No. 824,170. PATENTED JUNE 26, 1906.

A. CAMPBELL.

METALLIC CAR ROOF.

APPLICATION FILED OCT. 30, 1905.

Fig. 1.

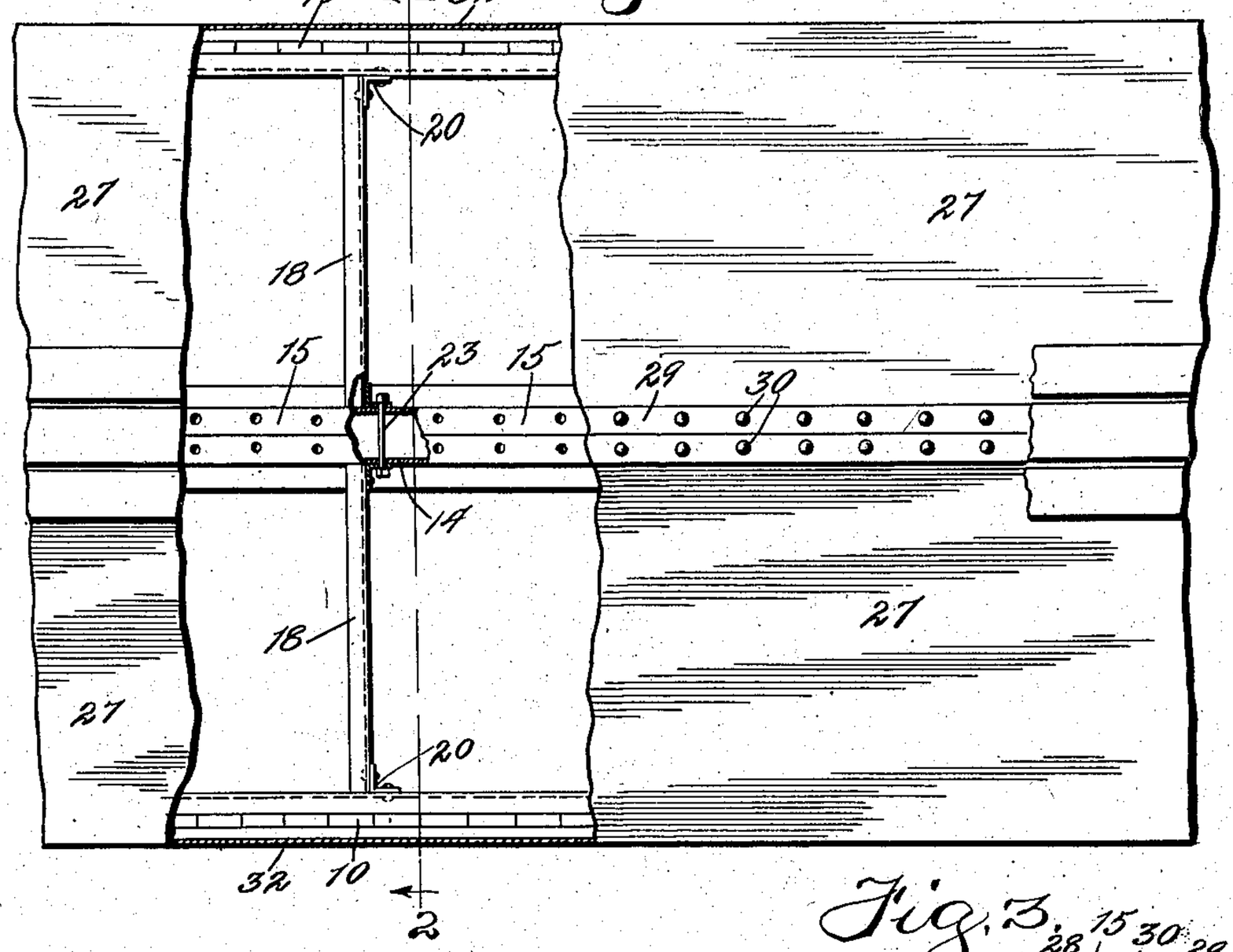


Fig. 3.

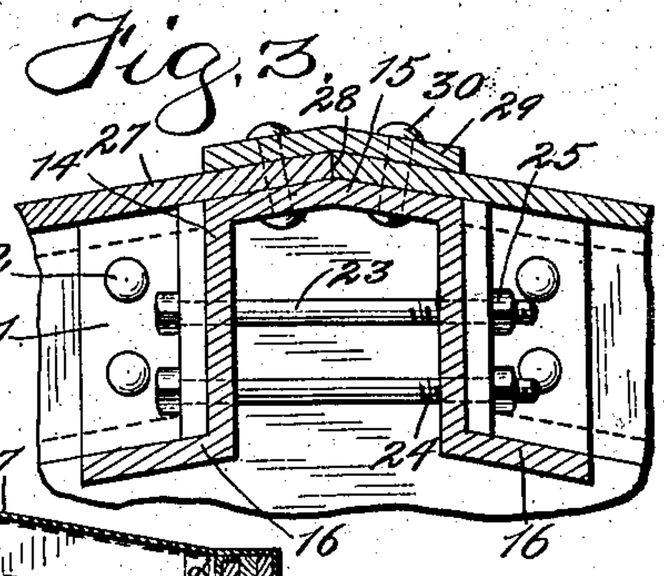
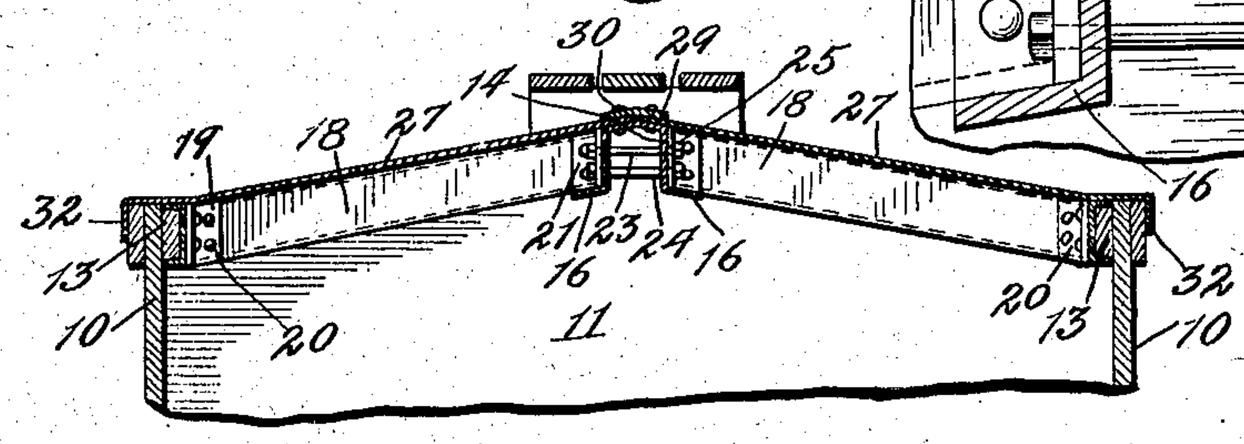


Fig. 2.



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UNITED STATES PATENT OFFICE.

ARGYLE CAMPBELL, OF CHICAGO, ILLINOIS, ASSIGNOR TO ENTERPRISE RAILWAY EQUIPMENT COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

METALLIC CAR-ROOF.

No. 824,170. Specification of Letters Patent. Patented June 26, 1906.

Application filed October 30, 1905. Serial No. 285,084.

To all whom it may concern:

Be it known that I, ARGYLE CAMPBELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Metallic Car-Roofs, (Case D,) of which the following is a specification.

My invention relates to metallic car-roofs.

The object of my invention is to make such a roof which can be easily made from a relatively small quantity of metal and which will be very strong and rigid in construction.

It consists, essentially, in the use of a novel form of ridge-pole and the combination with the same of the supporting members therefor and the covering-plates of metal.

It also consists in details of construction, which will be hereinafter more fully described and claimed as the specification proceeds.

In the drawings, Figure 1 is a plan view, partially broken away, of the car embodying my invention in its preferred form. Fig. 2 is an end sectional view on line 2 of Fig. 1. Fig. 3 is a detail sectional view, somewhat enlarged, showing the details of construction of the ridge-pole.

It should be understood that my roof is applicable to any of the common forms of cars, such as that illustrated in Fig. 2, having sides 10, ends 11, and longitudinal reinforcing members 13 at the upper edges of the sides.

For use in my roof I provide a novel form of ridge-pole 14, such as is illustrated in detail in Fig. 3, the same being in the form of an inverted U. The bottom of the U proper or top of the inverted U 15 is angularly inclined from its middle to each side in substantially the inclination of the car-roof which it is desired to form. The bottoms of the upright members of the inverted U have extending from them flanges 16, substantially parallel to the inclined surfaces just described. The ridge-pole 14 thus formed extends from end to end of the car, being suitably secured to opposite ends 11 thereof. Resting upon these flanges 16, just described, at intervals along the car and extending from the ridge-pole to the members 13, heretofore described, are rafters or half-carlines 18. These rafters or half-carlines are secured to the member 13, heretofore described, by means of angle-irons 19 and bolts or rivets 20 and have upon their upper ends angle-irons 21, secured thereto by bolts or rivets 22. Through the angle-irons 21 on opposite rafters or half-carlines and the vertical webs of the ridge-pole are bolts 23, adapted under the action of threads 24 and nuts 25 to rigidly secure all of the parts together, as shown in Fig. 3. By this construction I form a roof-frame composed of the ridge-pole, the half-carlines, and the upper edges of the sides and ends of the car which is very strong for a given depth of the carlines and consequent weight of metal. The center construction serves to give great rigidity to this roof-frame.

Upon each half of the roof-frame thus described I spread a continuous roof-plate 27, extending from end to end of the car and meeting the opposite roof-plate at the apex of the ridge in line 28, as shown. Over this line 28 or break between the roof-plates upon opposite sides of the car I place an angular cover-plate 29 and secure it to the roof-plates 27 and the top 15 of the inverted U by means of the bolts or rivets 30. It only needs an inspection of the drawings to see that the only break in the entire roof-surface is in the line 28 and that this is so thoroughly covered above by the angular plate 29 that it is practically impossible for any liquid to pass into said open line 28, and that should any liquid so reach this line of opening 28 it will be prevented from getting into the car itself by the fact that the roof-plates 27 have such a broad bearing upon the upper portion 15 of the ridge-pole.

The upper edges of the roof-plates 27 are bent over the edges of the car-frame in the downwardly-extending portions 32, so that there is no leak into the car at the edges of the car.

By this complete construction I obtain a very rigid car-roof and one in which the surface being made in only two parts and the one joint therein thoroughly spliced is entirely waterproof under all conditions.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a car, in combination with the sides and ends of a car; a ridge-pole in the form of

an inverted U extending from end to end of the car, there being flanges upon the lower edges of the sides of said U, rafters or half-carlines resting upon said flanges on opposite sides of the ridge-pole, means for securing the inner ends of said rafters to said ridge-pole and means for securing the outer ends of said rafters to the sides of the car.

2. In a car, in combination with the sides and ends of a car; a central ridge-pole extending from end to end of the car, the same being in the form of an inverted U and having flanges extending from its lower edges, rafters or half-carlines resting upon the flanges of said ridge-pole rigidly connected to said ridge-pole and to the sides of the car, and roof-plates extending from end to end of the car and from the middle of the roof to the side thereof resting upon said ridge-pole and carlines, a cover-plate over the joint between said plates upon the ridge-pole, and means for securing said cover-plate and roof-plates in position.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

ARGYLE CAMPBELL.

Witnesses:

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