E. C. COVERT.

METALLIC CARLINE.

APPLICATION FILED MAY 12, 1910.

976,435.

Patented Nov. 22, 1910.

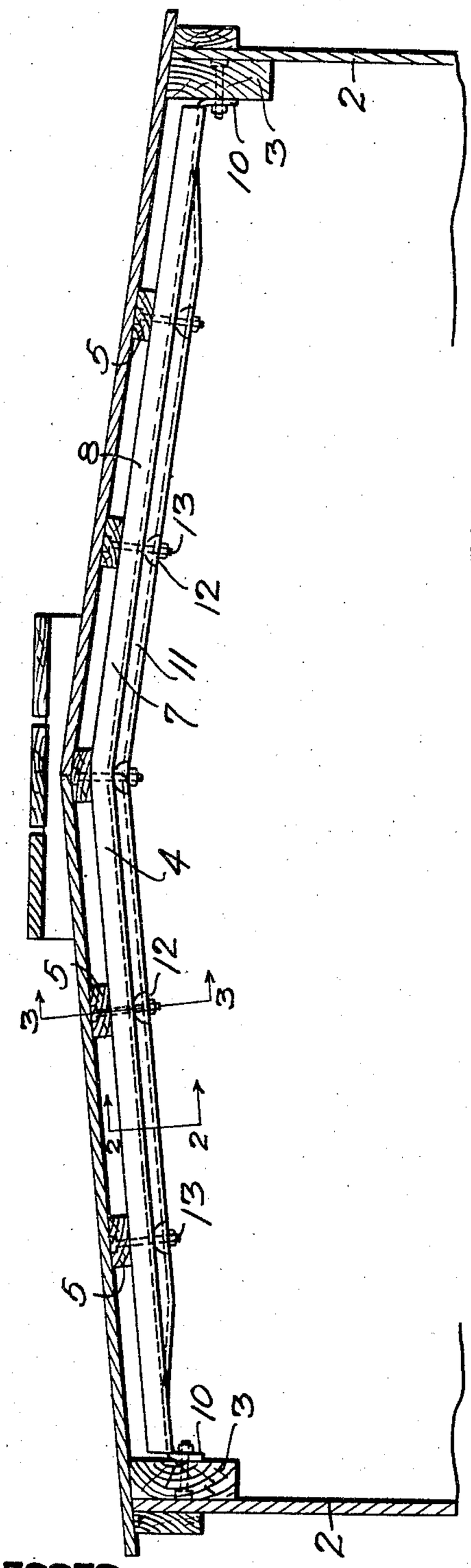

FIG. 1

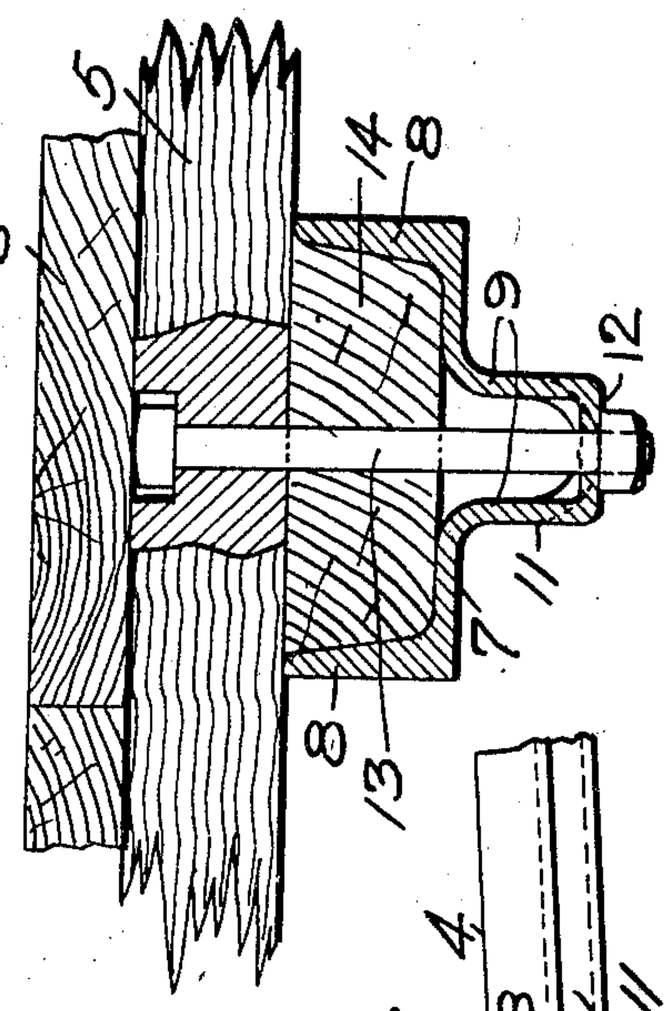

FIG. 3

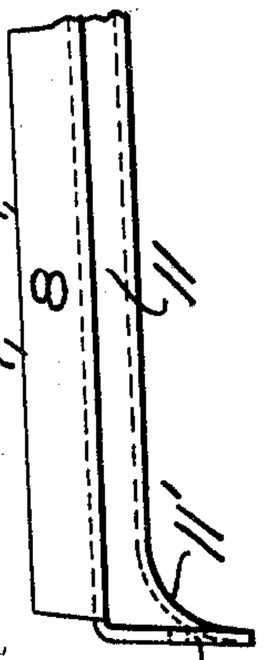

FIG. 4

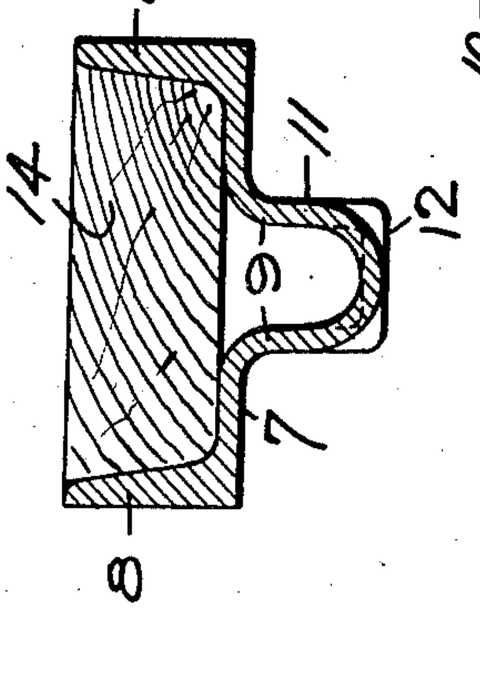

FIG. 2

WITNESSES.

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UNITED STATES PATENT OFFICE.

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METALLIC CARLINE.

976,435. Specification of Letters Patent. Patented Nov. 22, 1910.

Application filed May 12, 1910. Serial No. 561,024.

To all whom it may concern:

Be it known that I, EDSON C. COVERT, residing at New Kensington, in the county of Westmoreland and State of Pennsylvania, have invented a certain new and useful Improvement in Metallic Carlines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to metallic carlines for box and similar cars, and has for its primary object to provide a construction which for the same weight of material will give greater strength than is present in this member as heretofore constructed.

It also aims to provide other details of construction, as will be hereinafter more fully described.

I will now describe my invention, referring to the accompanying drawings, so that others skilled in the art to which it appertains may understand and construct the same.

Figure 1 is a vertical section through a box car showing my improved carline applied thereto; Fig. 2 is a section of the carline taken on the line 2—2 of Fig. 1; Fig. 3 is a similar view taken on the line 3—3 of Fig. 1; and Fig. 4 is a side elevation of the end of the carline showing modified end construction.

In the drawings the reference numeral 2 indicates the siding, 3 the side plates, 4 a carline, 5 the purlins and 6 the roofing of a box car.

My carline comprises the channel member 7 arranged so that the flanges 8 project upward and is bowed to take the shape of the roof. The web portion 9, projecting beyond the flanges 8 at each end of the carline, is turned down, forming the flanges 10 by means of which the carline may be bolted or otherwise fastened to the side plates 3 of the car. To strengthen this channel shaped carline against deflection under operative stresses, I form in the web portion 9 thereof, the substantially U-shaped depression or reinforcing flute 11, which projects preferably in a direction opposite to that of the flanges 8, thus forming, in combination with these flanges, a trussed construction which effectually meets the stress conditions of metallic carlines. This depression 11 may feather off at each end as it approaches the respective ends of the carline, as shown in Fig. 1, or may extend from end to end of the body of the carline, as shown in Fig. 4, and indicated by the numeral 11′; the two arrangements not affecting the strength of the truss but merely presenting differently shaped end bolting flanges. At suitable intervals along the carline, the depression or flute 11 is square finished or bossed as indicated by the numeral 12, so as to afford appropriate seats for the head or nut of the fastening means 13 of the purlins 5. A wood filler 14, mounted between the flanges 8 of the carline presents suitable flat seats for the purlins. This wood filler, however, in the absence of purlins, also serves as a nailing strip for the roof boards or plates of the car.

I prefer to construct my improved carline from a channel member of conventional cross section. The distribution of material in the ordinary commercial or conventional rolled channel section being such as to provide greater thickness of metal in the flanged portions than in the web, with the web portion reinforced as in my improved carline there is presented a light weight construction capable of meeting the maximum roof stresses. I find under test, that my invention increases the strength of the ordinary channel carline 300 per cent.

The advantages of my invention will be appreciated by those skilled in the art.

It will be apparent that many changes may be made in the construction shown which would not be a departure from my invention, and I do not therefore desire to limit myself thereto.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A metallic carline embodying a conventional rolled channel section having formed in the web portion thereof a longitudinal corrugation.

2. A metallic carline embodying a conventional rolled channel section having a substantially U-shaped longitudinal corrugation formed in its web portion, and projecting in a direction opposite to that of the flanges.

In testimony whereof, I have hereunto set my hand.

EDSON C. COVERT.

Witnesses:

PETER H. MURPHY,

M. ARTHUR KELLER.