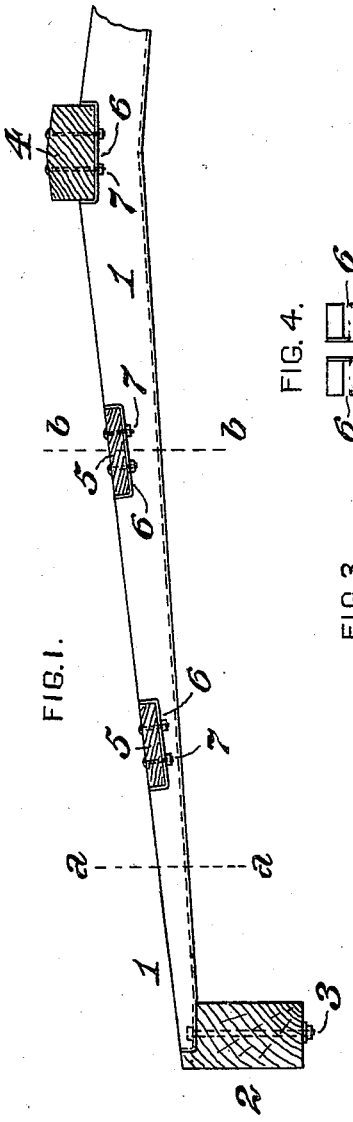
No. 649,171. Patented May 8, 1900.

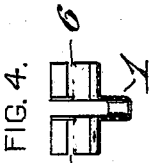
G. B. MALTBY.

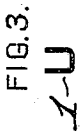
ROOF CARLINE.

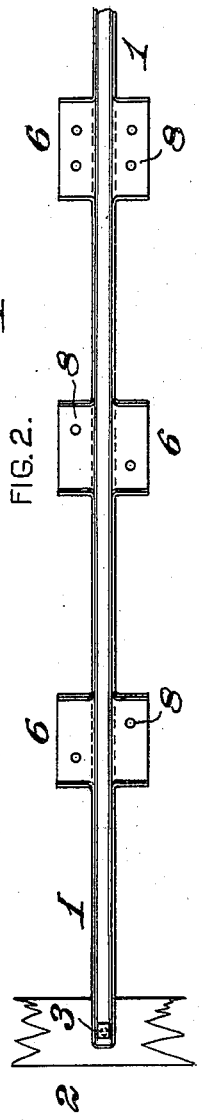
(Application filed Dec. 29, 1899.)

(No Model.)









WITNESSES:

James C. Herron

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UNITED STATES PATENT OFFICE.

GEORGE B. MALTBY, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO BRODERICK HASKELL, OF SAME PLACE.

ROOF-CARLINE.

SPECIFICATION forming part of Letters Patent No. 649,171, dated May 8, 1900.

Application filed December 29, 1899. Serial No. 741,934. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. MALTBY, of Grand Rapids, in the county of Kent and State of Michigan, have invented a certain new and useful Improvement in Roof-Carlines, of which improvement the following is a specification.

The object of my invention is to provide a roof-carline, specially applicable for use in the framing of railroad freight-cars, which shall embody the features of strength, lightness, and economy of construction and present simple and effective means for connecting and firmly supporting the ridge-pole and purlins in their respective positions in the roof structure.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a side view in elevation, showing slightly more than one-half in length of a roof-carline embodying my invention; Fig. 2, a plan or top view; and Figs. 3 and 4, transverse sections at the lines *a a* and *b b*, respectively, of Fig. 1.

In the practice of my invention I provide a roof-carline which is formed of sheet or plate metal, preferably by being pressed or shaped in a die or mold. The body 1 of the carline is integral and is made of U or channel shape in transverse section, its top being open and its side members gradually diminishing in depth from its middle toward each of its ends. It is also downwardly inclined from its middle to each of its ends at such an angle as may be adapted to impart the desired pitch to the roof. The ends of the carline are turned upwardly similarly to the side members, forming bearing-faces which abut against the ends of recesses in the side plates 2 of the car-frame, in which the end portions of the carlines are fitted, and are secured thereto by bolts 3 in the ordinary manner, and the ridge-pole and purlins rest in recessed seats in the carline. The channel form of the body enables it to be made light in weight, while being of ample strength to act as a firm transverse upper brace to the car-frame and a substantial support to the longitudinal members and covering-boards of the roof.

In order to provide suitable bearings for the ridge-pole 4 and purlins 5 of the roof, the metal of each of the side members of the body is turned outwardly at its top at the middle of the body and at suitable distances therefrom between the middle and the ends, so as to form pairs of wings 6 of channel-section, in which the ridge-pole and purlins are fitted and to which they are secured by bolts 7, passing through perforations 8 in the wings. It will be seen that the wings 6 not only provide ample bearing-surface for the longitudinal roof members, which they receive and support, but also enable the latter to be firmly and conveniently secured to the carlines and held at their proper distances apart throughout the length of the roof. While the wings 6 are preferably, as shown, formed on each of the side members of the body, their employment in pairs is not an essential of my invention, and they may be provided on one side member only, if preferred.

The practical advantages of strength, lightness, and facility of application in ordinary car-framing which are presented by my improvement will be obvious to those familiar with railroad construction, and it will also be apparent that it may be employed in connection with a roof of any desired type.

I claim as my invention and desire to secure by Letters Patent—

1. A sheet or plate metal roof-carline having a body of U or channel section, the side members of which gradually diminish in depth from its middle toward its ends, and having closed ends constituting bearing-faces.

2. A sheet or plate metal carline having a body of U or channel section, the top of which is open and the side members of which gradually diminish in depth from its middle toward its ends and are provided with recessed seats for longitudinal roof members.

3. A sheet or plate metal roof-carline having an open-topped body of U or channel section, and having outwardly-extending lateral wings, of channel-section, for the support and connection of longitudinal roof members.

4. A sheet or plate metal roof-carline having an open-topped body of U or channel section and having the metal of its side members turned outwardly at top, at its middle and at points between its middle and ends, so as to present pairs of lateral wings, of channel-sec-

tion, for the support and connection of a ridge-pole and purlins.

5. In a car-frame, the combination of recessed side plates, plate-metal roof-carlines, pressed into channel-section with closed ends, and having their ends fitting in and abutting against the ends of the recesses of the side plates, bolts passing through the bottom members of the carlines and securing them to the side plates, and a ridge-pole and purlins fitting in recessed seats integral with the side members of the roof-carlines.

GEORGE B. MALTBY.

Witnesses:
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EDWIN F. SWEET.