A. CHRISTIANSON.

CAR ROOF.

APPLICATION FILED NOV. 14, 1914.

1,220,193.

Patented Mar. 27, 1917.

2 SHEETS—SHEET 1.

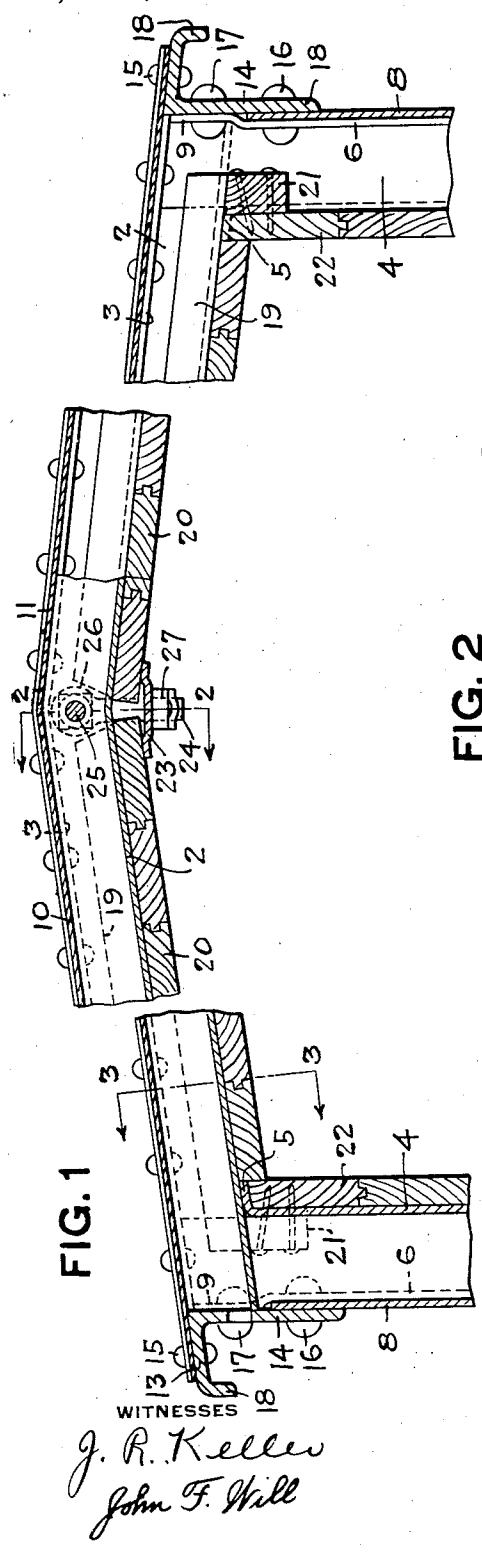


FIG. 1

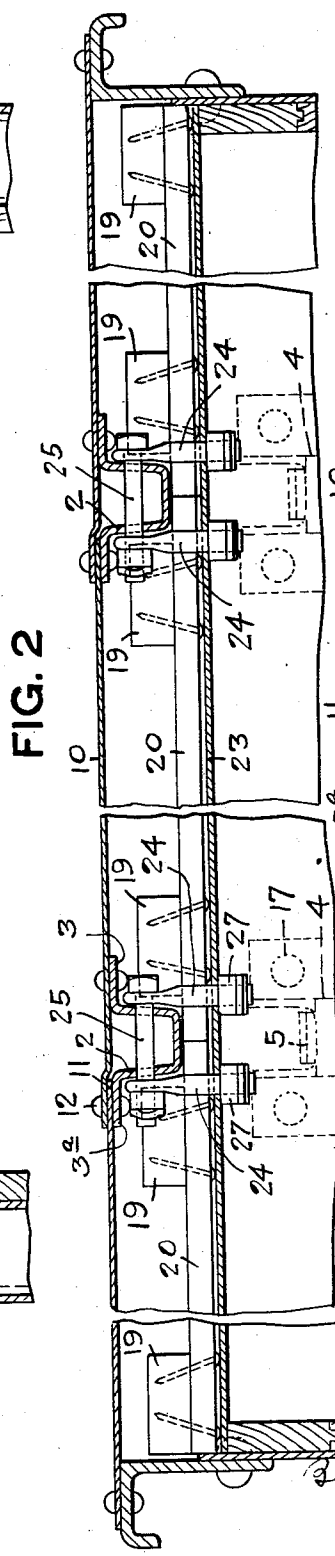


FIG. 2

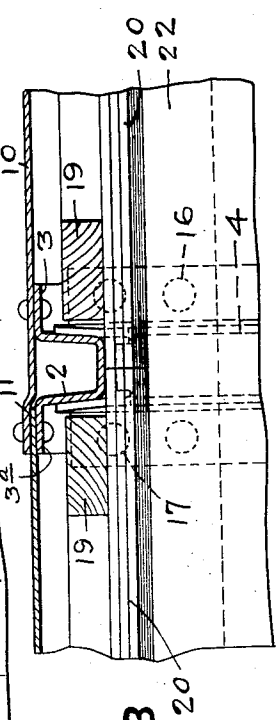


FIG. 3

WITNESSES

J. R. Keller

John F. Will

INVENTOR

Andrew Christianson

By Kay Fitzpatrick & Will

Attys

A. CHRISTIANSON.

CAR ROOF.

APPLICATION FILED NOV. 14, 1914.

1,220,193.

Patented Mar. 27, 1917.

2 SHEETS—SHEET 2.

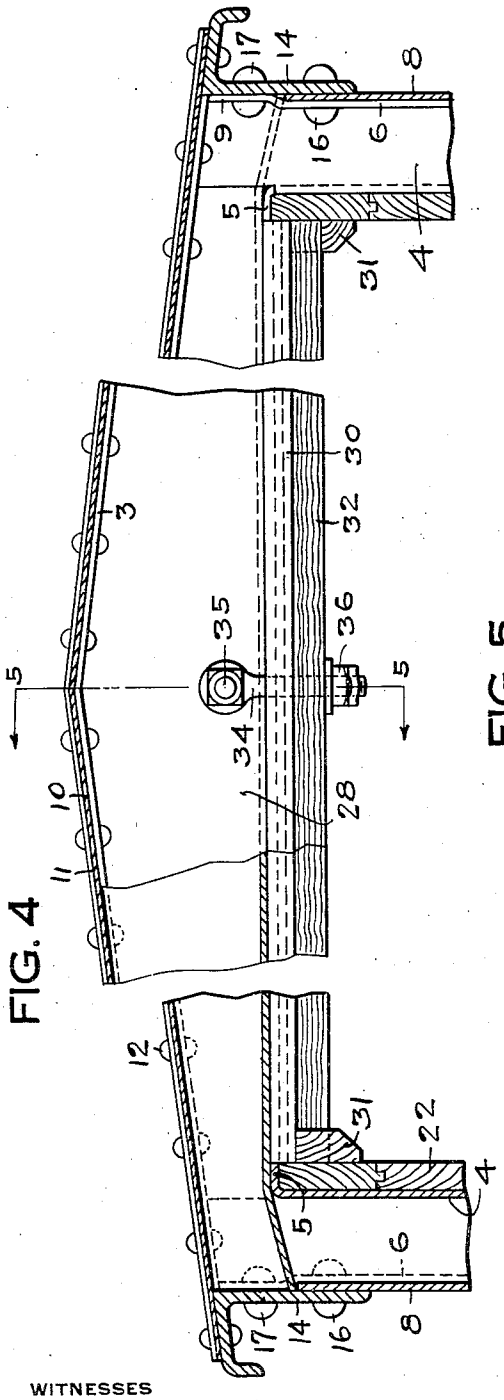


FIG. 4

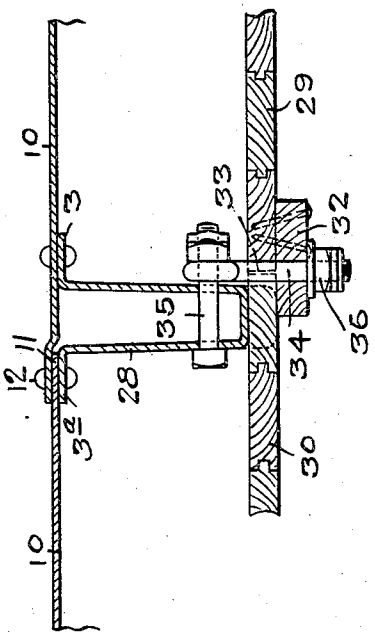


FIG. 5

WITNESSES

J. R. Keller

John F. Will

INVENTOR

Andrew Christianson

By Kay Fuller Powell

Attys

UNITED STATES PATENT OFFICE.

ANDREW CHRISTIANSON, OF BUTLER, PENNSYLVANIA, ASSIGNOR TO STANDARD STEEL CAR COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

CAR-ROOF.

1,220,193. Specification of Letters Patent. Patented Mar. 27, 1917.

Application filed November 14, 1914. Serial No. 872,154.

To all whom it may concern:

Be it known that I, ANDREW CHRISTIANSON, a citizen of the United States, and resident of Butler, in the county of Butler and State of Pennsylvania, have invented a new and useful Improvement in Car-Roofs; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to car-roofs.

The objects of my invention as well as what I claim as novel will fully hereinafter appear in the description and accompanying claims.

In the drawings, Figure 1 is a cross-section of a portion of a car showing my invention applied thereto; Fig. 2 is a section on the line 2—2, Fig. 1; Fig. 3 is a section on the line 3—3, Fig. 1; and Figs. 4 and 5 show a modified form of my invention.

In the drawings, the numeral 2 designates the carline which is preferably formed of a channel-bar member with the outwardly extending flanges 3. The ends of the carline are supported by the side-posts 4, said side-posts being composed likewise of channel-shaped members, the web-portions of said posts at the upper ends being cut and bent inwardly as indicated at 5, so as to form a seat or crotch in the post to receive the end of the carline as clearly indicated in Fig. 3. These posts are provided with the flanges 6, and may be secured by rivets or other suitable fastening devices to the side-walls or metal sheathing 8, said flanges projecting above said sides 8 as indicated at 9.

The metal roof-plates 10 are riveted to the flanges 3 of the carlines, and said roof-plates overlap as at 11 above one of the flanges 3^a of the carlines, and a single line of rivets 12 passes through said overlapping plates and said flanges 3^a. The roof-plates 10 at the sides and ends of the car project out on to the flanges 13 of the L-shaped fascias and side-plates 14 combined, and are riveted thereto by the rivets 15. The side plates 14 are riveted to the sides 8 and the flanges 6 of the posts 4 by a single line of rivets 16. A line of rivets 17 also connects said side plates with the upper portions 9 of said flanges 6.

The side plates 14 have the downwardly projecting flange 18, which tends to strengthen and stiffen the roof along its outer edges, and give the desired finish.

Nailing strips 19 are arranged transversely of the roof on each side of the carlines, and the boards 20 composing the inner lining of the roof are nailed to said strips 19, said boards being connected by the ordinary groove and tongue. The outer ends of the nailing strips 19 rest upon the strips 21 which are nailed to the boards 22 composing the inner side lining of the car, while the inner ends of the nailing strips 19 extend up to the center or ridge of the car, as indicated in dotted lines, Fig. 1. In this manner, the inner roof is made up of two sections at each side of the outer ends of said sections, being supported on the strips 21, while the inner ends are supported on the central strip 23.

This ridge strip 23 is preferably formed of metal and extends from one end of the roof to the other, and said strip is supported by the bolts 24, which are suspended from the bolts 25, carried by the carlines 2. The bolts 25 pass through openings in the carlines, and the bolts 24 have the eyes 26 through which the bolts 25 pass. The nuts 27 on the bolts 24 are screwed up to hold the strip 23 securely in position and bearing against adjacent boards 20 of the sections of the roof-lining, and the tightening up of the nuts 27 and the forcing of the strip 23 into close contact therewith, will hold the sections up in position, so that a very strong and rigid construction is obtained.

In Figs. 4 and 5, I have illustrated a modified form of my invention in which a deeper carline 28 is employed and the roof-sections 29 and 30 extend crosswise of the car, being supported at their ends on the strips 31. The cross-strip 32 covers the meeting point 33 of the sections 29 and 30, and said strip is connected to the carline by means of the bolt 34, which is carried on the bolt 35. By tightening up the nuts 36, the strip 32 is held up in very close relation to the roof-sections.

I claim—

1. In a car-roof, the combination of carlines consisting of channel-members, side-posts formed of channel-members, the web portions of said posts being cut away and

bent to receive the outer ends of said carlines.

2. In a car roof, the combination of channel shaped carlines, of roof sections, means for supporting the outer ends of said sections, a strip supporting the inner ends of said sections, a horizontally arranged bolt passing through the flanges of said carline, and bolts suspended from said first named bolt and engaging said strip.

In testimony whereof, I the said ANDREW CHRISTIANSON have hereunto set my hand.

ANDREW CHRISTIANSON.

Witnesses:
JOHN F. WILL,
S. F. ARMSTRONG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."