(No Model.)

J. M. KEOGH.

CAR COUPLING.

No. 485,500. Patented Nov. 1, 1892.

Fig. 1

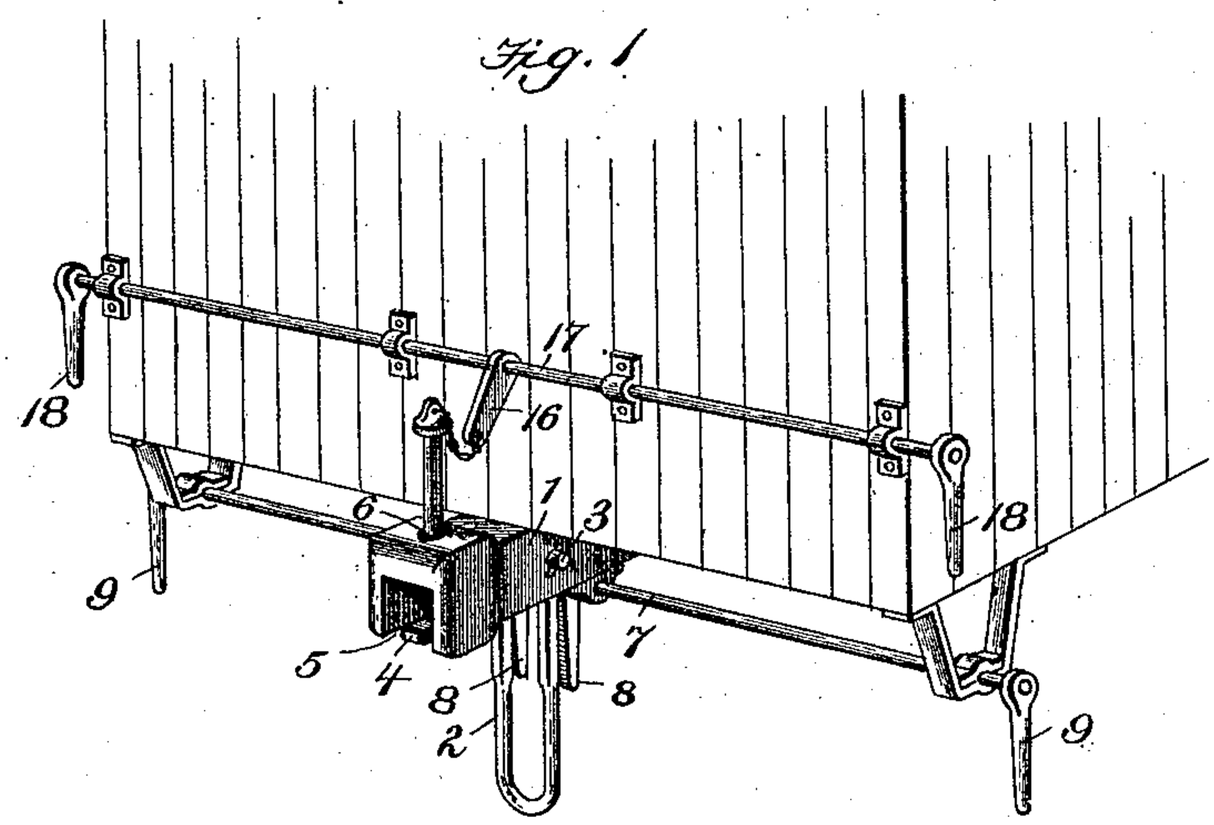


Fig. 2.

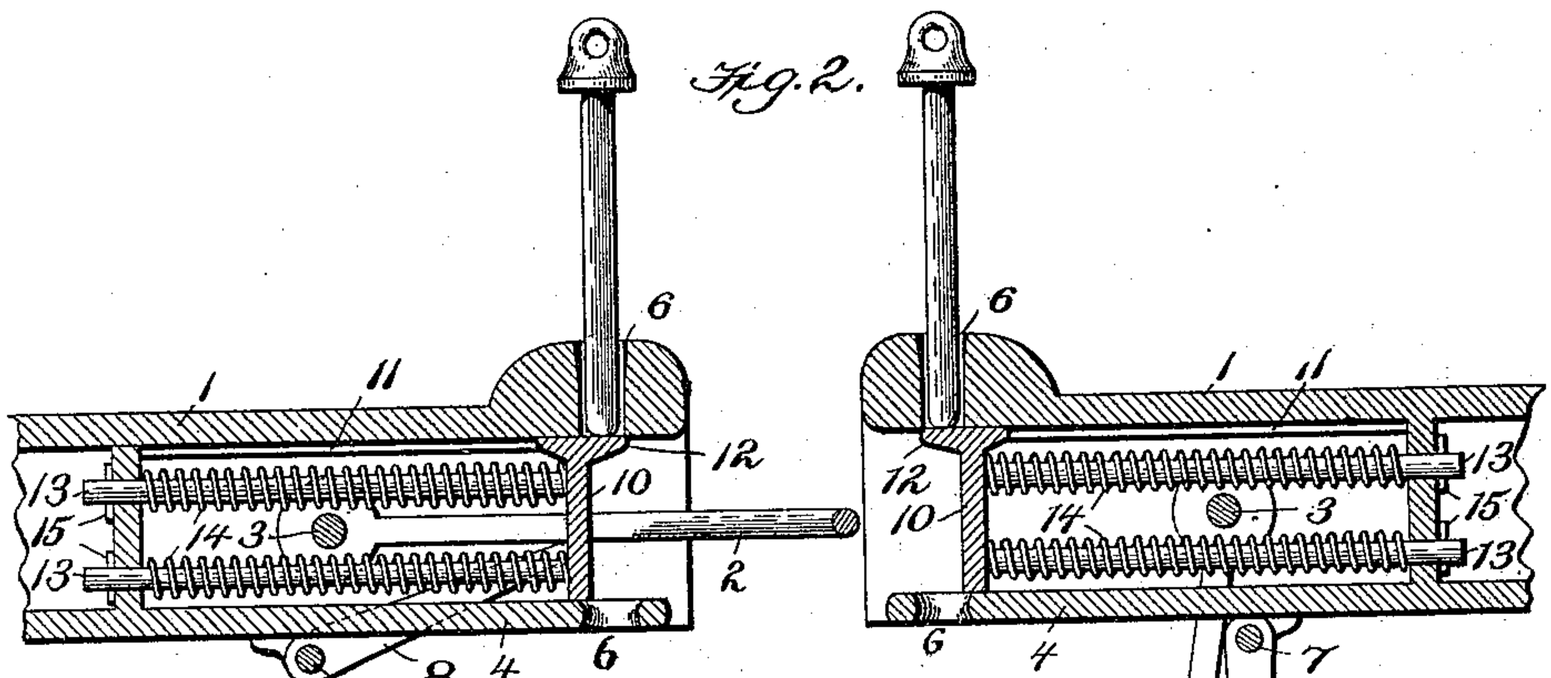


Fig. 3.

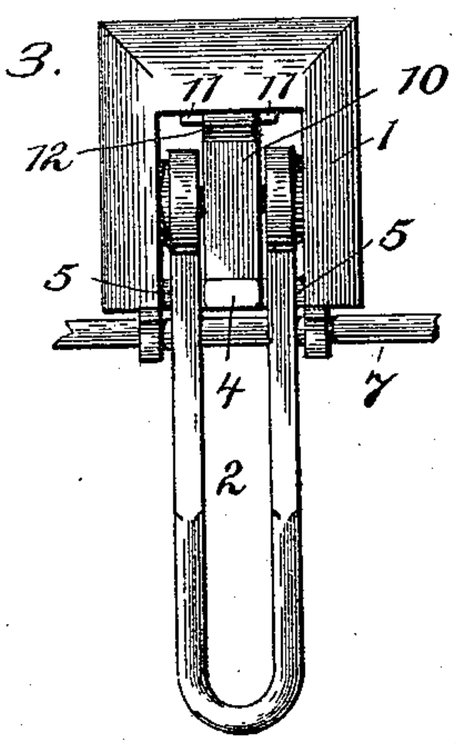


Fig. 5.

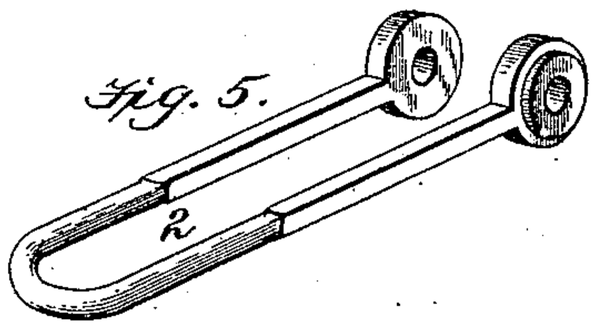


Fig. 4.

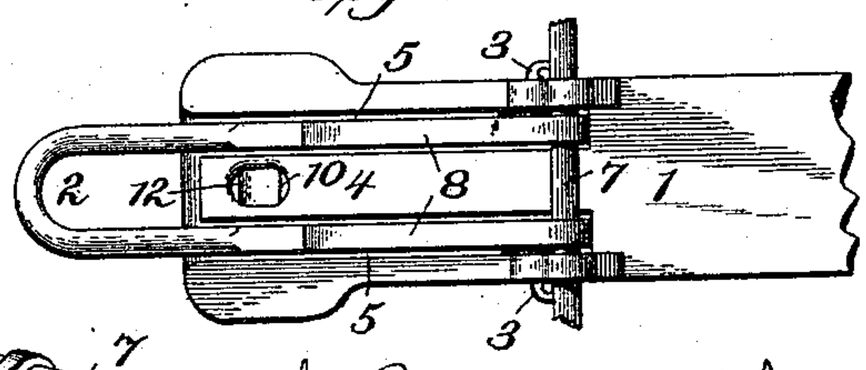
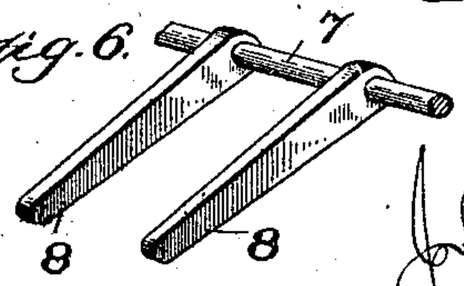


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN MARTIN KEOGH, OF DULUTH, MINNESOTA, ASSIGNOR OF ONE-HALF TO BYRON GEORGE SEGOG, OF SAME PLACE.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 485,500, dated November 1, 1892.

Application filed April 26, 1892. Serial No. 430,736. (No model.)

To all whom it may concern:

Be it known that I, JOHN MARTIN KEOGH, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

My invention is directed to improvements for coupling railway-cars, in which provision is made for the lifting, directing, and holding of the link in position for coupling the cars as they are moved together, and thereby avoid the danger of having the hands of the brakeman crushed, which would be liable in having to hold the link between the draw-heads in placing it for coupling, or to which danger the attendant would be liable in going between the cars for that purpose.

The particular matter of my invention consists of the combination and relative arrangement of a link permanently pivoted to the draw-head, a link-lifter permanently pivoted to the draw-head, and a construction of the draw-head which provides longitudinal bottom openings open at the front, the pivoting of the link and its lifter back of the coupling-pin, and the provision of a central longitudinal tongue at the bottom of the draw-head, within which the lower pin-opening is formed. This combination, construction, and relative arrangement of parts gives important advantages, which I will state and at the conclusion of the specification will specifically point out in the claims the matters and things which constitute my invention.

The accompanying drawings illustrate in Figure 1 so much of one end of a railroad-car as shows the application to the draw-head thereof of my improved coupling. Fig. 2 is a vertical longitudinal section of the draw-heads and their coupling devices. Fig. 3 is a front view. Fig. 4 is a bottom view of one of the draw-heads, and Fig. 5 is the link, and Fig. 6 is the link-lifter.

Referring to the drawings, it will be seen that the draw-head is constructed with a link 2, permanently pivoted thereto, that the link is pivoted by a strong pivot-pin 3 within the draw-head at about its longitudinal and vertical center, and that the bottom of the draw-head is constructed with a longitudinal tongue 4 and an opening 5 on each side thereof, extending from the coupling end to a point back of the link pivot-pin and open at the coupling end of the draw-head, for the purpose of allowing the coupling-link to hang in a vertical position back of the coupling-pin when the cars are uncoupled. This construction gives the advantage of placing the openings 6 in the draw-head to receive the coupling-pin very near the open end of the former, and it also gives the advantage of placing the pivot of the link back out of the way of being accidentally struck by the lifted link of the car moving to be coupled with the car having its link in hanging position. This construction also gives the advantage of raising, lowering, and directing the link into draw-heads of different heights without interfering with their links. This construction also gives the important advantage of causing the link and its lifter of one draw-head to hang out of the way when the link of the other draw-head is raised and is being coupled with the draw-head whose link is in hanging position, so that there is no danger of the raised link of one draw-head striking the hanging link of the other draw-head in coupling the cars.

The tongue of the draw-head I prefer to make as a part of the latter, and it extends to the front thereof and has the lower opening for the coupling-pin. Below this tongue, at about the middle of the length of the draw-head, I fit and key a cross-rod 7 in bearings in the latter and secure thereon two arms 8, so that they may rise and fall in the longitudinal bottom openings in the draw-head on each side of the tongue and in vertical planes with the sides or arms of the link. This cross-rod projects beyond one or both of the sides of the draw-head to the sides of the car and has a crank-arm on one or both ends by which the attendant can raise the arms to lift and hold the link in position to enter the draw-head of the car to be coupled, and this crank-arm may be so operated from the ground, the platform, or the top of the car. The normal position of the arms, however, is hanging free below and at about the middle of the length of the draw-head and in position behind the link which hangs at that point when uncoup-

led, so that the arms will act at once against the link and rise with it above and over the front end of the tongue in coupling the link. This construction renders the lifting-arms independent of the link, so that they hang out of the way and free of the link when the latter is coupled, and therefore neither tend to raise or depress it.

In co-operative relation with a link permanently pivoted to the draw-head and an independently-pivoted link-lifter I provide a spring-sustained slide 10 within the draw-head for supporting and automatically dropping the coupling-pin down when said slide is struck and pushed back by the entering link. This slide rests upon the tongue and is held in position between guides 11 on the upper wall of the hollow draw-head. At its upper end this slide has a front projection 12, which extends beneath the upper pin-opening in the draw-head, and in such normal position it forms the support for the coupling-pin and holds it up out of the cavity of the draw-head, so that the link entering it will strike and push the slide back and let the pin fall into the link. This slide has two guide-rods 13 extending back and passing through holes in the partition or solid rear end of the draw-head and are encircled by coil-springs 14, which bear against the rear side of the slide and the partition of the draw-head and constantly tend to push the slide out, the limit of which outward movement is controlled by stops 15 on the inner ends of the rods.

The pin is raised to uncouple the cars by means of a lever-arm 16, one end of which is connected by a chain to the pin-head and the other end of said lever-arm being secured to a cross-rod 17, mounted in suitable bearings on the end of the car and having a handle 18 at one or both ends, by raising or turning which the attendant can raise the pin to uncouple the link and to raise the pin above the slide, which being constantly pressed forward under the pin supports it in position to be dropped when the slide is again pushed back by the link in coupling the cars. The upper pin-hole in the draw-head is in a thick portion of the latter and serves as a guide to direct the pin straight into the hole in the tongue and which is made slightly flaring upward larger than the pin and oblong.

The pin can be removed and renewed at pleasure, and it will be understood that the draw-head may be secured to the car in any suitable manner.

It will be understood that in coupling cars the link of one car will be raised in position to enter the draw-head of the other car and that the coupling-link of the latter will hang down out of the way of the coupling-link a considerable distance behind the open end of the draw-head, leaving a clear way therein for the entering link.

I claim as my improvement—

1. In a car-coupling, the combination of a draw-head having a longitudinal bottom tongue and bottom openings on each side thereof open at the coupling end of the draw-head and extending back of the coupling and a coupling-pin with a link pivoted in the draw-head back of said coupling-pin and a link-lifter pivoted in said draw-head back of said coupling-pin, substantially as described.

2. In a car-coupling, the combination of a draw-head having a longitudinal bottom tongue and bottom openings on each side thereof open at the coupling end of the draw-head and extending back of the coupling and a coupling-pin with a link pivoted in the draw-head back of said coupling-pin, a link-lifter pivoted in the draw-head back of said coupling-pin, and a spring-sustained slide rising from said tongue to form a support for said pin, substantially as described.

3. In a car-coupling, a draw-head having a longitudinal central bottom tongue and openings on each side thereof open at the coupling end of the draw-head, in combination with a coupling-pin, a coupling-link pivoted in the draw-head back of said coupling-pin, and suitable means for lifting and holding said link in position for coupling, substantially as described.

4. In a car-coupling, the coupling-link pivoted in the draw-head and a link-lifter pivoted to the bottom of the draw-head and formed of two arms corresponding in position to the sides of the link, in combination with a draw-head having bottom openings corresponding to the arms of said link, as shown and described.

In testimony whereof I have hereunto signed to this specification in the presence of witnesses.

JOHN MARTIN KEOGH.

Witnesses:

B. G. SEGOG,

B. W. SOMMERS.