Jan. 2, 1923.

1,440,418

R. F. SNYDER.
CAR CONSTRUCTION.
FILED SEPT. 7, 1920.

2 SHEETS-SHEET 1

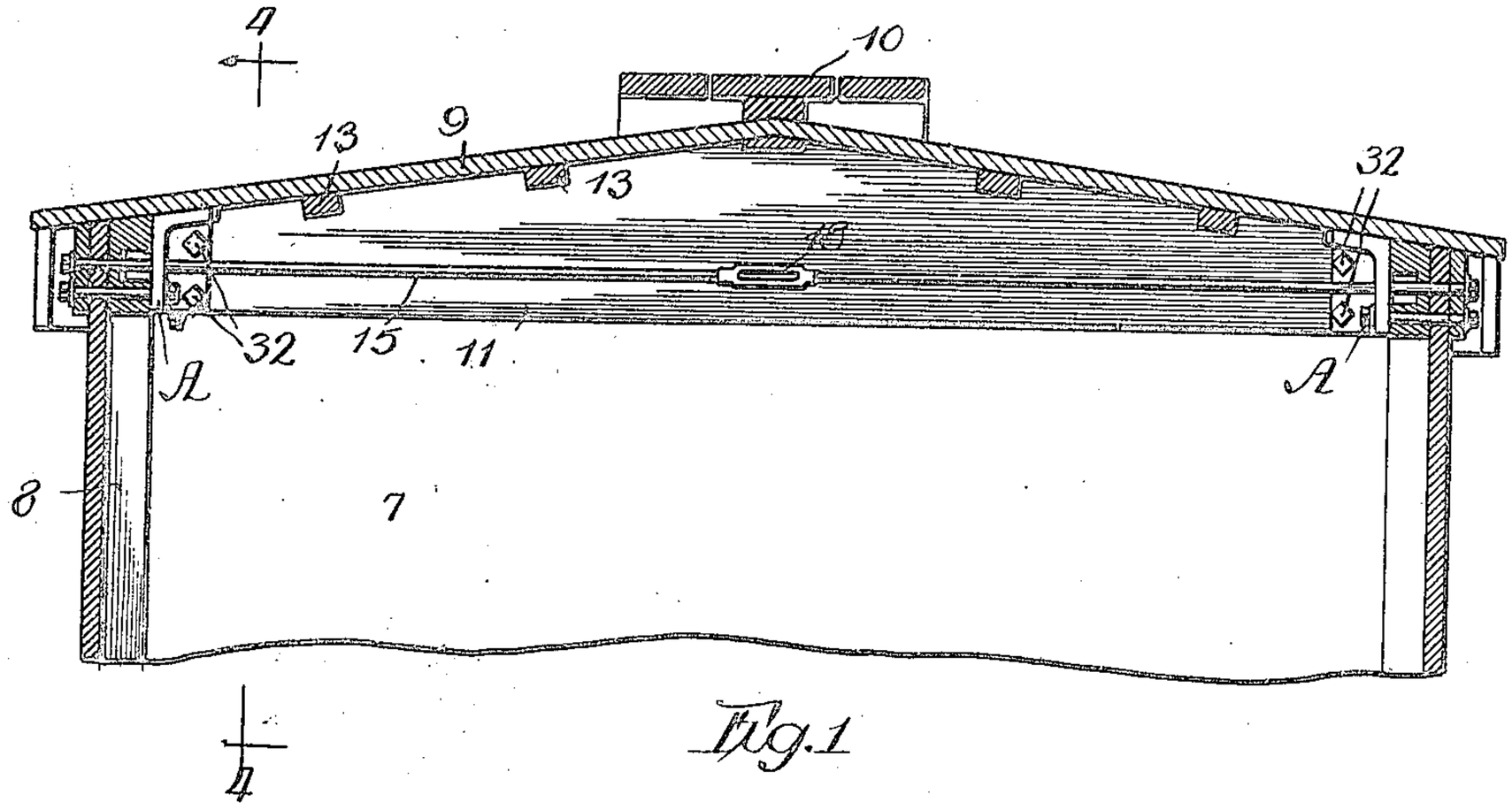

Fig. 1

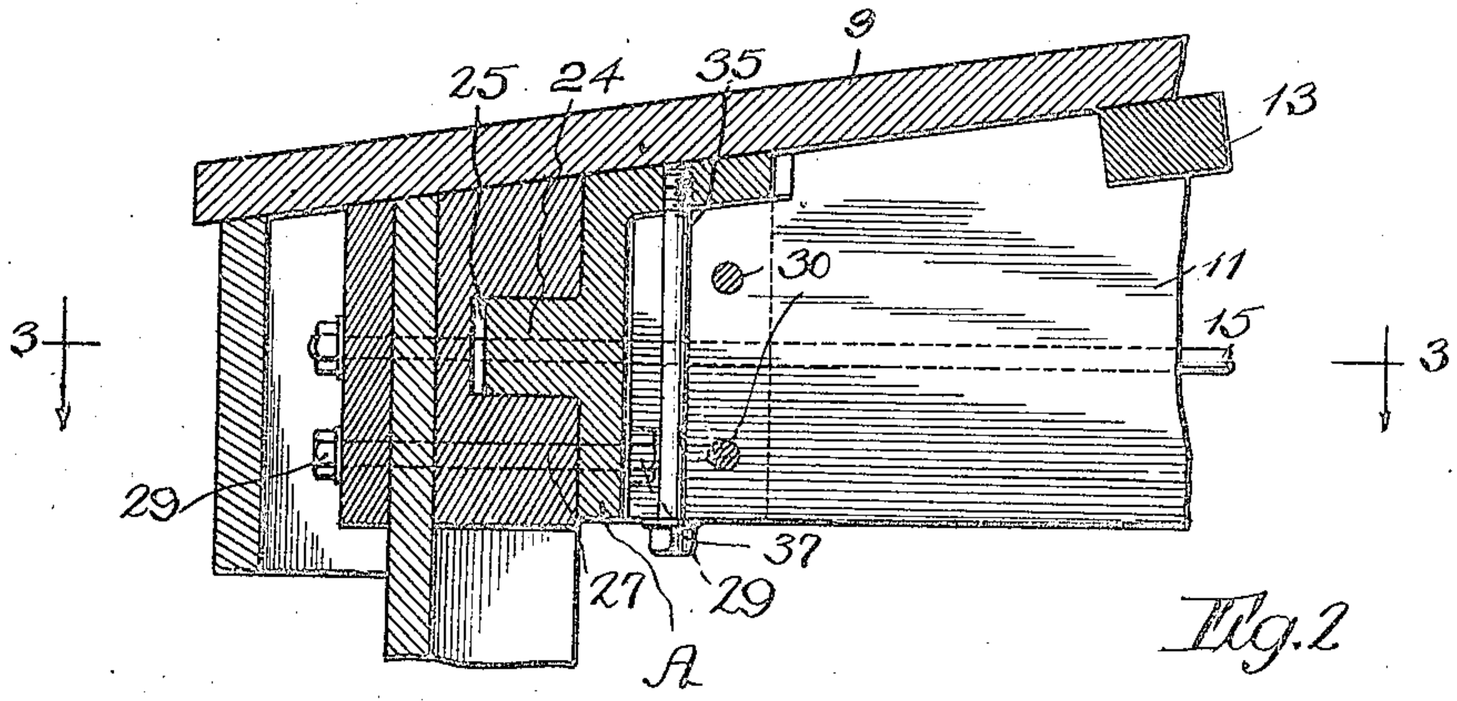

Fig. 2

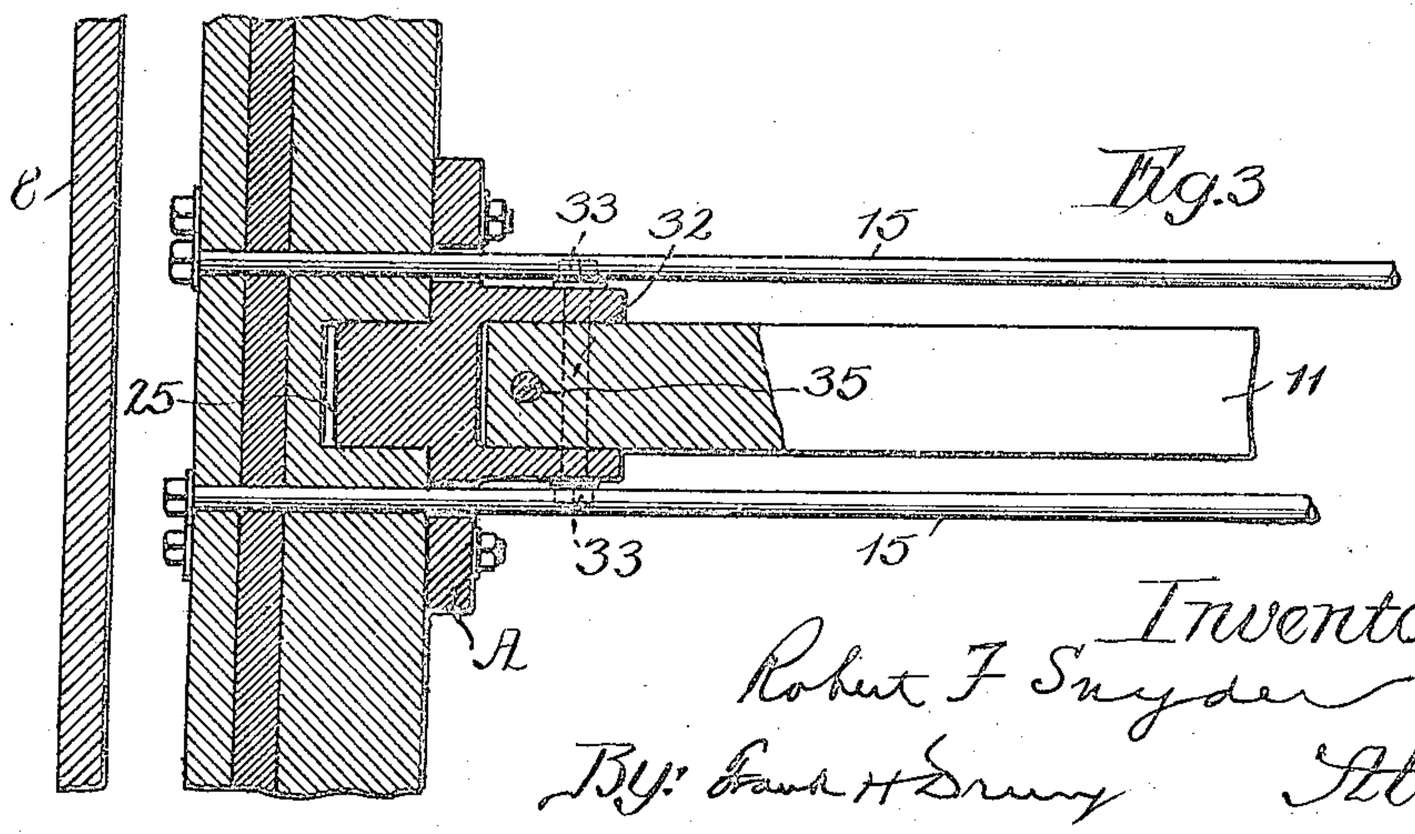

Fig. 3

Inventor.
Robert F Snyder
By: Fauth & Drury Attys.

Jan. 2, 1923.

1,440,418

R. F. SNYDER.
CAR CONSTRUCTION.
FILED SEPT. 7, 1920.

2 SHEETS-SHEET 2

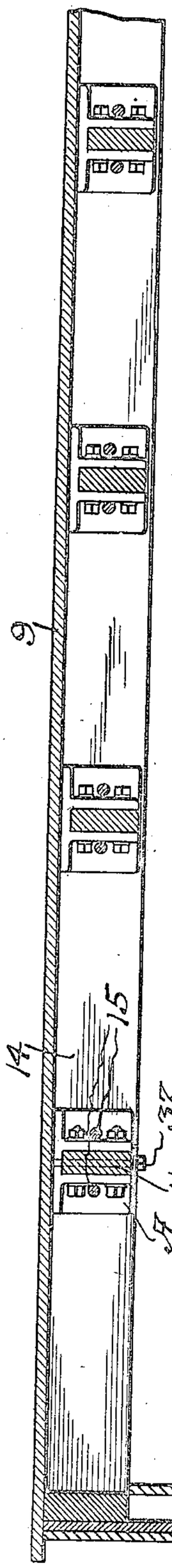

Fig. 4

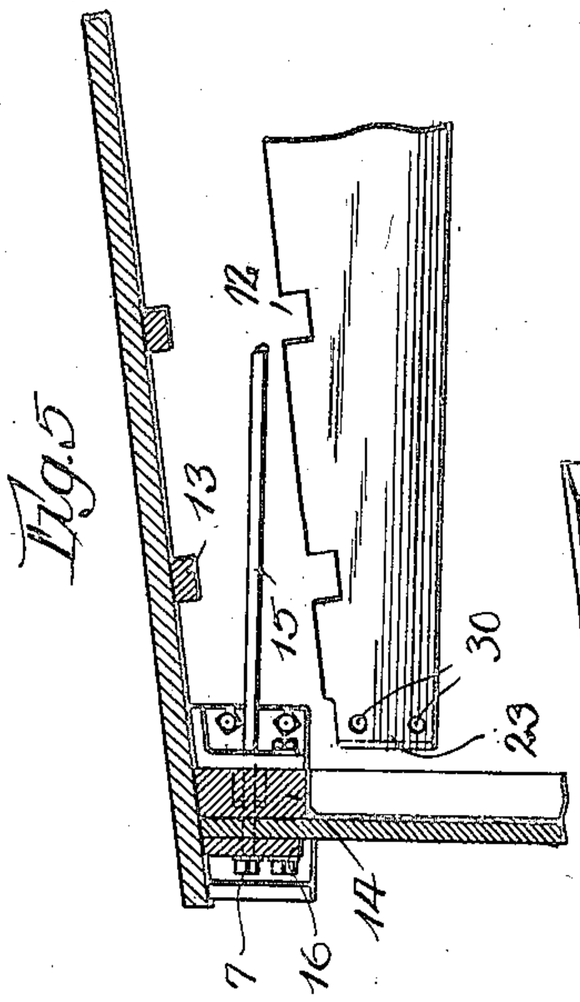

Fig. 5

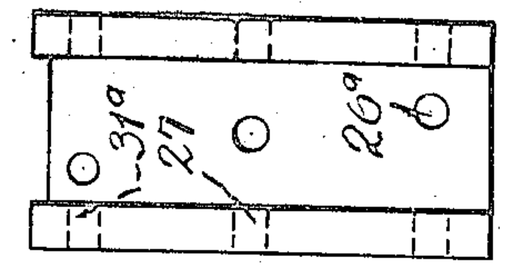

Fig. 6

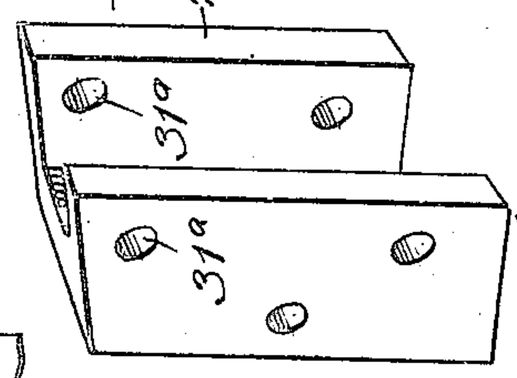

Fig. 7

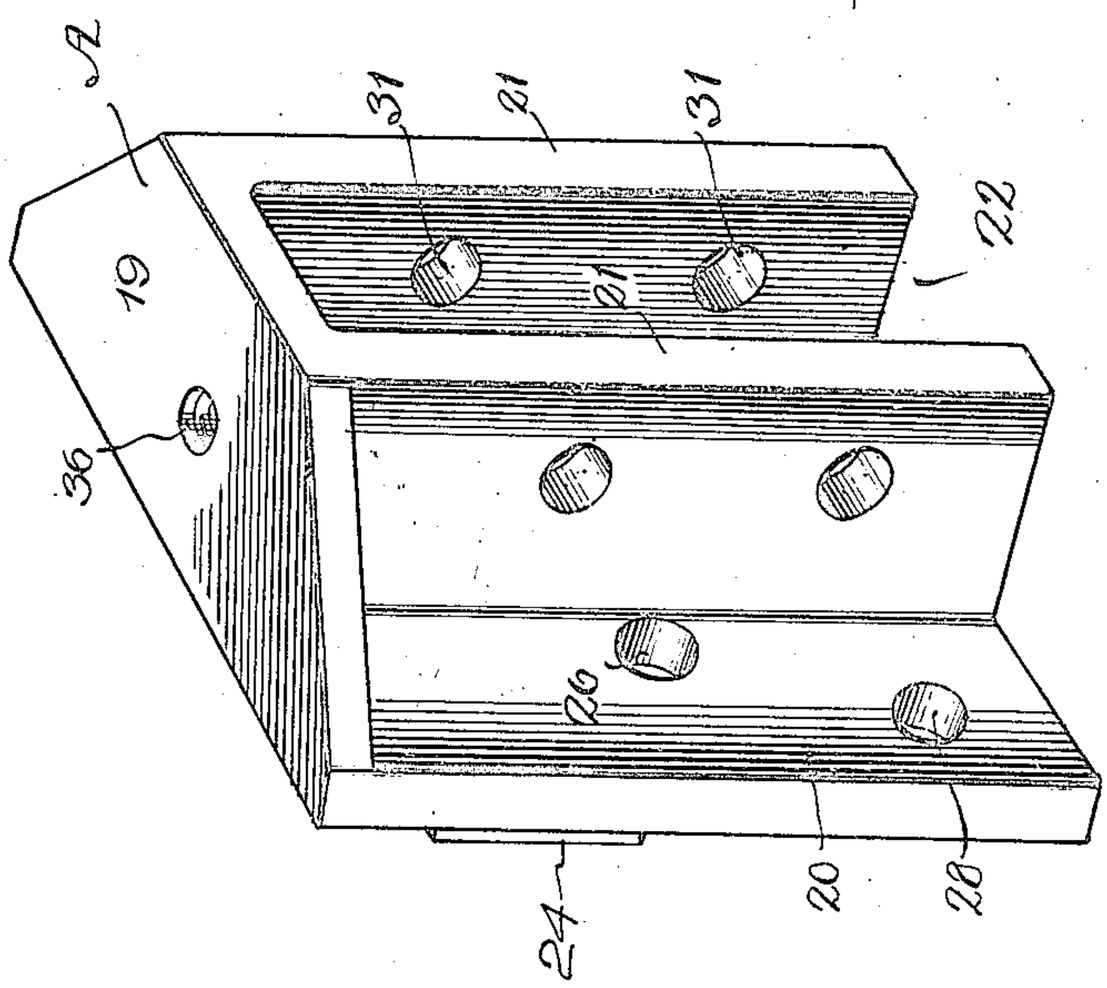

Fig. 8

Inventor.
Robert F. Snyder
By: Frank H. Young Atty.

Patented Jan. 2, 1923. 1,440,418.

UNITED STATES PATENT OFFICE.

ROBERT F. SNYDER, OF TERRE HAUTE, INDIANA.

CAR CONSTRUCTION.

Application filed September 7, 1920. Serial No. 408,525.

To all whom it may concern:

Be it known that I, ROBERT F. SNYDER, a citizen of the United States, residing at Terre Haute, in the county of Vigo and State of Indiana, have invented new and useful Improvements in Car Constructions, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to improvements in car construction, having especial reference to improvements in carlines and supports therefor.

The principal object of my invention is to provide an improved construction by means of which the carline proper may be removed without interfering with the rest of the car.

A further object is the production of a device of cheap and simple construction, and one not liable to get out of order.

These and such other objects as may appear hereinafter are attained by my device, an embodiment of which is illustrated in the accompanying drawings, in which—

Figure 1 represents a cross section of a portion of a car equipped with my improved device;

Fig. 2 represents an enlarged sectional view of a portion of Fig. 1;

Fig. 3 represents a sectional view on the line 3—3 of Fig. 2, looking in the direction indicated by the arrows;

Fig. 4 represents a sectional view on the line 4—4 of Fig. 1, looking in the direction indicated by the arrows;

Fig. 5 represents a view similar to Fig. 2, showing the carline out of position;

Fig. 6 represents a perspective view of my improved carline support;

Fig. 7 represents a perspective view of a modified form of my device, eliminating a number of the features shown in the preferred form; and

Fig. 8 represents a front plan view of Fig. 7.

Like numerals of reference indicate like parts in the several figures of the drawings.

Referring now to the drawings—7 represents an ordinary freight car having sides 8 and a roof 9. The ordinary running board 10 extends longitudinally of the roof over the center; a carline 11 extends from side to side, being notched, as shown at 12, to receive the purlines 13 supporting the roof 9.

The carlines are fitted into my improved carline support A, fitting against and within the side plate or girder beam 14. Carline rods 15 extend from side to side, passing through the carline support on either side of the carline, and extend through the side plate and sheathing, and also through the side facia 16, and are retained in position by means of bolts 17 on the outside of the side fixture. The rod is provided with an ordinary turn buckle 18, by means of which the tension is adjusted.

My carline support A is preferably of metal, and comprises a top member 19 sloping slightly upwardly to conform to the angle of the roof 9, and with a vertical rear plate 20 adapted to fit snugly against the side wall. Parallel retaining members 21 are provided forming a slot or groove 22 of such a width as to receive the end 23 of the carline. A rearwardly projecting boss or lug 24 is provided, adapted to fit within a socket 25 formed in the side plate. The bolts 15 pass through bolt holes 26 on either side of the carline support, and supplemental holding bolts 27 are provided, passing through bolt holes 28 in the carline support through the side plate and the facia, and provided at either end with nuts 29.

The ends 23 of the carlines are provided with bolt holes 30 registering with the corresponding holes 31 in the parallel retaining members, and bolts 32 are provided, passing therethrough, with nuts 33 on the ends holding the carlines rigidly in position.

The upper end of the carline is notched, as shown at 34, and adapted to fit snugly against the upper surface of the roof and the under surface of the plate 19.

Ordinarily, the carlines now used in the construction of freight cars are mortised in to the sides of the cars themselves; that is, the end of the carline is a tenon that fits in a socket in the side frame or side beam of the car. Consequently, when the car is subjected to rough handling, and lumber and other material is piled high in the car and thrown about in transit, or in loading or unloading, the carlines are very often bent or broken. In fact, it is quite a common occurrence to have a car returned from a foreign line, after a long absence, with half a dozen carlines bent or broken, and others temporarily put in place. Repair of the car means then taking off a portion of the siding and cutting off the end of the carline, driv-

ing it out and inserting a new carline,—quite an expensive and tedious operation, and one that is not at all satisfactory.

By the use of my improved carline support, however, the car, when built, has fitted in the side beam the supports as indicated in Fig. 4, and the carlines represented in Fig. 5 are slipped up in place, the bolts 32 passing through and locking the carlines securely in place. As a further locking means, bolts 35 are passed vertically through the bolt, as indicated clearly in Figure 2, and a nut 37 screwed on the lower end, thus locking the carline rigidly in position.

This construction makes it possible to keep the car intact, and at the same time provides a satisfactory and efficient carline having all the strength of the old constructions with no disadvantages attached thereto.

In Figs. 7 and 8 I have shown a modified form of my device in which I have eliminated the top plate 19 and the extending sides 20; also the rear lug 25. In this form I have shown 3 bolt holes 31ª, instead of two, as shown in Fig. 6; and instead of two holes in the wings, I have placed bolt holes 26ª through the back between the side members 21ª. The upper portion of the device may be sloped to conform to the slope of the roof, or it can be cut square, if desired, making it easier to manufacture.

In this form ordinary channel bars can be used, cut off and bored to form the device.

While I have shown certain specific embodiments of my carline support, it is understood, of course, that I do not limit myself to this construction, as other forms might be used without departing from the spirit of my invention.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent of the United States—

1. In a freight car construction, girder beams positioned in the corners formed by the roof and sides, oppositely disposed carline supports carried by the girder beams each having a rear wall with side and top integral flanges extending therefrom to form a downwardly opening pocket, a carline having its end thrust up into the pockets, means for forcibly drawing the carline ends upwardly into the pockets, and suitable bolts passing through the side walls of the supports and the carline ends to clamp the ends between the walls.

2. In a freight car construction, girder beams positioned in the corners formed by the roof and sides, oppositely disposed carline supports carried by the girder beams each having a rear wall with side and top integral flanges extending therefrom to form a downwardly opening pocket, a carline having its end thrust up into the pockets, means for forcibly drawing the carline ends upwardly into the pockets, suitable bolts passing through the side walls of the supports and the carline ends to clamp the ends between the walls, a lateral flange for each support, and a carline rod extending across the car and through the flanges and beams and secured at the ends outside the car so as to draw the car sides together rigidly.

3. As a new article of manufacture, a carline support comprising a rear wall, side and top integral flanges extending at right angles thereto from the face of said rear wall, said rear wall and side flanges being provided with a plurality of bolt holes for securing said car line support to the side flanges and to confine a carline within the groove between said flanges, and means for forcibly drawing a carline upwardly between the side flanges.

In witness whereof, I have hereunto subscribed my name.

ROBERT F. SNYDER.