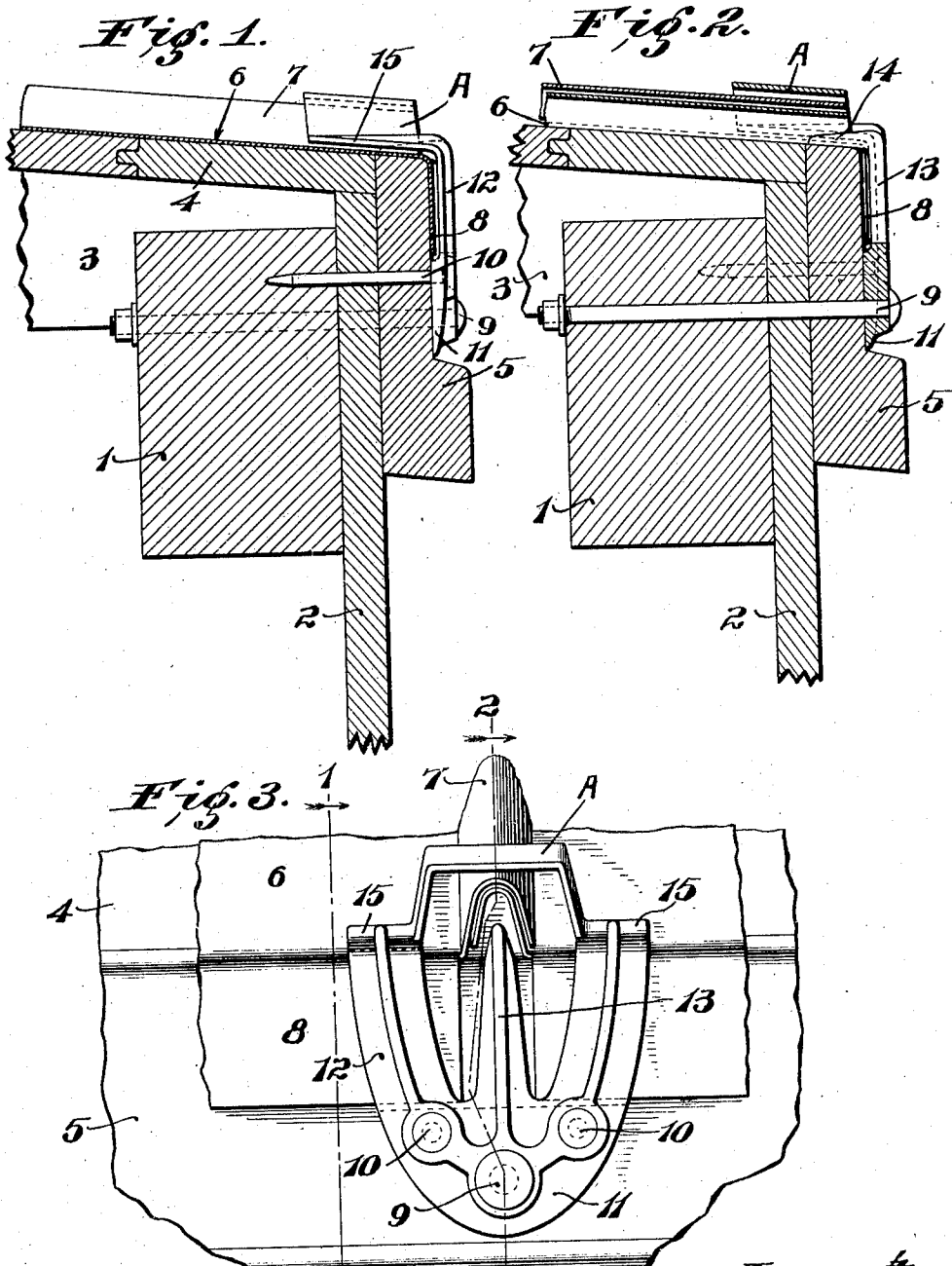


W. P. MURPHY.
 ROOF CLIP.
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1,006,495.

Patented Oct. 24, 1911.



Witnesses:

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WALTER P. MURPHY, OF ST. LOUIS, MISSOURI.

ROOF-CLIP.

1,006,495.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed December 14, 1908. Serial No. 467,479.

To all whom it may concern:

Be it known that I, WALTER P. MURPHY, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Improvement in Roof-Clips, of which the following is a specification.

My invention relates to outside car roofs and has for its principal objects to provide for the securing of the roof sheets at the eaves in such a way as to minimize their tendency to rust or wear out in the neighborhood of the eaves fasteners.

It consists principally in arranging the parts of the clip so that it normally rests out of contact with the roof sheets and does not interfere with the free ventilation thereof.

In the accompanying drawing, which forms part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a cross section of the top corner of a car embodying my invention, said section being taken on the line 1—1 of Fig. 3 and showing the clip in elevation; Fig. 2 is a similar view with the section taken on the line 2—2 of Fig. 3 and showing the clip in section; and, Fig. 3 is an elevation of a portion of the top corner of a car showing my clip applied thereto.

The car illustrated in the accompanying drawing comprises side plates 1, side sheathing 2, carlines 3, and roof sheathing 4, all of which may be of ordinary construction. Preferably, the roof sheathing extends longitudinally of the car and overlaps and terminates flush with the side sheathing. A fascia 5 is mounted outside of the side sheathing with its upper surface flush with the upper surface of the roof-sheathing. Preferably, the lower portion of the fascia is wider than the upper portion so as to constitute a protection for the clips A herein-after described.

Resting upon the roof sheathing are the metal roofing sheets 6 which are flexibly connected together so as to permit limited relative movement thereof. In the construction illustrated in the drawing, the roof sheets are connected by a hollow seam or raised rib 7 formed by the overlapping of reversely turned flanges provided therefor on the margins of the sheets. The ribs or seams terminate at or short of the edge of the car but the ends 8 of the roof sheets are turned

down over the edge of the fascia. The outer corner portions of the blank from which the roof sheet is made are removed, so that space will intervene between the edges of the downturned marginal portions of adjacent sheets.

The roof sheets are kept in proper position at the eaves by means of clips A which are secured by nails or other suitable fasteners. The clip illustrated in the drawing is mainly secured by a bolt 9 located vertically below the roof seam and extending entirely through the side plate. Said clip is further held by means of nails 10 at each side of the main bolt and below the depending flanges 8 of the roof sheets. By this arrangement, the bolt serves as the principal holding means and the nails serve to prevent the tilting or swinging of the clip upon said bolt. The lower portion 11 of the clip abuts flatwise against the thinner portion of the fascia and has three upwardly projecting arms 12, 12 13 whose inner surfaces are offset so that a space will intervene between them and the fascia. The middle arm 13 constitutes a distance piece and is provided with an inwardly projecting finger 14 whose lower surface rests on the top of the fascia. This projecting finger is located in the hollow of the roof seam and is small enough to normally lie out of contact with the flanges which constitute said seam. The other arms 12 overlap the downturned marginal portions of adjacent sheets, respectively, and diverge upwardly far enough to clear the roof sheets; and at their upper ends have inwardly turned portions 15 which extend over and parallel with said sheets to constitute holding clips therefor. The arms 12 spread or diverge so far that clearance spaces are formed between the respective downturned portions 15 and the upstanding rib or seam 7. The two clip members 15 are connected by a yoke piece 16 which is located in position to normally clear the intervening seam or rib.

In the foregoing construction, all portions of the clip are not only normally out of contact with the metal roof sheets, but are skeletonized to permit thorough ventilation. Therefore, such clips do not materially interfere with the free drainage of water or with the rapid evaporation of moisture under such clips, and consequently the rusting of the sheets at the clips is minimized,

and at the same time the roof sheets are less likely to bind and wear than with clips of the type now in common use.

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

1. The combination with a car having a plurality of roof sheets connected by transverse hollow seams, of clips secured at the eaves, said clips comprising a distance piece having a finger in the hollow of said seam and spaced arms turned inwardly over and clear of the roof sheets, said finger being small enough to normally lie out of contact with said seam.
2. The combination with a car having roof sheets connected by transverse hollow seams, of clips secured at the eaves by a plurality of spaced fasteners, said clips comprising a distance piece having a finger in the hollow of said seam and spaced arms turned inwardly over the roof sheets, all portions of said clip being clear of said roof sheets.
3. The combination with a car having roof sheets which are notched at their outer corners and are turned down at the eaves and which are connected at their sides by transverse hollow seams, of clips secured at the eaves, said clips comprising a distance piece having a finger in the hollow of said seam, and arms spaced from the eaves and from said distance piece and turned inwardly over said roof sheets at opposite sides

of said seam, all parts of said clip being clear of said sheets.

4. The combination with a car having roof sheets connected by transverse hollow seams, of clips secured at the eaves, said clips comprising a distance piece having a finger in the hollow of a seam and spaced arms turned inwardly over said sheets at opposite sides of a seam and connected together by a yoke extending over such seam, all parts of the clip being clear of the roof sheets.

5. The combination with a car having roof sheets connected by transverse hollow seams, of clips secured at the eaves, said clips comprising a distance piece having a finger in the hollow of a seam and spaced arms turned inwardly over said sheets at opposite sides of a seam and connected together by a yoke extending over such seam, all parts of the clip being clear of the roof sheets, the lower portion of said clip being thicker than the upper portion thereof, so as to form recesses between such upper portion and the side of the car, and the ends of the roof sheets being turned downwardly to lie in such recesses.

St. Louis, Mo., Dec. 12, 1908.

WALTER P. MURPHY.

Witnesses:

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