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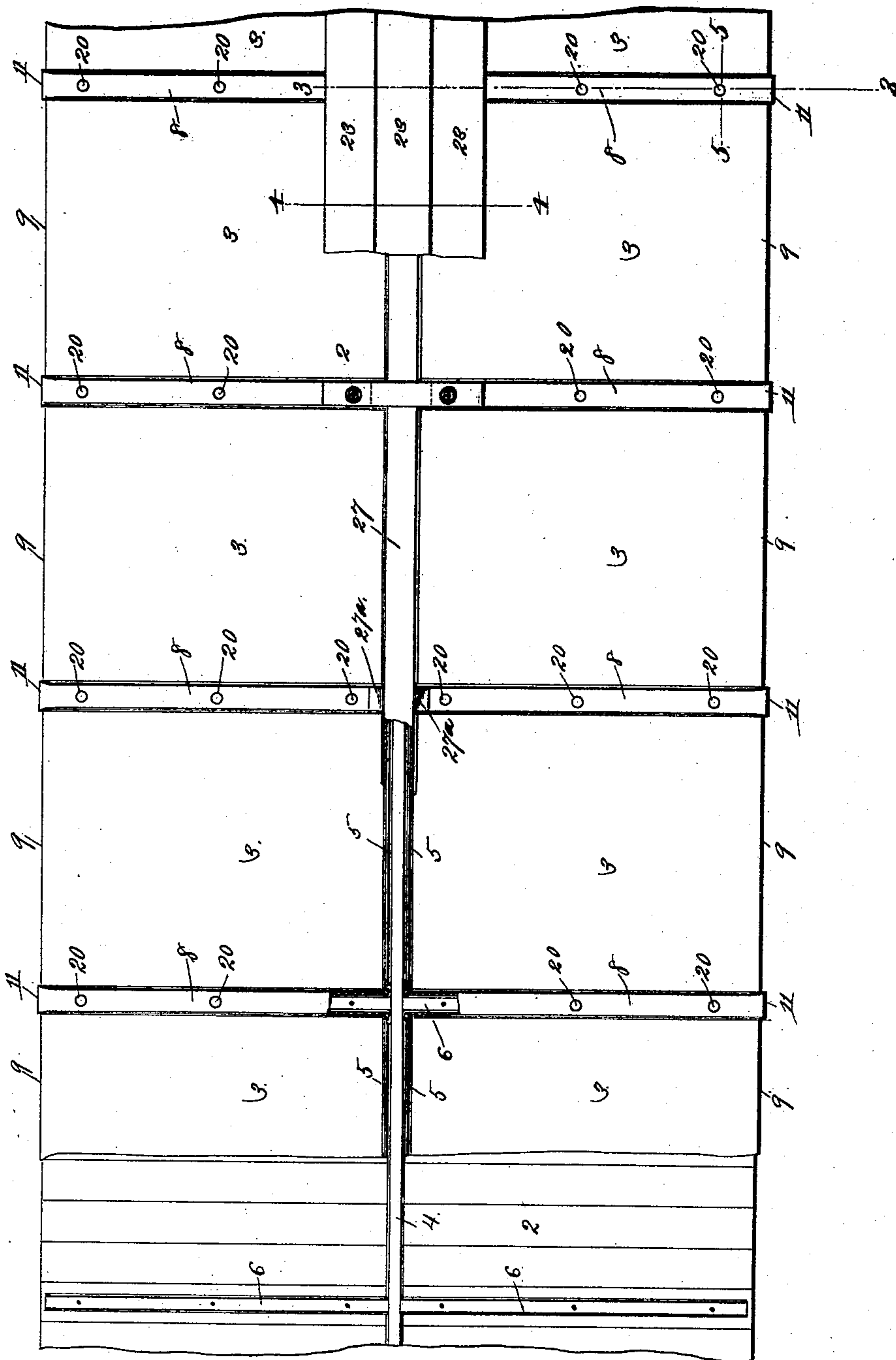
2 Sheets—Sheet 1.

A. N. MONTEER.  
COVERING ATTACHMENT FOR CAR ROOFS.

No. 491,120.

Patented Feb. 7, 1893.

Fig. 1.



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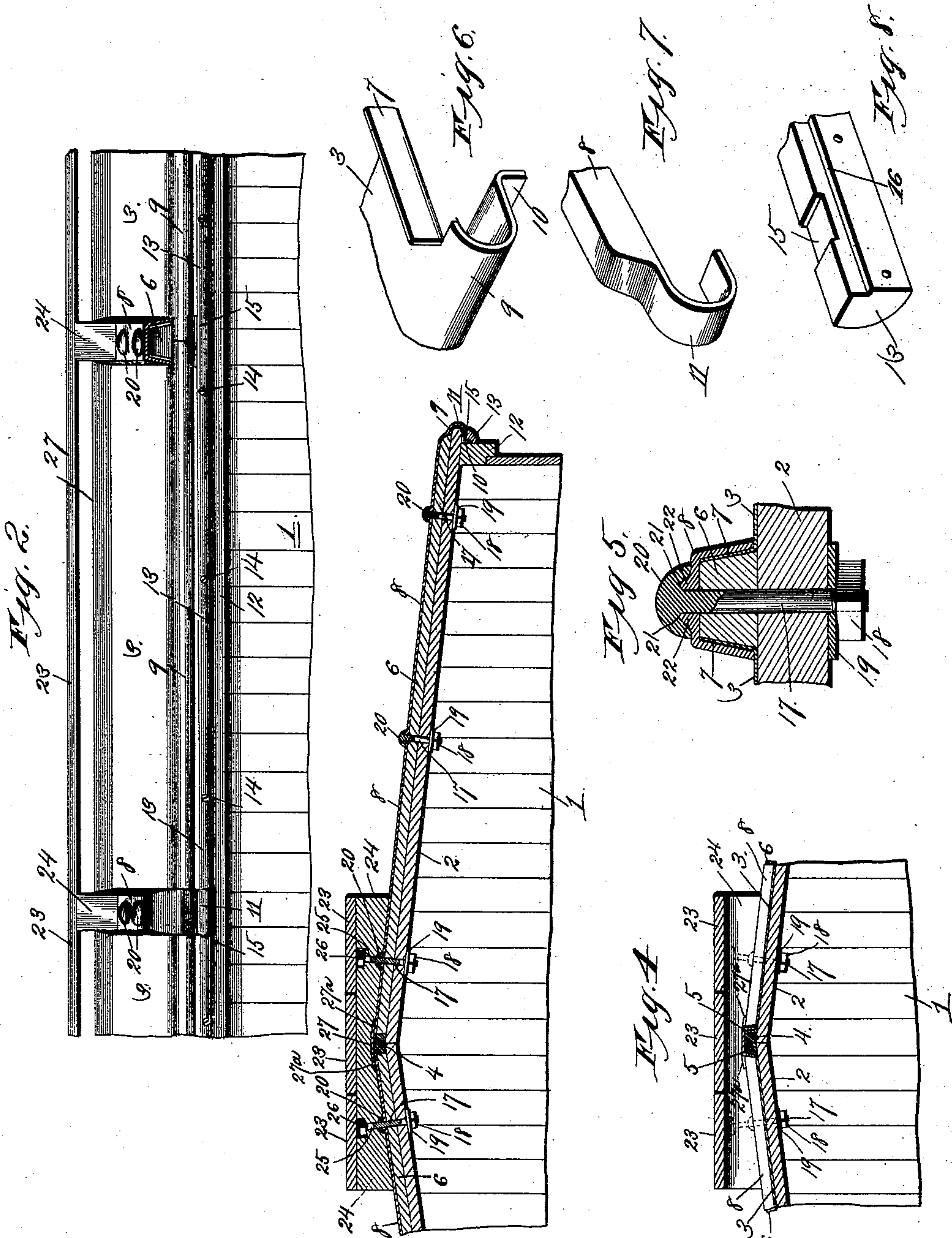
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*Fig. 3.*

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# UNITED STATES PATENT OFFICE.

ALEXANDER N. MONTEER, OF SPRINGFIELD, MISSOURI.

## COVERING ATTACHMENT FOR CAR-ROOFS.

SPECIFICATION forming part of Letters Patent No. 491,120, dated February 7, 1893.

Application filed July 8, 1892. Serial No. 439,337. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER N. MONTEER, of Springfield, Greene county, Missouri, have invented certain new and useful Improvements in Covering Attachments for Car-Roofs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to attachments for covering the roofs of box-cars, and all other types of freight and other railway cars such as are roofed over.

The objects of my invention are to produce covering-attachments for car-roofs which shall be simple, strong, durable, and inexpensive in construction, capable of application to a great variety of car-roofs without necessitating the use of nails or rivets, and also without necessitating any material alterations of the construction of the roofs themselves.

A further object of my invention is to produce a roof-covering attachment which shall be so constructed as to render the roofs perfectly water-tight at all times, and which shall allow for expansion and contraction of the parts. Finally, to produce roof-covering attachments which can be readily, rapidly, and easily applied to the car-roofs, and which shall be composed of but few parts.

To the above purposes, my invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which:

Figure 1 is a plan view of a portion of a car-roof with the covering-attachments applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a transverse vertical section of the same, on the line 3—3 of Fig. 1. Fig. 4 is a transverse vertical section of the same, on the line 4—4 of Fig. 1. Fig. 5 is a vertical longitudinal section of the same, on the line 5—5 of Fig. 1. Figs. 6, 7, and 8 are detached perspective views of certain details of construction hereinafter described.

In the said drawings, 1 designates the body-portion, and 2 a portion of the top or roof proper of the car.

It is to be understood that my invention is designed more particularly for application to the roofs of box-cars, refrigerator-cars, stock cars, fruit-cars, and the like, but it is equally applicable to the roofs of all kinds of railway cars, whether for freight or other purposes, which are roofed over. The left hand end portion of the covering is shown as removed, in Fig. 1, so as to expose a portion of the car-roof itself, and this roof is shown as composed of a number of matched boards which extend transversely from the middle or ridge of the roof to and slightly beyond the sides of the car-body in the usual manner. I desire it to be understood, however, that the roof 2, itself, may be either of this precise construction or of any other suitable or preferred construction; my covering attachments being, as above stated, applicable to a great variety of car-roofs.

3 designates a number of plates or strips of sheet iron, tin, or any other suitable sheet-metal, each of which is of suitable width, and of such length as to extend from each side of the ridge-pole outward and beneath the eaves of the roof, as hereinafter more fully described. The inner or upper edges of the plates 3 are lapped upward against the outer sides of the ridge-pole 4, as is best shown in Fig. 4, while the body-portions of the plates lie flat upon the upper side of the roof. At regular intervals throughout the length of the car-roof, are placed cleats or strips 6, of wood, which extend parallel with each other and which are of such length as to extend from the sides of the ridge-pole 4 to the outer or side edges of the roof, as shown. The sides of each of these strips preferably incline upwardly toward each other, as is best shown in Fig. 5, and the side-edges 7 of the plates or strips 3 are lapped closely against the sides of the strips. These flanges 7 are about the same length as the cleats 6, the side marginal portions of the said strips or plates 3, below the lower or outer end of the flanges, being extended laterally, (as shown in Fig. 6) and meeting the similar portion of the adjacent strip or plate 3, about midway the width of the said cleats 6, as shown plainly in Fig. 2. Each of the strips 6 is inclosed at its top and two sides by an elongated metal casing 8 which is of approximately U-form in cross-section, and



which is of such length as to extend from one of the sides of the ridge-pole 4 to and beyond the outer edge of the car-roof, as hereinafter more fully explained. The top of each of these casings 8 corresponds in width to the width of the top of the strip 6, and the height of the sides of said casings or caps corresponds to the height of the strips 6; the sides of the casings or caps 8 closely embracing the lapped edges 7 and also the lateral meeting extensions at the lower ends of the lapped edges or flanges 7 of the strips or plates 3, so as to form perfectly water-tight joints, as shown. The outer ends 9 of the strips or plates 3 are bent downward in U-form, so as to closely surround the outer edges or eaves of the roof, and the lower extremities 10 of the strips or plates 3 are extended downward a short distance so as to lie flat against the upper parts of the sides of the car-body 1, as also shown. At its outer end each casing or cap 8 is formed with a U-shaped extension 11 which closely surrounds the bent portions 9 of the strips or plates 3, so as to confine said portions 9 in their required positions. To the outer side of each horizontal top-beam 12 of the car-body 1, is secured by screws 14 or equivalent devices, a horizontal retaining-strip or bead 13 the outer surface of which is preferably of segmental form in cross-section, and which has a flat vertical inner side and a flat horizontal upper side, as shown. In the upper sides of these strips or beads 13 are formed transverse recesses 15 to receive the lower ends of the bends 11 of the casings or caps 8, while the inner sides of the beads or strips 13 are formed with continuous chamfers 16, at the points of juncture with the upper sides of the beads, which receive the downwardly extending portions 10 of the plates or strips 3, and closely confine such portions 10 against the sides of the car-body; thus forming perfectly tight joints at these points. The screws 14 do not pass through the portions 10 of the plates or strips 3, but below the same, as shown, and said portions 10 are shorter than the depth of the chamfers 16, so that expansion and contraction are fully provided for. The caps or casings 8 are secured in position upon the strips or cleats 6 by bolts 17 which pass downwardly through the tops of the casings or caps and also through the strips or cleats 6, and through the roof 2 of the car; suitable retaining-nuts 18 being screwed upon the lower ends of the bolts 17, and washers 19 being interposed between the nuts and the under side of the roof. The heads 20 of these bolts are formed on their under sides with cavities 21 which receive the upper edges of circular bosses 22 which are formed upon the tops of the casings or caps 8; perfectly water-tight joints being thus formed at these points also. Upon the upper side of the ridge-pole 4 is secured a number of metal strips or plates 27 which are of greater width than said ridge-pole and the sides of

which are turned downward against the ridge-beam 4 so as to overlap the upper or inner edges of the strips or plates 3; lateral extensions 27<sup>a</sup> being left lying upon the inner ends of the caps or casings 8; tight joints being thus formed also at these points and there being, of course, either a single strip 27, or as many of said strips—placed end to end—as will extend throughout the length of the ridge-pole. 23 designates the foot-boards or running-boards, upon which the train-men walk while attending to their duties; these boards extending longitudinally of the roof above its ridge. These boards are supported upon cross-pieces 24 which rest directly upon the roof. These cross-pieces are secured in position by means of extensions 25 of the upper ends of the corresponding bolts 17; said extensions projecting upward from the heads 20 of the bolts and through the cross-pieces 24, and having at their upper ends heads 26 which are countersunk in the upper sides of the cross-pieces 24, as shown.

From the above description, it will be seen that I have produced covering-attachments for car-roofs which are simple, strong, durable and inexpensive in construction, and capable of application to a great variety of car-roofs without necessitating the use of nails or rivets, and also without necessitating any material alterations in the construction of the roofs themselves. It will also be seen that the covering attachments render the roofs perfectly water-tight, and are unimpeded in expansion and contraction, and also that they can be readily, easily, and quickly applied to the car-roofs.

I desire it to be understood that while I have described the strips or plates 3 as being metal plates, such plates or strips may be of canvas, or other similar material without departing from the essential spirit of my invention; the metal plates being however, the preferred form used by me.

Having thus described my invention, what I claim as new therein and desire to secure by Letters Patent, is

1. In a covering attachment for car-roofs, the combination of a number of strips or plates, having at their upper ends and two side margins, upwardly turned flanges, and having their lower ends curved semi-circularly downward and inward, and the extreme end thereof, bent vertically downward, with a bead, to fit against the vertical ends of the strips or plates, and secured to the side of the car, substantially as described.

2. In a car-roofing attachment, the combination of the transverse cleats, and strips or plates, laid upon the roof, between said cleats, and having side marginal flanges fitting against said cleats and a marginal flange at the upper end of each strip or plate, and a cap-piece fitting over each transverse cleat and adjacent side marginal flanges of the roof-covering strips or plates, with a number



of strips placed upon the ridge-pole of the roof, and having depending marginal flanges fitting over the flanges at the upper ends of the roof-covering strips or plates, and lateral extensions, fitting upon the upper or inner ends of the caps covering the transverse cleats, substantially as described.

3. In a roof-covering attachment, the combination of a number of transverse cleats extending from opposite sides of the ridge pole, of the car-roof, with a number of strips or plates laid upon the roof between said cleats, and having side marginal flanges extending to the lower ends of the transverse cleats, and side extensions projecting laterally beyond said marginal flanges, the adjacent lateral extensions of each strip or plate, meeting about midway of the width of the transverse cleat, and a cap or casing fitting over the cleat and adjacent marginal flanges of the roof-covering strips or plates, and also over the lateral ex-

tensions of said strips or plates, substantially as described.

4. An attachment for covering car-roofs, comprising a number of parallel strips laid transversely upon the roof and a number of covering strips or plates interposed between said strips and bent over the outer edges of the roof, a number of elongated caps or casings inclosing the cleats and extending at their outer ends around the outer edges of the roof, and a bead having a chamfered inner side to receive the covering-plates, and also a recessed upper side to receive the extensions of the caps, substantially as set forth.

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

ALEXANDER N. MONTEER.

Witnesses:

JNO. L. CONDRON,  
HARRIET E. PRICE.