

H. E. HADDOCK.  
CORNER ANCHOR FOR CARS.  
APPLICATION FILED JULY 11, 1908.

912,120.

Patented Feb. 9, 1909.  
2 SHEETS—SHEET 1.

Fig. 1.

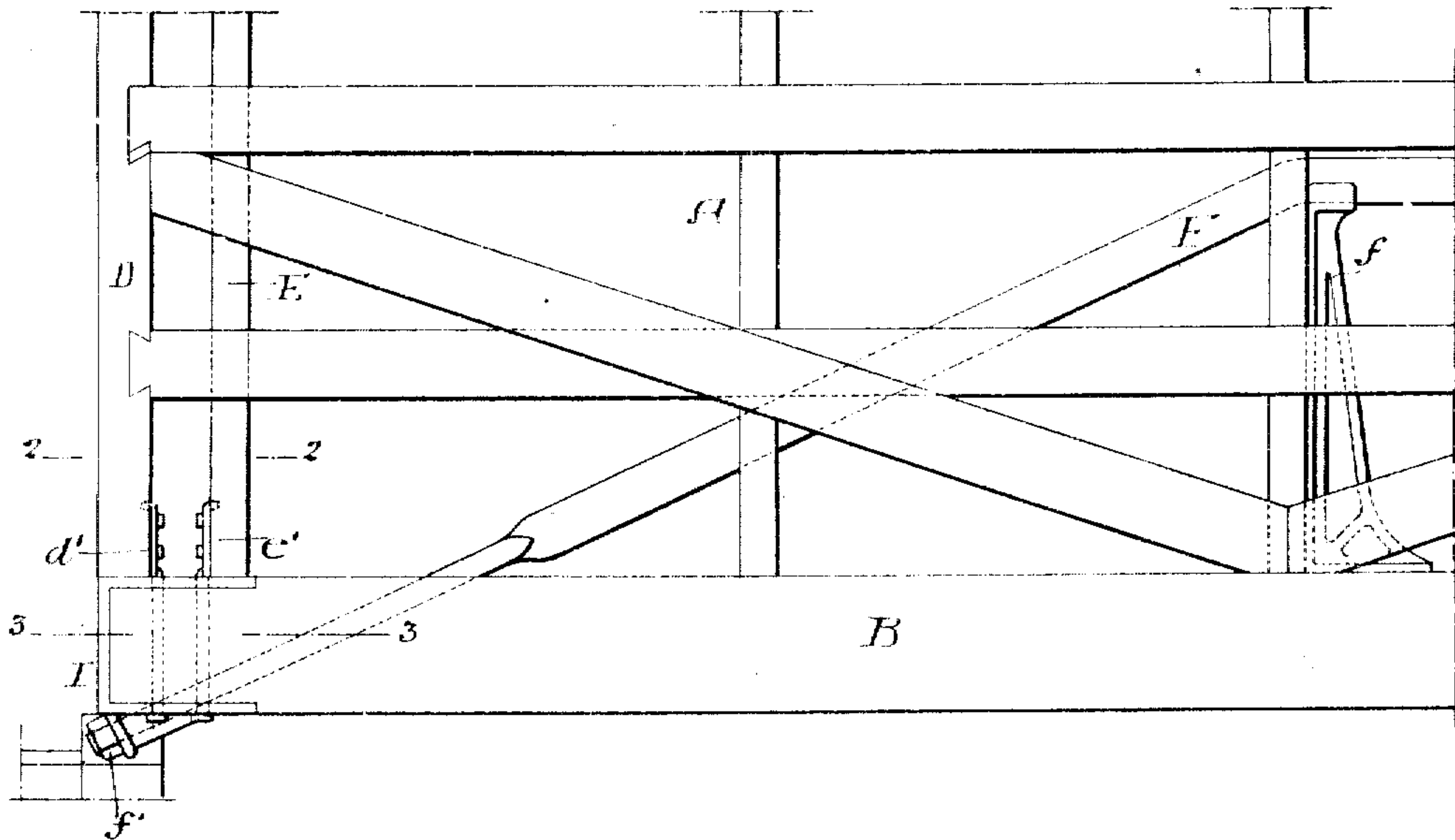


Fig. 2.

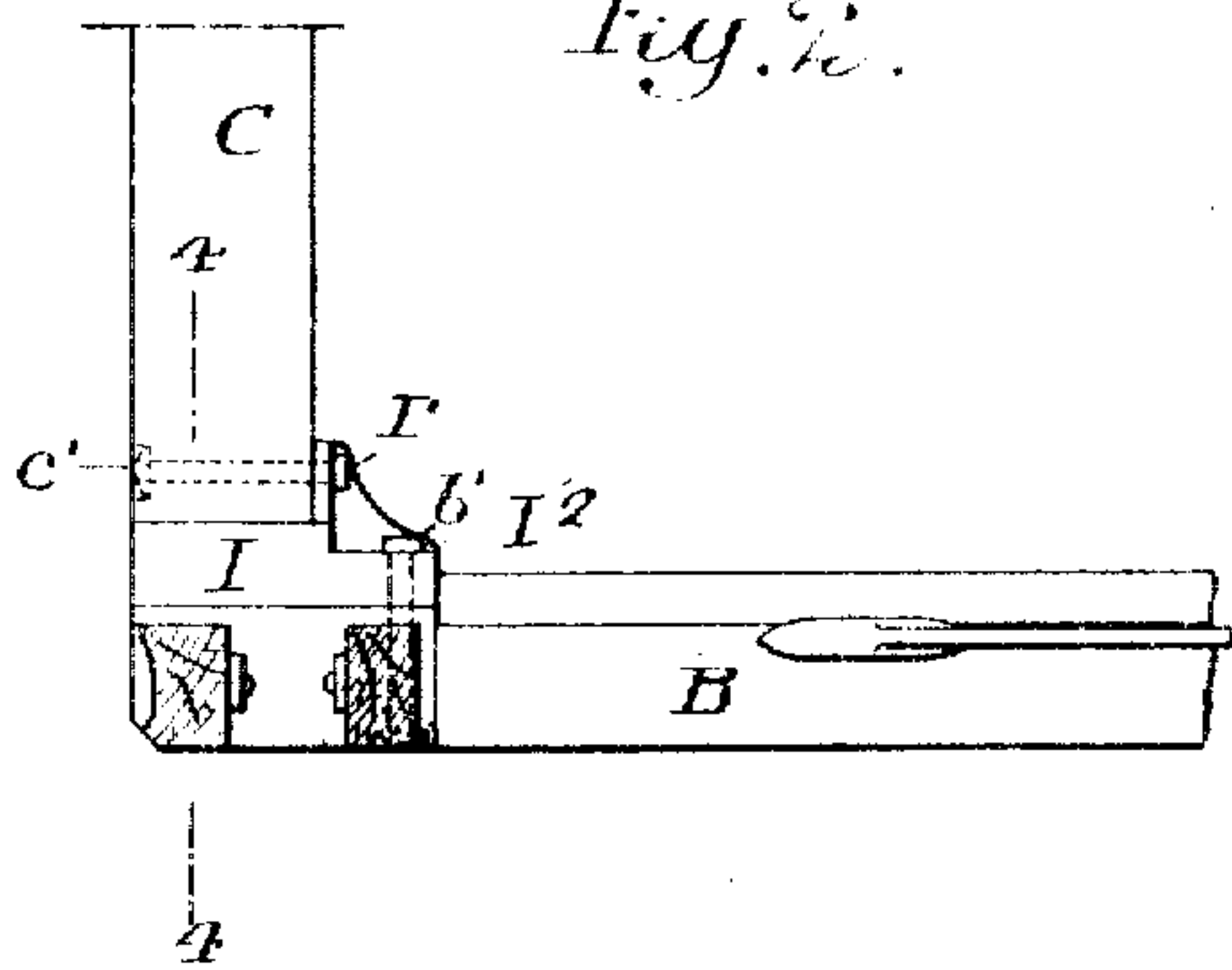


Fig. 3.

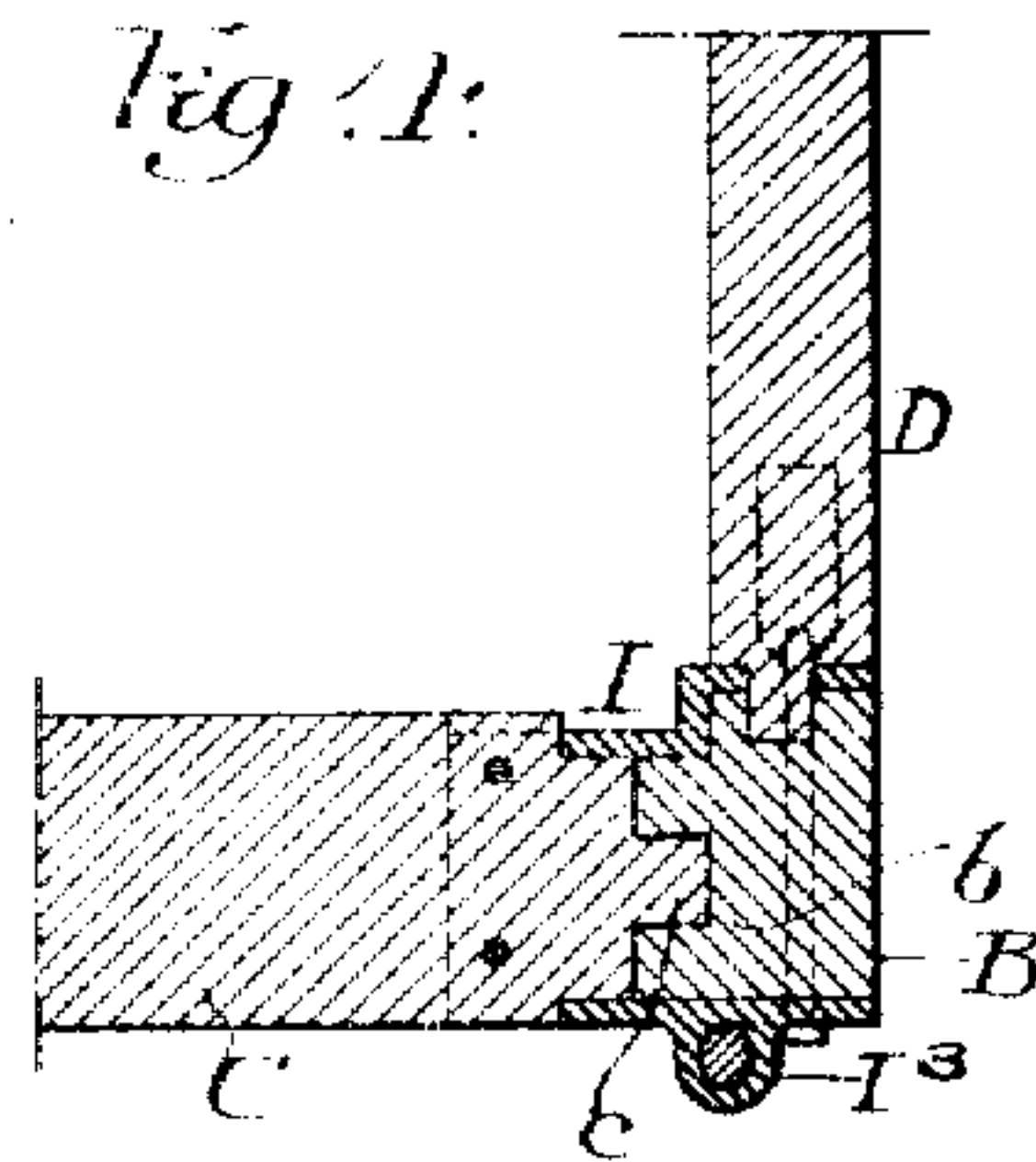
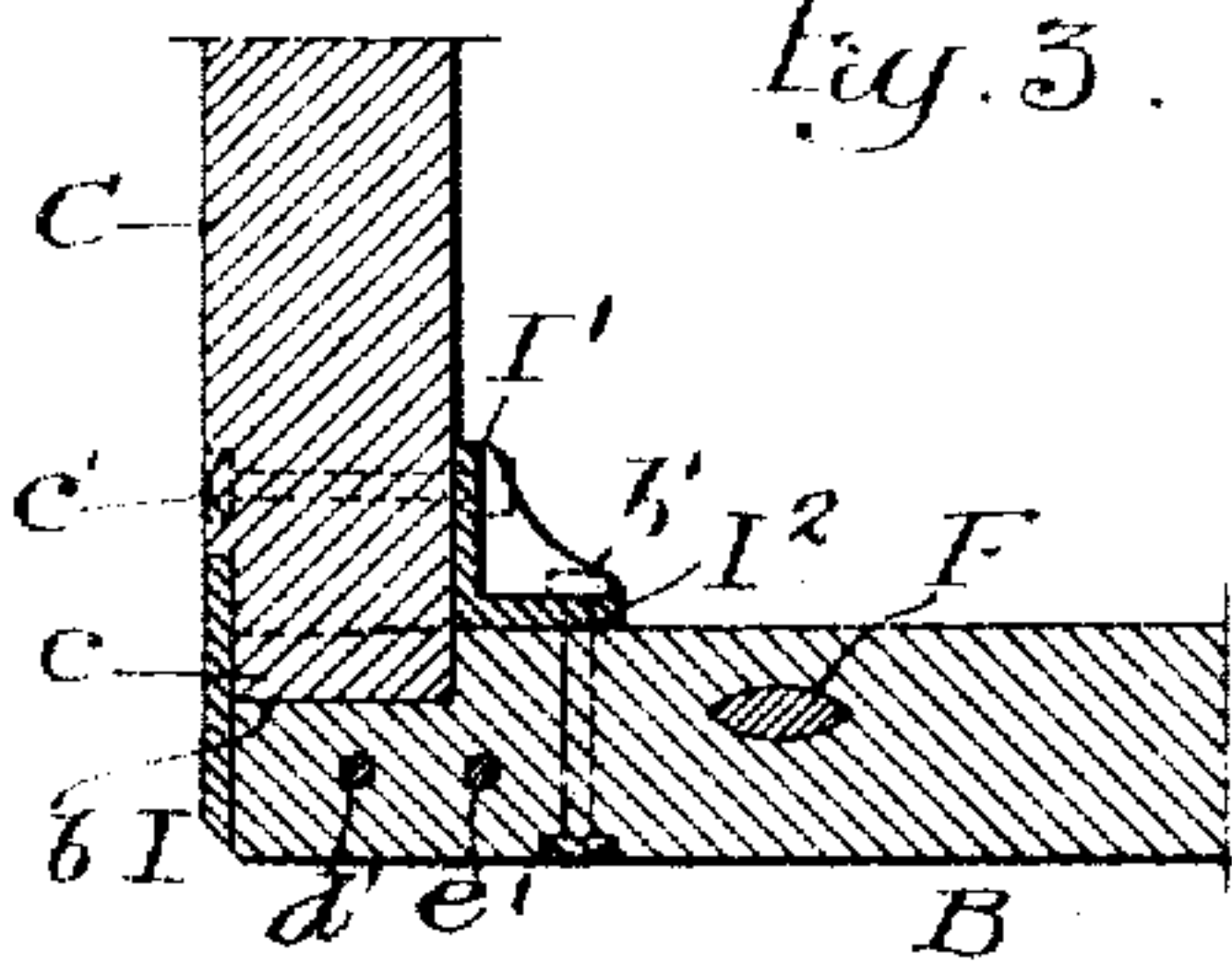


Fig. 4.



Witnesses—

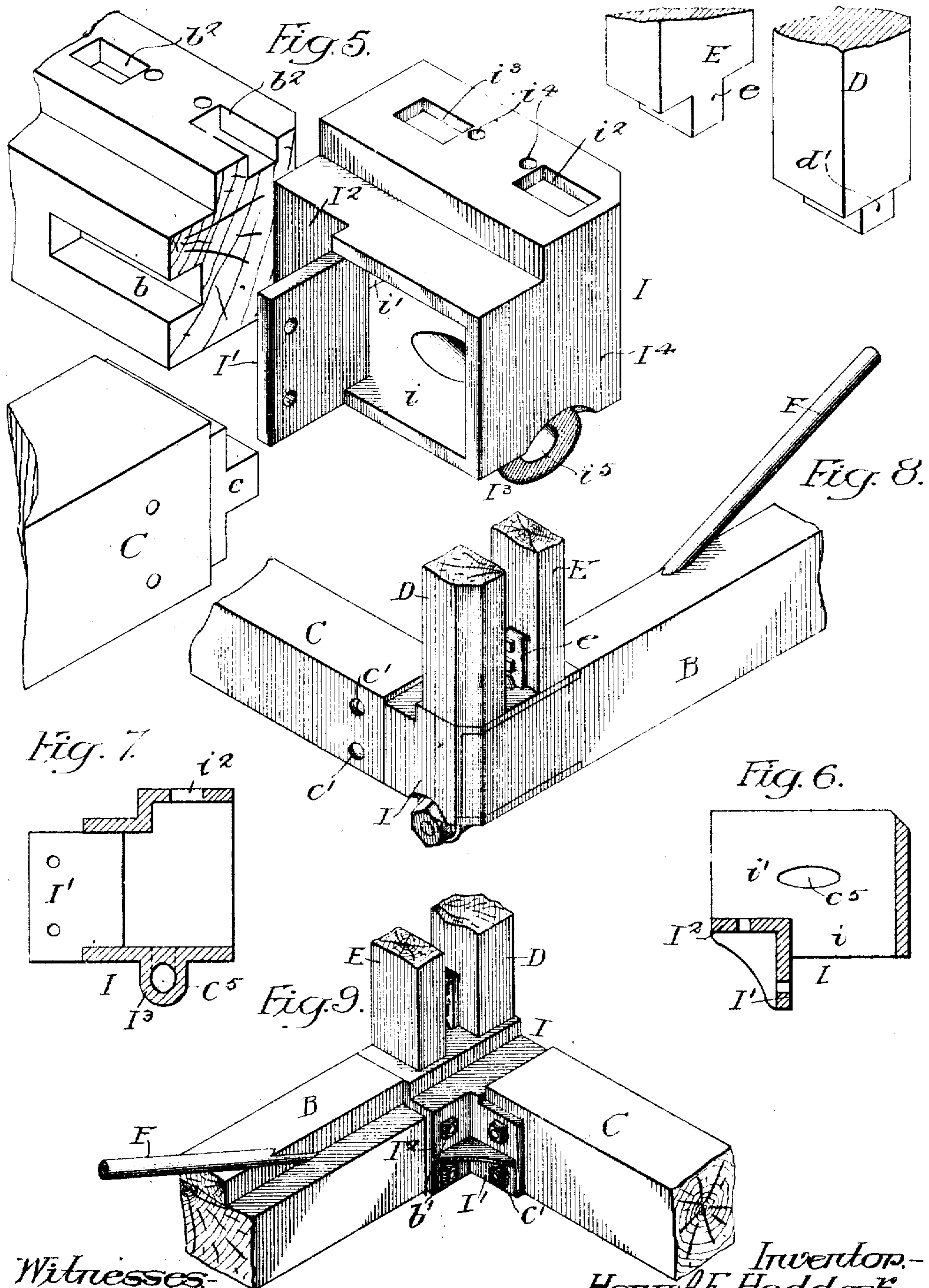
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# UNITED STATES PATENT OFFICE.

HENRY E. HADDOCK, OF CLEVELAND, OHIO, ASSIGNOR TO THE J. G. BRILL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## CORNER-ANCHOR FOR CARS.

No. 912,120.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed July 11, 1903. Serial No. 443,102.

*To all whom it may concern:*

Be it known that I, HENRY E. HADDOCK, a citizen of the United States, residing in Cleveland, Ohio, have invented certain improvements in Corner-Anchors for Cars, of which the following is a specification.

My invention relates to certain improvements in the corner construction of cars, particularly of the passenger type, in which a side truss rod is used which extends from one end of the car to the other. In this type of car it is difficult to properly strengthen the corner and at the same time use a truss rod which will have sufficient anchorage, and the object of my invention is to so design a corner and truss rod anchor that the parts will be readily held together and the truss rod will have a firm and secure anchorage, as fully described hereafter.

In the accompanying drawings:—Figure 1, is a side view showing sufficient of a frame of a passenger car to illustrate my invention; Fig. 2, is a sectional plan view on the line 2—2, Fig. 1, illustrating the corner; Fig. 3, is a sectional plan view on the line 3—3, Fig. 1; Fig. 4, is a vertical sectional view on the line 4—4, Fig. 2; Fig. 5, is a perspective view showing my improved corner anchor detached from the timbers; Fig. 6, is a sectional view of the corner anchor, similar to Fig. 3 with the sills omitted; Fig. 7, is a sectional view of the anchor, similar to Fig. 4 with the sills and the corner post omitted; Fig. 8, is a perspective view looking at the outside of the corner, showing the sills and uprights in position; and Fig. 9, is a perspective view of the inside of the corner shown in Fig. 8.

A is the body portion of a passenger car, which may be formed in any suitable manner, but in this type of car there is the side sill B, the end sill C, and the corner posts D and E. These elements must be securely attached to each other at the lower corner so that the car framing will be held absolutely square.

F is a truss rod situated at each side of the car and extending diagonally from each lower corner as illustrated in Fig. 1 over struts *f* placed at intervals on the lower sill B. This rod materially stiffens the side framing of the car and is particularly essential in larger cars. The truss rod should also be anchored at the corners so as to act as a brace for the corners of the car as well.

I is a corner anchor shaped in the form of a box having an opening *i* at one side into which projects the end sill C and an opening at one end *i'* into which projects the side sill B. The side sill is mortised at *b* for the reception of a tenon *c* on the end sill C, as illustrated clearly in Figs. 4 and 5.

In the upper plate of this corner anchor are two quadrangular openings *i<sup>2</sup>* and *i<sup>3</sup>* for the reception of tenons *d* and *e* on the corner posts D and E respectively, and these corner posts are held down to the anchor by bolts *d'* and *e'* respectively, which have their upper ends bent so as to enter notches in the corner posts and are firmly bolted to the corner posts as shown; the round shanks of the bolts passing through holes *i<sup>2</sup>* in the upper and lower plates of the anchor I and through the side sill B, as clearly shown in Fig. 1 of the drawings.

Projecting from one side of the corner anchor I is a plate *I'* which rests against the inner side of the end sill and the sill is firmly secured to this plate *I'* by bolts *c'* which pass through openings in the sill and in the plate, as clearly illustrated in Fig. 2. The side sill is secured to the corner anchor by bolts *b'* which pass through the plate *I<sup>2</sup>* of the anchor and through the openings in the sill as illustrated in Fig. 3. By this construction the end and side sills are firmly secured together and to the anchor and the corner posts D and E are firmly secured to the two sills by the tenons *c* and *d* passing through the openings *i<sup>2</sup>* and *i<sup>3</sup>* and into the mortises *b<sup>2</sup>* in the side sill B. The brace rod F extends diagonally through an opening in the side sill B and through an opening *i<sup>3</sup>* in the projection *I<sup>3</sup>* at the bottom of the corner anchor I and a nut *f'* is applied to the threaded end of the anchor rod and this nut can be adjusted so as to bring sufficient tension on the rod for it to act as a brace for the side sill B, at the same time holding the corner anchor I rigidly onto the side sill and causing the end plate *I<sup>1</sup>* of the anchor to bear firmly against the sill C. Thus by this construction of anchor I firmly hold the several parts rigidly in position.

I claim:—

1. The combination in a car, of a corner anchor having sockets, a side sill adapted to the anchor, an end sill adapted to extend into the anchor and having a tenon extending into a mortise on the side sill, and means for securing both the end and the side sill to the



corner anchor, the end of the corner being solid so as to hold the end sill in position.

2. The combination in a car, of a corner anchor having sockets, a side sill extending through one end of the corner anchor and resting against the end plate thereof, an end sill extending into another socket at right angles to the first mentioned socket and having a tenon adapted to a mortise in the side sill, a corner post resting upon the anchor and having a tenon extending into an opening in the anchor, and means for holding the corner post onto the anchor.

3. The combination in a corner post, of an anchor having sockets therein, a side sill extending through one socket and resting against the end plate of the corner, an end sill extending through another socket at right angles to the side sill, means for securing the side and end sills to the anchor, two corner posts, one situated back of the other, each corner post having a tenon, said anchor having an opening in its upper plate through which the said tenons extend, and means for securing the two corner posts to the anchor.

4. The combination in a car, of a corner anchor, a side sill extending into the anchor and secured thereto, an end sill extending into the anchor and also secured thereto, corner posts resting upon the anchor and having tenons adapted to openings in the top plate of the anchor, with a truss rod arranged diagonally and passing through the side sill and through an opening in the bottom plate of the anchor, and means for securing the said truss rod to the anchor.

5. A corner anchor for a car made in a single casting open at one side and one end, with a flange projecting from the anchor at one side of the opening and having two openings in the top plate, and having a diagonal passage in the bottom plate.

6. The combination in a car, of a corner anchor having top and bottom plates, said top plate having two openings, the bottom plate having a diagonal opening, the anchor being shaped to receive the side and end sills, the side sills being mortised at one side and having two mortises at the top near the end so that when the sill is in position the two mortises will be in line with the opening in the top plate, an end sill having a tenon at the end adapted to the mortise in the side sill, two corner posts, one situated back of the other and each having a tenon adapted to the openings in the top plate of the anchor and extending into mortises in the top of the side sill, a tie bolt secured to each corner post and extending through an opening in the anchor and in the side sill, said tie bolts securing the corner posts firmly to the anchor, with a diagonal truss rod extending through the side sill and through the inclined opening in the anchor.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY E. HADDOCK

Witnesses:

G. C. MAPES,  
GREGORY MAPES.