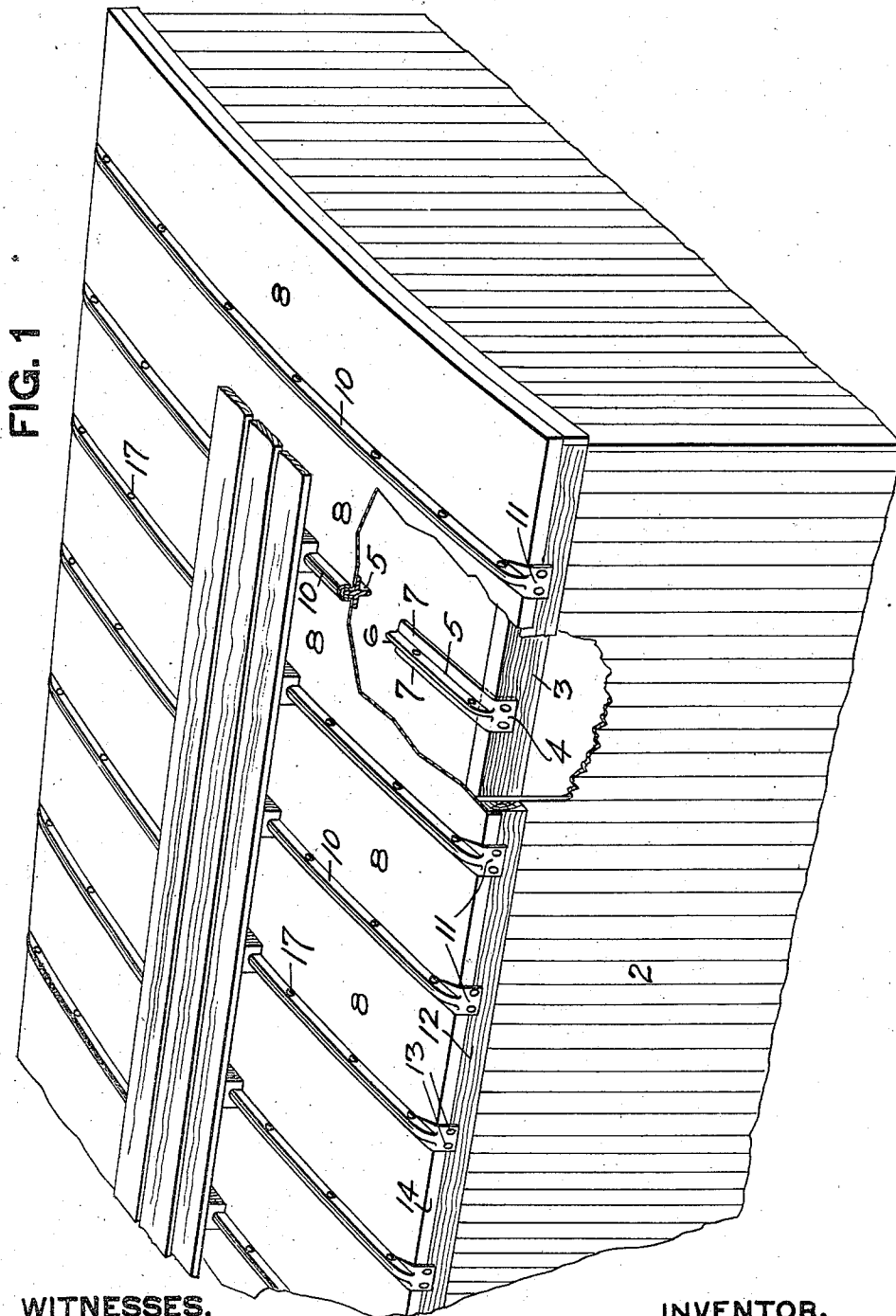


E. C. COVERT.
METALLIC CAR ROOF CONSTRUCTION.
APPLICATION FILED MAY 12, 1910.

996,564.

Patented June 27, 1911.

2 SHEETS—SHEET 1.



WITNESSES.

W. A. Barth
H. K. Landry

INVENTOR.

Edam C. Covert
by Bakewell & Sellers
attys

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2 SHEETS-SHEET 2.

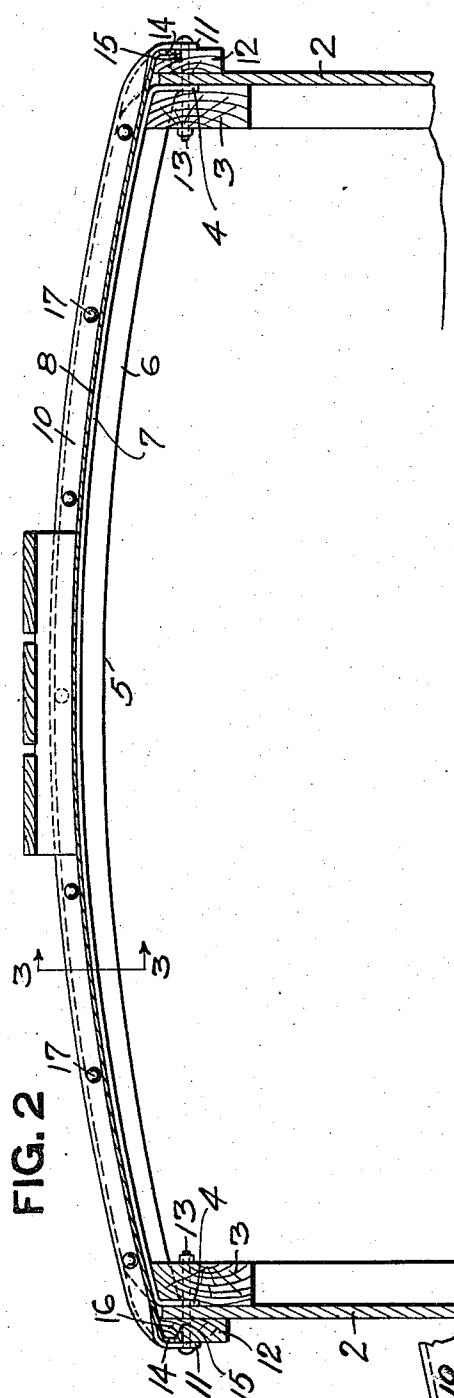


FIG. 2

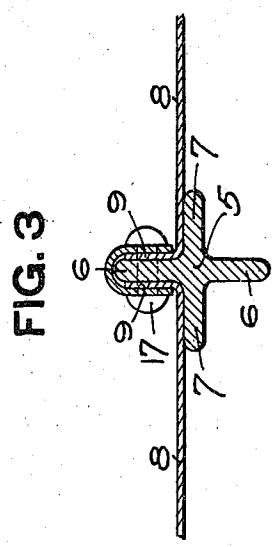


FIG. 3

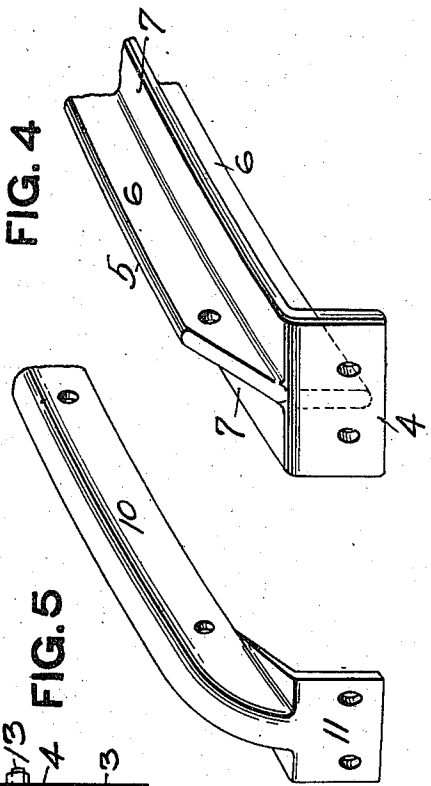


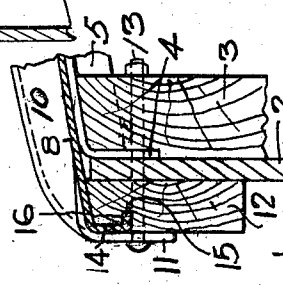
FIG. 4

FIG. 5

WITNESSES.

M. A. Barch
H. A. Randolph

FIG. 6



INVENTOR.

Edson C. Covert
By Dabswell & Keller
Attorneys

UNITED STATES PATENT OFFICE.

EDSON C. COVERT, OF NEW KENSINGTON, PENNSYLVANIA.

METALLIC CAR-ROOF CONSTRUCTION.

996,564.

Specification of Letters Patent. Patented June 27, 1911.

Application filed May 12, 1910. Serial No. 561,023.

To all whom it may concern:

Be it known that I, EDSON C. COVERT, of New Kensington, in the county of Westmoreland and State of Pennsylvania, have invented a certain new and useful Improvement in Metallic Car-Roof Construction, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

The object of this invention is to provide an all metallic car roof construction in which is combined maximum strength with a minimum amount of metal.

I will now describe my invention, referring to the accompanying drawings, so that others skilled in the art to which it appertains may understand and construct the same.

Figure 1 is a fragmentary perspective view, partly in section, of a box car, showing my improved roof applied thereto; Fig. 2 is a transverse vertical sectional view through the same; Fig. 3 is a sectional view of car and roof plating and a carline taken on the line 3-3 of Fig. 2; Fig. 4 is a perspective view of an end of the carline preferably employed in my improved roof construction; Fig. 5 is a similar view of the U-shaped finishing cover-strip or cap which surmounts the seam formed by the roof plates and carline; and Fig. 6 is an enlarged detail sectional view showing the side edge construction of my improved car roof.

In the drawings, the reference numeral 2 indicates the siding of a car which may be of ordinary construction, having the side plates 3.

Bowed to take the shape of the roof and having the depending end flanges 4, are the carlines 5 which are spaced at intervals, in the usual manner, along the car body; the end flanges 4 forming means whereby the carline may be bolted or otherwise fastened to the car siding. This carline construction 5 comprises the vertical web portion 6 and the horizontal flanges 7 which serve to resist lateral buckling of the web portion under operative stresses and form with that portion of the web 6 lying above such flanges, a seat for the side margins of the roofing plates 8. The plates 8 are preferably of single units, extending transversely of the car and between the carlines 5, as shown in Fig. 1. However, if desired, they may be

of sectional or built-up construction. These plates are shaped to conform to the roof contour of the carlines and have the upwardly extending flanges 9 which are adapted to lie against the side faces of the web 6, with the body of the plating, on each side, resting on the flange 9, as is clearly shown in Fig. 3. Surmounting the web 6 of the carline and embracing the upwardly extending flanges 9 of the roof plates, is the U-shaped cover-strip or cap 10, which extends beyond the side of the car and is provided at each end with the downwardly extending flange 11 which is fastened to the facia 12, and preferably by the same fastening means 13 which secures the end of the carline to the side plate 3. This flange 11 preferably takes the width of the strip before being U-shaped, as shown in Fig. 5, such width affording application of a plurality of fastening bolts 13, and effectually covering or overlapping the opposing edges of the depending flanges 14 of the roof plates. The downturned end flange 14 of the roof preferably terminates at a point above the bolts 13; being provided with the in-turned marginal flange 15, as shown in Fig. 6, which is received by the recess 16 of the facia 12, and which serves to hold the end of the sheet against rising at points lying between the flanges 11. The upper face of the facia, which receives the end flange of the roof plate is preferably countersunk so as to bring the outer face of the depending roof flange flush with the facia and thereby permit of the employment of the straight flange 11; this flange, as will be readily understood, serving to hold the end edge of the roof plate in position while still permitting of movement of such edge of the plate, incident to contraction and expansion and to severe usage. Suitable rivets 17 passing through the cap 10, the roof plating flanges 9 and the upper vertical extension of the carline 6, and serving to firmly bind the cover-strip or cap 10 and the roof sheets or plates 8 to the carlines 5, complete the arrangement of my improved roof construction.

The advantages of my invention will be appreciated by those skilled in the art. My roof will be found light and simple in construction and capable of resisting the strains and stresses to which such roofs are subjected.

It will be apparent that many changes

may be made in the construction shown without departing from my invention, and I do not therefore desire to limit myself thereto.

What I claim and desire to secure by Letters Patent is:

In a car roof, the combination of the car siding and eaves facia, of a carline provided with end flanges, roof sheets having upwardly extending side flanges and downwardly extending end flanges having an inturned marginal flange lying in a recess in a counter-sunk face in the facia, a cover strip embracing the side flanges of the roof

sheets and having an end flange lying against the facia and the depending end flanges of the roof sheets, and fastening means passing through the end of the flange of the strip, the car siding and the flange of the carline, at a point below the depending end flanges of the roof sheets.

In testimony whereof, I have hereunto set my hand.

EDSON C. COVERT.

Witnesses:

PETER H. MURPHY,
M. ARTHUR KELLER.