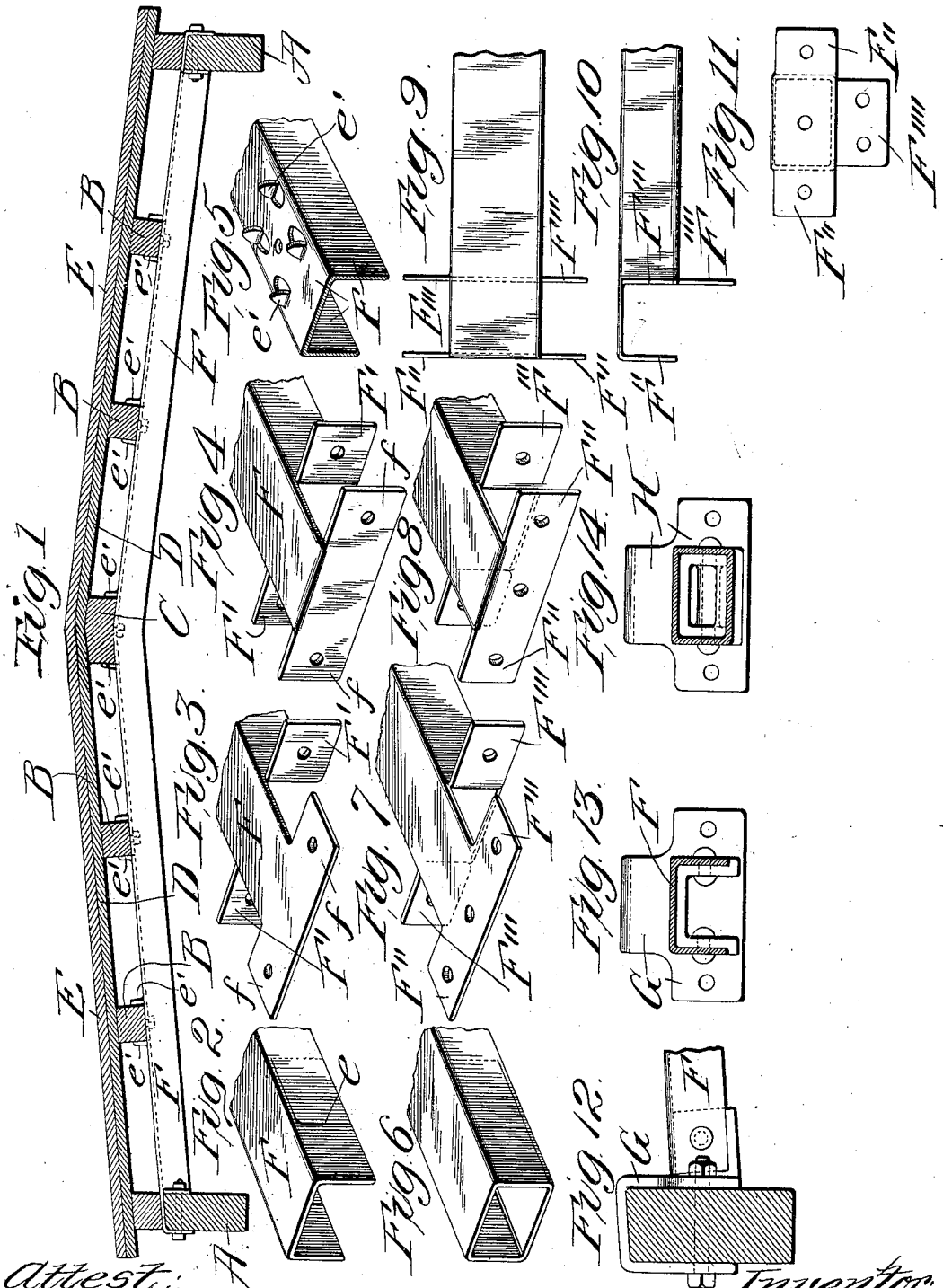
No. 651,139. Patented June 5, 1900.

H. W. GAYS.

CARLINE.

(Application filed Mar. 27, 1899.)

(No Model.)



Attest,
W. A. Fox
A. S. Gray.

Inventor:
Henry W. Gays.
by Pakewell & Cornwall
Attys

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UNITED STATES PATENT OFFICE.

HENRY W. GAYS, OF OTTAWA, CANADA.

CARLINE.

SPECIFICATION forming part of Letters Patent No. 651,139, dated June 5, 1900.

Application filed March 27, 1899. Serial No. 710,643. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. GAYS, a citizen of the United States, residing at the city of Ottawa, Province of Ontario, Canada, have invented a certain new and useful Improvement in Carlines, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a cross-sectional view of a car-roof, showing my improved carline in position thereunder. Fig. 2 is a detail view of one end of an inverted-U-shaped or channel-beam member from which my improved carline is formed. Fig. 3 is a similar view showing the manner of cutting and bending the end of said U-shaped carline for the purpose of securing the same to the side plates. Fig. 4 is a similar view showing the end bent as finally applied to the side plate. Fig. 5 is a detail view illustrating the manner of holding the purlins and ridge-pole in position on the carline. Fig. 6 is a detail view of one end of the box-shaped carline, which may also be used as a modification of the channel-beam form. Fig. 7 is a detail view illustrating the manner of bending one end of the box-shaped form before attachment to the side plate. Fig. 8 is a similar view showing the end of said box-shaped form in readiness for attachment to the side plate. Fig. 9 is a top plan view of the box-formed carline, showing the wings for attachment to the side plate. Fig. 10 is a modified form thereof, showing the downward bend from the bottom of the box form for attachment to the side plate. Fig. 11 is an end view of the form shown in Fig. 10. Fig. 12 is a detail view, in side elevation, illustrating the manner of attaching the U form of carline to a hanger. Fig. 13 is a cross-sectional view through the U-shaped carline looking toward the hanger, and Fig. 14 is a side elevational view of a hanger adapted to support the box form of carline.

This invention relates to a new and useful improvement in metallic carlines for use in car construction, the object being to form attaching means directly on the carline itself by which the same may be supported from the side plates.

The invention therefore consists in the formation of attaching devices on the ends of the carline whereby the same may be secured to the side plates or to suitable hangers secured to the side plates, and, finally, the invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described, and afterward pointed out in the claims.

In the drawings I have shown two forms of a carline, one an inverted-U-shaped structure or channel-beam form whose top and side webs are cut and bent for attachment to the side plates of the car, the carline proper being suitably cambered or bent to conform to the pitch of the roof, and the other form is substantially the same, with the exception that the vertical members are secured together at their lower edges by a bottom wall, forming a box-like structure, whose ends are cut and bent for attachment to the side plates directly or the hangers secured to the side plates.

In the drawings, A indicates the side plates, B the purlins, C the ridge-pole, D the under-roof sheathing, and E the outer-roof sheathing, of the car, such parts being of the usual and well-known construction.

F indicates my improved carline, which, as shown in Figs. 1 to 5, is of inverted-U shape in cross-section or of channel-beam form and suitably cambered to conform to the pitch of the roof. As shown in Fig. 2, a cut is made in the vertical walls of this carline, as at *e*, and said vertical walls are bent up to form wings *f* on the same plane with the horizontal member of the carline, said vertical webs being also bent laterally to form wings F′, which are adapted to bear against the inner faces of the side plates, as is obvious. The T-shaped tongue formed by the horizontal member and the wings *f* is then bent down, as shown in Fig. 4, so as to engage the outer face of the side plates, and said portions *f* and F′, being provided with suitable bolt-holes, are secured in position on the side plates by bolts passing through the same and said wings.

To provide suitable means for securing the purlins and ridge-pole in position, I strike up suitable projections e' at proper points along the horizontal member, as shown in Fig. 5, the purlins and ridge-pole fitting in the seat so provided and secured in position by bolts, as usual.

In Figs. 6 to 11 the carline is provided with a bottom wall forming a box-like structure which is cut and bent to form the wings F'' and F''', corresponding in shape and function to the wings f and F' before referred to. The bottom wall left by the above method of cutting and bending the ends of this box-like structure may be bent down, as shown in Figs. 10 and 11, to form a wing F'''', which may be formed with suitable bolt-openings for the reception of bolt or lag screws.

As shown in Figs. 12 and 13, the U-shaped structure, instead of having its ends bent for attachment to the side plate direct, can be secured to hangers G, which hangers are so shaped as to afford suitable supports for the ends of the carline.

In Fig. 14 a hanger H is illustrated for the box-like form of carline.

I am aware that minor changes in the arrangement, construction, and combination of several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. A metallic carline having horizontal and vertical portions, said vertical portion extending laterally at the end of the carline to engage the inner face of the side plate and said horizontal portion extending over the side plate and being bent down against the outer face of said side plate and provided with lateral extensions substantially in line with the ends or projections fitting against the inner face of the side plates; substantially as described.

2. The combination with a metallic carline provided with means on its upper face for maintaining the alinement of the purlins and ridge-pole, and hangers at the ends of the carline for securing the same to the side plates, said hangers having lateral projections in line with each other and engaging the inner and outer faces of the side plates, and being connected by cross-pieces extending over the side plates and securing means passed through said hangers and side plates for securing the carlines rigidly in place; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 15th day of March, 1899.

HENRY W. GAYS.

Witnesses:
G. B. COLPAS,
J. H. CORRY.