P. HIEN & J. KOCH.

Car-Coupling.

No. 165,826. Patented July 20, 1875.

Fig. 1.

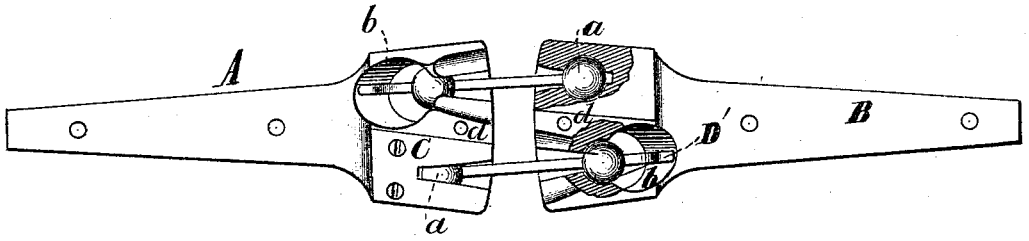


Fig. 2.

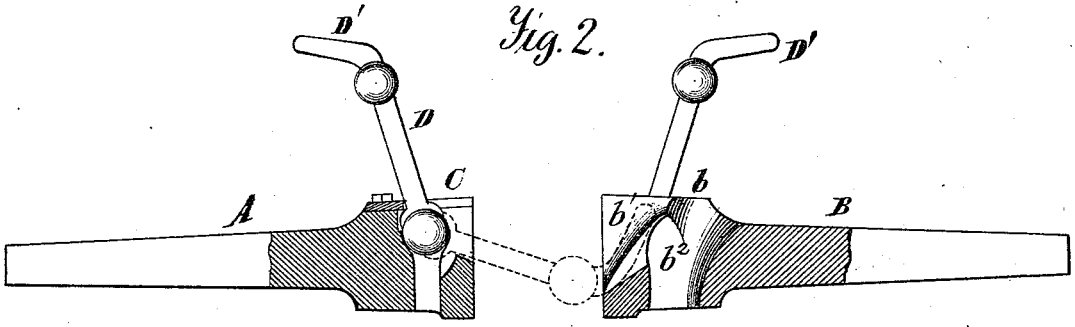
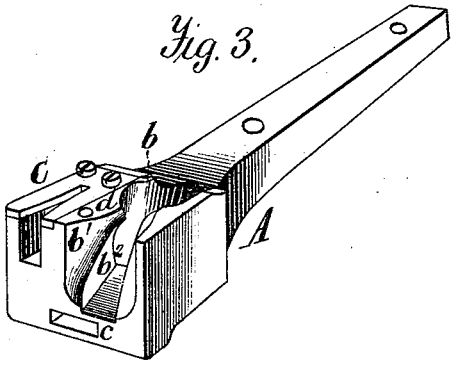


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

PHILLIP HIEN AND JOHN KOCH, OF ROCK ISLAND, ILLINOIS.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **165,826**, dated July 20, 1875; application filed June 2, 1875.

To all whom it may concern:

Be it known that we, PHILLIP HIEN and JOHN KOCH, of Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Improvement in Automatic Couplers for Railway-Cars, of which the following is a specification:

This invention relates to that class of car-couplings in which the coupling of the draw-heads is effected by ball-links.

Our improvement consists, mainly, in providing each draw-head with such a ball-link permanently confined at one end in a socket in such draw-head, and also furnishing each draw-head with an open socket for the reception of the link of an approaching or adjacent car. In this way the draw-heads are always ready to couple, no matter what ends of the cars are brought opposite to each other. Our improvement further consists of certain hereinafter more fully described details of construction.

In the annexed drawings, which form a part of this specification, Figure 1 is a plan, partly in section. Fig. 2 is a side elevation, also partly in section; and Fig. 3 is a perspective view of a draw-bar.

The same letters are employed in all the figures in the indication of identical parts.

The draw-heads are formed with two chambers, *a* and *b*. The former is nearly round to receive the ball on the end of the link D, which, when placed in the chamber, its stem extending through a narrow opening in front of chamber *a*, is secured by bolting on the notched plate C, the notch or slit permitting the stem D to be raised beyond the perpendicular, so as to sustain it when the cars are being brought together. The ends of the bars or links are turned up, as at D′, for handles, by which the links can be lifted out of the socket *b*, the other end being securely fastened in the socket *a*. The sockets *b* are formed with their mouths cut away at b^1 to guide the ball on the free end of the link upward, so that it will fall into the open socket, the stem of the link passing into a narrower slit in the front end of the draw-head. The socket *b* is cut away toward the front to receive the ball on the link, which, when drawn upon, is carried into the recess b^2, and there held, so that the link cannot be lifted out of the socket *b* while there is a strain upon it.

When the cars are to be coupled, the links may be turned up, as shown in Fig. 2, and then, when the draw-heads strike as the cars are brought together, the free end of the link will be thrown forward, the ball falling into the socket *b*. When the train is to be uncoupled, the draw-heads must be forced together, so as to relax the strain on the links, when they can be lifted out of socket *b*.

Recesses are formed at *c*, through which a vertical hole, *d*, passes, by means of which the cars may be coupled by the ordinary pin and link, so that our draw-head may be used for attaching one car to another of the common construction.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The draw-head constructed with the open socket *b*, in combination with the ball-link D, permanently confined at one end in socket *a*, substantially as and for the purpose specified.

2. The links D, constructed with the two balls and curved handle D′, substantially as set forth.

3. The draw-head constructed with the double recesses *a* and *b*, and the recess *c*, and hole *d*, for coupling with either the link D or the ordinary coupling-link, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

PHILLIP HIEN.
JOHN KOCH.

Witnesses:
JAMES M. BEARDSLEY,
JOHN T. KENWORTHY.