

(No Model.)

2 Sheets—Sheet 1.

H. DEITZ.
CAR COUPLING.

No. 576,094.

Patented Feb. 2, 1897.

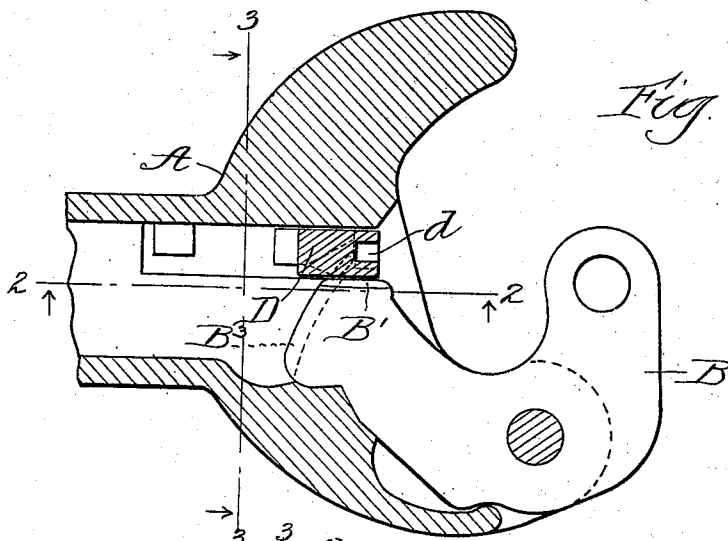


Fig. 1.

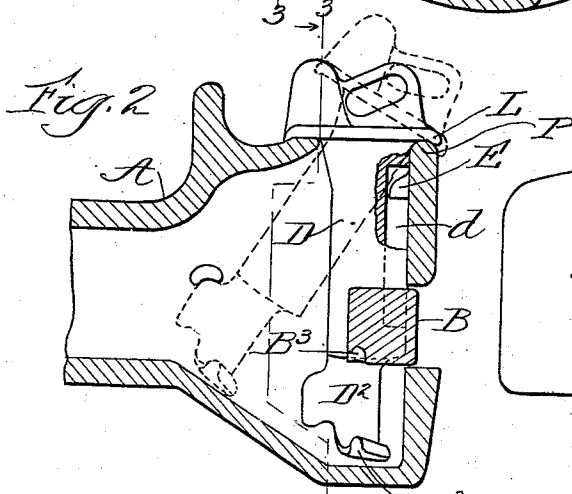


Fig. 2.

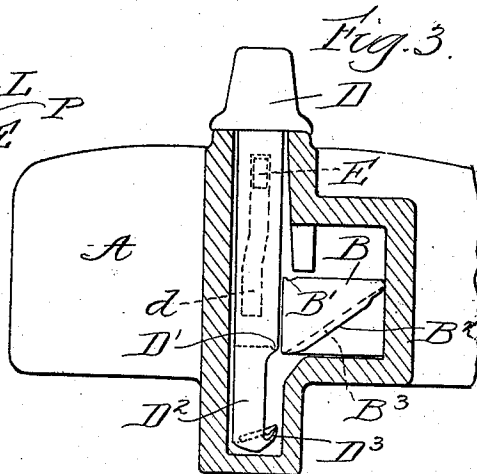


Fig. 3.

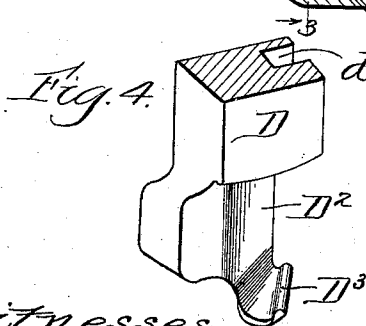


Fig. 4.

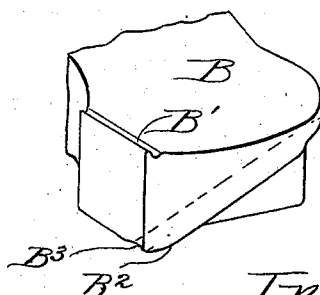


Fig. 5.

Witnesses.

Wm. M. Rheims
Wm. F. Hanning

Inventor

by H. W. Williams
Att'y.

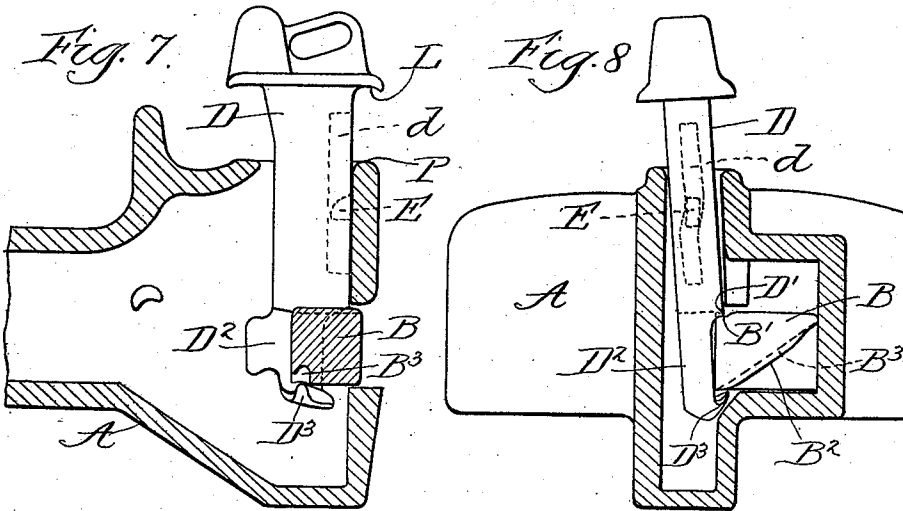
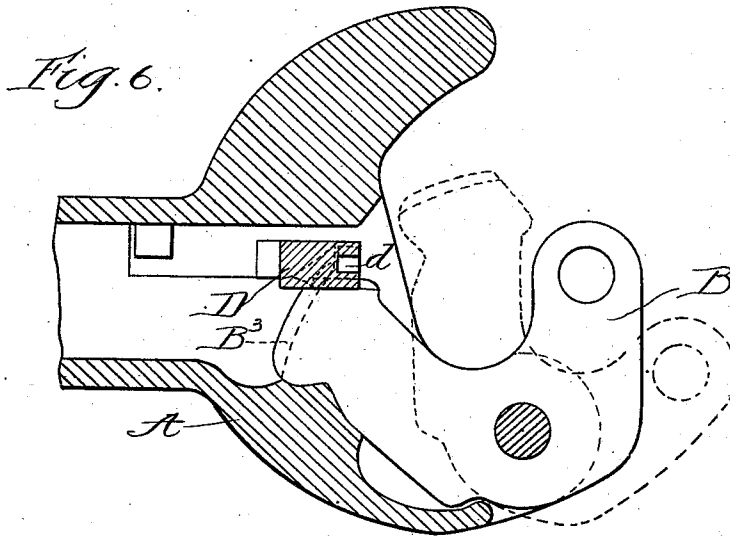
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2 Sheets—Sheet 2

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Wm. M. Rheem.
Wm. J. Hanning

Inventor.

Henry Deitz
by W. E. Williams
Atty.

UNITED STATES PATENT OFFICE.

HENRY DEITZ, OF CHICAGO, ILLINOIS.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 576,094, dated February 2, 1897.

Application filed September 2, 1896. Serial No. 604,615. (No model.)

To all whom it may concern:

Be it known that I, HENRY DEITZ, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Car-Couplers, of which the following is a specification.

My car-coupler relates to that class known as the "Master Car-Builders' standard of vertical-hook type;" and my invention has for its object to provide means to throw open the knuckle simultaneously with the movement which unlocks the knuckle and to do this with the locking-piece in the simplest and most efficient manner.

Reference will be had to the accompanying drawings, in which—

Figure 1 is plan sectional view through the coupler. Fig. 2 is a vertical sectional view on line 2 2 of Fig. 1. Fig. 3 is an end vertical sectional view on line 3 3 of Figs. 1 and 2. Fig. 4 is a perspective view of the lower end of the locking-pin. Fig. 5 is a perspective view of the end of the knuckle which comes into engagement with the locking-pin. Fig. 6 is a similar plan view to that of Fig. 1, showing the locking-pin in a different position. Fig. 7 is a similar view to that of Fig. 2, showing the locking-pin in a different position. Fig. 8 is a similar view to that of Fig. 3 with the locking-pin in the position shown in Figs. 6 and 7.

In the drawings, A designates the ordinary main cast piece of car-couplers of this class, and B designates the knuckle thereof.

D is the locking-pin, which is made in a manner to serve the purpose of automatically locking the knuckle and also to throw open the knuckle when the pin is lifted, as will be described. This pin D has a slot *d* in its forward edge, (shown by the dotted lines in Figs. 3, 7, and 8,) which engages a projection E in the front wall of the main casting. This slot *d* is inclined and offset at its lower end, as is shown in Figs. 3 and 8, for the purpose of throwing the lower end of the pin at an incline when the pin is lifted, whereby the shoulder D' of the pin engages a lip B' of the knuckle end, as is shown in Figs. 6, 7, and 8. The purpose of this is to provide that when the locking-pin is lifted and let fall back again before the cars are pulled apart, per-

mitting the knuckle to be opened, the pin will fall back and rest upon the end of the knuckle and ride thereon until the knuckle is pulled open, whereby the pin rides off the knuckle end and drops in its normal position ready to couple automatically. The pin when down in its normal position, locking the knuckle, is shown in Fig. 2, and when in this position and the knuckle is open and a coupling is made the pin swings back, to free the end of the knuckle, to the position of the dotted lines in Fig. 2, the lip L of the pin engaging the projection P of the main casting, and thereby acting as a center about which the pin revolves when automatically coupling, and when the knuckle is home the pin swings back to its normal vertical position between the end of the knuckle and the side wall of the casting, thereby locking the knuckle.

On the lower end of the pin D there is a projection D², having a lip D³, and the outer end of the knuckle is cut away on an incline, as is shown at B², which leaves an inclined way B³, and upon the lifting of the pin forcibly the inclined slot *d* throws the lip D³ into engagement with the inclined way B³, (see Figs. 7 and 8,) whereby the further upward movement of the pin, the lip D³ engaging the way B³ by virtue of the incline, forces the knuckle end outward and open in the position of the dotted lines in Fig. 6, provided, however, the knuckle is free to open, not being in contact with any other coupler. The purpose of this means of throwing open the knuckle is to avoid the necessity of the brakeman entering between the cars at any time for any purpose when coupling, and should he find the knuckle closed when he desires to couple all that he is required to do is to lift the cutting-out lever, thereby lifting the locking-pin, which unlocks the knuckle and throws it open by the vertical movement, as above described, and this means of throwing open the knuckle is secured by the simple addition of the end-projection locking-pin and by the cutting away of a portion of the end of the knuckle, making no new part to the coupler nor adding any additional expense in its construction, which is a great desideratum.

What I claim is—

1. The combination with a draw-head and a horizontally-swinging knuckle pivoted there-

in, of a vertically-movable locking-pin normally obstructing the path of said knuckle, but not when partially raised, devices whereby the pin if partially raised while the knuckle
5 is closed is prevented from automatically descending until the knuckle opens, and means whereby completing the raising of the pin throws the knuckle open.

2. The combination of a vertical lifting
10 locking-pin, of a lip on the lower end thereof, of means for inclining the lower end of the pin when the pin is lifted, whereby the lip on the end of the pin is swung underneath the end of the knuckle, with an inclined way on
15 the end of the knuckle-piece for the purpose of being engaged by the lip on the pin whereby the knuckle is thrown open as described.

3. The combination of a vertical lifting

locking-pin, of a lip on the lower end thereof, of a slot in the body of the pin engaging the
20 projection on the main casting of the coupler, the lower end of said slot inclined as described, for the purpose of inclining the bottom of the pin, with an inclined way on the
25 end of the knuckle-piece adapted to be engaged by the lip on the lower end of the pin whereby the knuckle is thrown open, substantially as shown and described.

In witness whereof I have hereunto subscribed my name, in the presence of two
30 subscribing witnesses, on this 19th day of August, 1896.

HENRY DEITZ.

Witnesses:

W. E. WILLIAMS,
E. J. KENT.