Dec. 14, 1937. W. P. MURPHY 2,102,277

CARLINE

Filed Oct. 3, 1936

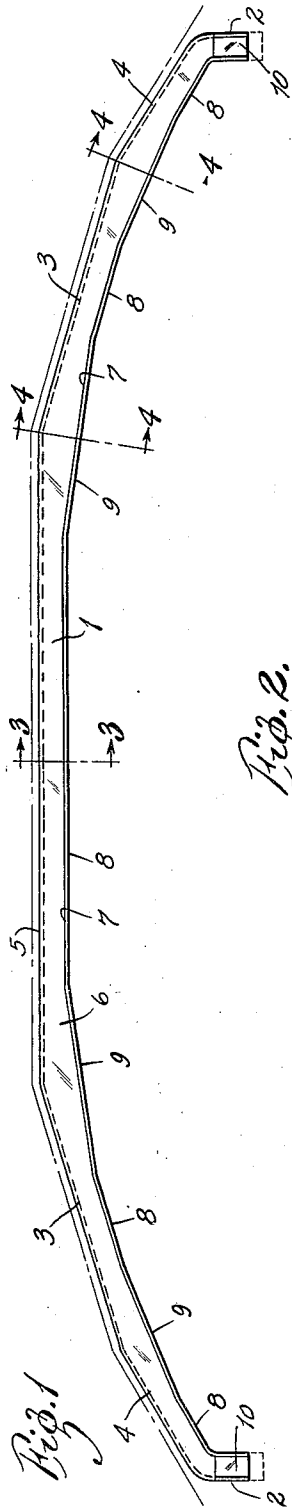


Fig. 1.

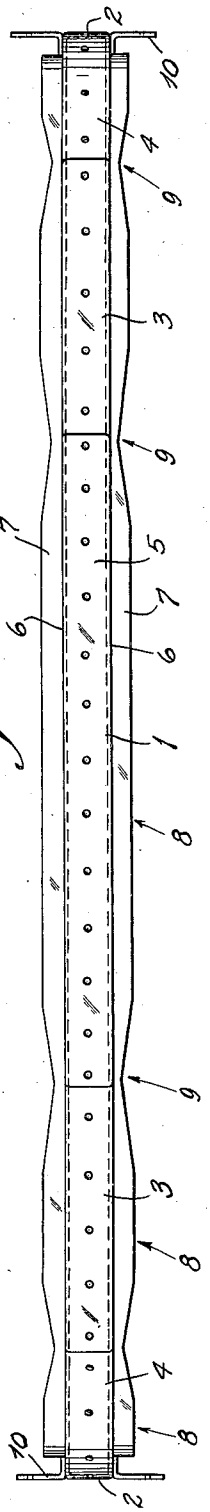


Fig. 2.

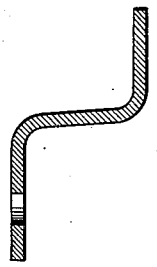


Fig. 5.

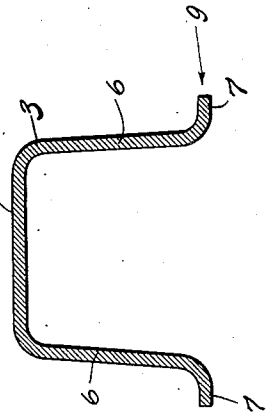


Fig. 4.

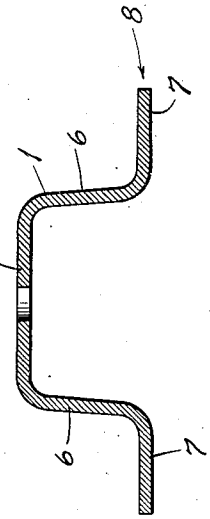


Fig. 3.

INVENTOR:

Walter P. Murphy

Carr + Carr + Gravely

HIS ATTORNEYS.

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UNITED STATES PATENT OFFICE

2,102,277

CARLINE

Walter P. Murphy, Chicago, Ill., assignor to P. H. Murphy Company, New Kensington, Pa., a corporation of Pennsylvania

Application October 3, 1936, Serial No. 103,833

3 Claims. (Cl. 108—5.6)

My invention relates to carline for railway cars and has for its principal object to devise a strong metal carline which will not materially reduce the headroom of the car and whose upper surface will substantially conform to the tunnel clearance outline established by the American Association of Railroads so as to enable the roof to be placed at the maximum allowable height above the rails. The invention consists in the carline hereinafter described and claimed.

In the accompanying drawing, wherein like reference numerals refer to like parts wherever they occur,

Fig. 1 is a side elevation of a carline conforming to my invention;

Fig. 2 is a plan view thereof;

Figs. 3 and 4 are cross sections thereof on the lines 3—3 and 4—4, respectively, of Fig. 1; and

Fig. 5 is a cross sectional view of the modified form of a carline.

The carline illustrated in Fig. 1 comprises a straight middle portion 1, downturned end portions 2, and two intermediate portions 3, 4 between said middle portion and each end portion. At all points throughout its length, the carline is of inverted channel shape in cross section; that is, it comprises a flat top or outermost portion 5, side walls 6 and flanges 7 extending laterally from the lower or inner margins of said side walls.

The top or outer surface of the carline conforms substantially to the tunnel clearance outline established by the American Association of Railroads. The top of the middle portion 1 extends in a horizontal direction close to the uppermost angle or break in the established clearance outline and from this point, the top or outer surface of the inner intermediate portion 3 extends substantially parallel with the clearance outline to the second break therein and thence the top or outer surface of the outer intermediate portion 4 extends substantially parallel with the clearance line to a point close to the eaves of the car.

The inner or lower surface of the carline has certain portions 8 that are parallel with but shorter than the adjacent portions of the outer surface. These parallel portions 8 are connected by non-parallel portions 9 opposite the breaks between the middle portion 1 and the inner intermediate portion 3, of the upper surface and between the inner and outer intermediate portions 3, 4 of the upper surface. As each of these nonparallel portions 9 connects portions 8 that are parallel with the outer surfaces at points spaced apart on opposite sides of the break in the upper surface, the depth of the carline increases from each parallel portion to a point near the middle of the non-parallel portion, which point is opposite the break in the outer surface. When the carline is pressed up from a plate of uniform width, the width of the lateral flanges 7 decreases correspondingly with the increase in the depth of the carline so that the overall width of the carline is less in the neighborhood of the breaks in the upper surface where the depth of the car is greatest.

The carline hereinbefore described is not only simple and strong and especially adapted for economical manufacture, but it has the great merit of having its upper surface conform substantially to the tunnel clearance outline and thereby enabling the car roof to be placed at the maximum permissible height above the rails. Such a car roof embodying said carline is shown and claimed in my copending application, Serial No. 103,832 filed October 3, 1936. At the same time, the carline is of such shallow depth that it does not materially affect the headroom or loading capacity of the car.

While the carline hereinbefore described is especially adaptable to manufacture by die pressing, it may be cast or otherwise made. Likewise, the invention is not restricted to an inverted channel shape. For instance, the carline may be of Z-shaped section, which may be considered as a channel-shaped carline split lengthwise; or the carline may be in the shape of a channel opening toward the top.

At each end, the carline is provided with means for securing it to the side plate of the car. As illustrated in Figs. 1 and 2, such securing means comprises an angle member 10 welded or riveted to the downturned end portion of the carline with one leg disposed vertically and extending laterally outwardly so as to fit flatwise against the inner face of the side plate. This outturned leg is preferably provided with one or more holes for riveting it to the side plate.

What I claim is:

1. A carline for car roofs whose upper surface substantially conforms to the established tunnel clearance outline and whose lower surface has certain portions, which are substantially parallel with but of shorter length than the adjacent portions of the upper surface, and other portions, which connect the ends of said short portions and substantially increase the depth of the carline in the regions of the breaks in its upper surface.

2. A carline for car roofs pressed from a blank of even width, said carline being of inverted channel shape and comprising a straight middle portion, vertically disposed end portions and intermediate portions between said middle portion and said end portions, said carline having breaks in its surface at the ends of said intermediate portion and in the middle region thereof to conform the outer surface of said carline to the established tunnel clearance outline, said carline having two breaks in its under surface spaced away from and on opposite sides of each of the inner and middle breaks in its outer surface.

3. A pressed metal carline for car roofs comprising a flat-topped middle portion, vertically disposed end portions and intermediate portions between said middle portion and said end portions, said carline having breaks in its outer surface at the ends of said intermediate portion and in the middle region thereof to conform the outer surface of said carline to the established tunnel clearance outline, said carline having two breaks in its inner surface spaced away from and on opposite sides of each of the inner and middle breaks in its exterior surface.

WALTER P. MURPHY.