATHING AND ROOFING. The car now passes along one more stage in its path, when the sheathing of the sides is attended to. This is a simple task, as the matched lumber is prepared to length and only requires to be nailed on. This is followed by the addition of end ladders, previ-

outside trimmings of the car near the roof are also added. This completes the car construction, and it is now ready for the finishing touches in the paint shop.

THE PAINT SHOP is at the extreme end of the erecting shop, through large corrugated fire doors. Here there is room for several cars in a row, where they are painted one after the other by means of the air brush. Needless to say, the air of this shop is a bright red from the atomized paint floating about in the atmosphere. But the job is performed very rapidly, and the re-

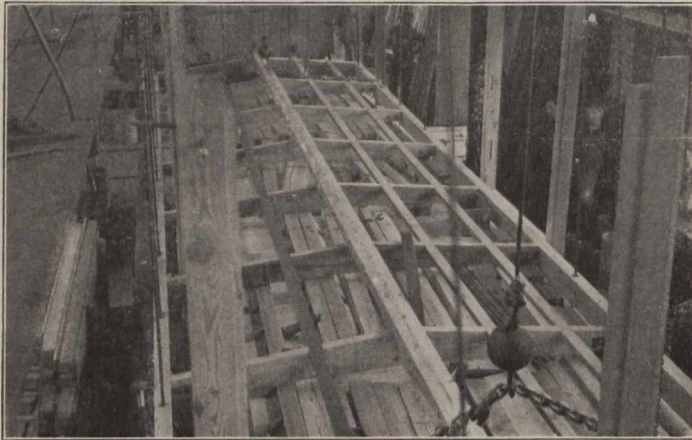


Fig. 9.—Raising Assembled Roof Frame.

the car roof, from which some of the assembling operations such as the driving of the posts are carried out.

The next step is to lift the roof structure at both ends by means of air hoists over both those points, resting the elevated structure on the tops of the awaiting posts, which have just previously been capped with end castings, similar to those used at the lower end. These fit recesses in the lower edge of the side plates. The diagonal bracing is also located in correct position as the roof is being located, thus forming a loose skeleton of the car frame. At

ously assembled on the side benches by a workman detailed for this specific purpose, followed by the end trussing and the mounting of the door and its fittings, the door having previously been made up in the wood working department and brought over in a completed state.

This is followed by the roofing, the first layer being an overlapping one of reinforced galvanized metal. This metal layer is supported on small strips resting on the stringers, and running from the ridge pole to the side plates as shown in fig. 11. Corrugations in the metal fit over these strips.

sulting work is said to be superior to hand brush painting, as the paint is made to penetrate into the pores of the wood and into all the crevices that could not be reached by the brush. Each car receives three coatings, with a several hour period intervening between each coat that it might penetrate and dry.

The car thus painted is taken out into the yard, where the lettering and numbering is attended to with stencils in the usual manner. Without any special waiting after the car is thus numbered and painted, it is hauled away to make room for more, so

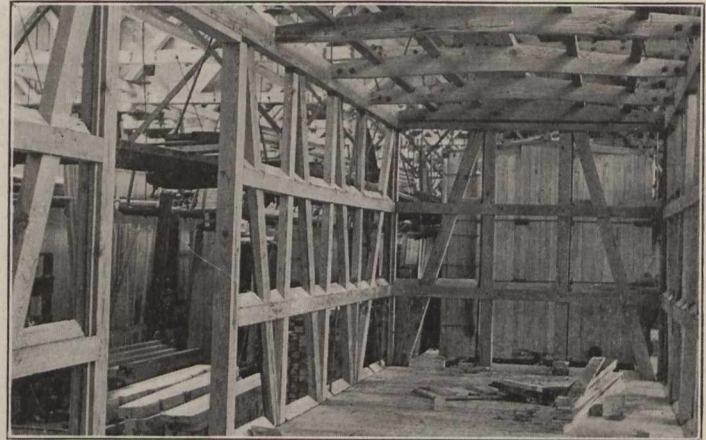


Fig. 10.—Assembled Superstructure Framing.

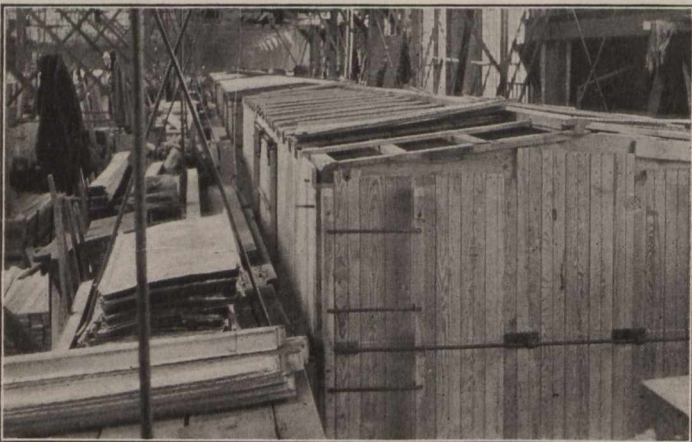


Fig. 11.—Fitting on Galvanized Roofing.

the same time, the horizontal tie rods that are to pass along the belt railing are slipped into place, and loosely tightened.

The different diagonals and posts being located and the roof lowered into position, the next step is to fit the belt railing into place on all four sides of the car. There are two rows along the four sides, tightly fitting into place, making of themselves a very solid structure of the car framing. The frame is finally completed to the appearance shown in fig. 10, by the tightening up of all the various tie bolts in the framing. The rapidity with which this

Over top of this, the matched lumber for the roof is laid.

FINAL TOUCHES. Passing the car down one more step, most of the final touches to it are made. These include the additional parts shown in the car in fig. 12, such as the centre runway on the car roof, brake standard and its attachments, and the grab irons on the roof. On the lower level, there is a further gang adding the end deadwood, and tightening the centre truss rods on to it, piping the car for the air, putting on the steps, and the other minor details that go to make the completed car. The

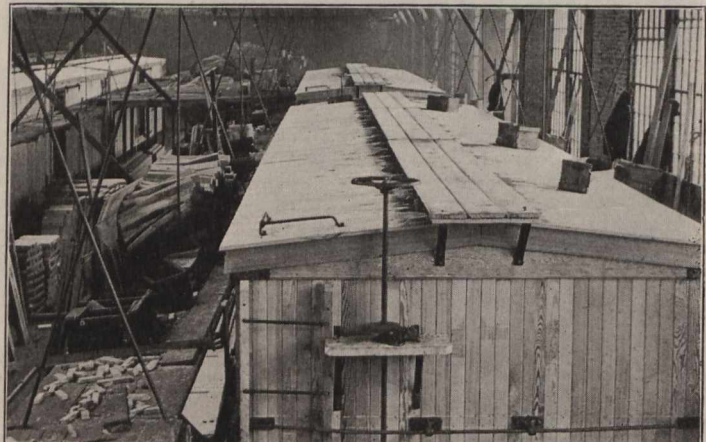


Fig. 12.—Roof of Completed Car.

rapid is the rate of production, even though the yard space at the disposal of the builders is quite large.

The capacity of each track per day is 10 cars under normal conditions, so a good idea of the rate at which the work progresses may be gathered. The steps in the work are so mechanical, and the methods involved so well planned, that the workmen are not pushed beyond normal working. To watch the gradual evolution of the car is, to say the least, a most interesting sight, and it is very instructive.