

D. H. Ball.
CAR COUPLING.

116663

DATED JUL 4 1871

Fig. 1.

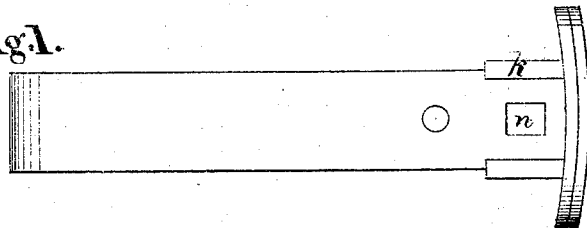


Fig. 2.

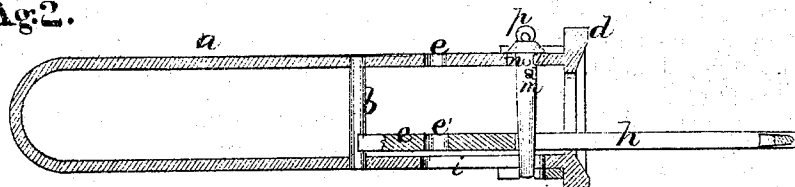


Fig. 3.

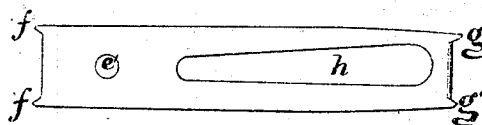


Fig. 4.

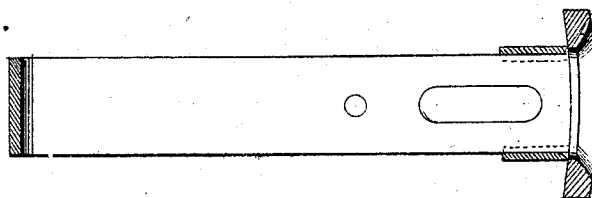
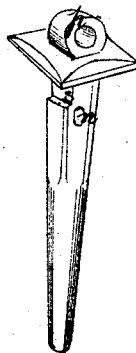


Fig. 5.



Witnesses.

Chas. Kemper
 Villette Anderson

Inventor

D. H. Ball,
 Chipman & Foster & Co.
 Attys.

UNITED STATES PATENT OFFICE.

DAVID H. BALL, OF SINNAMAHONING, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPPLINGS.

Specification forming part of Letters Patent No. 116,663, dated July 4, 1871.

To all whom it may concern:

Be it known that I, DAVID H. BALL, of Sinna-mahoning, in the county of Cameron and State of Pennsylvania, have invented a new and valuable Improvement in Car-Coupling; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a plan view of my coupling. Fig. 2 is a central vertical section. Fig. 3 is a view of the coupling-link. Fig. 4 is a longitudinal section. Fig. 5 is a perspective view of the coupling-pin.

This invention relates to improvements in car-couplings; and it consists in a device that will operate in an automatic manner; the object being the production of a new draw-head having the improvements referred to, or the remodeling of old draw-heads to conform thereto.

Referring to the drawing, *a* represents a draw-head, which may be attached to a car in a suitable manner. *b* is a fixed pin, against which the link *c* rests as a stop. The banger *d* is bevel-shaped, as shown, to facilitate the entrance of the link. The draw-head and link have holes, *e* and *e'*, for the admission of a pin to hold the link in place before and after the act of coupling. The link is of the peculiar form shown, having at its ends short projections, *f* and *f'* and *g* and *g'*, which serve as guards to facilitate the entrance of the link into the draw-heads and to keep it in proper position. The link is slotted in the manner shown at *h* for the admission of the pin *s* and to allow of the necessary play; and the under side of the draw-head is slotted also, as at *i*, for the reception of the pins. *k* is a band that passes around the draw-head and slides on it, being open at the top and slotted at the bottom so as not to interfere with the pins. This band serves as a guide for the link, and it is only nec-

essary when the common or old form of link is used.

In coupling cars the link is placed in position against the fixed pin *b*, and held there by a pin in the holes *e* and *e'* and slot *i*. In the opposite draw-head is placed the pin *m* in the hole *n* and slot *i*. The cars, and consequently the draw-heads, are brought together, the end of the link strikes the pin *m*, which, being free to move in the hole *n* and the slot *i*, is pressed backward and upward, and the link passes under it until the end of the pin falls back in the slots *h* and *i*, when the pin is again in its perpendicular position, and the coupling is completed in an automatic manner, as aforesaid.

The pin *m* is of a peculiar form, having a large square head, which serves to raise up the pin as it is pressed backward, and having a groove on the front side under the head and a square portion below the groove, both of which serve to keep the pin in position and to prevent its working up and out of place. It also has an eye for a chain, as at *p*, and a hole, *s*, for a fastening-pin.

Old draw-heads and links, or the kind now in common use, may be remodeled so as to conform to this improved coupling; or the old link may be used with this new or remodeled draw-head, when the band *k* may be used to advantage.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the draw-head *a* having square hole *n*, pin *b*, and slot *i*, with the link *h* having guards *g* and *g'* and *f* *f'*, of the pin *m* having its upper shank square and notched at the throat and provided with a square cam-head, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

Witnesses:

DAVID H. BALL.

G. H. ALLIS,

JOHN RUBISON.