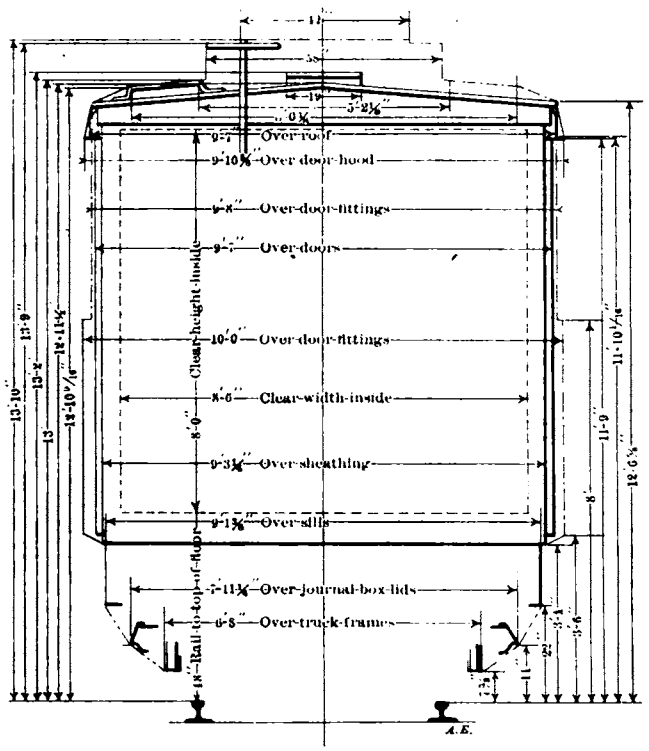
THE STANDARD BOX CAR.

The Master Car Builders' Association has acted with characteristic promptness in beginning its part in the adoption of the standard box car. Immediately upon receipt of the notice of the adoption of the interior dimensions by the American Railway Association, the President of the Master Car Builders' Association appointed a committee to consider the subject, consisting of Messrs. C. A. Schroyer, Chairman; G. W. Rhodes, W. P. Appleyard, J. N. Barr, Joseph Buker. This committee met in Chicago November 30th, and considered the limiting dimensions of important railroad clearances, the present established height of loading platforms, the various methods of car body construction and proposed the following exterior dimensions for cars of this class:



For a box car set on the trucks used as standard, where the height from top of rail to top of floor is 4 ft.

Height, top of rail to upper edge of eaves	12 ft. 6¾ in.

The following details were used to determine the above elevation:

Top of rail to upper face of floor	4 ft.
Upper face of floor to under edge of carline	8 ft.
Width of carline at end where secured to plate	3 13-16 ins.
Thickness of rafter to which metallic roof is applied	1⅝ in.
Thickness of purlin to which roof boards are secured	1⅛ in.
Thickness of roof boards	13-16 in.
	12 ft. 7⅜ ins.
Less pitch of roof from inside edge of plate to outside edge of eaves	⅜ in
	12 ft. 6¾ ins.
Width, at eaves at above height, maximum	9 ft. 7⅜ ins.

The following details were used to determine the above dimensions:

Width, between lining	8 ft. 6 ins.
Thickness of lining	1⅝ ins.
Thickness of siding	1⅝ ins.
Thickness of posts and braces	6 ins.
Air space between fascia boards	1 in.
Thickness of fascia boards	1⅝ in.
Projection on each side for roof, ¾ in	1½ in.
	9 ft. 7⅜ ins.

The committee believe that these allowances will present no difficulty in framing a car with metallic roofs, as ordinarily applied. In their circular they recommend not less than 18 ins. as a minimum distance from the top of the rail to the bottom edge of the outside sill. This was to provide for limits at this point determined by girder bridges and viaducts on many roads. The circular also suggests the following dimensions:

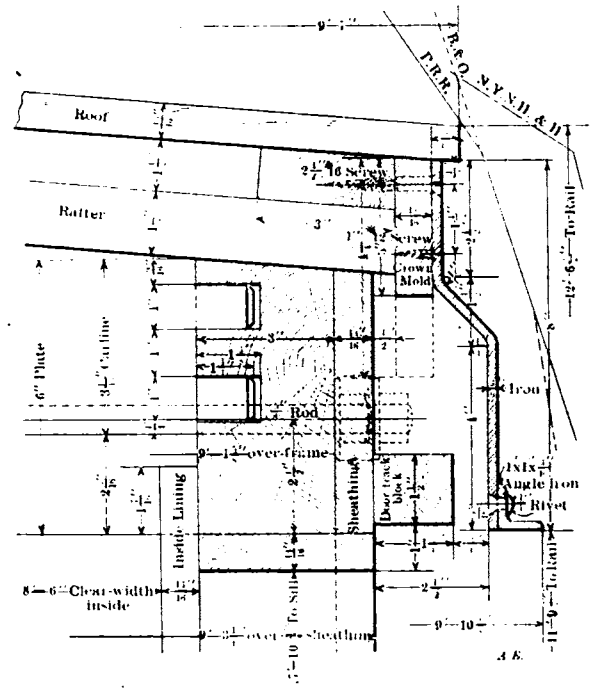
For a box car on low trucks, where the height

from top of rail to top of floor, is	3 ft. 6 ins.
Height, top of rail to upper edge of eaves	12 ft. 3¼ in.
Width, at eaves, at above height, maximum	9 ft. 10 ins.

No recommendations are made as to length, but it is the opinion of the committee that the strongest end construction possible should be used, regardless of the exterior longitudinal dimensions.

The subject is placed before the members of the Association by means of this circular, in which replies to the secretary are requested from those who wish the dimensions modified to meet the conditions on their own roads. With this prompt action a definite result may confidently be expected at the June convention of the Master Car Builders' Association.

The principal trouble as to clearances occurs at the eaves, and a diagram furnished us by Mr. John Henney, Superintendent of Motive Power of the New York, New Haven & Hartford, illustrates the construction at this point of cars which



are being built for that road by the Pressed Steel Car Company. In this diagram the full solid line indicates the eaves clearance of the Pennsylvania, the dotted line that of the Baltimore & Ohio, and the dot and dash line that of the New York, New Haven & Hartford. These show the dimensions of cars which will be accepted over all portions of these roads.

Door hoods of metal, pressed into shape, are to be applied in accordance with this drawing. These hoods are brought around on a line with the fascia boards at the ends, and the angle-iron at the bottom extends the full length of the hood. This should give a strong hood, much stiffer than the usual construction, and from the detail drawing it is apparent that wood is out of the question for this purpose.

It has been ascertained that the car shown in the complete clearance diagram can be operated over all of the principal lines east of the Mississippi River, with the exception of a few minor branches, and it is understood that the circular issued by the Master Car Builders' Association giving the proposed limiting dimensions of the heights and widths, is based on this car.

Charles H. Haswell, the first chief engineer of the United States Navy, was appointed in 1836 and was engineer-in-chief from 1844 to 1850. He is now over 90 years of age and was able, last month, to attend the memorable services at the unveiling of the monument erected by the American Society of Mechanical Engineers to the memory of Robert Fulton, in Trinity churchyard, New York. This fact is indeed most impressive of the wonderful progress of engineering in a single generation, when only a few rods away could be found the highest types of merchant and war vessels.