(No Model.)

J. I. NEWBURG.

CAR COUPLING.

No. 603,340. Patented May 3, 1898.

Fig. 1.

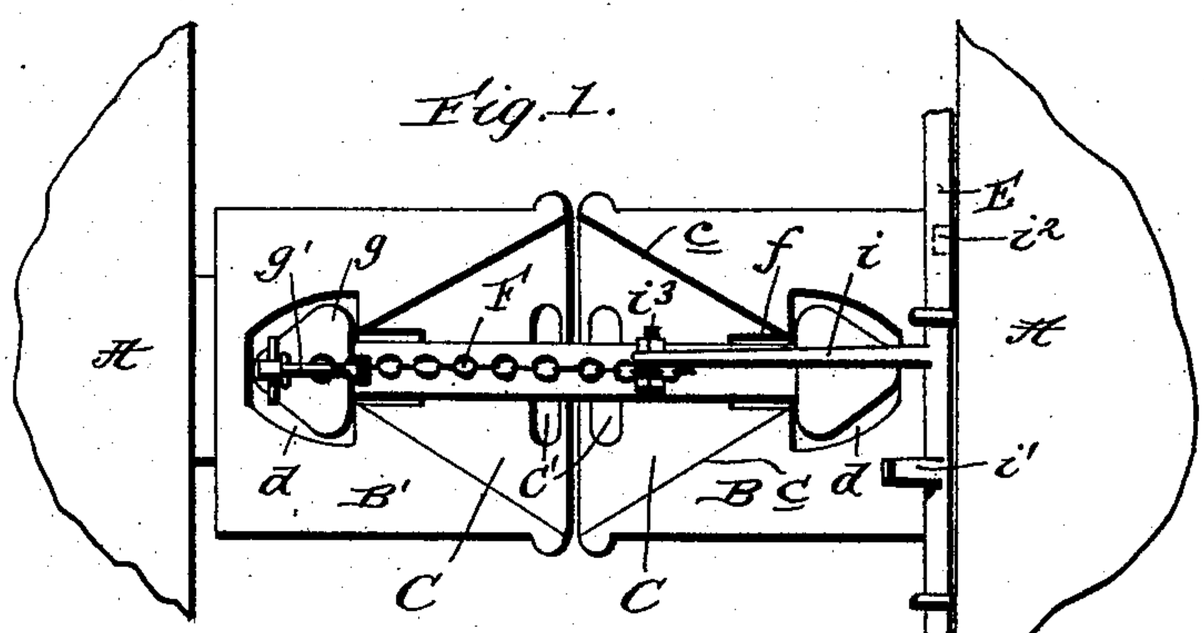


Fig. 2.

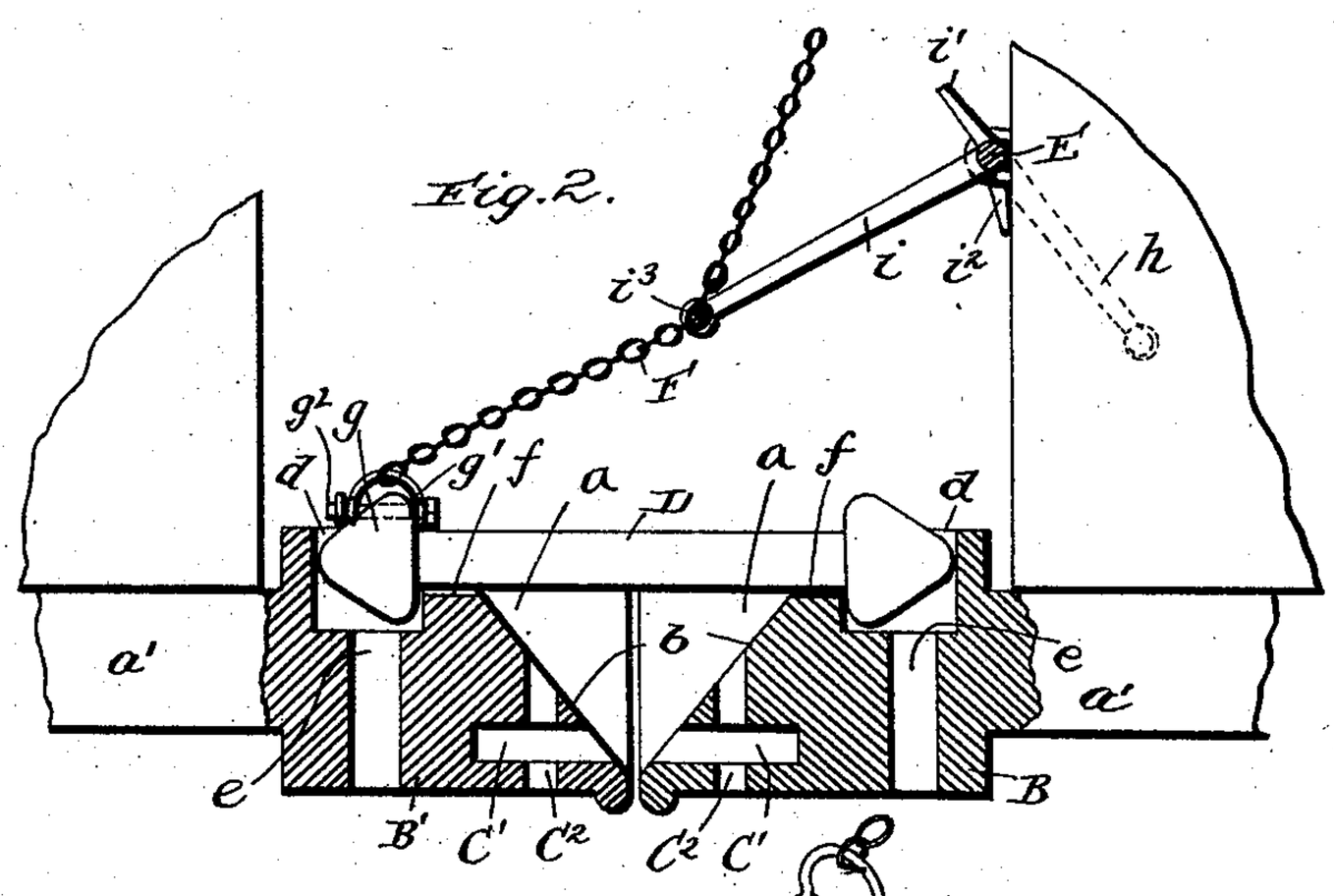


Fig. 3.

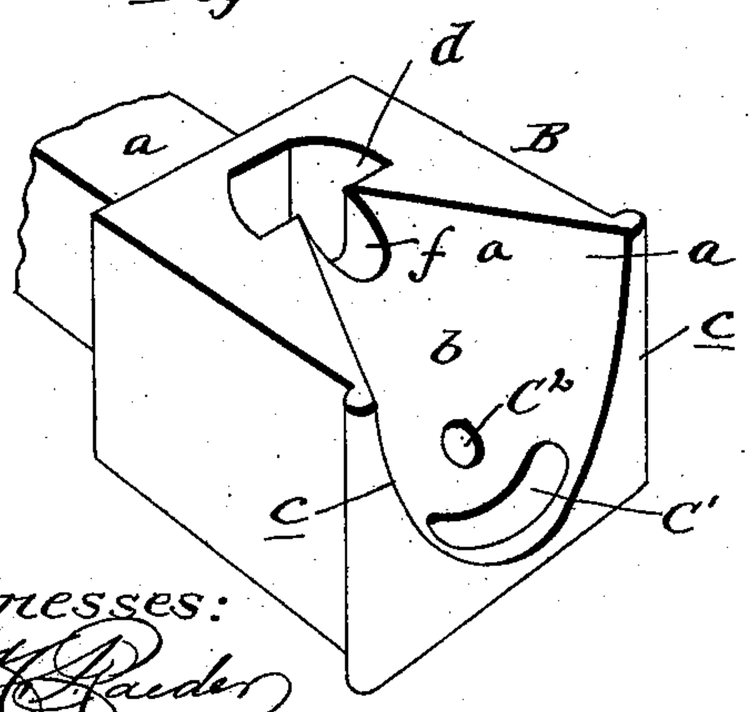
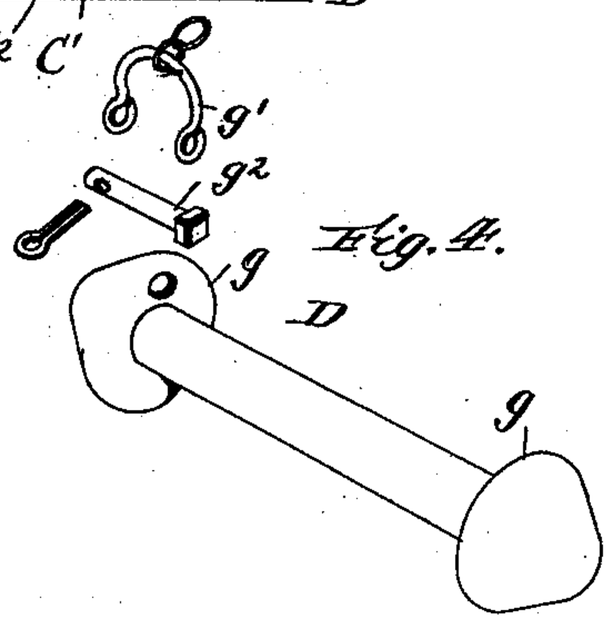


Fig. 4.



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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 603,340, dated May 3, 1898.

Application filed December 23, 1897. Serial No. 663,200. (No model.)

To all whom it may concern:

Be it known that I, JOHN ISRAEL NEWBURG, a citizen of the United States, residing at Vicksburg, in the county of Warren and State of Mississippi, have invented certain new and useful Improvements in Car-Couplers; and I do 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.

My invention relates to car-couplers of that class which are designed with a view of obviating the necessity of a trainman going between two cars in order to couple or uncouple the same; and it has for its general object to provide such a coupler of an exceedingly cheap and simple construction and one which is capable of withstanding the shocks and strains to which couplers are ordinarily subjected and which is reliable in operation.

The invention will be fully understood from the following description and claim when taken in conjunction with the annexed drawings, in which—

Figure 1 is a plan view of portions of two cars connected by my improved coupler, with the operating-shaft on one car. Fig. 2 is a side elevation of the same with the draw-heads in section. Fig. 3 is an enlarged perspective view of one draw-head with its draw-bar broken away; and Fig. 4 comprises enlarged perspective views of the coupling-link, together with a portion of the chain and the parts connecting the same.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A designates the contiguous end portions of two cars, and B B′ designate the draw-heads of the coupler, which have their bars *a* connected to the cars in the ordinary or any suitable manner, which forms no part of my invention and is not shown. The draw-heads B B′ are identical in construction, and therefore a description of the draw-head B will suffice for both. Said draw-head B is cast or otherwise made in one piece, and it has the recess C, formed in its upper side and extending to its outer end, as shown. This recess C, as better shown in Fig. 3, comprises the mouth *a*, which occupies the full height and width of the draw-head at the forward end thereof, and has the inclined bottom *b*, of concave form in cross-section, and the flaring side walls *c*, the inner pocket *d*, which has a depending portion *e*, extending to the bottom of the draw-head, so as to permit dirt and water to escape therefrom, and the longitudinal central groove *f*, which connects the mouth *a* and pocket *d* and is of about the proportional depth shown. In addition to the recess C the draw-head B is provided with a horizontal recess C′, which is arranged at about the elevation shown and communicates at its forward end with the mouth *a*, and the vertically-disposed aperture C^2, which intersects the recess C′, as shown. The said recess C′ and aperture C^2 are designed to permit of my improved draw-head being connected with an ordinary draw-head through the medium of the well-known open link, (not shown,) the recess C′ being adapted, when such coupling is made, to receive the open coupling-link, while the aperture C^2 receives the pin which extends through the open link and connects the same to the draw-head B.

D designates my improved coupling, which has heart-shaped heads *g* at its opposite ends.

E designates a rock-shaft which is journaled on the end of the car carrying the draw-head B, and has cranks *h* at its opposite ends and also has an arm *i* at its middle, and F designates a chain which is connected at one end with one head *g* of the link through the medium of a clevis *g′* and pivot-bolt g^2 (see Fig. 4) and is connected at its opposite end to the top of the car and at an intermediate point of its length to the arm *i*, sufficient slack being afforded to permit of free movement of the arm *i* and link D.

The rock-shaft E is provided with upwardly and downwardly extending stop-arms i' i^2, the former being designed to engage the front wall of the car-body A and limit the upward movement of the arm *i*, while the latter is designed to normally engage said front wall and hold the arm *i* in the position shown in Fig. 2. This connection between the chain F and the arm *i* is preferably effected by a removable bolt i^3, and in virtue of this it will be seen that the portion of the chain between the arm *i* and the link D may be lengthened or shortened, as desired, so as to normally hold the link in the approximate horizontal posi-

tion shown in Fig. 2 or in an inclined position, so as to enable it to automatically take into a complementary draw-head, as will be presently described. It will also be seen that when the draw-head B is to be connected with an ordinary draw-head through the medium of an open link the portion of the chain between the link D and arm *i* may be shortened, so as to hold the outer end of said link in an elevated position and prevent it from interfering with the operation of the ordinary open link in the horizontal recess of the draw-head.

When it is desired to couple the car carrying the draw-head B with the car equipped with the complementary draw-head B′, it is simply necessary to bring the cars together, when the outer end of the link D, carried by draw-head B, will ride up the bottom wall *b* of the mouth *a* in draw-head B′ and drop into the pocket *d* thereof.

When it is desired to uncouple the cars, it is simply necessary for a trainman on top of the car to draw upon the chain F or one standing at the side of the car to rock the shaft E in the direction indicated by arrow, so as to raise the end of the link from the pocket *d* of the draw-head B′. This may be easily done when the cars are in motion and the link D is subjected to draft, which is an important advantage.

It will be noticed from the foregoing that in the event of the draw-heads B B′ resting in different horizontal planes the inclined bottom wall *b* of the mouth *a* in the draw-head B′ will guide the outer end or head of the link to its seat in the pocket *d* of said draw-head B′.

Having thus described my invention, what I claim is—

In a car-coupler, the combination of a car-body, a draw-head formed in one piece and having the recess C in its upper side comprising the mouth *a* corresponding in width and height to the draw-head at the outer end thereof and having the inclined bottom wall of concave form in cross-section and also having the flaring side walls *c*, the pocket *d*, and the longitudinal central groove *f* connecting the mouth and the pocket; said draw-head also having the horizontal recess, at an intermediate point of its height, communicating at its outer end with the mouth *a*, and the vertically-disposed aperture intersecting said horizontal recess, the link having heads at its opposite ends; one of said heads being designed to rest in the pocket *d* of the draw-head, a clevis disposed longitudinally of the link, a bolt extending longitudinally through the outer head of the link and pivotally connecting the clevis thereto so as to enable the same to rock laterally on the link, the rock-shaft journaled in bearings on the end wall on the car-body and having the forwardly-extending arm *i* and also having the upper and lower stop-arms i' i^2 adapted to engage the end wall of the car-body, a chain connected at one end to the clevis on the outer head of the link and at its opposite end to the car-body, and a bolt detachably connecting the chain and the arm *i* of the rock-shaft, substantially as specified.

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

JOHN ISRAEL NEWBURG.

Witnesses:

GUSTAV SINA,

REUBEN SIMON.