

982,412.

Patented Jan. 24, 1911.

2 SHEETS-SHEET 1.

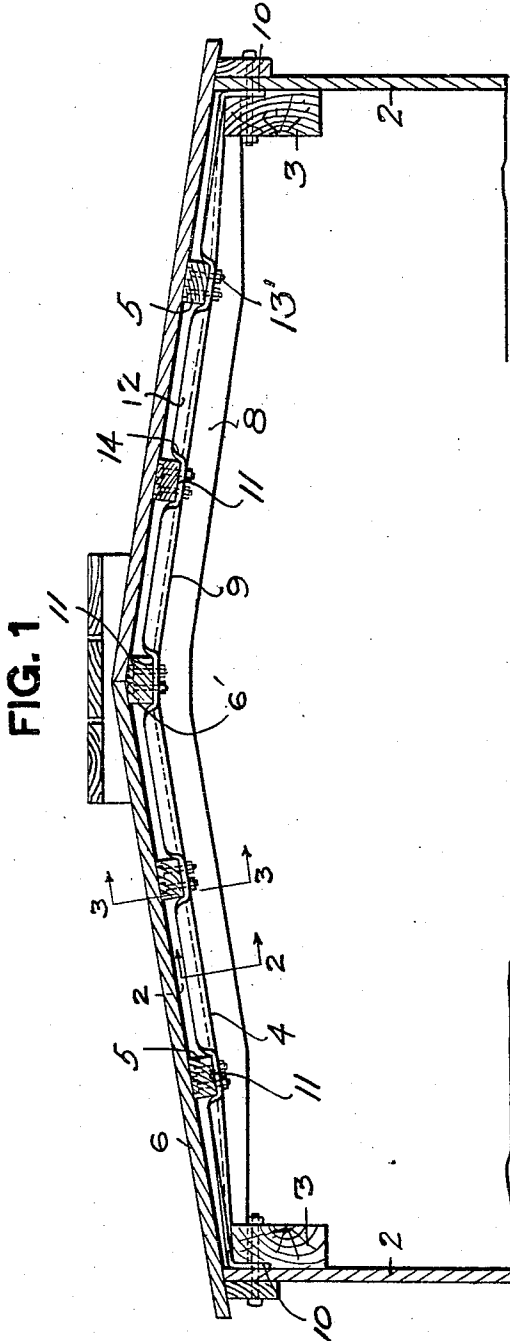


FIG. 1

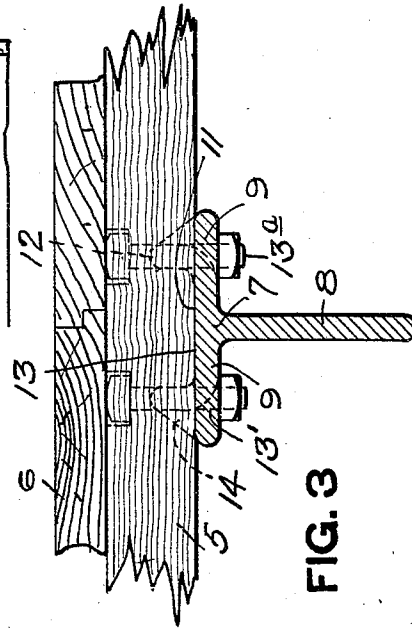


FIG. 3

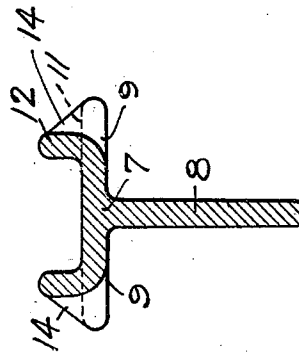


FIG. 2

WITNESSES.

H. W. Smith.
A. O'Hanlon

INVENTOR.

Edwin C. Covert
by Baker & Keller
his attys

982,412.

Patented Jan. 24, 1911.

2 SHEETS-SHEET 2.

FIG. 4

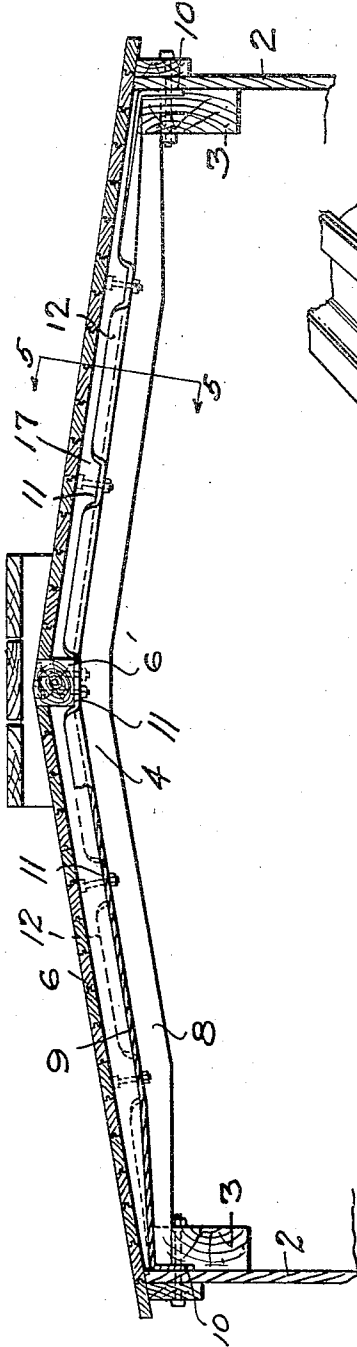


FIG. 6

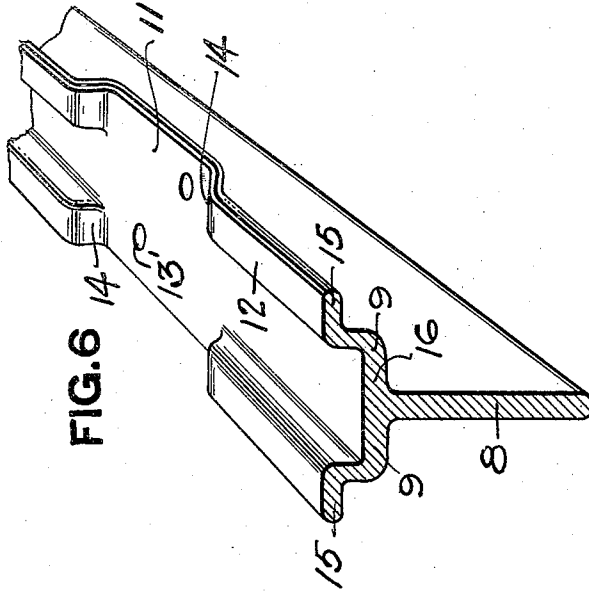
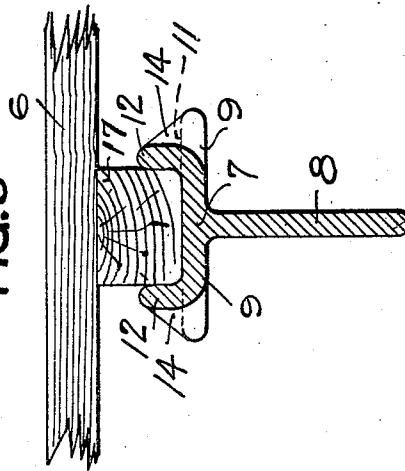


FIG. 5



WITNESSES.

W. A. Baruch

A. O. Hauler

INVENTOR.

Edison C. Covert
by *Bakerwell & Keller*
his attys

UNITED STATES PATENT OFFICE.

EDSON C. COVERT, OF NEW KENSINGTON, PENNSYLVANIA.

METALLIC CARLINE.

982,412.

Specification of Letters Patent. Patented Jan. 24, 1911.

Application filed May 14, 1910. Serial No. 561,406.

To all whom it may concern:

Be it known that I, EDSON C. COVERT, a resident of New Kensington, county of Westmoreland, and State of Pennsylvania, have invented a 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 the provision of a construction which for the same weight of material will give greater strength than is present in this member as heretofore constructed.

With the above object in view I also aim to provide a carline which may be readily formed from a commercial or conventional rolled section.

Further objects are to provide a strong, light weight carline having purlin pockets of great width and 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 sectional view through a box car, showing my improved carline applied thereto; Fig. 2 is a sectional view of my improved 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; Fig. 4 is a view corresponding with Fig. 1, but showing the carline partly broken away and as used without purlins and in connection with longitudinal roof boards; Fig. 5 is a sectional view taken on the line 5—5 of Fig. 4; and Fig. 6 is a sectional perspective view showing modified manner of forming purlin seats in the carline.

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

My improved carline comprises the substantially T-shaped section 7 bowed to take the shape of the roof and so arranged that the vertical cross-sectional leg 8 projects downwardly from the horizontally disposed legs 9. The legs 9, forming the top portion of the carline, preferably extend beyond the depending leg 8 at each end of the carline and are turned down at these points to form

the suitable flanges 10 by means of which the carline may be bolted or otherwise fastened to the side plates 3 of the car. In the mounting of the carline, the upper faces of the side plates 3 are preferably recessed to receive the ends of the carline; the depending leg 8 symmetrically tapering or feathering off at each end as it approaches the flanges 10.

To form pockets or seats 11 in the carline, for the reception of the purlins 5, I cause the end edges 12 of the legs 9 to project upwardly above the general plane of the body of such legs at suitable intervals along the T-section, preferably symmetrically disposed on opposite sides of the median point receiving the ridge purlin 6, as clearly shown in the different views; the seat or pocket 11 being formed by the lower face 13 presented by the undisturbed flat top surface of the legs 9 and by the gradually rising faces 14 of the upwardly projecting edges 12. The face 13 taking the width of the T-head formed by the straight oppositely disposed legs 9, presents a wide flat, firm bearing surface for the purlin. It may be provided with the staggered or diagonally arranged openings or holes 13' for the reception of the suitable purlin fastening bolts 13". The edges 12 may be caused to project upwardly to form the seats 11, either by angularly turning the edges as shown in Figs. 1 to 5, inclusive, or they may be struck up in the manner shown in Fig. 6; the latter manner maintaining uniform width throughout the length of the carline by stretching the legs 9 at points intermediate the outwardly projecting edge 15 and the body portion 16.

In symmetry with the tapering ends of the depending legs 8, as described above, the upwardly projecting edges of the legs 9 may gradually feather off at each end of the carline, as shown, and may be an incident so far as it concerns the construction shown in Figs. 1 to 5, if it is desired to maintain the full width of the T-section at the ends of the carline and consequently wide bearing surface and end bolting flanges; the edges 12 being gradually turned to an upright position from the ends toward the center of the construction, as shown.

In the absence of purlins, as in the case of the employment of roof plates or longitudinal boarding, a wood filler strip 17, at each side of the ridge pole 6 may be mounted between the upwardly projecting

edges of the legs 9, as is clearly shown in Fig. 4.

It will be noticed that the ends of the carline are preferably slightly bowed upwardly, the purpose of which is to allow the top of the plates 3 to supportingly receive the carline ends while still maintaining such space between the body proper of the carline and the car roof as to accommodate deep purlins or filler strips. The construction also conduces to symmetry.

The upwardly projecting portions of the T-section greatly stiffen the longitudinal legs 9 which form the compression member of a truss construction of which the depending flange or leg 8 forms the tension member.

The T-shape embodied in my improved carline is preferably the ordinary commercial or conventional rolled T-section. The shape may be purchased in the open market and is readily cut to the desired length and rolled or pressed to the desired shape, and these operations may be done with or without heating, as desired.

The advantages of my invention will be

appreciated by those skilled in the art. By my invention there is presented a construction able to meet the maximum roof stresses with a minimum amount of material.

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

1. A metallic carline, comprising a rolled section having a T-shaped cross section, and purlin receiving pockets on the horizontal leg thereof, defined by twisted deflections of such leg.

2. A metallic carline comprising a rolled section having a T-shaped cross section and having separate portions of the opposite edges of its horizontal leg struck upwardly to form longitudinal ribs lying above the general plane of said leg, the intervening portions of the leg forming purlin pockets.

In testimony whereof, I have hereunto set my hand.

EDSON C. COVERT.

Witnesses:

JOSEPH SPINELLI,
M. H. MAINWARING.