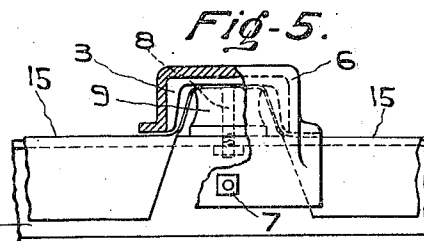
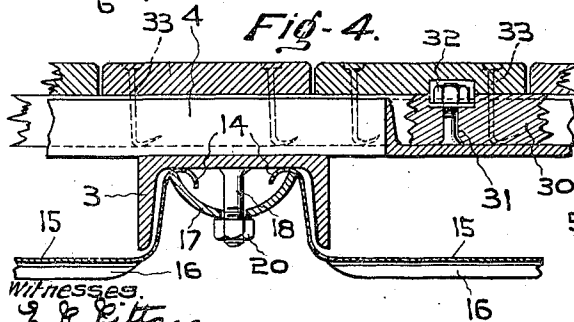
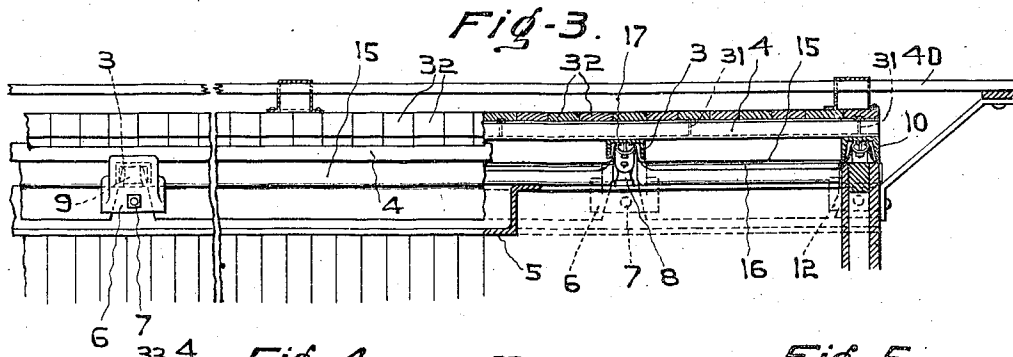
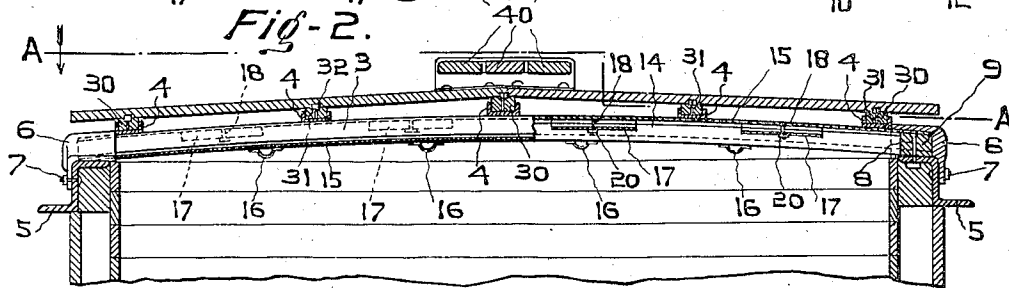
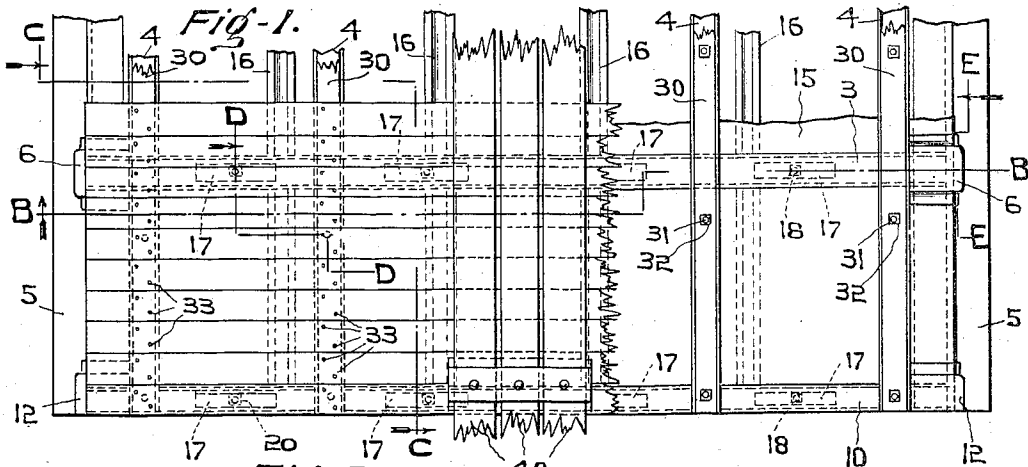


1,242,519.

Patented Oct. 9, 1917.



Witnesses.
G. R. Pitts
J. R. Hooke

Richard W. Burnett.
Inventor.
per Attorney.
William H. Hoke

UNITED STATES PATENT OFFICE.

RICHARD WEBB BURNETT, OF MONTREAL, QUEBEC, CANADA.

CAR-ROOF.

1,242,519.

Specification of Letters Patent.

Patented Oct. 9, 1917.

Application filed November 22, 1911. Serial No. 661,836.

To all whom it may concern:

Be it known that I, RICHARD WEBB BURNETT, residing at the city of Montreal, Province of Quebec, Dominion of Canada, have invented certain new and useful Improvements in Car-Roofs; and I do hereby declare that the following is a full, clear, and exact description thereof:

My invention relates particularly to sheet metal car roofs with protecting roof boards, and it has for its object to provide increased clearance by reducing the thickness of the roof, to enhance the resistance to the twisting tendency of the car, to obviate puncturing of the roof members, and to insure a permanency in the connection between the wooden members and their supports.

To this end the invention may be said to consist of the construction, combination and particular arrangement of parts hereinafter described and pointed out in the claims.

For full comprehension, however, of my invention reference must be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate the same parts, and wherein:

Figure 1 is a part plan and part horizontal sectional view of a car roof constructed according to my invention the section being taken on line A A Fig. 2;

Fig. 2 is a transverse vertical sectional view taken on line B B Fig. 1;

Fig. 3 is a longitudinal sectional view taken on line C C Fig. 1;

Fig. 4 is a detail vertical sectional view taken on line D D Fig. 1 drawn to a larger scale; and

Fig. 5 is a detail vertical sectional view taken on line E E Fig. 1 drawn to a larger scale.

The main supporting members of my improved roof consists of arched channel-iron carlines 3 disposed with their flanges downward, their inverted bases being electrically welded to a series of purlins 4 with upturned flanges. The ends of the carlines rest on Z-iron side-plates 5 to which they are fastened by sheet metal caps 6 inclosing and electrically welded to the top and sides of the carline ends and riveted as at 7 to the side plates; while the purlins are supported at their ends on inverted channel-iron end-plates 10 to the bases of which they are connected by an electrically-welded joint,

and the ends of these end plates are secured to the side plates by sheet metal caps 12 electrically welded thereto and riveted to the side plates. The connection between the ends of the carlines and the side plates is further stiffened by screw-threaded studs welded thereto and projecting downwardly through cast iron distance blocks and through the side plates to which they are clamped by nuts screwed upon the studs.

The roof-sheets 15 are flat and stiffened transversely by beads 16 consisting of metal strips of flanged U cross-section, the flanges thereof being electrically welded to the sheets. The side edges of these sheets are bent upwardly into the carlines and their extreme edges are turned back as at 14 to form pockets and they are suspended from the carlines by curved sheet metal clips 17 clamped in place by studs 18 welded at their upper ends to the carlines and having their lower ends screw-threaded and projecting through the clips, nuts 20 screwed upon the studs clamping the turned-back edges of the sheets securely in place. The ends of the sheets are bent over the side plates, and the particular construction of side-edge clamps obviate the necessity of fastening their ends to the side plates thus accommodating the working of the car while in transit without straining the sheets, the freedom of the movement of the sheets being further augmented by the distance blocks 9.

This peculiar construction of roof-sheets permits very thin sheet material to be used and still sufficiently self-sustaining to, when augmented with the side edge fastening means above mentioned, dispense with the usual inside purlin supports.

These roof-sheets are protected by a wooden roofing constructed of nailing strips set in the upturned purlins and fastened therein by upwardly projecting studs within the purlins and electrically welded to the webs thereof, clamping nuts being screwed on the upper ends of the studs for the purpose. The roof boards are nailed to these strips as at 33 and the metal base to the nailing strips presented by the webs of the purlins causes the nails to clench and the boards to be permanently fastened in place.

The running board 40 is carried in sheet-metal saddles fastened to the roof-boards.

Another advantage of my improved roof

is that protruding nails, a great source of danger to train-men, are entirely dispensed with.

What I claim is as follows:—

5 1. In a car roof the combination with a roof-frame having a series of downwardly turned channel-iron carlines, of roof-sheets with upwardly turned side edges entering the carlines and having turned-back extreme
10 edges, and means fastening the turned back edge-portions to the carlines.

2. In a car roof the combination with a roof-frame having a series of downwardly turned channel-iron carlines, of flat roof-
15 sheets with stiffening beads secured to the underside thereof, and means fastening the sheets to the carlines.

3. In a car roof, the combination with a downwardly-turned channel-iron carline, of a roofing sheet have an upwardly-turned
20 side edge entering the carline and having a turned-back extreme edge, a clip for fastening the turned-back edge portions to the interior of the carline, and a hanger for said
25 clip integral with the lower face of the web portion of said carline.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

Montreal, November 16, 1911.

RICHARD WEBB BURNETT.

Witnesses:

E. R. PITTS,

T. J. GRIFFIN.

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