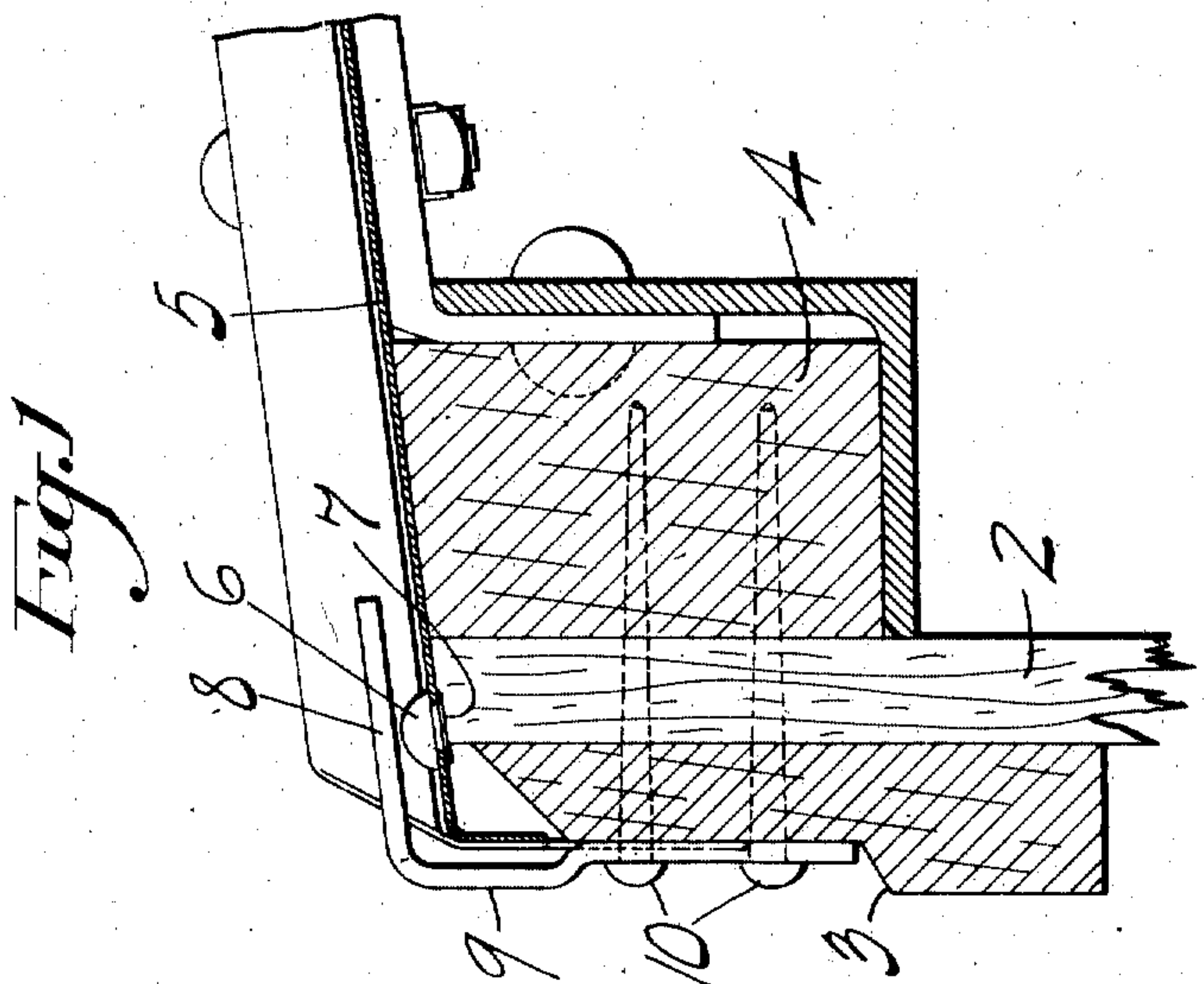
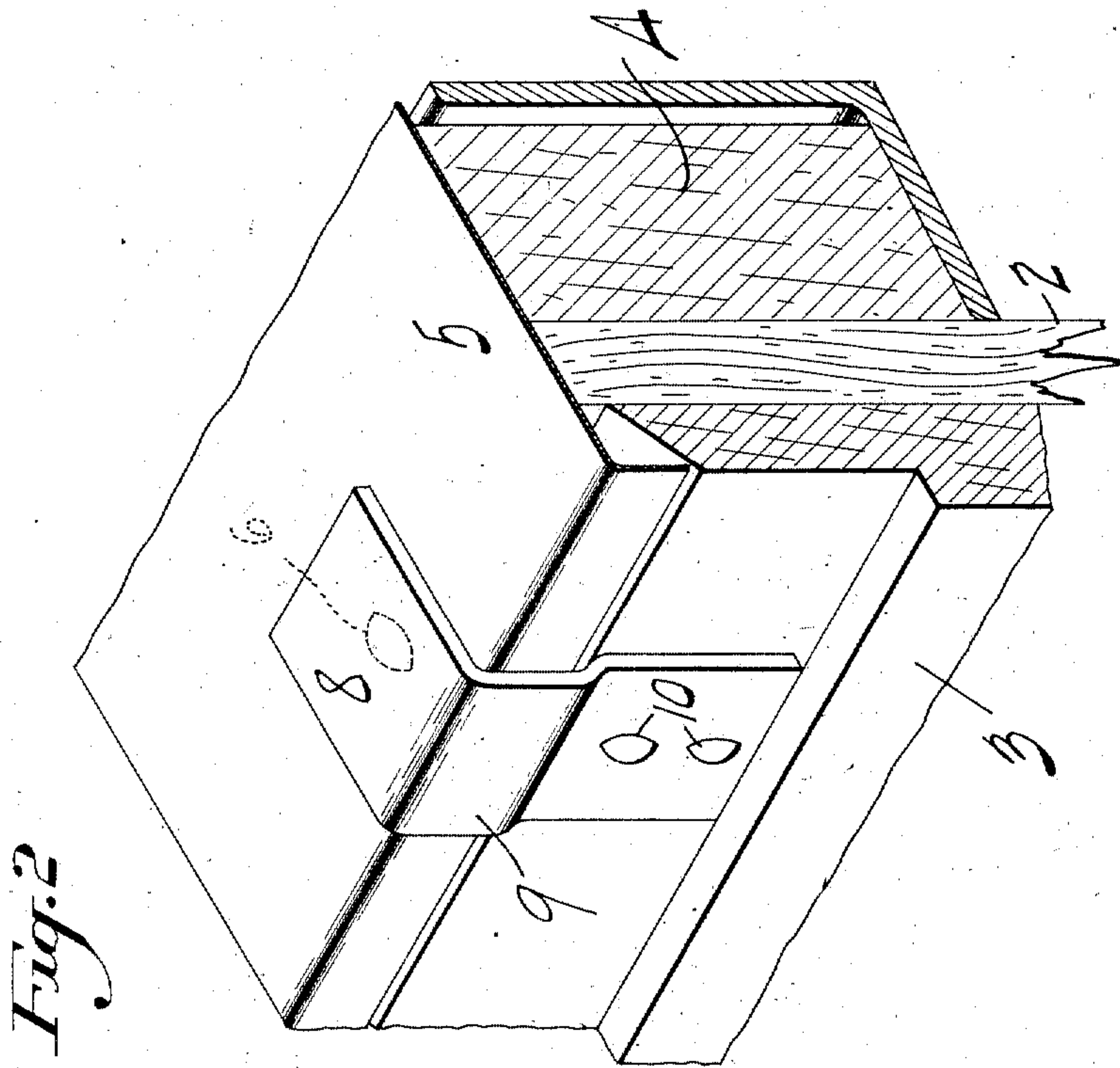


J. J. HOFFMAN.
CAR ROOF CONSTRUCTION.
APPLICATION FILED AUG. 20, 1910.

993,600.

Patented May 30, 1911.



WITNESSES
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UNITED STATES PATENT OFFICE.

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CAR-ROOF CONSTRUCTION.

993,600.

Specification of Letters Patent.

Patented May 30, 1911.

Application filed August 20, 1910. Serial No. 578,206.

To all whom it may concern:

Be it known that I, JOHN J. HOFFMAN, of New Kensington, county of Westmoreland, and State of Pennsylvania, have invented a new and useful Improvement in 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.

10 This invention relates to car roof construction and more particularly to that type employing metallic sheets which are fastened to the car siding by means of suitable clips, which are secured to the crown mold or facia and extend up and overlies the edges of the sheets.

The primary object of the invention is to obviate the chafing of the clips on the sheet at this point. This chafing is occasioned by the clip binding upon the sheets incident to the sheet movement due to weaving of the car and sheet expansion and contraction, and engenders rusting of the sheet, which rusting is augmented by the moisture retaining cinders harbored by the clip.

My invention consists in providing a novel form of construction in which is obviated the binding of the clip directly upon the body of the sheet and in which provision is made for the free circulation of air between the clip and roof to free the device from cinders, and for reinforcement of the roof sheet at points lying within and about the zone of the clips.

35 I will now describe my invention so that others skilled in the art to which it appertains may understand and construct the same, referring to the accompanying drawings in which I have shown one embodiment of my invention. It will, however, be apparent that the construction shown admits of great modification without departing from my invention.

45 Figure 1 is a transverse vertical section through the side edge of a car roof, showing the car siding, side plate, facia, and roof sheets; and Fig. 2 is a sectional perspective view of the same.

In describing my invention, the reference

numeral 2 indicates the siding, 3 the facia, 50 4 the side plate and 5 a roof sheet of a car of ordinary construction.

The employment of securing clips of the character above mentioned is generally in connection with roof construction employing metallic plates 5 which are united at their edges by a suitable flexible seam and are capable of moving longitudinally and transversely of the roof; the clip serving to not only prevent the sheet from rising at the edge but also to resist by a suitable close fitting, undue movement of the sheets. So in order not to impair the functions of the clip, as above stated, I provide the sheet with the rivet like bearing 6, which, preferably passing through the sheet, has the under face 7 lying substantially flush with the under face of the sheet so as not to bind against the car siding and resist the movement of the sheet. The upper portion of the bearing 6 takes the form of a boss and adapted to rest upon and bind against this head is the shank 8 of the clip 9, which shank overlies the sheet in the usual manner; the clip 9 being also secured in the usual manner to the facia 3, siding 2 and side plate 4 by the suitable fastening bolts or nails 10.

By my improved construction it will be seen that the clip is prevented from binding upon the roof sheet and setting up chafing. The elevation of the shank 8 of the clip from the upper face of the sheet also permits of the free circulation of air beneath the clip for the removal of cinders. The member 6 does not call for the special formation of the roof sheet and may be applied without impairing its waterproof quality. Furthermore, the rivet-like member 6 passing through the sheet tends to greatly stiffen the sheet at points lying within and about the zone of the clip so that the sheet is effectually held in flat position at this point where the tendency thereof is to rise and buckle as the sheet, bound to the roof by the clip, moves under expansion and contraction by the operative roof stress.

Other advantages of my invention will be appreciated by those skilled in the art.

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

1. In a car roof, the combination of a support, a series of roof sheets carried thereby, a rivet-like bearing piece carried by the sheet and a fastening clip secured to the car siding and overlying the bearing piece.
2. In a car roof, the combination of a support, a series of roof sheets carried thereby, a rivet-like bearing piece carried by and

passing through the sheet, and a fastening clip secured to the car siding and overlying the bearing piece.

In testimony whereof, I have hereunto set my hand.

JOHN J. HOFFMAN.

Witnesses:

M. A. BARTH,
M. A. KELLER.