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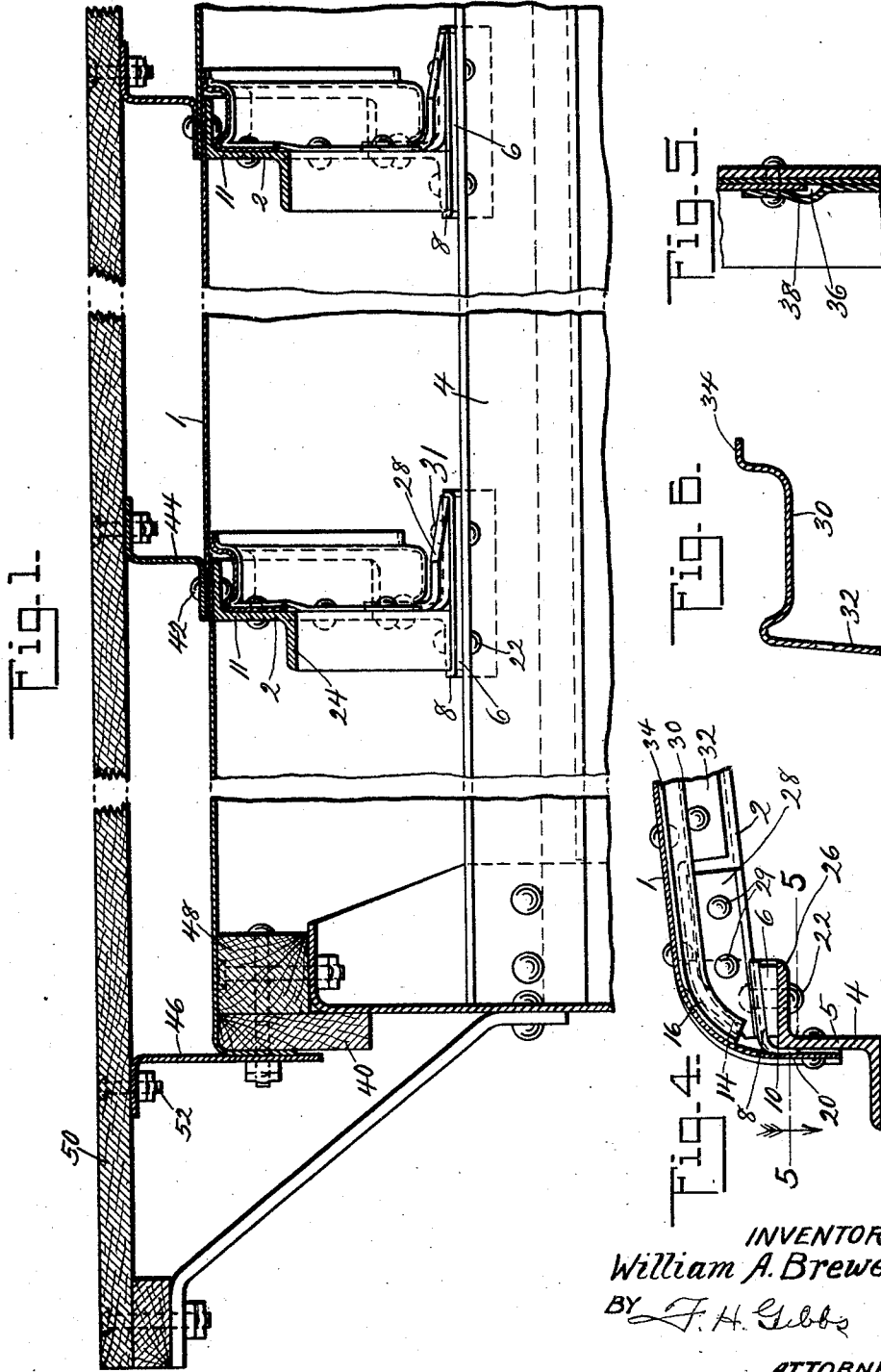
W. A. BREWER

1,605,390

CAR ROOF

Filed Jan. 8, 1925

2 Sheets-Sheet 1



INVENTOR
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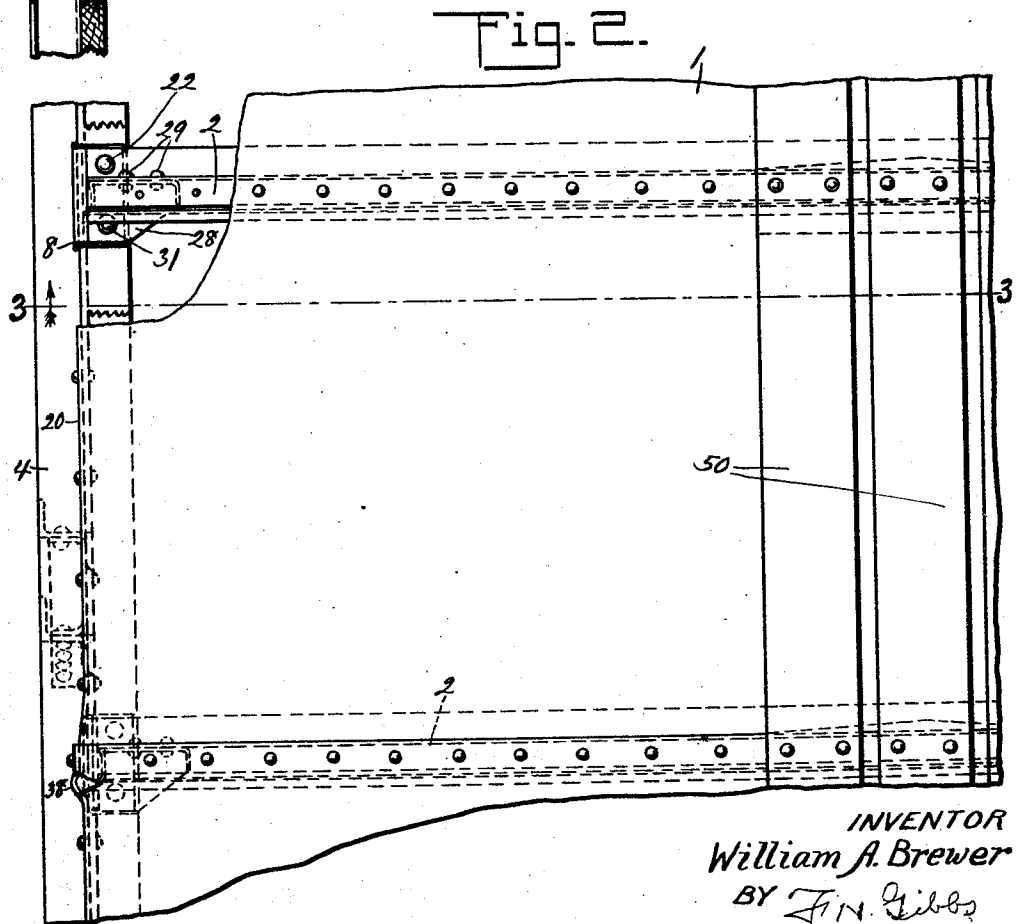
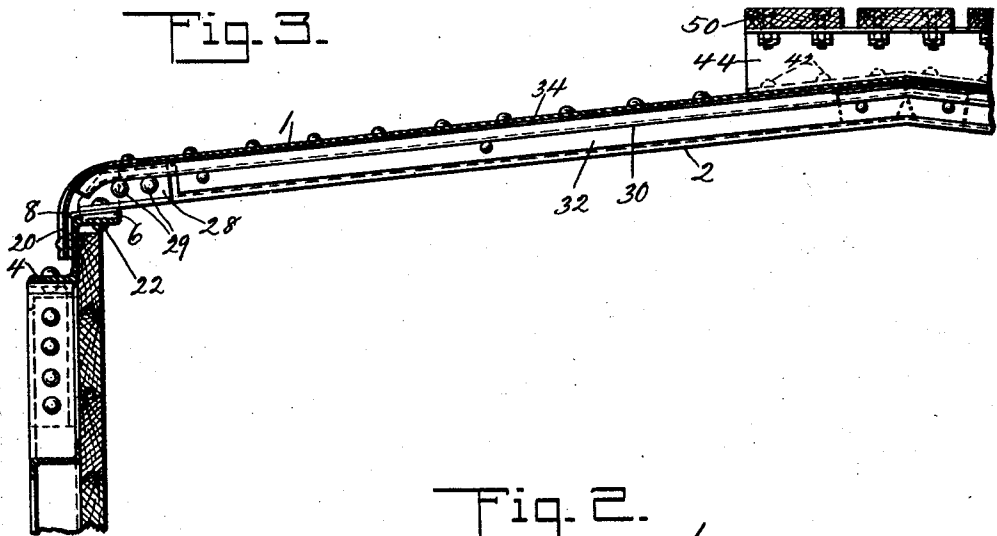
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

WILLIAM A. BREWER, OF ST. LOUIS, MISSOURI, ASSIGNOR TO AMERICAN CAR AND
FOUNDRY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

CAR ROOF.

Application filed January 8, 1925. Serial No. 1,208.

In the drawings:

Fig. 1 is a broken central vertical section of a portion of a car roof constructed in accordance with this invention;

5 Fig. 2 is a top plan view of a section of the roof shown in Fig. 1, a portion of the roof sheets being broken away to show the connection of a carline and a side plate more clearly;

10 Fig. 3 is a vertical section through one side of the roof taken on the line 3—3 of Fig. 2;

Fig. 4 is a vertical section drawn to a larger scale showing the connection of a carline with a side plate;

15 Fig. 5 is a horizontal section taken on the line 5—5 of Fig. 4; and

Fig. 6 is a vertical section through the drain strip.

20 This invention relates to car roofs and has for an object the provision of an improved roof which shall be water-tight, light in weight and simple in construction, and which may be cheaply made and readily repaired. It is also an object of this invention to provide a roof having means whereby any leakage which passes through the roof seams will be caught and drained to the outside of the car and the car contents protected.

30 As shown in the drawings, the roof comprises roof sheets 1 having their side edges overlapping and secured along the laps to the upper flanges of carlines 2 of Z cross section which extend between the side plates 4, the ends of the carlines resting upon tapered filler blocks 6 interposed between the carlines and the side plates and which correspond to the inclination of the carlines. Between the carlines 2 and the filler blocks 6 are placed short flashing strips 8 having downwardly projecting flanges 10 which overlap the outside of the webs 5 of the side plates 4. The carlines 2 are of uniform depth from the ridge to the side plates 45 where the webs 12 are cut away, as at 14, permitting the upper flanges to be bent downwardly in a curve, as at 16, to provide a proper support for the downwardly-turned flanges 20 of the roof sheets 1, the flanges 20 extending so as to overlap and be secured to the webs 5 of the side plates 4.

55 The carlines 2 are secured to the side plates 4 by rivets 22 which pass through flanges 24 of the carlines 2, the flashing strips 8, filler blocks 6 and flanges 26 of the side

plates. Angles 28 secured to the webs 11 of the carlines by rivets 29 and to the flanges 26 of the side plates 4 by rivets 31 which also pass through the filler blocks 6 and flashing strips 8 aid in securing the carlines 2 to the side plates 4.

60 Secured to the carlines 2 are channel-shaped drain strips 30 having reversely turned flanges 32 secured to the webs 11 of the carlines and outwardly projecting flanges 34 which bear against the roof plates 1, the width of the channel portions of the drain strips under the seams and the upper carline flanges being sufficient that the flanges 34 engage the roof sheets 1 beyond and alongside the roof seams and the edges of the carlines so that any leakage which passes through the roof seams will be caught in the channel portions of the drain strips 30. The channel portions of the drain strips 75 30 extend across beneath the roof sheets to and downwardly a short distance on the flanges of the roof sheets so that moisture accumulating in the drain strips will be deposited upon the flashing strips 8 from which it will drain to the outside of the car through openings 36 between the side plates 4 and the flanges of the roof sheets formed by corrugations 38 in the overlapping portions of the roof sheets.

85 The roof sheets extend to the ends of the car, overlapping the end fascia plates 40 in the usual manner, and the rivets 42 which secure the overlapping portions of the roof sheets together and to the carlines 2 also serve to secure the running board saddles 44 to the carlines 2.

90 Upon the running board saddles 44 and end running board saddles 46 secured to the end carlines 48 and end fascia plates 40 is mounted the running board 50 secured thereto by the bolts 52 in the usual manner.

What is claimed is:

1. A car roof construction comprising carlines, roof sheets having overlapping edges secured to said carlines and drain strips carried by said carlines in position to catch any water leaking through the roof seams over the carlines and engaging said roof sheets.

2. A car roof construction comprising flanged carlines, roof sheets having overlapping edges secured to flanges of said carlines and independently formed drain strips under the carline flanges beneath the laps secured to the webs of said carlines.

3. A car roof construction comprising carlines, side plates carrying said carlines, roof sheets having overlapping edges secured to said carlines, flashing strips between said side plates and carlines and independently formed drain strips secured to said carlines and extending to said flashing strips.
4. A car roof construction comprising Z-bar carlines, side plates carrying said carlines, flashing strips between said carlines and side plates and having flanges extending along said side plates, roof sheets having overlapping edges secured to flanges of said carlines and flanges secured to said side plates, and independently formed drain strips secured to the webs of said carlines and having flanges engaging said roof sheets.
5. A car roof construction comprising carlines, side plates carrying said carlines, flashing strips between said carlines and side plates and having flanges engaging said side plates, roof sheets having overlapping edges secured to said carlines and flanges secured to said side plates and independently formed drain strips carried by said carlines and extending to said flashing strips, said roof sheets being corrugated at said flashing strips to provide drain openings.
6. A car roof construction comprising carlines, roof sheets secured to said carlines and independently formed drain strips carried by said carlines beneath the roof seams and engaging said roof sheets alongside the carlines.
7. A car roof construction comprising carlines, side plates carrying said carlines, flashing strips between said side plates and carlines and having downwardly extending flanges engaging said side plates, roof sheets carried by said carlines and having flanges secured to said side plates and independently formed drain strips beneath the roof seams secured to said carlines and extending to said flashing strips.
8. A car roof construction comprising Z-shape carlines of uniform depth, roof sheets having their side edges lapped and secured to said carlines and independently formed drain strips secured to said carlines underneath the roof seams.
9. A car roof construction comprising Z-shape carlines of uniform depth, roof sheets having their side edges lapped and secured to said carlines along the laps and channel-shape drain strips under the carline edges beneath the laps having flanges secured to said carlines and flanges bearing against said roof sheets beyond said carline edges.
10. A car roof construction comprising Z-shape carlines of uniform depth, side plates carrying said carlines, roof sheets having their side edges lapped and secured to said carlines, said roof sheets having flanges secured to said side plates, flashing strips between said carlines and side plates and having flanges engaging said side plates and channel-shape drain strips extending to said flashing strips and having flanges secured to carlines and flanges engaging said roof sheets.
11. A car roof construction comprising Z-shape carlines of uniform depth, side plates carrying said carlines roof sheets having their side edges lapped and secured to flanges of said carlines, said roof sheets having flanges secured to said side plates, flashing strips between said carlines and side plates and having downwardly extending flanges engaging the outsides of said side plates and channel-shape drain strips extending to said flashing strips and having downwardly extending flanges secured to the webs of said carlines and outwardly extending flanges engaging said roof sheets, said roof sheet flanges being corrugated adjacent to said flashing strips to provide drain openings.

In witness whereof I have hereunto set my hand.

WILLIAM A. BREWER.