T. DE VINNEY.

CARLINE FOR BOX CARS.

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945,084.

Patented Jan. 4, 1910.

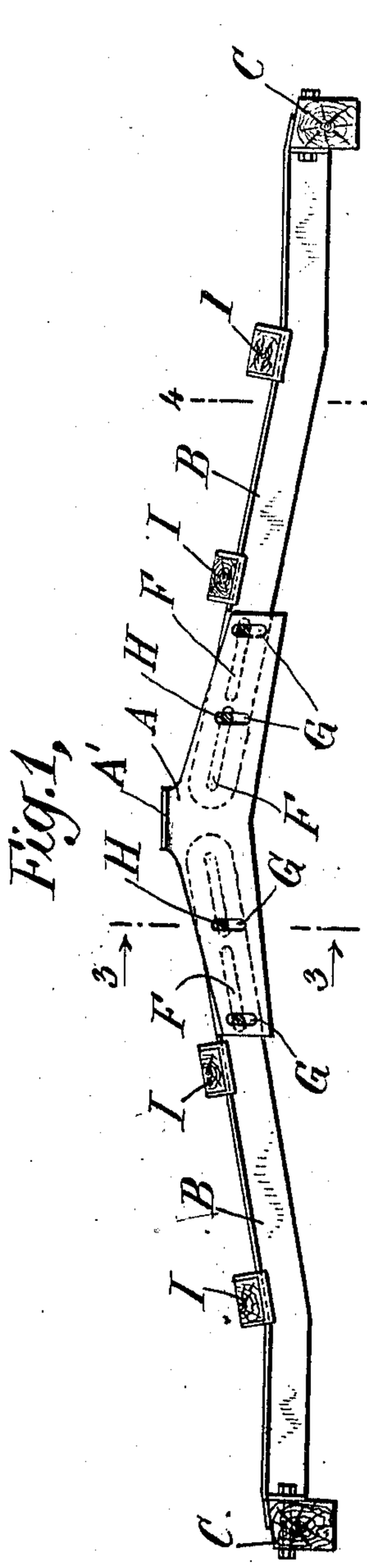

Fig. 1,

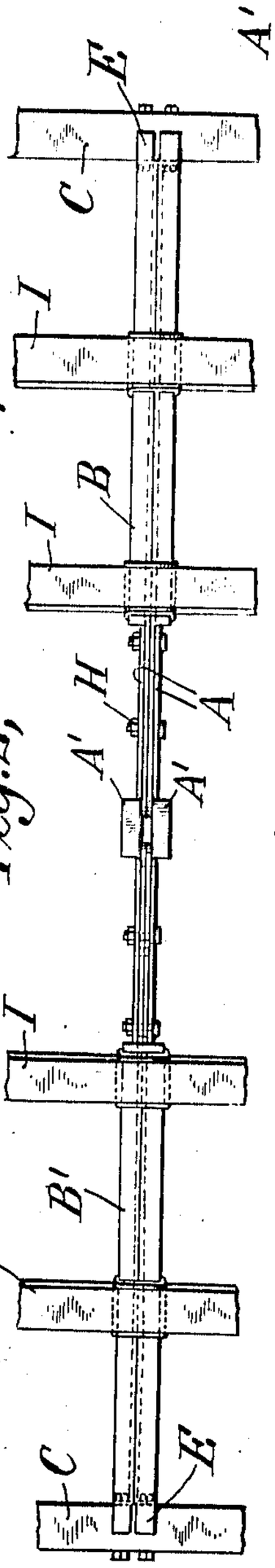

Fig. 2,

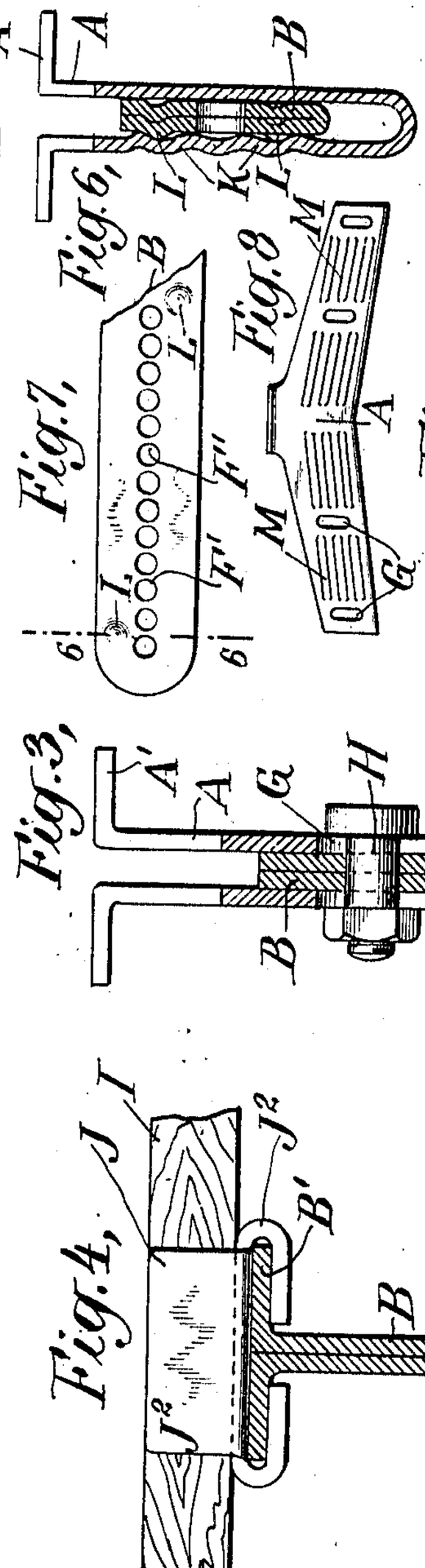

Fig. 6,

Fig. 7,

Fig. 8

Fig. 9,

Fig. 3,

Fig. 4,

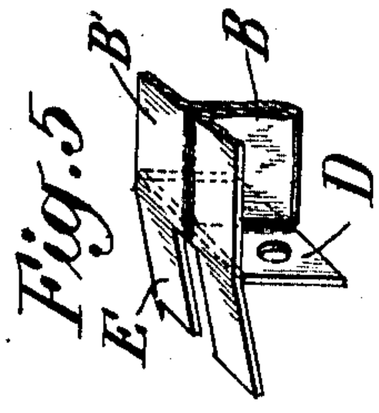

Fig. 5

WITNESSES:

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CARLINE FOR BOX-CARS.

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To all whom it may concern:

Be it known that I, THEODORE DE VINNEY, a citizen of the United States, residing at Albany, county of Albany, State of New York, (whose post-office address is 496 Central avenue, Albany, New York,) have invented certain new and useful Improvements in Carlines for Box-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

It is becoming increasingly the custom to use in box cars and the like transverse roof supports or carlines made of metal, whether the cars themselves are made of metal or wood. There is not, however, any standard width or roof pitch for cars of different roads and cars built for different purposes, so that a repair shop has to carry on hand, among its spare repair parts, many different styles of carlines, in sufficient quantities to supply the demand for repair parts.

It is the primary object of my invention to obviate this by providing a carline which is adjustable in length, depth and pitch, to such an extent that it can readily be adapted to mee the variation in the different styles of cars within the limits required by shop practice, but as those skilled in the art will appreciate, the adjustable carlines of my invention may be made use of to advantage in the original construction of cars.

The particular nature of the invention, and the manner in which the intended objects are attained, will be understood from the following description taken in connection with the accompanying drawing in which the preferred form of my invention is disclosed.

Figure 1— is an elevation of one of my improved carlines extending between the side top plates of a car and supporting the longitudinally extending rafters or purlins; Fig. 2— is a plan view of same; Fig. 3— is a section on the line 3—3 of Fig. 1, on a larger scale; Fig. 4— is a section on the line 4—4 of Fig. 1, on the same scale as Fig. 3; Fig. 5— is a perspective detail of the extreme end of the carline; Fig. 6— is a cross-section of a modified center or key piece; Fig. 7— shows the end of one side member adapted to be used with the center or key piece of Fig. 6; Fig. 8 is an elevation of another modified center or key piece and Fig. 9 is a sectional plan of the same on a larger scale showing its engagement with the end of one side piece.

The adjustable carline as it is shown in the drawings, is made up of the center-piece or key-piece A, which is preferably, though not necessarily, made of a single piece of metal bent or stamped into the U-shape shown in Fig. 3 and having at its central portion, on its upper edge, the lateral extensions A′, to support the ridge beam of the roof; and the two side members B, adapted to lie within, or between the faces of, the member A and extending the width of the car into engagement with the side top plates C. In the preferred construction the members B are made of sheet metal doubled upon itself and have, throughout that portion of their length which extends beyond the member A, the lateral flanges B′, and at the end of each member B the depending double portion is split and bent laterally to form the attaching flanges D to be bolted to the side top plates, the flanges B′ being extended to form the portions E overlying the top of the side top plates.

Each of the members B has at its inner end two elongated slots F and in the center or key piece A are four elongated vertical slots G the members B being fastened to member A by bolts H passing through slots F and G. By virtue of the elongation of slots F the members B may be moved in and out to change the length of the carline, and by virtue of the elongation of slots G the angle of inclination of members B may be changed to vary the pitch of the roof, the parts, when properly adjusted to suit the particular case in hand, being locked securely in place by the clamping action of bolts H.

The longitudinally extending roof beams or purlins I might well be secured to such a carline by bolts passing through the flanges B into the purlins, any variation in the position of the purlins in different cars being taken care of by boring properly spaced bolt holes in the flanges B at the time and place of repair, but I may conveniently avoid even this necessity, and at the same time afford a ready attachment or seat for the purlin by providing adjustable chairs or slides J made of metal with upstanding sides J′ and a flat base plate J^2, the extremities of the base plate being turned over as shown in Fig. 4. about the flanges B′ so that the chairs or

slides J may be slid along members B to any desired positions, corresponding to the positions of the purlins in the car undergoing repairs.

In different cars the ridge beam, which will rest on the flanges A′ of my improved carline, is at different heights above the purlins, and to provide for this adjustment the slots G may conveniently be made longer than is necessary for the single purpose of adjusting the pitch of the members B, so that the center piece or key piece A has an up and down adjustment.

A tight clamping of the parts by the bolts H, as shown in Fig. 3, is ordinarily sufficient to hold them securely in their adjusted position, but for additional security, when needed, I have adopted a construction in which there are on one or both of the inner faces of the member A and on the embraced portion of the members B, interlocking projections and recesses.

In the form illustrated in Figs. 6 and 7 one of the face plates of member A is corrugated as at K and projecting studs I out of vertical alinement with one another are found on the embraced portion of member B preferably spaced well apart as in Fig. 7.

I have also shown in Fig. 7 a further convenient modification of the side members B, by which they are enabled to more strongly resist any strain tending to pull the side members of the carline away from the center piece. This modification consists in replacing the slots F by a series of evenly spaced bolt holes F′, through which the bolts H pass as before. In general practice the widths of various sizes of box cars differ from one another by two inches, so that if the bolt holes have centers one inch apart the adjustment will be a convenient one, since it would involve moving each side piece out one bolt hole. If, however, the car width changes by an amount not evenly divisible by two inches, there is no difficulty in making the adjustment, because one side member may be taken up one inch more than the other without detriment. The only effect will be to put the center piece very slightly off the center and that is not objectionable because the flanges A′ which support the ridge pole are conveniently made slightly wider than the ridge pole. In Figs. 8 and 9 is shown another modified form in which the face plates of member A have parallel slots M and when the parts have been adjusted and locked in position by bolts H they are further secured by bending portions of the face plates between slits in the slots F, as shown at N in Fig. 9. It will be observed that in both of these cases, by reason of the plurality of corrugations and slots, the parts are still capable of adjustment, in the manner described, that is, in length and pitch and in the height of the ridge beam support.

In the arrangement of Figs. 6 and 7 the locking takes place at any one of a number of different adjustments without other manipulation of the parts than the tightening up of bolts H; while in the arrangement of Figs. 8 and 9 the adjustment is made and the parts locked permanently at that particular adjustment by the bending in of the metal to form projections N.

So far as I am aware, I am the first to suggest that the difficulties in repair shop practice referred to in the first part of this specification may be overcome by a carline made up of a plurality of connected parts relatively adjustable to change the length and pitch of the carline, and to provide a carline capable of such adjustment, and I desire to include within my monopoly any construction which is the equivalent of that herein illustrated and described and falling within the scope of the appended claims whether made of a greater or less number of parts.

What I claim is—

1. A carline or cross-support for the roofs of box cars and the like, made up of a plurality of connected parts adjustable in length and pitch, substantially as described.

2. A carline or cross-support for the roofs of box cars and the like, made up of a plurality of connected parts adjustable in length, depth and pitch, substantially as described.

3. A carline or cross-support for the roofs of box cars and the like made up of a center-piece or key-piece A having slots G, a pair of side pieces B having slots F and connecting bolts H passing through the slots F and G substantially as described.

4. A carline or cross-support for the roofs of box cars and the like made up of a center-piece or key-piece A having slots G, a pair of side pieces B having slots F and connecting bolts H passing through the slots F and G and purlin supports J adjustable on the members B, substantially as described.

5. A carline or cross-support for the roofs of box cars and the like having a double center-piece or key-piece and a pair of side pieces embraced at their inner ends by the center piece and adjustably connected thereto to permit variations in length and pitch of the carline, substantially as described.

6. A carline or cross-support for the roofs of box cars and the like having a double center-piece or key-piece and a pair of side pieces embraced at their inner ends by the center piece and adjustably connected thereto to permit variations in length and pitch of the carline, and the embraced ends of the side pieces and the embracing faces of the center piece having interlocking projections and recesses, substantially as described.

7. A carline or cross support for the roofs of box-cars and the like, having a center piece or key piece and a pair of side pieces

adjustably connected thereto to permit variations in length and pitch of the carline; substantially as described.

8. A carline or cross support for the roofs of box-cars and the like, having a center piece or key piece and a pair of side pieces adjustably connected thereto to permit variations in length and pitch of the carline, the abutting faces of the center piece and side pieces having interlocking projections and recesses; substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

THEODORE DE VINNEY.

Witnesses:
WILLIAM H. DAVIS,
LAURA B. PENFIELD.