W. H. SLATTEN & W. F. NOLAN.

CAR ROOF CONSTRUCTION.

APPLICATION FILED MAY 10, 1915.

1,149,093.

Patented Aug. 3, 1915.

2 SHEETS—SHEET 1.

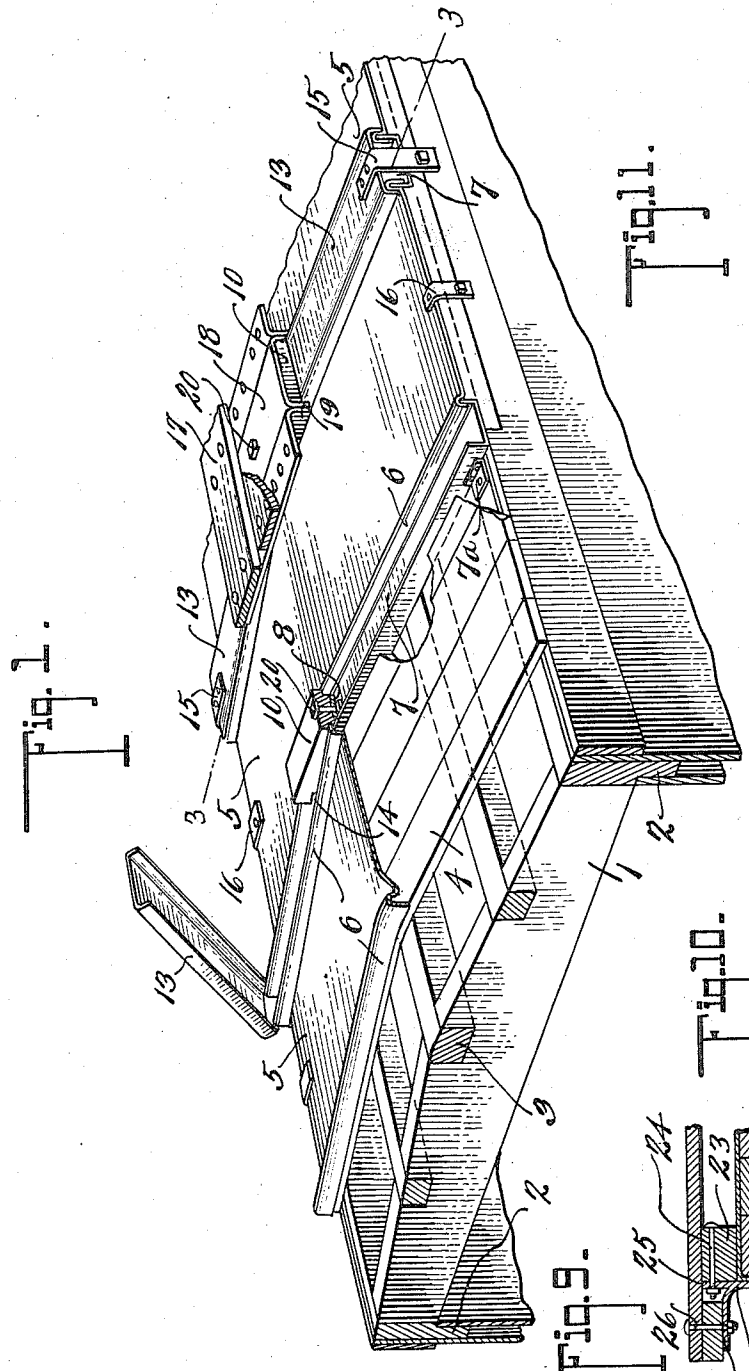


Fig. 1.

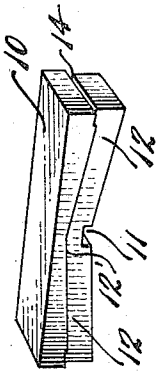


Fig. 11.

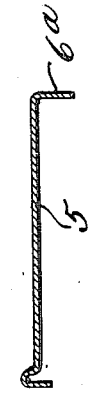


Fig. 10.

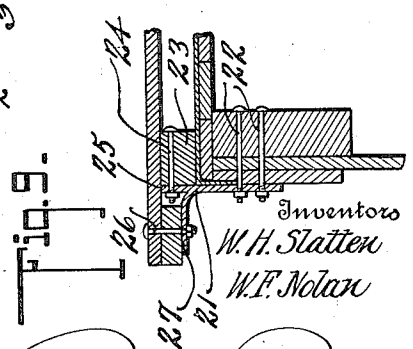


Fig. 9.

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2 SHEETS—SHEET 2.

Fig. 2.

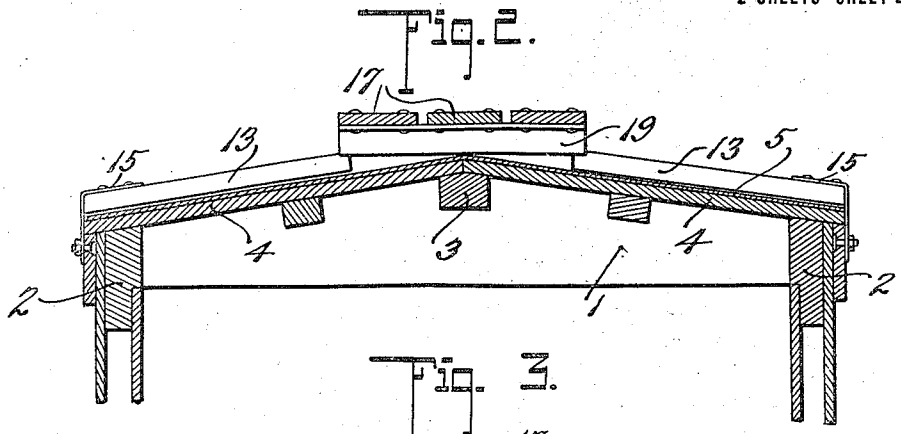


Fig. 3.

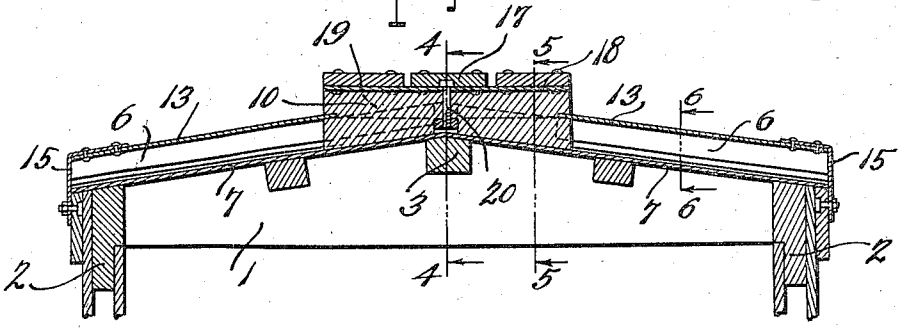


Fig. 4.

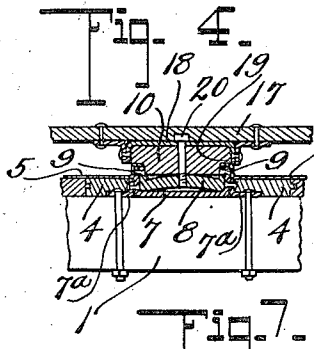


Fig. 5.

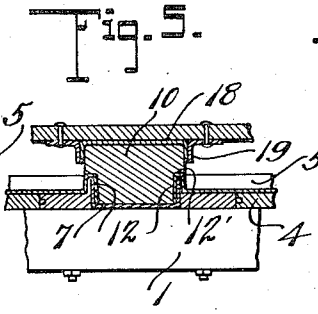


Fig. 6.

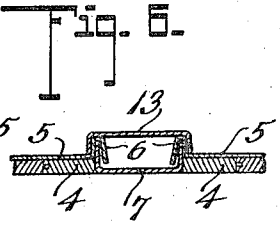


Fig. 7.

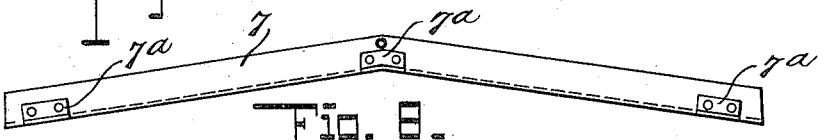
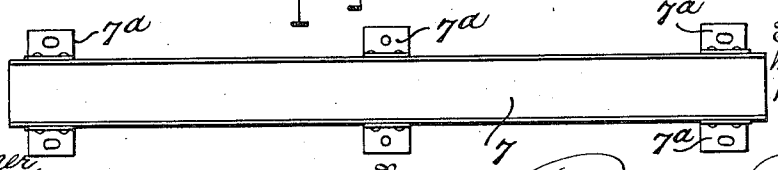


Fig. 8.



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WILLIAM H. SLATTEN AND WILLIAM F. NOLAN, OF CHICAGO, ILLINOIS.

CAR-ROOF CONSTRUCTION.

1,149,093. Specification of Letters Patent. Patented Aug. 3, 1915.

Application filed May 10, 1915. Serial No. 27,145.

To all whom it may concern:

Be it known that we, WILLIAM H. SLATTEN and WILLIAM F. NOLAN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Roof Constructions, of which the following is a specification.

The present invention relates to improvements in car roof constructions of that type disclosed in our copending application, Serial Number 849,196, filed July 6th, 1914.

The arrangement of the car roof construction of the present invention possesses all the advantages and merits of the combination comprehended by the above referred to application, and the object in view is to obtain an improved interlocking and clamping connection between certain of the parts of which the roof construction consists.

With the above and other objects in view, this invention consists in the construction, combination and arrangement of parts all as hereinafter more fully described, claimed and illustrated in the accompanying drawings, wherein:

Figure 1 is a perspective view of a roof construction forming the embodiment of this invention, parts being broken away and shown in section to more clearly disclose details of construction, one of the cap members being illustrated in elevated position disconnected from its interlocking member. Fig. 2 is a transverse sectional view. Fig. 3 is a transverse sectional view taken through the longitudinal center of one of the channel plates taken about on the line 3—3 of Fig. 1. Figs. 4, 5 and 6 are vertical sectional views taken on the line 4—4, 5—5, and 6—6 respectively of Fig. 3. Fig. 7 is a side elevation of a channel plate. Fig. 8 is a top plan view thereof. Fig. 9 is a fragmentary sectional view showing more clearly the end running board support. Fig. 10 is a transverse section of an end roof section; and Fig. 11 is a perspective view of the filler block used in connection with this roof section.

Referring to the drawings, the numeral 1 indicates the transverse car frame members, 2 the side plates, 3 the purlins, and 4 the wooden sheathing boards, all of conventional construction and formation in cars of a well known type. Upon the framing is disposed the car roof construction which forms the embodiment of the present invention, and which consists of a plurality of roof sections 5 arranged at regular intervals transversely of the car throughout its length. These roof sections are of metallic material and formed at each side with rebent flanges 6 which engage over transverse channel plates or carlines 7, one of which is disposed between each pair of roof sections. The channel plates are U-shaped in cross section and are secured to the car roof, preferably by means of angle plates 7^a, a sufficient number of which are bolted to the plates and to the roof of the car at each side of said plates. The function of the channel plates is quite apparent in that they will impart rigidity to the car roof transversely as well as provide an interlocking connection between the respective roof sections. As apparent from the drawings, the channel plates as well as the roof sections are bent intermediate their lengths along a central longitudinal line of the car roof to provide for the usual sloping construction of roofs of this type.

At the central portion of each channel plate 7 is arranged transversely thereof a connecting plate or member 8 most clearly shown in Fig. 4 of the drawing, said plate or bar being bent upwardly at its extremities and secured to its channel plate by means of rivets or like fastening members 9. These connecting members 9 allow certain pivotal movement of the connecting plate 8 which serves an advantage in roof constructions of this type in that it enhances the flexibility of the roof assembly.

Disposed over the connecting plate 8 is a filler block 10 shown most clearly in Fig. 11 of the drawings, this block being cut away transversely and centrally as indicated at 11 to receive the connecting plate at this point. The filler block 10 is also cut away at each side as indicated at 12 so as to provide a shoulder 12′ which is adapted to seat upon the inturned or rebent flange 6 of the adjacent roof section, which, as will be seen more plainly as this description proceeds, provides for the clamping of the roof sections onto the channel plates at their intermediate points.

Over the channel plates at each side of the car is seated a cap member 13, said cap members having flanged sides so as to engage over the rebent flanges of contiguous roof sections. The inner extremity of each cap member is engaged in a transverse end

slot 14 of its coöperating filler block while the opposite end of the cap member is secured to the car by means of clips 15 fastened to the cap and to the car in any desired manner, and as clearly shown in Fig. 3 of the drawings. Thus the cap members are securely held in position and adequately afford protection against leakage at the points of connection of the roof sections with the channel plates. Each roof member or section is furthermore secured preferably to the car by a clip 16 one of which is attached at each end of a roof member.

As clearly shown in the drawings, and especially in Fig. 1, the car roof assembly includes a running board 17 of conventional type and extending longitudinally of the car, said running board being supported at points corresponding to the position of the channel plates by a saddle member 18. This saddle member 18 has depending flange portions or elements 19 which engage over the filler block 10 therebeneath and over the rebent flanges of the contiguous roof sections. A bolt or similar fastening member 20 passes through the saddle 18, the filler block 10, and into the connecting plate 8 with which it preferably has threaded connection. Thus it will be apparent that the parts along the central longitudinal line of the car are clamped together by the bolts 20, and this combination or arrangement of parts permits of the maximum amount of flexibility of the roof construction.

In order to prevent any tendency of the running board to move longitudinally, the end brackets 21 are provided as clearly shown in Fig. 9 of the drawing. The said brackets are fastened to the ends of the car by means of bolts 22 and to a transverse filler support 23 by the fastening members 24 extending through a vertical extension of the bracket designated 25, being similarly connected to the running board by the fastening members 26 extending through a lateral extension 27 of said bracket.

The end roof section is, of course, similar in formation to the other roof sections excepting that instead of having a rebent flange at both sides, one side only is bent downwardly to form a depending flange 6^a for securing the plate to the end of the car.

As will be obvious to those skilled in the art, the filler blocks 10 constituting the supports for the running board are held from displacement on the channel plates by the interlocking arrangement thereof with the connecting plates 8, and furthermore, the cooperation of the spaced cap members engaging in the ends of the filler blocks is an additional means for insuring against displacement.

Having thus described our invention, what we claim as new is:

1. In a car roof construction, the combination of roof sections, channel plates intermediate said sections, means attaching said plates to the car roof, a running board, supports for said running board carried by the channel plates and having clamping shoulders adapted to engage the roof sections and clamp them against the channel plates, connecting members attached to each channel plate with which the running board supports interlock, and fastening means connecting the running board to the connecting members and extending through the running board supports aforesaid.

2. In car roof construction, the combination of roof sections, a channel plate intermediate each pair of roof sections with which the channel plates have interlocking engagement, a running board, a filler block carried by each channel plate for supporting the running board, said filler block having lateral cut away portions forming shoulders adapted to engage over the adjacent roof sections to clamp said sections to the channel plates, a running board saddle straddling the filler block, means on each channel plate for preventing displacement of the filler block, and a fastening member intermediate said means and the running board saddle.

3. In car roof construction, the combination of roof sections having lateral rebent flanges, channel plates intermediate the roof sections of U-shape in cross section with which the flanges of said roof sections engage, a connecting plate secured to each channel plate, a filler block having a transverse groove engaging over said connecting plate whereby to prevent displacement of said filler block, cap members disposed over said channel plates and snugly fitting over the flange of the roof sections, fastening members connecting the cap members to the car roof, said filler block having end grooves to receive the inner ends of the cap members, a running board supported by said filler block, and fastening means between the running board and the connecting plate aforesaid.

In testimony whereof we affix our signatures.

WILLIAM H. SLATTEN.
WILLIAM F. NOLAN.