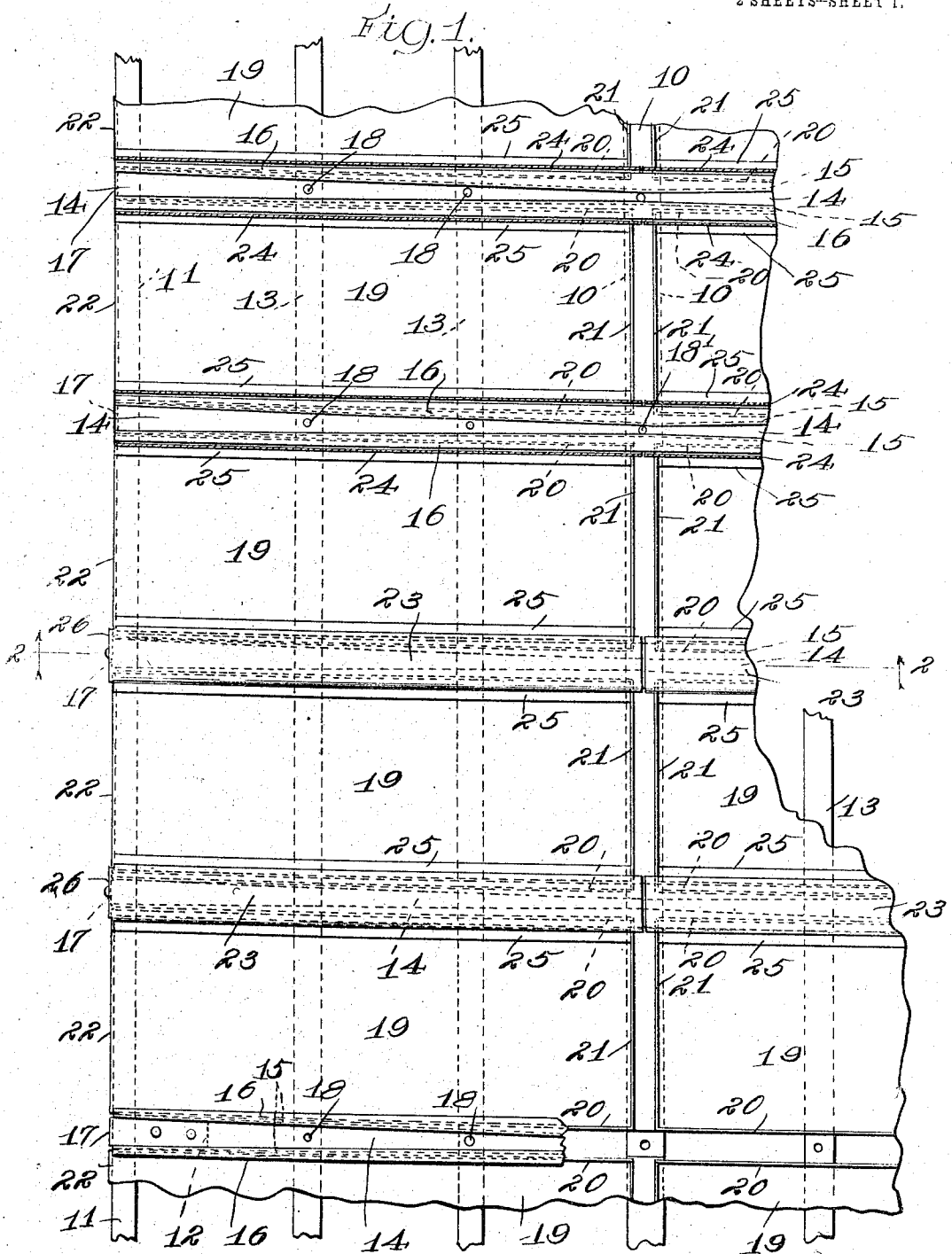


1,013,811.

Patented Jan. 2, 1912.

2 SHEETS—SHEET 1.



Witnesses:
H. H. H. H. H.
C. A. H. H. H.

Inventor:
John Pearson
By J. M. Roberts
Att'y:

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2 SHEETS-SHEET 2.

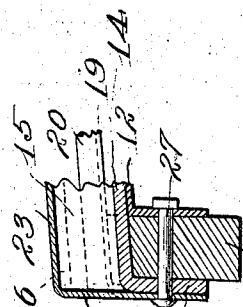
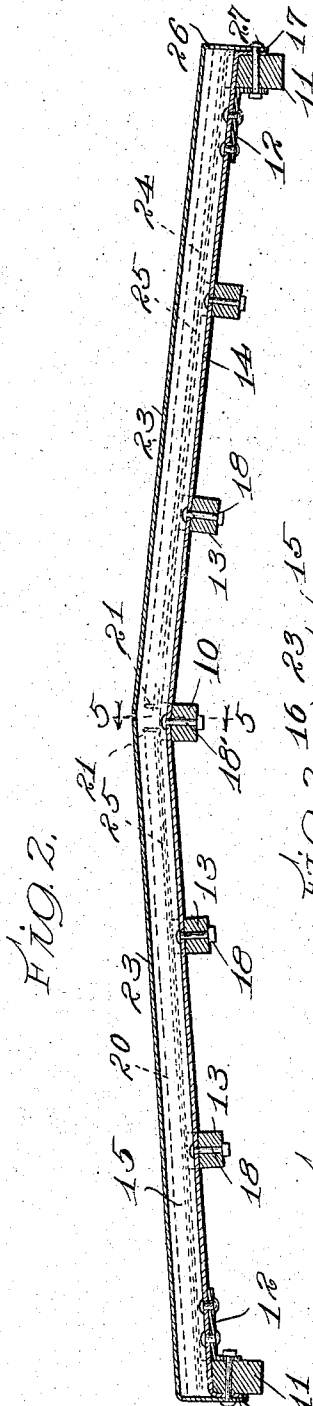


FIG. 4.

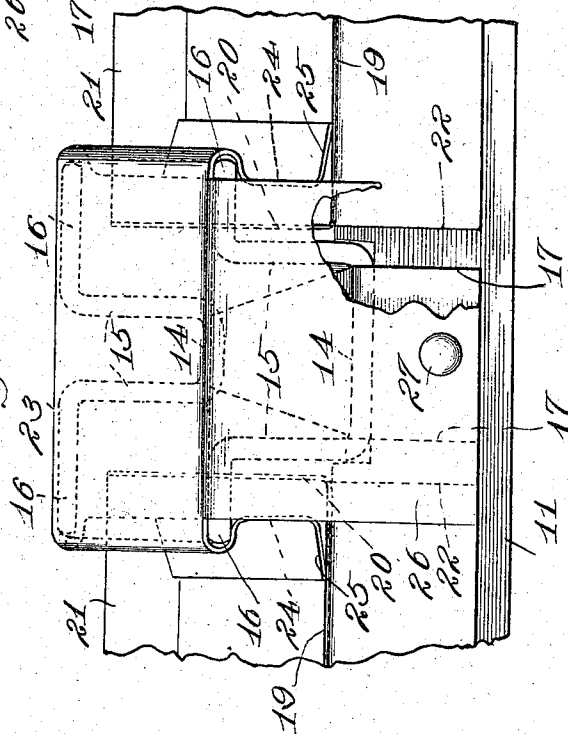
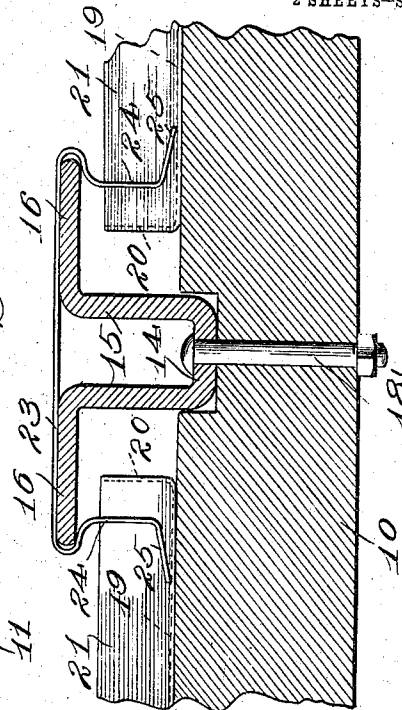


FIG. 5.



Witnesses:
W. L. Marcus Jr.
C. A. Paulschmidt

Inventor:
John Pearson
By: J. M. Roberts
Att'y

UNITED STATES PATENT OFFICE.

JOHN PEARSON, OF CHICAGO, ILLINOIS.

CAR-ROOF.

1,013,811.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed May 26, 1911. Serial No. 629,675.

To all whom it may concern:

Be it known that I, JOHN PEARSON, a citizen of the United States, residing at Chicago, 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 metallic car roofs, and consists in the novel and useful combinations and organizations of parts herein described and then pointed out in the appended claims.

In the accompanying drawings, which illustrate a practical embodiment of my invention and in which the same reference numerals indicate similar parts in the different figures:—Figure 1 is a top plan view of a portion of a car roof showing my invention, parts being omitted for the purpose of illustration; Fig. 2 is a sectional view on the line 2—2 of Fig. 4; Fig. 3 is an enlarged detail view of parts at the end of Fig. 2; Fig. 4 is an end view taken at the eaves, and Fig. 5 is a sectional view of the carlines taken at the ridge-pole on the line 5—5 of Fig. 2.

In the drawings the reference numeral 10 designates the ridge-pole, 11 the side-plates, 12 the brackets bolted to the side-plates at intervals along their length, and 13 the longitudinal wooden purlins. Extending transversely of the car at suitable intervals are the metal carlines which in the present invention are U-shaped in cross-section comprising horizontal webs 14 extending from side to side of the car and resting upon the side-plates and ridge-pole into which they are stepped as shown in Figs. 4 and 5 respectively, vertical webs 15, and lateral flanges 16, the horizontal webs being extended beyond the side-webs and side-plates of the car and bent down to form seats for the side-plates as at 17. The carlines are connected to the side-plates 11 also by means of the metallic brackets 12 which are bolted to the plates and to the lower portions of the bodies of the carlines as clearly shown in Fig. 2. The carlines are also stepped into the purlins and these parts are secured by bolts or other suitable connecting devices as clearly shown at 18 in Figs. 1 and 2, so that the carlines carry the purlins and the superposed roof-sheets; the carlines and ridge-pole are also bolted together as at 18'. The flanges 16 of the carlines are substantially

straight from end to end so that the overall width of the carlines is approximately uniform throughout their length, but the trough-portions of the carlines are narrower at the ridge-pole than at the eaves, as clearly shown in Figs. 4 and 5, the side-webs 15 being tapered longitudinally or bent gradually inwardly from each end toward the center for this purpose. The roof sheets or panels 19 which extend from the ridge-pole outward to the eaves rest upon the purlins 13 and each sheet or panel is substantially rectangular in shape and is provided with upturned side flanges 20, an upturned inner flange 21, and a downturned outer flange or end 22 adapted to extend down upon and be fastened to the outer face of the side-plates.

The carline-caps are of metal and are of inverted trough-shape consisting of an upper horizontal portion 23 of sufficient width to overlap adjacent flanges 20 of a pair of roof-panels or plates, downturned sides 24, and laterally extending side-flanges 25, and they extend from the ridge-pole outwardly to the eaves where they are provided with downturned outer ends 26 overlying the downturned portions of the carlines and roof-panels, suitable fastening bolts 27 passing through the downturned portions 17 and 26 and the side-plates. After the roof-plates are assembled upon their supporting purlins on each side of the carlines, the carline-caps are slipped into place, each along the length of the associated carline from the eaves to the ridge-pole and embracing the flanges 20 of the adjacent panels beginning at its outer end and when each cap is in position its downturned sides 24 embrace the lateral flanges of its carline and overlap the upturned flanges 20 of the associated panels leaving the latter flanges free to move or play under strains or twisting actions of the car. By this organization the roof-plates are interlocked with the carlines in such manner as to retain them in position but permit them to have play or movement under any strains to which the car may be subjected; the inner ends of the panels have room for play between the narrower or reduced central portions of the carlines and the downturned sides of the caps, and the outer ends between the outer ends of the carlines and the caps, all as clearly shown in Figs. 4 and 5. The outer ends 25 of the caps resting on the panels hold the latter in place, as the inturned portions of the caps

under the lateral flanges of the carlines retain these parts in position. The carlines being stepped into the purlins brace each purlin from the adjacent ones, and the purlins also brace each carline from the adjacent ones; and the carlines being also stepped into the ridge-pole and side-plates brace these parts.

I claim:—

10 1. A trough-shape metal carline having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends.

15 2. In a car-roof, a plurality of trough-shape metal carlines having lateral flanges on the upper face and the trough-portion being wider in cross-section at its ends, metal panels having upturned side flanges under the lateral flanges of the carlines, and caps on the carlines each having a top and sides covering the joint between two panels, the sides of the cap overlying the lateral flanges of the carlines and the upturned flanges of adjacent panels at a distance therefrom.

25 3. In a car-roof, a plurality of trough-shape metal carlines having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends, purlins into which the carlines are stepped, panels on the purlins and having upturned flanges under the lateral flanges of the carlines, and caps on the carlines having tops and sides covering the joints between adjacent panels, the sides of the caps being inturned under the lateral flanges of the carlines and resting at their edges on the panels at a distance from the upturned flanges thereof.

40 4. In a car-roof, a plurality of trough-shape metal carlines having lateral flanges on the upper face with substantially straight sides, the trough-portion being wider in cross-section at its ends, purlins secured to the undersides of the carlines, roof-panels having upturned flanges adjacent the car-

line-webs, and carline-caps of inverted trough shape having tops and sides embracing the lateral flanges of the carlines and overlapping the upturned flanges of adjacent panels.

50 5. In a car-roof, side-plates, a ridge-pole, a series of purlins, a series of metallic body-carlines extending the width of the car above the pole and purlins and U-shape in cross-section with lateral flanges, means to secure the carlines to the pole and to the purlins at their intersections therewith, rectangular metallic panels overlying the purlins intermediate the carlines and having upturned edges lying adjacent the carlines, and caps on the carlines having inturned sides embracing the lateral flanges of the carlines and covering the upturned flanges of adjacent panels, and the carlines having their outer ends turned down over the side-plates.

60 6. In a car-roof, side-plates, a ridge-pole, a series of metallic body-carlines extending the width of the car and U-shape in cross-section with lateral flanges, means to secure the carlines to the pole and side-plates, rectangular metallic panels intermediate the carlines and having upturned edges lying adjacent the carlines, caps on the carlines having inturned sides embracing the lateral flanges of the carlines and covering the upturned flanges of adjacent panels, the carlines and panels having their outer ends turned down over the side-plates and the caps having their outer ends turned down over the downturned ends of the carlines and panels, and means to secure the downturned ends of the caps to the side-plates.

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

JOHN PEARSON.

Witnesses:

J. McROBERTS,
H. C. LUST.