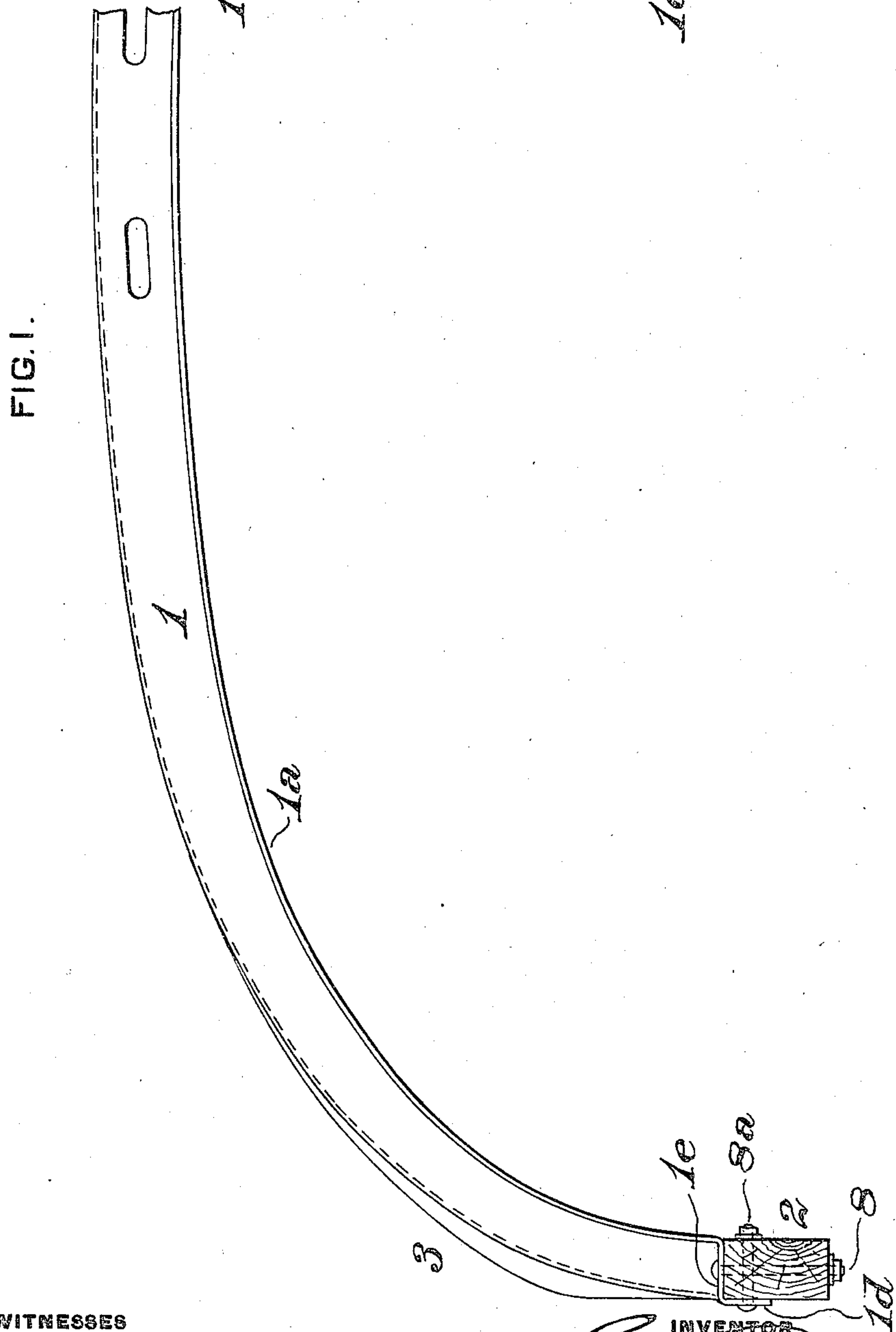
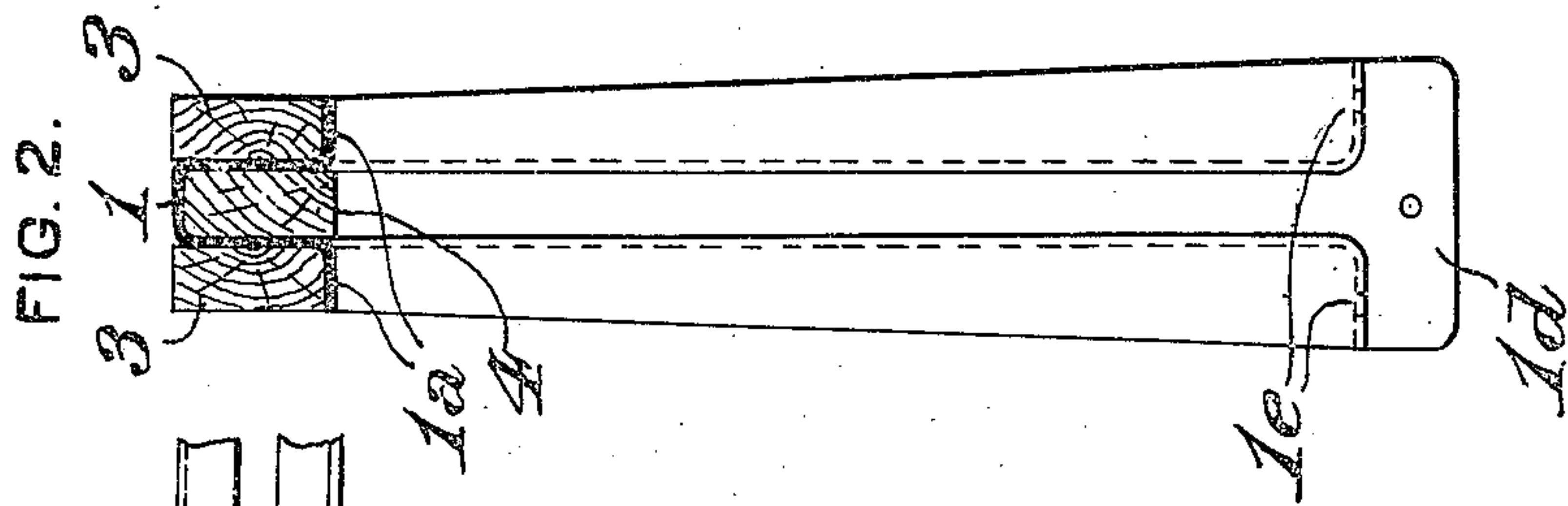


No. 869,975.

PATENTED NOV. 5, 1907.

G. B. MALTBY.  
ROOF GARLINE.

APPLICATION FILED OCT. 19, 1906.



WITNESSES

James C. Herron.  
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G. B. Maltby  
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Att'y.

# UNITED STATES PATENT OFFICE.

GEORGE B. MALTBY, OF CLEVELAND, OHIO, ASSIGNOR TO CLEVELAND CAR SPECIALTY COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF WEST VIRGINIA.

## ROOF-CARLINE.

No. 869,975.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed October 19, 1906. Serial No. 339,615.

*To all whom it may concern:*

Be it known that I, GEORGE B. MALTBY, of Cleveland, in the county of Cuyahoga and State of Ohio, 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 metallic roof carline, specially adaptable for use in railroad passenger train car equipment, which shall be rigid, substantial, and inexpensive in construction, and enable the maximum amount of head room to be made available in mail and baggage cars.

The improvement claimed is hereinafter fully set forth.

In the accompanying drawing: Figure 1 is a side view, in elevation, showing slightly more than one half in length of a roof carline embodying my invention; and, Fig. 2, a vertical central section through the same.

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 of the carline is integral and comprises a web, 1 of inverted U or channel transverse section, and lateral flanges, 1<sup>a</sup>, projecting from the bottoms of the opposite side members of the web. The web and flanges of the carline are downwardly curved from its middle portion to its ends, the middle portion being preferably, as shown, curved on a longer radius than the side portions, the difference of curvature being merely a matter of degree, so that the carline could, if desired, be made flat at its central portion and curved only on its side portions, in order to allow as much available head room as the design of the roof will permit.

The lateral flanges, 1<sup>a</sup>, are turned first horizontally and then vertically at the ends of the carline, thereby forming horizontal end or base flanges, 1<sup>b</sup>, which are substantially radial to the curvature of the adjoining portions of the carline, and are adapted to rest on the tops of the side plates, 2, of the car frame, and vertical end flanges, 1<sup>d</sup>, at right angles thereto, adapted to abut against the outer sides of the side plates; 2, the vertical flanges being continuous and comprehending the intermediate end portions of the web as well as those of the two adjoining lateral flanges, 1<sup>a</sup>. By this construction of the end flanges, I am enabled to provide both horizontal and vertical bearings, of the maximum area attainable, for the carlines on the side plates, the horizontal bearings being transverse to the end portions of the carline, or forming the bases thereof, and the vertical bearings being substantially in line with, or in

the direction of the end portions of the carline. The carline is secured to the side plates by vertical bolts, 8, passing through holes in the horizontal end or base flanges, 1<sup>b</sup>, and horizontal bolts, 8<sup>a</sup>, passing through holes in the vertical end flanges, 1<sup>d</sup>.

The lateral flanges, 1<sup>a</sup>, of the carline provide seats or bearings for wooden filling strips, 3, to which the outside roof may be secured, and a wooden filling strip, 4, may be fitted in the space within the web, 1, for the attachment of the inside head lining, or, if preferred, the inside strip, 4, may be dispensed with, and the head lining connected to extensions of the outer strips 3.

It will be obvious that the relative degree of curvature of the middle and side portions of the carline is not material and may be varied in the discretion of the constructor the only essential in this regard being that the carline shall be curved downwardly from its middle portion towards ends or bases, which are substantially radial to the curvature of the adjoining end portions of its body.

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

1. A sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to its ends, and horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions.

2. A sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to its ends, horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions and vertical end flanges formed by the metal of the lateral flanges and intermediate web portions, turned substantially at right angles to the horizontal flanges.

3. The combination of a sheet or plate metal roof carline having an integral body comprising a web of inverted U or channel section and lateral flanges projecting from the side members thereof, the body being downwardly curved from its middle portion to horizontal end or base flanges formed by the metal of the lateral flanges of the body turned directly into planes substantially radial to the curvature of the adjoining portions, and filling strips of wood resting on the lateral flanges of the body and abutting against the side members of the web.

GEORGE B. MALTBY.

Witnesses:

WM. B. WAGGONER,  
F. J. RUDOLPH.