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CAR ROOF.

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2 SHEETS—SHEET 1.

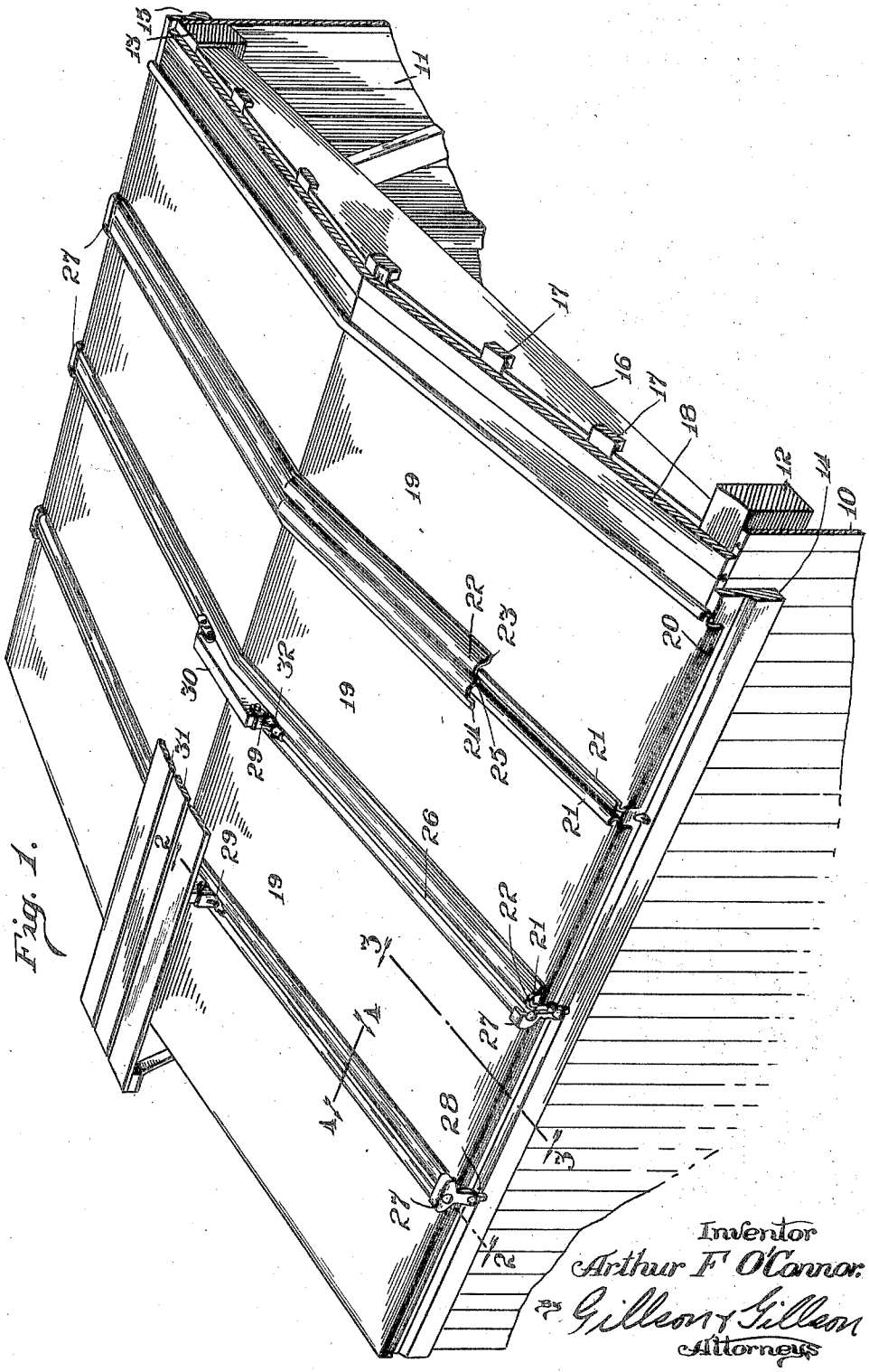


Fig. 1.

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CAR-ROOF.

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To all whom it may concern:

Be it known that I, ARTHUR F. O'CONNOR, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Car-Roofs, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to car roofs formed wholly or in part of sheet metal plates; its object being to provide improved means for attaching the plates to the car so as to secure flexibility, permitting the weaving or twisting action of the roof which occurs in service, without throwing strain upon the plates.

The invention consists in a structure such as is hereinafter described, and as illustrated in the accompanying drawings, in which a preferred embodiment is disclosed.

In the drawings—

Figure 1 is a detail perspective of a car, some parts being broken away;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a sectional view on the line 4—4 of Fig. 1; and

Fig. 5 is a detail plan view of the car.

The side walls of the car are shown at 10, 11; its side plates at 12, 13, and its fascia plates at 14, 15. At 16 is shown one of its carlines, and at 17, 17, the usual purlins. A roof lining 18 of wood may or may not be interposed between the framing of the roof and the metal plates 19.

The plates 19 extend entirely across the roof, and at their ends are flanged downwardly, as shown at 20, to overlap the fascia plates 14, 15, the latter being preferably rabbeted to loosely receive the flange, as most plainly shown in Fig. 3. The side edges of each of the plates 19 are turned upwardly, and preferably backwardly, as shown at 21 (Fig. 4). The several roofing plates 19 are spaced apart, and over the adjacent edges of each pair is placed a sheet metal binding strip 22, transversely bowed to loosely cover the upturned edges 21 of the sheets, its side margins being laterally extended from the bowed portion to form feet 23, 24, which rest firmly upon the body portion of the two roofing sheets with which the strip is associated. Along its median line the bowed portion of the strip 22 is depressed, as shown at 25, to form a channel within which is seated the binding rods 26.

Each of the binding rods 26 is anchored at its outer end in a bracket 27, secured to the fascia plate 14, as by means of a bolt 28 passing through these elements and through the plate 12. Two of the rods 26 are used in connection with each of the strips 22, one at each side of the roof, the inner or upper end of each rod being anchored in a bracket 29, secured to a saddle block 30 mounted upon the ridge of the roof and carrying the running boards 31. At least one end of each of the rods 26 is threaded, in the construction shown threads being formed at the inner end, to receive a nut 32 by means of which the rods may be placed under tension in order to bind the strips 22 upon the plates 19 and hold the saddle blocks and running boards in position.

By the means described the roof plates are secured without the use of nails or screws, or other means requiring their perforation. Their upturned marginal edges, in coöperation with the binding strips, exclude the weather, dust and moisture. The binding strips 22 are of metal, such as steel, having a sufficient degree of elasticity to cause a spring pressure upon the plates 19. The latter plates, however, have sufficient freedom of movement under the feet of the binding strips, and also by reason of their loose engagement with the fascia plates, to relieve them of all strains incident to the twisting or weaving action of the car.

I claim as my invention—

1. A car roof comprising, in combination, sheet metal plates extending from side to side of the car and having their side margins upturned, adjacent plates being spaced apart, transversely bowed binding strips seated on adjacent plates and loosely covering the margins thereof, saddle blocks seated on the strips at the ridge of the roof, and binding rods anchored in the saddle blocks and in the framing of the car and located on the median line of the binding strips.

2. A car roof comprising, in combination, sheet metal plates adapted to rest loosely upon the roof framing of the car and having their side margins upturned, adjacent

plates being spaced apart, transversely bowed binding strips loosely covering the margins of adjacent plates and adapted to yieldingly bear upon the body portions of such plates, and means extending throughout substantially their entire length for compressing the strips upon the plates.

3. A car roof comprising, in combination, sheet metal plates extending from side to side of the car and having their side margins upturned, adjacent plates being spaced apart, transversely bowed binding strips loosely covering the margins of adjacent plates and each having a channel on its median line, a saddle block seated upon each strip at the ridge of the roof, and binding rods anchored in the saddle block and in the framing of the car and fitting within the channels of the strips.

4. A car roof comprising, in combination, sheet metal plates extending from side to side of the car and having their side margins upturned, adjacent plates being spaced apart, transversely bowed binding strips loosely covering the margins of adjacent plates and each having a longitudinal depression forming a groove on its upper surface adjacent its median line, a saddle block seated upon each strip at the ridge of the roof, binding rods anchored in the saddle block and in the side framing of the car and fitting within the depression of the strips, and said sheet metal plates having downwardly turned margins loosely overhanging the side framing.

5. A car roof comprising, in combination, sheet metal plates adapted to rest loosely upon the roof framing of the car and having their side margins upturned, adjacent plates being spaced apart, the ends of the plates being flanged downwardly to loosely overlap the fascia plates of the car, transversely bowed binding strips loosely covering the margins of adjacent plates and adapted to yieldingly bear upon the body portions of such plates, and means wholly external thereof for compressing the strips upon the plates.

6. A car roof comprising, in combination, a longitudinal series of unconnected sheet metal plates resting loosely upon and covering the roof framing of the car, each plate extending continuously from side to side of the car and each alternate plate overlapping both of the adjacent plates, and a binding strip extending over each of the said alternate plates and having its ends anchored to the car sides.

7. A car roof comprising, in combination, a longitudinal series of unconnected sheet metal plates resting upon and covering the roof framing of the car, each plate extending continuously from side to side of the car and each alternate plate having upturned side margins, each of the remaining plates being transversely bowed to loosely cover the upturned side margins of adjacent plates and yieldingly bear upon the body portions of such plates at a substantial distance from the said upturned margins, and binding strips extending over the bowed plates and having their ends anchored to the car sides.

8. A car roof comprising, in combination, sheet metal plates adapted to rest loosely upon the roof framing of the car and having their side margins upturned, adjacent plates being spaced apart, the ends of the plates being flanged downwardly to loosely overlap the fascia plates of the car, transversely bowed binding strips loosely covering the margins of adjacent plates each strip having a central portion adapted to rest on the roof framing between the edges of adjacent plates and side portions adapted to yieldingly bear upon the body portions of such plates, and means wholly external thereof for compressing the strips upon the plates.

ARTHUR F. O'CONNOR.