

No. 657,848.

Patented Sept. 11, 1900.

D. ARENSON.

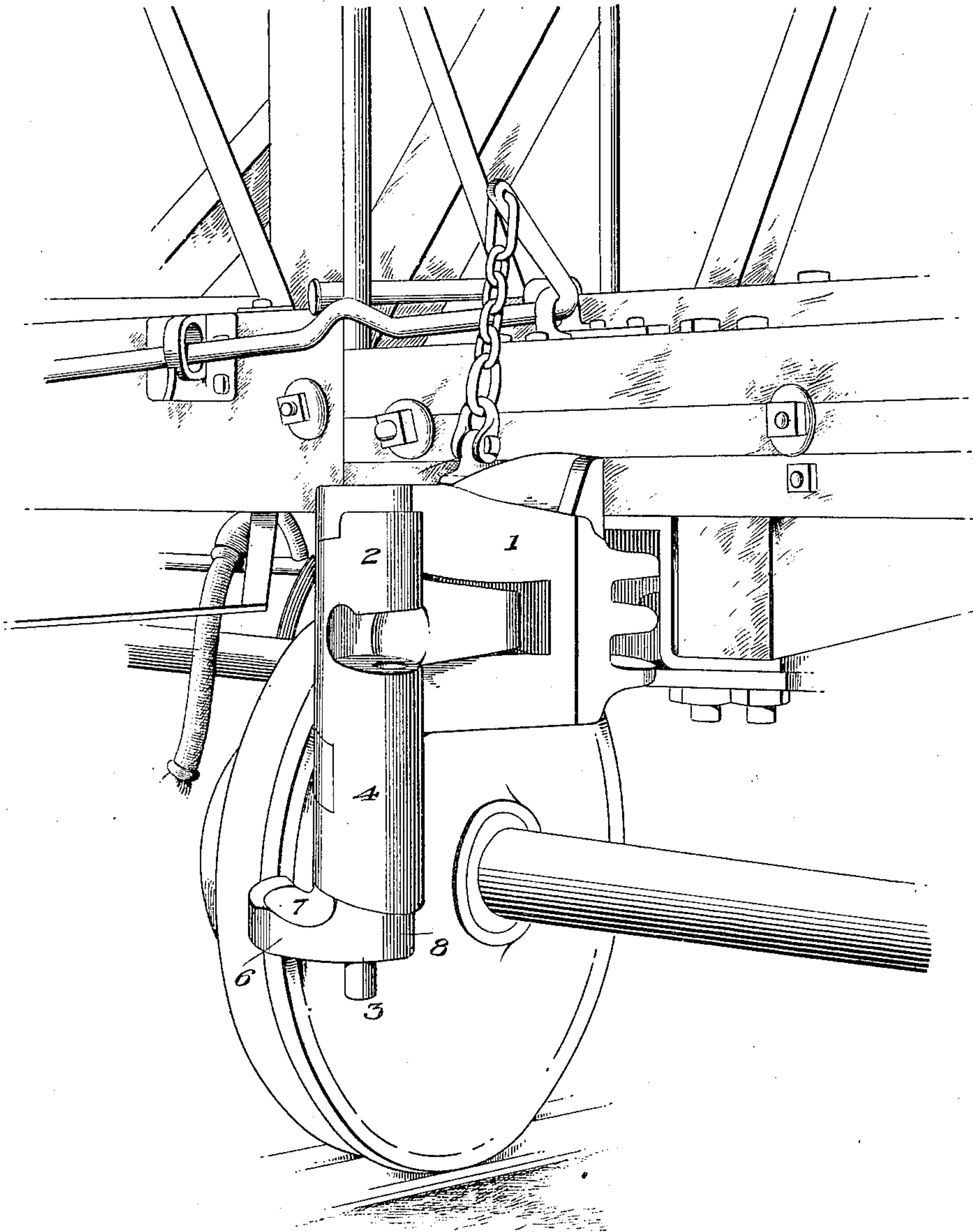
CAR COUPLING.

(Application filed Oct. 14, 1899.)

(No Model.)

3 Sheets—Sheet 1.

FIG. 1.



Witnesses:

Wm. D. Ashie
Karl Daniel

Inventor:

David Arensen
Laurel Hopkins
Atty.

No. 657,848.

Patented Sept. 11, 1900.

D. ARENSEN.
CAR COUPLING.

(Application filed Oct. 14, 1899.)

(No Model.)

3 Sheets—Sheet 2.

FIG. II.

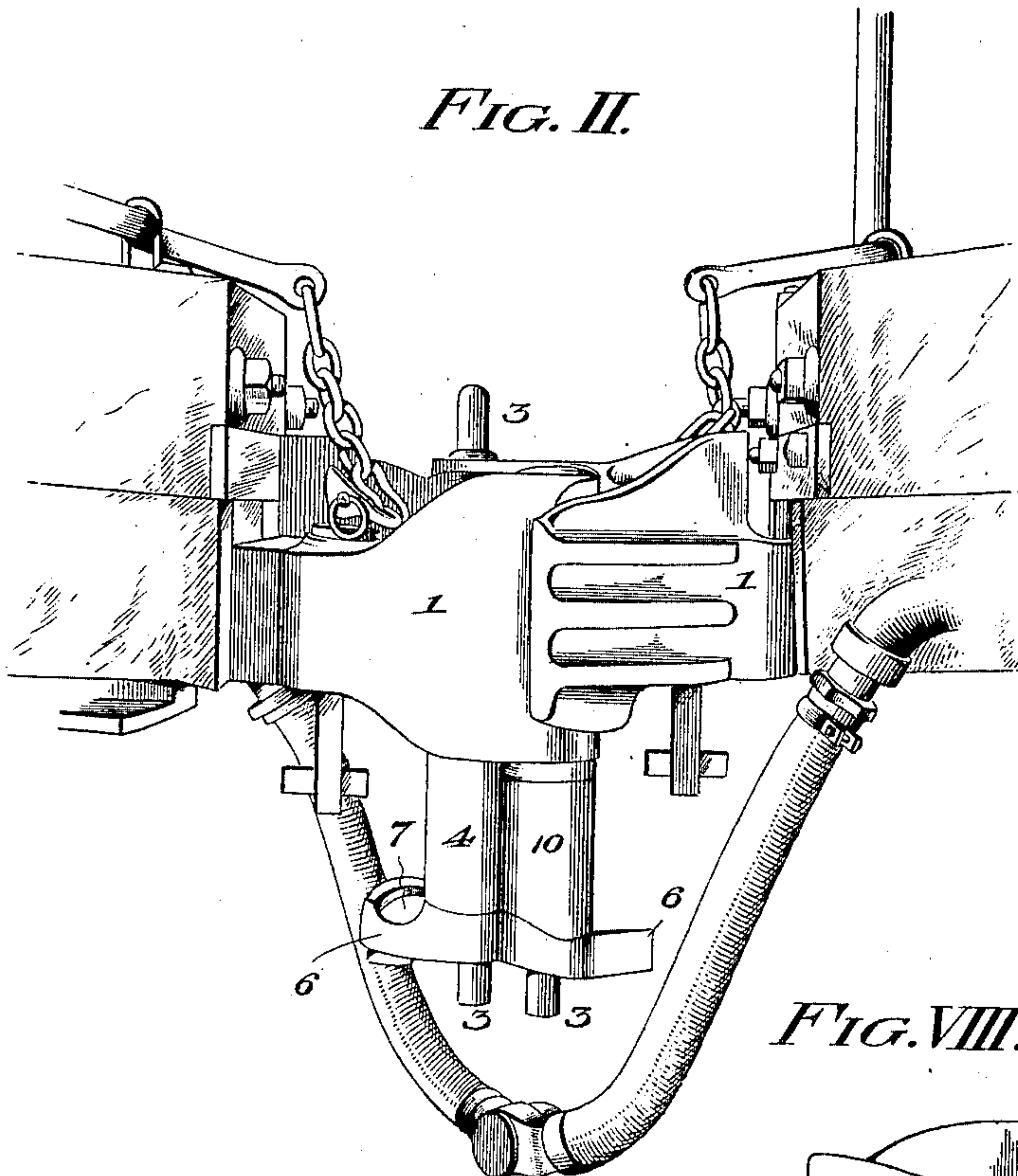


FIG. VIII.

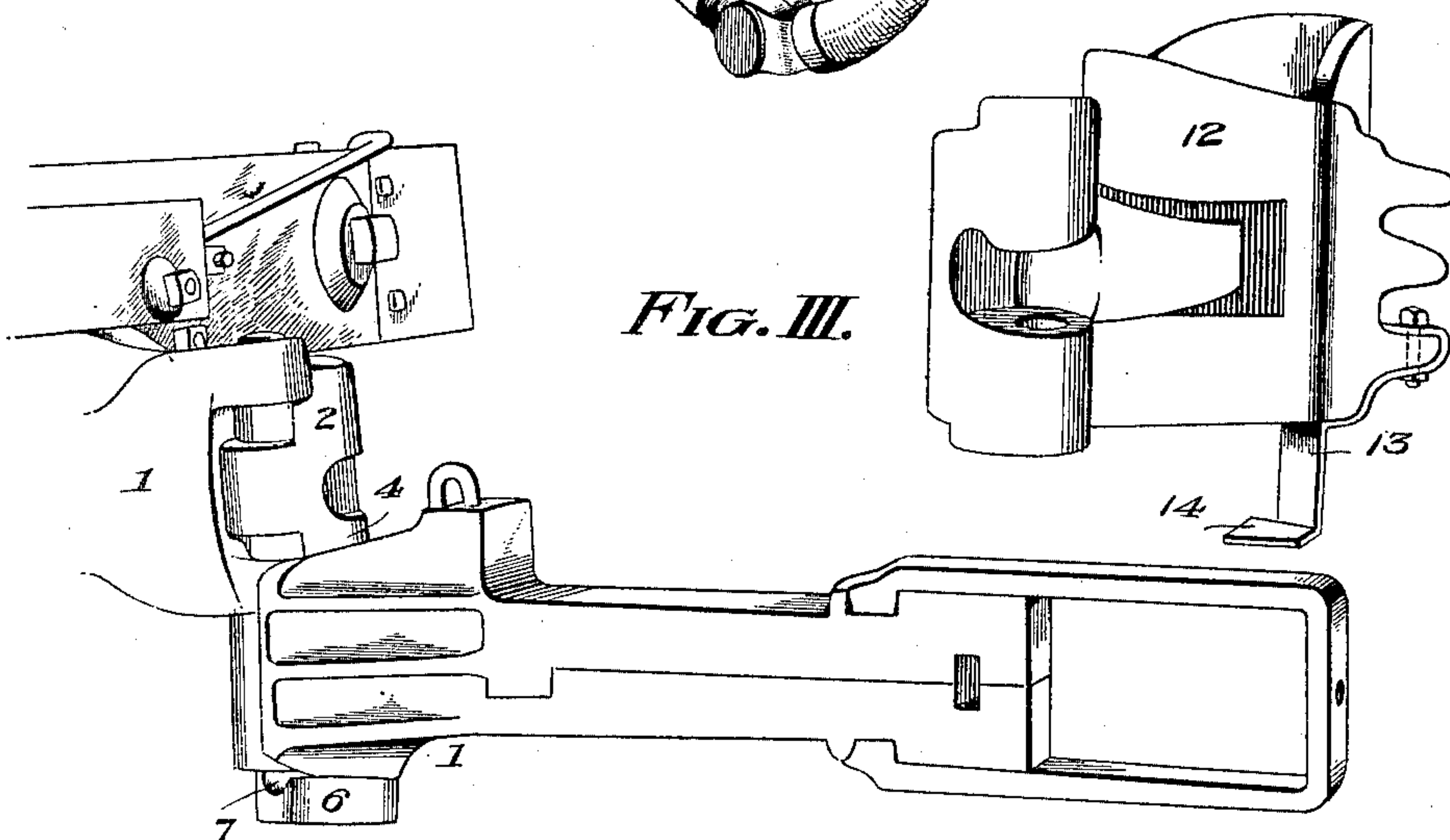


FIG. III.

Witnesses:

Wm. O. Ashlee
Karl Daniel

Inventor:

David Arnsen
Joseph L. Atkins
Att'y.

No. 657,848.

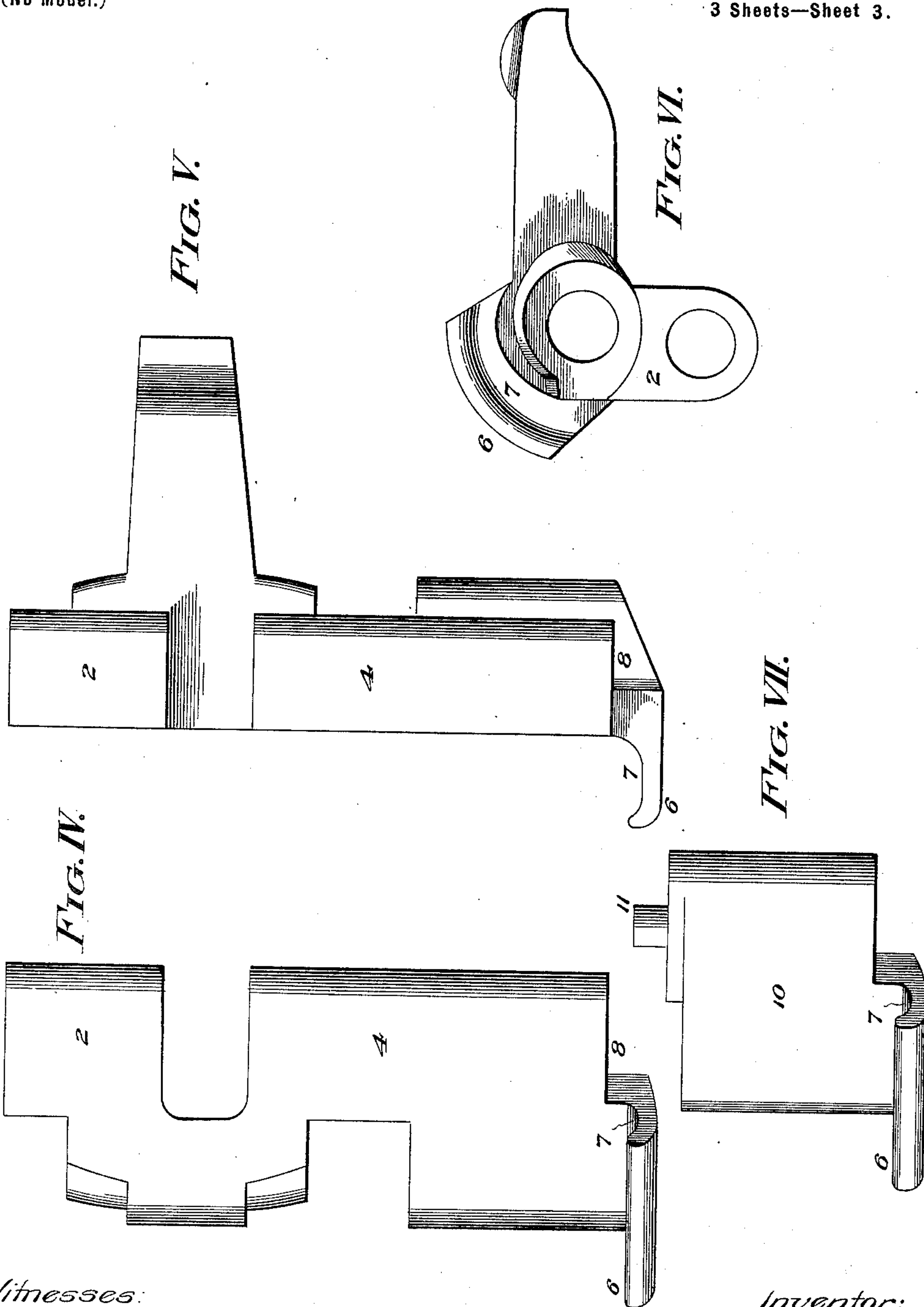
Patented Sept. 11, 1900.

D. ARENSON.
CAR COUPLING.

(Application filed Oct. 14, 1899.)

(No Model.)

3 Sheets—Sheet 3.



Witnesses:

Wm. O. Ashiee
Karl Daniel

Inventor:

David Arenson
By *Joseph H. Atkins*
Att'y.

UNITED STATES PATENT OFFICE.

DAVID ARENSON, OF ESCANABA, MICHIGAN.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 657,848, dated September 11, 1900.

Application filed October 14, 1899. Serial No. 733,644. (No model.)

To all whom it may concern:

Be it known that I, DAVID ARENSON, of Escanaba, in the county of Delta, State of Michigan, have invented certain new and useful Improvements in Car-Couplers, of which the following is a complete specification, reference being had to the accompanying drawings.

My invention relates to improvements in car-couplers, particularly those of the type known as "vertical-plane" couplers, the object being to provide means which will effectually prevent damage by the breaking of one draw-bar so long as the other coupling member remains in position.

Accidents frequently occur by the breaking and dropping underneath a car of a draw-bar, owing to the fact that the draw-bar when detached from its car drops freely from the coupling member with which it engages upon the next adjacent car. By my invention provision is made for preventing detachment of the broken member from the member with which it is engaged and for sustaining the broken member against all tendencies to dislodge it, including horizontal or sidewise tendencies, as well as vertical.

In the accompanying drawings, Figure I is a perspective view of one member of my coupler secured in place to the end of a car, a portion of which is illustrated. Fig. II is a similar view showing two couplers embodying my invention coupled together as in ordinary use. Fig. III illustrates a pair of coupling members, one secured to the end of a car and the other detached from its car and supported by the member with which it engages. Fig. IV is an elevation taken from one side of my knuckle. Fig. V is a similar view taken at an angle to that shown in Fig. IV. Fig. VI is a top plan view of the knuckle detached. Fig. VII is a view corresponding to Fig. IV, showing a knuckle extension adapted to convert the ordinary knuckle into my form of device. Fig. VIII is a perspective view of the forward end of a draw-head provided with a modified form of my engaging and supporting member.

Referring to the numerals on the drawings, 1 indicates the draw-bar of a vertical-plane coupler, to which is pivoted a knuckle 2, as by means of a coupling-pin 3. The draw-bar and knuckle proper may be of any usual, prac-

ticable, and preferred form, those illustrated being shown merely by way of example. My invention does not relate to the parts above specified, except so far as it comprehends a modification in the nature of an addition to the knuckle.

The extension of the knuckle referred to consists of a dependent portion 4, which, conforming in cross-section with the cross-section of the knuckle, constitutes such an extension as will compel engagement of a cooperating coupling member as surely and efficiently as will the knuckle itself. The extension should be of a length sufficient to permit of the ordinary coupling operations of the coupler proper and yet to support a broken coupler in a horizontal position above contact with the road-bed. Upon the lower end of the extension I provide a supporting member 6, which consists, essentially, of a flanged shelf or lug projecting at right angles from the extension 4 and serving to prevent the dropping of a broken coupling member from the extension 4. The support 6 may be of any suitable shape, size, and dimensions, but is preferably provided with a groove 7, which, engaging the lower edge of a broken draw-bar, prevents it from swinging laterally.

In order to permit the free coupling under ordinary conditions of the members equipped with my device, I provide a cut-away 8, by which the coupling members when united, as shown in Fig. II, may swing freely, as required.

The conversion of the ordinary knuckle to my form of knuckle may be readily effected by the aid of an extension-piece 10, as shown in Fig. VII. This extension-piece is provided with a dowel-pin 11, which being entered in a recess provided for it in the ordinary knuckle may be made to perform therewith the function of my knuckle as well as if the knuckle were originally constructed for the purpose. The dowel-pin 11 coöperates with the pin 3 to support the extension 10 when fixed in operative relations to the knuckle.

It being the main object of my invention not only to support a broken draw-bar in a horizontal position, but also to prevent such lateral motion of the broken member as might tend to disconnect it from the sound or supporting member, and since my object may be accomplished by providing a member which

shall both support the broken draw-bar and engage the knuckle thereof I have conceived that such a device may be modified by mounting the supporting and engaging member
5 upon the draw-bar instead of the knuckle. This modified form of my invention is shown in Fig. VIII, in which 12 indicates the draw-bar, 13 the knuckle-engaging member, and 14 the sustaining member.

10 In the forms of my device shown in Figs. I to VII, inclusive, the knuckle extension 4 engages with the inside of its cooperating knuckle, and thereby holds the latter, with its draw-bar, in position. The engagement
15 referred to is between the inner faces of the engaging knuckles, and the supporting and engaging member 13 in Fig. VIII performs the same function in a precisely-similar manner, except that the engagement of the mem-
20 ber 13 is with the outside of the knuckle instead of with the inside thereof.

What I claim is—

1. In a car-coupler the combination with a draw-head and knuckle, of a depending mem-
25 ber adapted to engage the side of an engaging coupling member, and prevent its lateral movement, and a supporting member on the lower end of the depending member, consisting of a narrow shelf or lug, the length of the
30 depending member, between the knuckle and supporting member, being substantially the width of the knuckle, substantially as set forth.

2. In a car-coupler, the combination with a
35 draw-head and knuckle, of a knuckle exten-

sion provided with a supporting member, the shape of the knuckle and knuckle extension corresponding in cross-section, substantially as set forth.

3. In a car-coupler the combination with a
40 draw-head and knuckle, of a knuckle extension provided with a horizontal supporting member grooved on top to receive and prevent the swinging motion of a detached coupling member, when united therewith, sub-
45 stantially as set forth.

4. In a car-coupler the combination with a draw-head and knuckle, of a knuckle extension provided with a supporting member, the extension being cut away to one side of the
50 longitudinal axis of the draw-head, and on its end which carries the supporting member, substantially as set forth.

5. As a new article of manufacture, a knuckle provided with an extension corre-
55 sponding to the knuckle in cross-section and having a supporting member, substantially as set forth.

6. As a new article of manufacture, a knuckle extension conformable in cross-section to the shape of a knuckle to which it is to be applied, provided upon one end with a
60 dowel-pin and upon the other with a supporting member, substantially as set forth.

In testimony of all which I have hereunto
65 subscribed my name.

DAVID ARENSON.

Witnesses:

CHAS. A. IGGESTROM,
N. O. GREER.