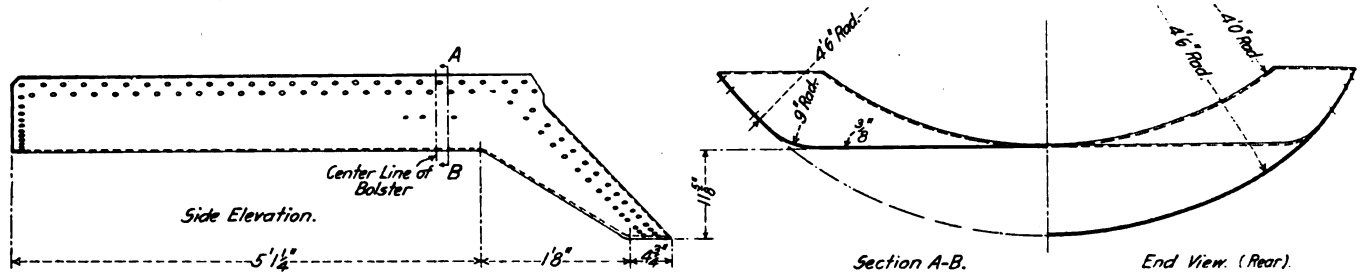


LARGE CAPACITY TANK CAR.

A new tank car 9 ft. in diameter and 33 ft. long, having a capacity of 14,650 gal., was recently exhibited at the Twelfth Street station, Chicago, of the Illinois Central, by the Chicago Steel Car Company, Chicago. It will be placed in service on all the lines of the Harriman system for test, inspection and criticism. The capacity for 113,550 lbs. of oil is 72 per cent. of the total weight (159,100 lbs.) of the car loaded to its full capacity. The largest car of this type built heretofore had a tank 8 ft. in diameter and 33 ft. long, with a capacity of 12,000

which it is secured with three rows of rivets. A $\frac{3}{8}$ in. conical gusset sheet is connected to the 9 ft. cylinder back of the bolster and extends forward to the end of the tank, which is 8 ft. in diameter. The top line of the tank is horizontal. The gusset sheet forms a portion of the oil tank proper, but the connection of the $\frac{5}{8}$ in. bottom sheet to the steel bolster is open and any working of the rivets at this point will not cause leakage.

The tank has a bursting pressure of 240 lbs. per sq. in. and was tested to 60 lbs. per sq. in. Four splash plates, 10 in. x 5/16 in., are placed on the longitudinal center line of the car. These also act as lateral braces in holding the large tank in

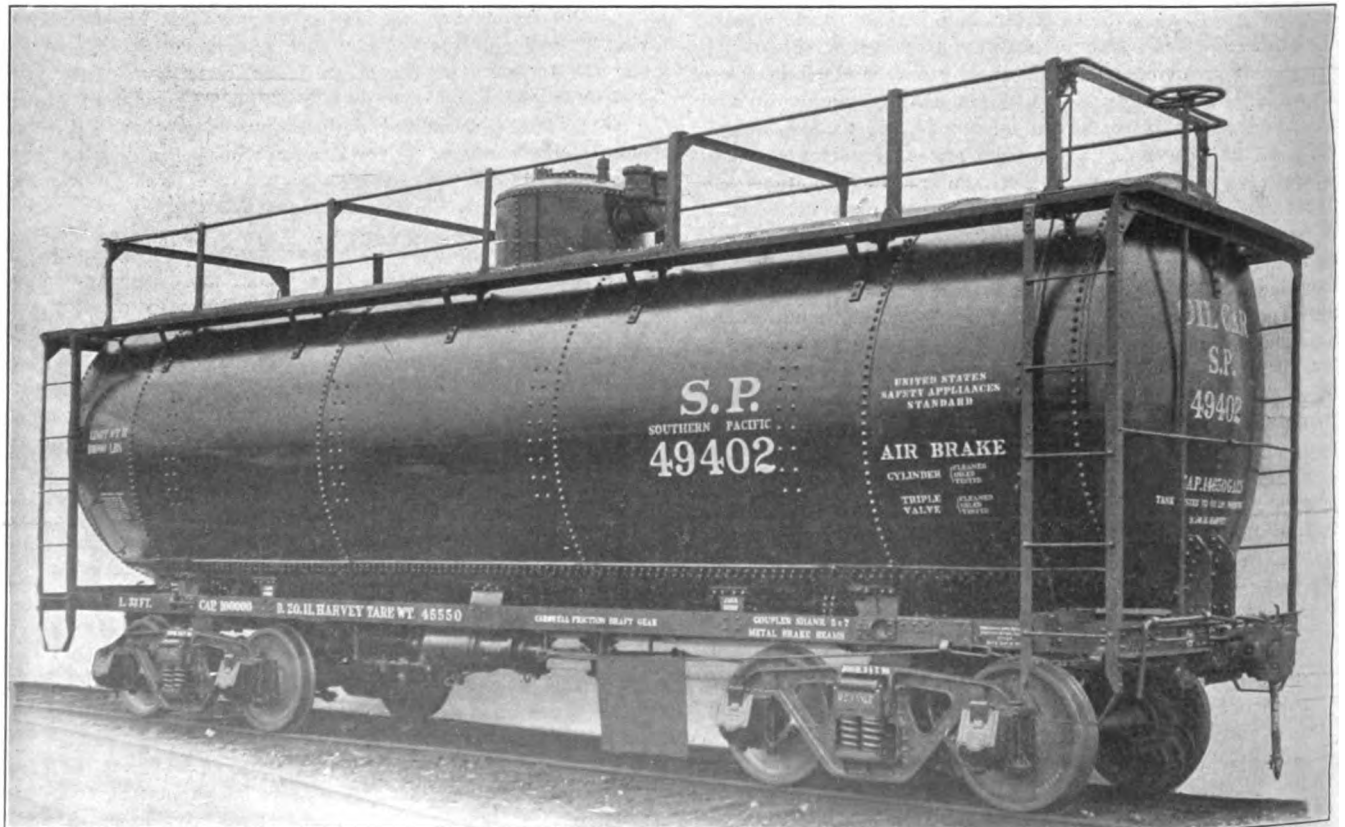


Gusset Connection for Tank Car.

gal., while the ordinary standard tank car is 7 ft. in diameter with a capacity of 10,000 gal. Tank cars of this new design have reached the same limit as coal or ore cars, and the same advantages of the concentration of large volume in one unit may be expected from them.

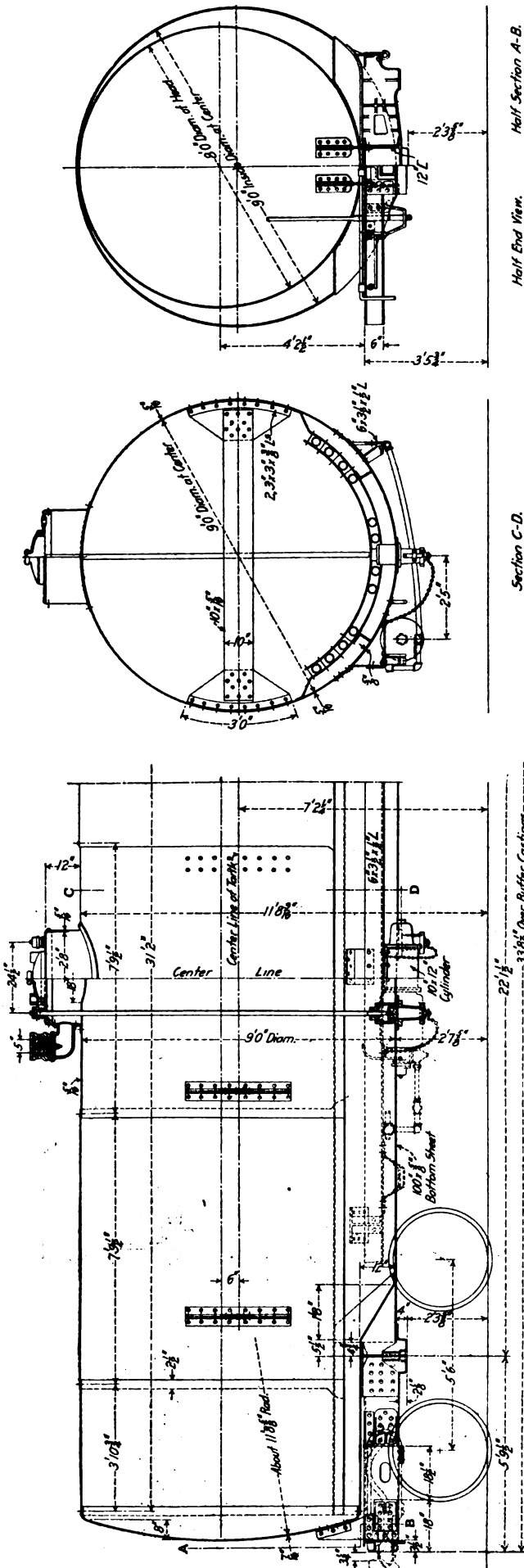
The center of gravity of the car is 7 ft. from the top of the rail, which is lower than that of many of the old 8,000 gal. tank cars. This is accomplished by placing the bottom of the 9-ft. tank only 2 ft. 7 7/8 in. from the top of the rail, with an offset in the bottom sheet at each end to allow the bolster draft sills and coupler to occupy the normal standard height. The bottom sheet is $\frac{5}{8}$ in. thick, and is carried forward as a portion of the cylinder to its connection with the cast steel body bolster, to

shape. The area of the bottom $\frac{5}{8}$ in. plate in resisting buffing is 62 1/2 sq. in. The draft sills are 12 in. steel channels heavily riveted to the body bolster; they are connected to the tank at the front by two large plate brackets. The friction draft gear is the Cardwell heavy type. The trucks were supplied by the American Steel Foundries Company, and have M. C. B. 50-ton axles and Griffin wheels weighing 825 lbs. each. The side sills are heavy angles, 6 in. x 3 1/2 in. x 1/2 in., and the end sill is braced by diagonal angles 4 in. x 3 in. x 3/8 in. extending to the ends of the body bolster. A cast steel push pocket is riveted to the side sill at the body bolster and a jacking bracket is secured to the same sill at the rear of the truck. These two features are new in design and location.



Experimental Tank Car of 14,650 Gal. Capacity.

The arrangement of the running boards and ladders is shown clearly in the illustration. The running board is a 2 in. x 12 in. plank, and is supported at the corners of the car by the angle iron ladders. The side boards are supported by bar iron brackets riveted to the tank. The hand-rail is also supported by steel

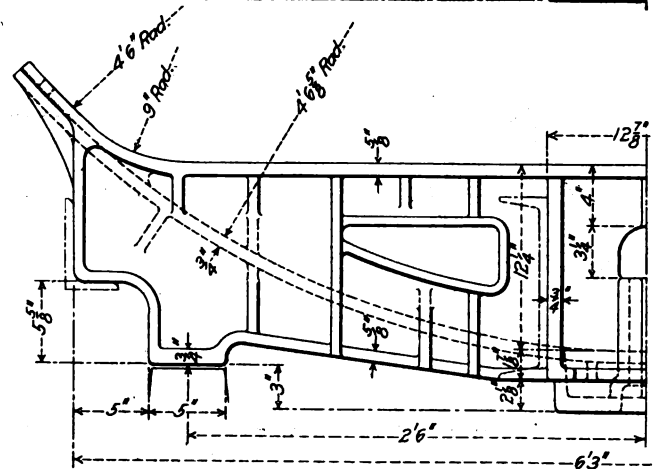
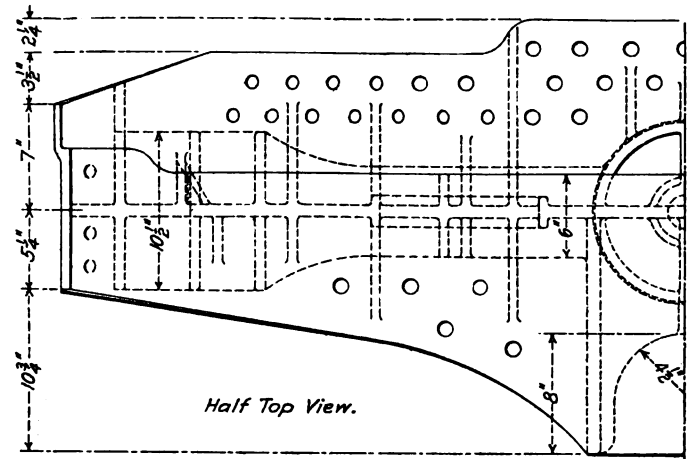
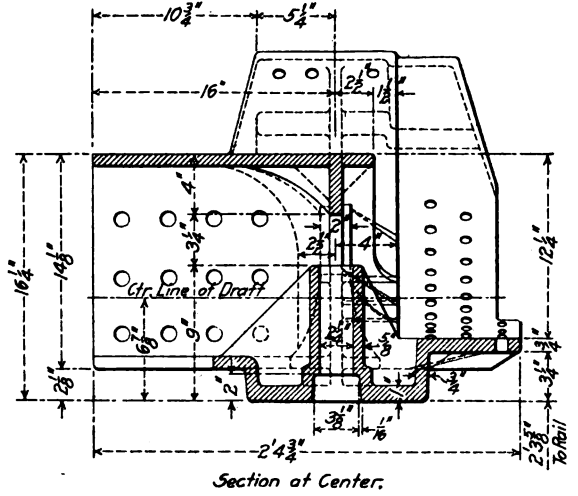


Half Section A-B.

Half End View.

Section C-D.

Half Elevation and Cross-Sections of High Capacity Tank Car.



Details of Tank Car Body Bolster.

angles, and the whole structure provides for safe passage over the car and is unusually convenient and substantial. The car was designed by H. C. Priebe, and built by the Chicago Steel Car Company at Harvey, Ill.

A report of the inspector general of the state railways of Chile shows that during the first quarter of 1911 there were 1,487 miles of railways in course of construction under the direction of the department of public works.