

J. A. COSTELLO.
CAR ROOF FRAME.
APPLICATION FILED MAY 3, 1912.

1,033,549.

Patented July 23, 1912.

Fig. 1.

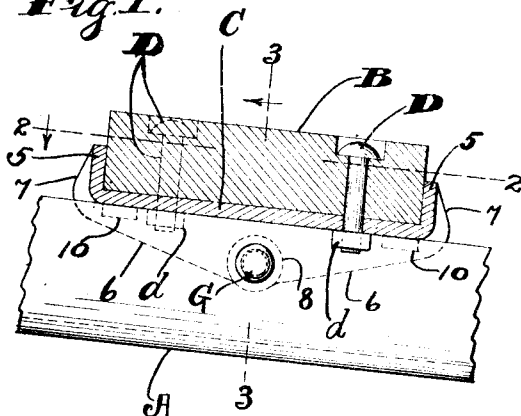


Fig. 2.

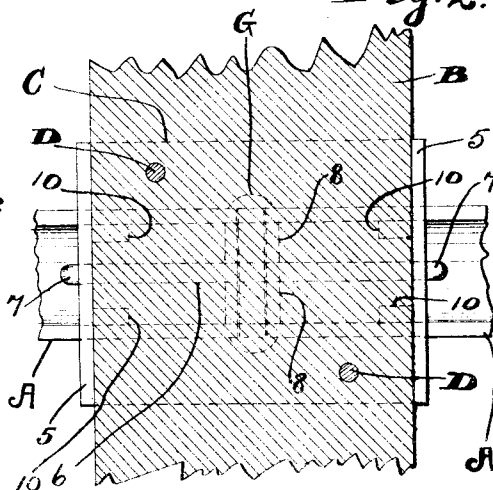


Fig. 3.

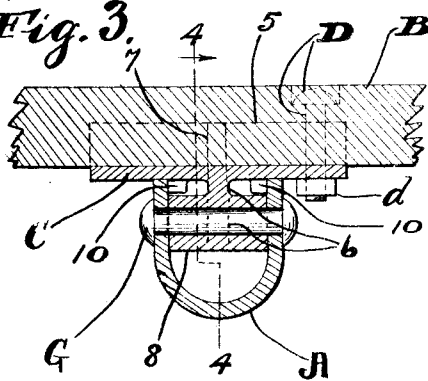
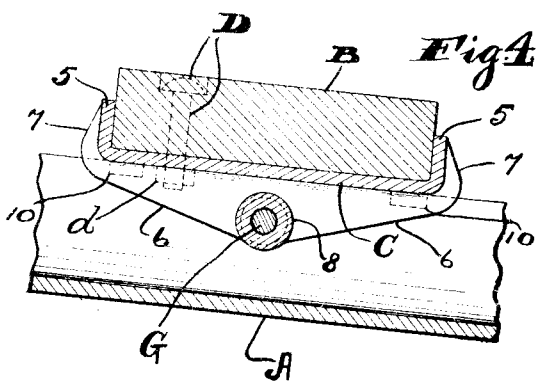


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH A. COSTELLO, OF CLEVELAND, OHIO, ASSIGNOR TO CLEVELAND CAR SPECIALTY COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF WEST VIRGINIA.

CAR-ROOF FRAME.

1,033,549.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed May 3, 1912. Serial No. 694,873.

To all whom it may concern:

Be it known that I, JOSEPH A. COSTELLO, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Car-Roof Frames; and I hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates to improvements in car-roof-frames, and pertains more especially to improved means for connecting a purlin or longitudinal member of a car-roof-frame to carline or transverse member of the frame.

One object of this invention is to employ a carline consisting of a steel trough which is U-shaped in cross-section, and to mount and hold a purlin or longitudinal member of said frame on said carline without the formation of depressions or pockets in said carline for receiving said longitudinal member.

Another object is to have said purlin or longitudinal member arranged above and spaced from said trough and seated on a metal plate which is interposed between said longitudinal member and said trough and seated on the top edges of the side walls of said trough and held efficiently in place relative to the trough.

Another object is to prevent strain on the bolts or securing devices employed in securing a purlin or longitudinal member of a car-roof-frame to said plate.

With these objects in view, this invention consists in certain features of construction, and combinations and arrangements of parts, hereinafter described, pointed out in the claims, and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a side view of a portion of a carline and shows, in cross-section, a purlin or longitudinal member of a car-roof-frame and the plate interposed between said longitudinal member and said carline. Fig. 2 is a section on line 2-2, Fig. 1. Fig. 3 is a vertical section on line 3-3, Fig. 1. Fig. 4 is a vertical section on line 4-4, Fig. 3.

My improved car-roof-frame comprises a carline or transverse member which consists

of a steel trough A which is U-shaped in cross-section, and B indicates a purlin or longitudinal member of said frame. The longitudinal member B is arranged above and spaced from and extends transversely of the transverse member A.

C indicates a metal plate interposed between the bottom or under side of the purlin or longitudinal members B and the top edges of the side walls of the trough A. The plate C rests therefore on said edges. Said plate extends laterally beyond the outer sides of the trough A, and the purlin or longitudinal member B is secured to said plate at the outer sides of said trough by suitably applied bolts D and nuts d. Said plate is provided with flanges 5 overlapping the sides of the purlin or longitudinal member B. Said plate is provided centrally between the sides of and within the trough A with a rib 6 which is arranged longitudinally of said trough and extends, as at 7, to and over the outer sides of the flanges 5. The rib 6 has a laterally enlarged central portion 8 which extends between and into contiguity with the side walls of the trough A, and a strong rivet G extends through said enlarged portion of said rib and through said walls and secures the plate C to the trough A. The rib 6 is therefore riveted to said walls and the central portion 8 of said rib braces said walls during the riveting of said rib to said walls.

The plate C is provided next the inner side of each side wall of the trough A with two lugs 10 and 10 spaced longitudinally of said trough and arranged at opposite sides respectively of and spaced from the central enlarged brace-forming portion 8 of the rib 6. Each lug 10 is preferably arranged at or in proximity to the adjacent flange 5 of said plate. The lugs 10 cooperate with the enlarged brace-forming portion 8 of the rib 6 in holding the plate C in place relative to the trough A.

By my improved construction is avoided the formation of depressions or pockets in the carline or transverse member of a car-roof-frame to receive a purlin or longitudinal member of said frame, and it will be observed that displacement of the plate C laterally of said trough is rendered impossible, and that strain on the securing devices D

and *d* by any force tending to displace said members independently of each other is prevented.

What I claim is:—

5 1. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough, of a plate interposed between said longitudinal member and the top edges of the side walls of said trough and secured to said longitudinal member, said plate being provided at its under side and centrally between said walls with a rib which extends transversely of the plate and is arranged longitudinally of said trough, which rib has its central portion enlarged laterally and extending to and secured to said walls.

2. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough, of a plate interposed between said longitudinal member and the top edges of the side walls of said trough and secured to said longitudinal member and having flanges overlapping and forming abutments for the sides of said longitudinal member, said plate being provided at its under side and between said walls with a rib which extends transversely of the plate and is arranged longitudinally of the trough, which rib has an enlargement extending to and secured to said walls.

3. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough, of a plate interposed between said longitudinal member and the top edges of the side walls of said trough and secured to said longitudinal member and provided at its under side and at the inner sides of said walls with downwardly projecting lugs which depend into said trough, said plate having a member depending into and extending between and riveted to said walls.

4. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal

member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough, of a plate interposed between said longitudinal member and the top edges of the side walls of said trough and secured to said longitudinal member and having flanges overlapping and forming abutments for the sides of said longitudinal member, said plate being provided at its under side and centrally between said walls with a rib which extends transversely of the plate and transversely of the aforesaid flanges and is arranged longitudinally of said trough, said rib having its central portion enlarged laterally and extending and secured to said walls.

5. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough, of a plate interposed between said longitudinal member and the top edges of the side walls of said trough and secured to said longitudinal member, said plate being secured to said walls and provided at its under side and next each side wall of said trough with two downwardly projecting lugs which depend into and are spaced longitudinally of said trough.

6. The combination, with a carline or transverse member of a car-roof-frame, which member is in the form of a trough in cross-section, and a purlin or longitudinal member of said frame, said longitudinal member being arranged above and spaced from and extending transversely of said trough or carline, of a plate interposed between said longitudinal member and said trough and resting on the top edges of the side walls of said trough, which plate is provided at its under side and centrally between said walls with a rib which is arranged longitudinally of said trough and has its central portion riveted to said walls, said plate being secured to the aforesaid longitudinal member and provided at each side of said portion of said rib with lugs depending into the trough and overlapping the aforesaid walls.

In testimony whereof, I sign the foregoing specification, in the presence of two witnesses.

JOSEPH A. COSTELLO.

Witnesses:

B. C. BROWN,

U. L. McDONNELL.