J. PEARSON.

CAR ROOF.

APPLICATION FILED MAR. 20, 1908.

949,839. Patented Feb. 22, 1910.

Fig. 1.

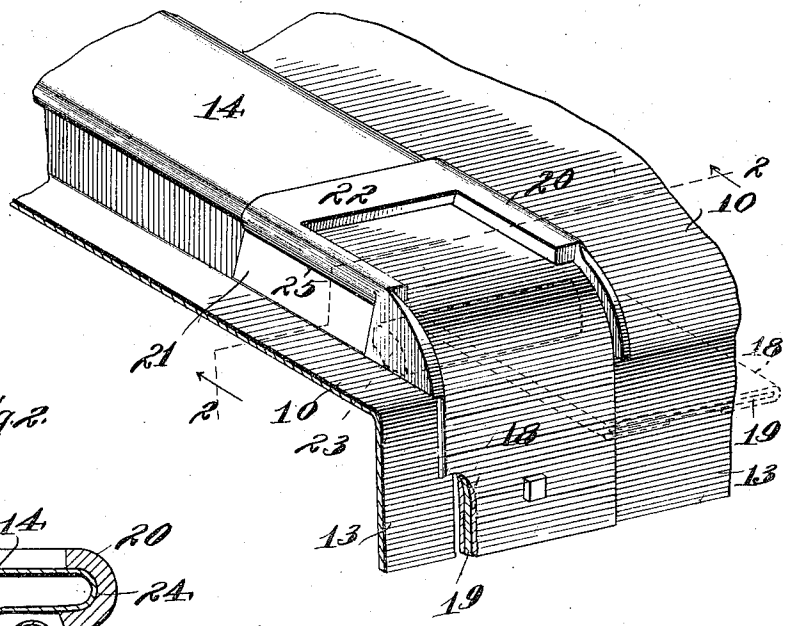


Fig. 2.

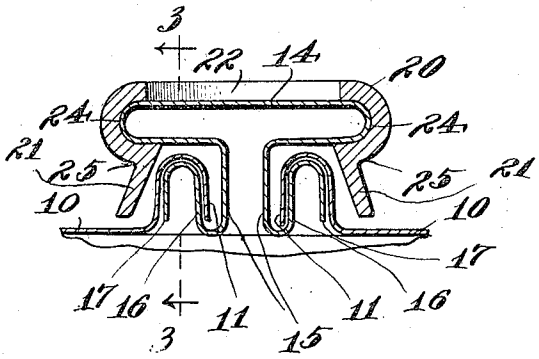


Fig. 3.

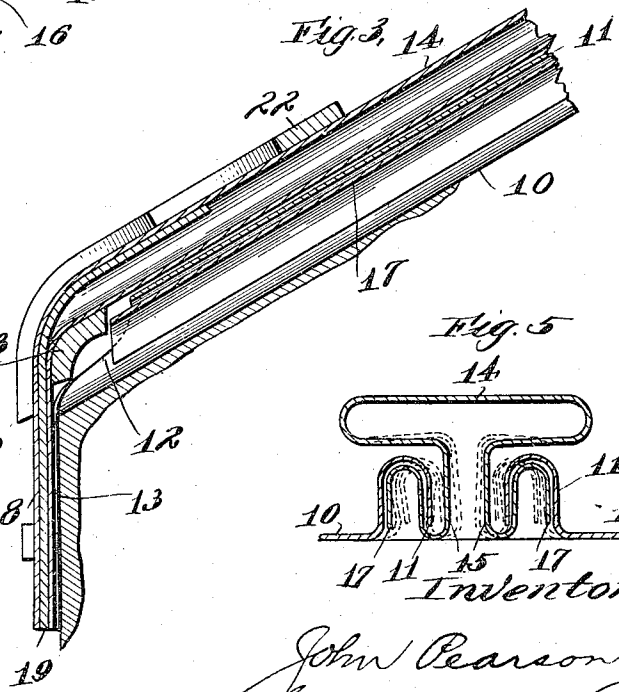


Fig. 4.

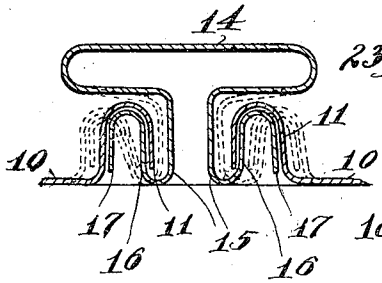


Fig. 5.

Witnesses.

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CAR-ROOF.

949,839. Specification of Letters Patent. Patented Feb. 22, 1910.

Application filed March 20, 1908. Serial No. 422,245.

To all whom it may concern:

Be it known that I, JOHN PEARSON, a citizen of Chicago, residing at 885 East Seventy-second street, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Car-Roofs, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in car-roofs and has reference primarily to providing an improved metal roof composed of a series of plates or panels and interlocking the roof-plates and which shall provide flexible joints adapted to yield to the pull or compression which may be exerted thereon by the plates when under strain and to expansion and contraction due to changes in temperature.

The invention consists in the arrangements and combinations of the parts hereinafter particularly described and then pointed out in the appended claims.

In the accompanying drawings in which like reference numerals indicate similar parts in the different figures; Figure 1 is a perspective view illustrating an embodiment of my invention showing a cap and roof-plates interlocked; Fig. 2 is a cross-sectional view on the line 2—2 of Fig. 1; Fig. 3 is a longitudinal sectional view on the line 3—3 of Fig. 2; Fig. 4 is a cross-sectional view of the cap showing in dotted lines the out-bend of the sides; and Fig. 5 is a similar view showing in dotted lines the in-bend of the sides.

In the drawing the reference numeral 10 indicates the roof-plates which are preferably of galvanized iron but may be of any suitable material. It is of course to be understood that the plates may be of any desired length and width. Each side of the plates is provided with an upturned and reversely bent flap 11 forming a vertical pocket, the flap being cut away at the eaves as at 12 for a purpose to be hereinafter made plain, and at its outer end each plate is downwardly bent to form a skirt 13.

The cap is preferably of the same material as the roof-plates and is composed of an upper horizontal portion 14 of sufficient width to extend across or over the pockets of adjacent panels or plates, and of downturned and inturned sides which are brought under the horizontal portions, the sides being then bent down as at 15 and then bent reversely as at 16 to form pockets for the sides of the flaps 11 and again bent reversely as at 17 to form vertical portions in the pockets of the plates 10. The inturned portions of the sides of the cap are suitably cut-away at their front ends and the head 14 of the cap is extended into a skirt or curtain 18 which may be bent down to overlie the skirts 13 of the adjacent panels, and also may be provided with a reinforce 19 to stiffen or give greater rigidity thereto.

A hood 20 of malleable iron or other suitable metal is adapted to interlock with the cap and comprises a pair of parallel sides 21 connected at one end by a tie 22 and at its other or front end by a yoke or connection 23. The yoke lies in a plane sufficiently lower than that of the tie so that before the skirt of the cap is bent down and when it occupies the position shown in dotted lines in Fig. 1, the hood may be slipped over the skirt of the cap which passes freely between the sides and the tie and yoke. The sides 21 are inwardly and reversely bent after the hood is assembled to form recesses 24 into which the sides of the head 14 of the cap are adapted to seat, the sides of the hood being pressed together as at 25 by a suitable tool or in any other preferred manner. In assembling the hood upon the cap the former is slid along the skirt of the latter until the yoke contacts with the cut away ends of the flaps 11, and the skirt of the cap is then bent down to place and the sides 21 are contracted at 25 as before described to lock the hood to the cap.

Each cap is interlocked with two roof-plates and the parts are assembled by laying the plates adjacent each other and positioning the cap so that the pockets interconnect as shown in Fig. 2 and the cap is then slid along the plates to proper position. The hood is then slid upon the outwardly projecting end formed by the skirt of the head of the cap until the yoke contacts with the flaps 11 which are cut away at 12 sufficiently to slip into place so that when skirt 18 is turned down to place it will overlie and abut against the skirts 13 of the adjacent panels, so that when they are secured to the side of the car in the usual or in any suitable manner they contact along their entire length to form a tight joint to prevent water or other foreign matter from getting beneath the roof-plates and thus enter the car. It is also to be understood and is clearly obvious from Fig. 2 that the bends and

pockets of the panels and caps are adapted to telescope so that the caps may be slid to place.

The cap being of flexible material provides a flexible joint between the panels so as to take up any strain or movement in the panels caused by the action of the car without buckling the panels or causing them to fracture at their joints which is the initial point of breakage in most metal roofs. This function of the caps is clearly shown in the drawings by reference to Figs. 4 and 5. When one of the plates is subjected to strain in the general direction away from a cap, the latter yields so that the interconnected parts occupy the positions shown in dotted lines in Fig. 4, and when a plate is subjected to strain in the opposite direction the cap yields so that the interconnected parts occupy the positions shown in dotted lines in Fig. 5.

The hoods interlock with the caps and also with the ends of the flaps of the panels at or near the eaves, where the sides of the hoods also close the openings between the sides of the caps and the flaps formed by the cut-away portions of the latter. The hoods also form braces for the curtains or skirts of the caps, and the inturned portions 25 of their sides are located a suitable distance from the interlocking portions of the panels and caps as shown in Fig. 2 to provide the clearance necessary to allow these parts to move when under strain as before described.

Having described my invention, I claim:—

1. In a metal car-roof, a series of panels having flaps, skirts on the panels, a flexible cap having inturned sides forming channels to receive the flaps of adjacent panels to interlock the cap with the panels, and the inturned portions of the cap being cut away at their front ends and the head being extended into a curtain of substantially the same width as the head and adapted to overlie the skirts of adjacent panels.

2. In a metal car-roof, a series of panels, a cap adapted to interlock with adjacent panels, aad an interlocking hood on the cap.

3. In a metal car-roof, a series of panels, a cap having a head and inturned sides adapted to interlock with adjacent panels, and an end hood having recesses to receive the sides of the head of the cap.

4. In a metal car-roof, a series of panels having skirts and flaps, a flexible cap having inturned sides adapted to interlock with the flaps and cut away at their ends, a curtain on the cap overlying the skirts, and a hood on the cap and interlocking with the cap and curtain to close the openings between the sides of the cap and flaps.

5. In a metal car-roof, a series of panels, a cap having a head and inturned sides adapted to interlock with adjacent panels, and a hood having sides adapted to interlock with the sides of the cap and having a cross-tie and a yoke above and below the plane of the head of the cap.

6. In a metal car-roof, a series of panels having flaps, skirts on the panels, a flexible cap having pockets adapted to interlock with the flaps and providing a curtain adapted to overlie the skirts, a reinforce secured to the curtain, a malleable hood mounted on the cap and comprising a pair of sides connected by a tie and yoke and adapted to be compressed to interlock with the cap and to secure the curtain between the sides, tie and yoke.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN PEARSON.

Witnesses:

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