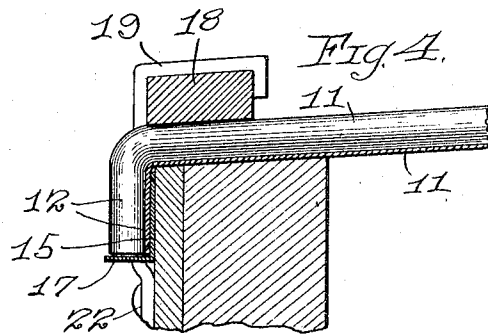
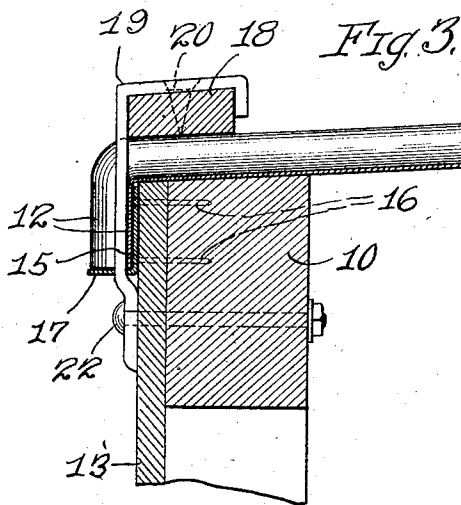
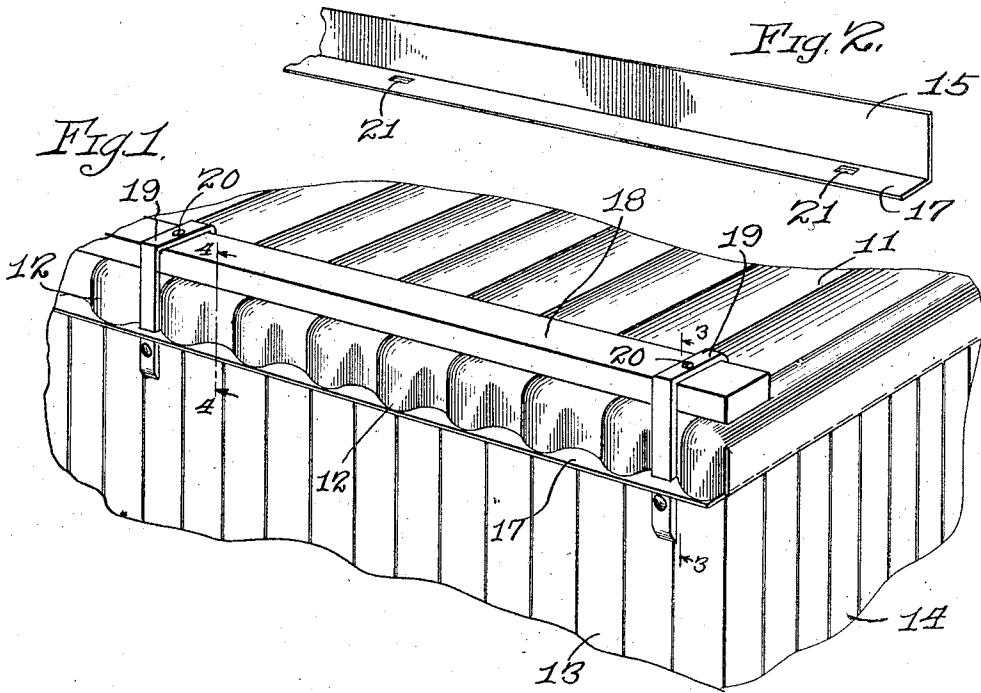


T. N. RUSSELL.
 CAR ROOF.
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1,103,085.

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UNITED STATES PATENT OFFICE.

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CAR-ROOF.

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To all whom it may concern:

Be it known that I, THOMAS N. RUSSELL, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Car-Roofs, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in car roofs, and has for one of its objects to provide improved means for firmly holding down in place on the side plates of the car the corrugated roofing sheets without offering any obstruction to the escape of water or cinders that may fall upon the roof and flow or move toward the sides.

Another object of the invention is to provide in connection with such corrugated roofing sheets and the holding means referred to, improved means for closing the ends of the channels on the under face of the said sheets.

I accomplish these objects by the constructions shown in the drawings and hereinafter specifically described. That which I believe to be new will be pointed out in the claims.

In the drawings: Figure 1 is a perspective view of a portion of a car provided with my improvements; Fig. 2 is a detail, being a perspective view of the bent strip employed in the construction shown in Fig. 1 for closing the ends of the channels on the under face of the corrugated roofing sheets; Figs. 3 and 4 are cross-sectional views taken on lines 3—3 and 4—4, respectively, of Fig. 1.

Referring to the several figures of the drawings, in which corresponding parts are indicated by like reference characters, 10 indicates one of the usual side plates of a car on which and on the usual purlins (not shown) the car roof rests. The roof proper, in the construction illustrated, consists of corrugated sheets extending from side to side of the car and sloping as usual from the central ridge-pole to the sides. One of such sheets is shown and is indicated by 11. These corrugated roofing sheets differ from those ordinarily employed in that they are made wide enough so as to extend beyond the side of the car and are there turned

downwardly to lie parallel with the side, as clearly shown in Fig. 3, the corrugations appearing in the roof proper being still preserved in these turned-down edge portions. The turned edge portion of the sheet shown is indicated by 12.

Thirteen indicates the side sheathing of the car, and 14 the end sheathing thereof. The turned portion 12 of the corrugated sheet does not lie directly against the side sheathing 13, but against the outer face of a metal strip 15 which is secured by suitable fastenings 16 to the upper part of the sheathing, as clearly shown in Figs. 3 and 4. The lower portion of the metal strip 15 is turned at right angles to provide a horizontal flange 17, which, when the roofing sheets are in place, lies directly beneath the edge of the turned portion 12 and serves to close the channels formed by the corrugations thus effectually preventing any sparks or cinders from entering beneath the roof through any of the channels of the corrugated sheets.

18 indicates a stringer, preferably in the form of a small wooden beam which extends longitudinally of the car at its edge—one at each side of the car, of course—and resting upon the tops or crowns of the elevations of the corrugated sheet. These stringers are held firmly in place by comparatively heavy metal brackets 19 secured in place at intervals. As shown each of such brackets is bent at its upper portion so as to extend over the upper surface of the stringer with its extreme end portion bent down against the inner edge of the stringer, thus partially embracing the stringer. It is secured to the stringer, preferably by screws, as indicated by 20. The vertical leg of the bracket extends down in one of the exterior channels of the turned-down portion 12 of the roofing sheet and passes through a suitable opening 21 in the horizontal portion or flange 17 of the strip 15, and immediately below such flange portion 17 the said vertical leg of the bracket is slightly offset to adapt it to bear against the side sheathing of the car opposite the adjacent side plate 10. It is firmly secured in place, the securing means shown being a bolt 22 that passes through the bracket, the side sheathing and the side plate, as

clearly shown in Fig. 3. By securing the various brackets as described the longitudinally-extending stringers are held firmly down upon the roofing sheets and hold such roofing sheets firmly and properly in place between them and the upper face of the side plate.

It is evident that while the construction described holds the roofing sheets at their edge portions properly in place the stringer will not prove an obstruction to the free passage of water and cinders from the car roof because, of course, the water, cinders, &c., will wash down in the channels, and such channels, as is clearly shown in Fig. 1, are only bridged by the stringers so that the water, cinders, &c., can readily pass beneath the stringer. At the same time, as before pointed out, all liability of cinders or sparks entering beneath the roof is effectually prevented by reason of the closing of all of the channels by the flange 17 of the strip 15.

At each end of the car the adjacent sheet 11 is turned down as shown in Fig. 1 to lie against the end sheathing, the sheet being suitably slit at the corner, as indicated, to permit such turning down of the sheet.

By my improved construction it will be noted that while the brackets are secured by fastening devices, such as screws, passed through the upper parts of the brackets into the stringers, such fastening devices do not penetrate the roofing sheets, but reliance for holding the roofing sheets firmly down in place along their edges is placed wholly upon the firm downward pressure upon them of the firmly-secured longitudinally-extending stringers. There is almost always more or less slight relative movement between the stringers and the roof, due to the strains imposed upon the car-body as a whole when in use, and I have found that by making such stringers of wood there is much less chafing or wearing of the roof than where metal holding members resting on the roof are employed.

What I claim as my invention and desire to secure by Letters Patent, is—

1. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of such sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned portion, means for securing such roofing sheet in place, and a flanged strip secured to the side of the car and projecting beneath the edge of the turned portion of the sheet to close the channels therein.

2. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of said sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned portion, a stringer resting on the roofing-sheet adjacent to the side of the car, and a brackets engaging said stringer and extending down in one of the outer channels of said turned portion of the sheet, and means for securing the bracket to the side of the car.

3. In a car, the combination with a corrugated roofing-sheet, the corrugations of which extend transversely of the car, the outer portion of said sheet being turned down opposite the side wall of the car with the corrugations maintained in such turned portion, a stringer resting on the roofing-sheet adjacent to the side of the car, a strip attached to the side of the car and arranged below the edge of the turned portion of the corrugated sheet to close the channels therein, and a bracket engaging said stringer and extending down in one of the channels of the said turned portion of the sheet and passing through an opening in said closure strip, and means for securing the bracket to the side of the car.

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