J. W. KLINGER, D. BOLENDER & S. E. STEM.

CAR-COUPLING.

No. 171,289. Patented Dec. 21, 1875.

Fig. 1

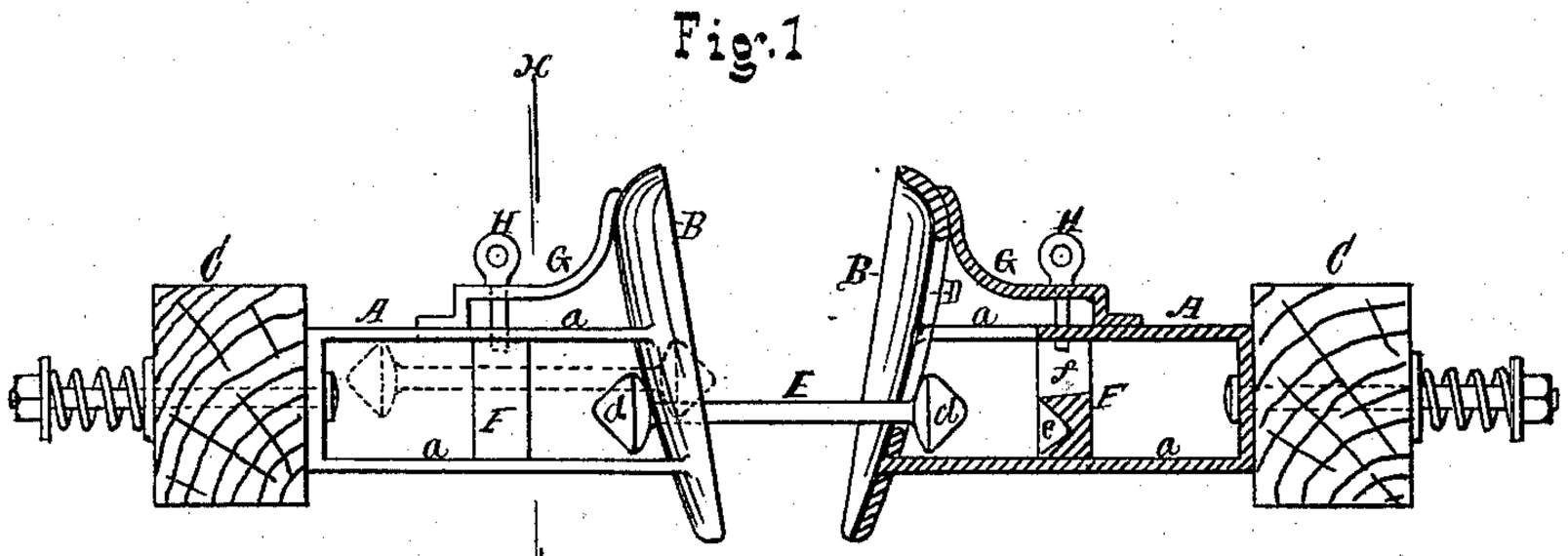


Fig. 2

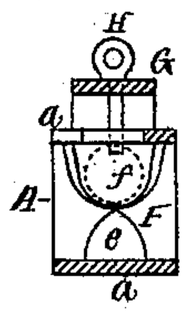


Fig. 3

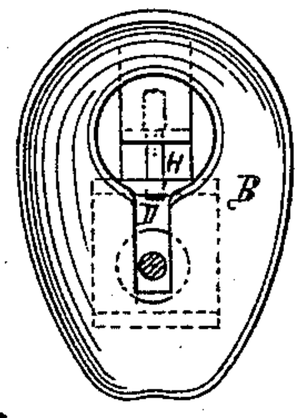


Fig. 4

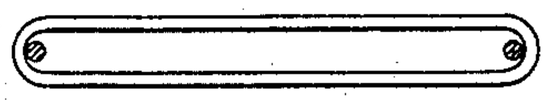
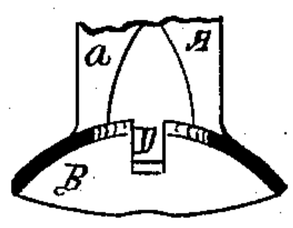


Fig. 5



Witnesses:

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JOSEPH W. KLINGLER, DANIEL BOLENDER, AND SAMUEL E. STEM, OF BEAVERTOWN, PENNSYLVANIA.

IMPROVEMENT IN CAR-COUPLINGS.

Specification forming part of Letters Patent No. **171,289**, dated December 21, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that we, JOSEPH W. KLINGLER, DANIEL BOLENDER, and SAMUEL E. STEM, of Beavertown, in the county of Snyder and State of Pennsylvania, have invented a new and useful Improvement in Car-Couplings; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation of a car-coupling embodying our invention, with one of the draw-bars cut longitudinally through the center. Fig. 2 is a transverse section of the draw-bar, taken on the line *x x* drawn across Fig. 1. Fig. 3 is an end view of the buffer-head. Fig. 4 is a plan view of the ordinary link; and Fig. 5 is a sectional plan of the buffer-head detached, taken on the line *y y* drawn through Fig. 3.

Similar letters of reference indicate like parts in the several figures of the drawing.

Our invention has for its object to provide a self-coupler for railway-cars, adapted to be attached to the ordinary draw-bar; and to that end it consists in the arrangement of parts, as will be more fully understood by the following description and claims.

In the drawing, A represents the ordinary draw-bar, which is connected to the buffer-beam C in the usual manner. B is the buffer-head, which is made of sheet metal of the proper thickness, and riveted or bolted to the end of the draw-bar, as shown in Fig. 1. The buffer-head B is so attached to the draw-bar that the plane of its face inclines backward, as shown in Fig. 1, and its area is that of the sectional area of an ovoid concaved, as shown in Figs. 1 and 5, so that the converging angles of the face terminate at one given point. The central portion of the buffer-head is provided with a mortise, D, elongated vertically, as shown in Fig. 3. The upper portion of this mortise is made annular, and its diameter is greater than the diameter of the lower or depending portion, the object of which is to allow the enlarged end *d* of the coupling-bar E to freely pass through the same. The annular portion of the mortise is located at the point where the converging angles of the face intercept each other, so that the end of the coupling-bar, when brought in contact with the face of the buffer-head, is caused to move toward the greater opening of the mortise. Permanently attached to the bars *a a* of the draw-bar, at a point back of the buffer-head, is a concussion-block, F. This block is provided with a recess, *e*, arranged in its lower edge toward the buffer-head, and in line with the lower portion of mortise D. This recess is adapted to receive the end of the coupling-bar when in the act of coupling one car to the other, the object being to hold the bar in the proper position to cause its opposite end to come in contact with the concaved surface of the adjacent buffer-head, and at the same time allow the bar to adjust itself so that its projecting end will pass into the greater opening of the mortise. The upper edge of this block is provided with a channel, *f*, formed across the same. The size of this channel is such as to allow the enlarged end of the coupling-bar to freely pass through the same, the object of which is to enable the coupling-bar to be moved backward through the block, as shown by dotted lines, Fig. 1, when not in use. Permanently attached to the rear surface of the buffer-head, at a point near its upper end, is a curved brace, G, which extends backward to a point slightly back of block F, and is attached at its rear end to the upper surface of the draw-bar, as shown in Fig. 1. This brace is provided, near its rear end, with an aperture corresponding with a like aperture formed through the upper bar *a* of the draw-bar, through which the coupling-pin H is loosely passed when necessary to use the ordinary coupling-link. The arrangement of this brace is such as to allow the link to pass under the same between it and the upper surface of the draw-bar, which brings the link in the proper position to pass through the annular portion of the mortise loosely, thereby admitting of the requisite lateral movement of the draw-bar without causing the link to bind against the walls of the mortise.

The operation of our invention is as follows: One end of the coupling-bar is first passed

through the annular portion of the mortise, when it falls downward into the diminished portion of the mortise. It is then moved backward until its end passes into the recess in the concussion-block, which secures the projecting end of the bar in line with the concaved surface of the buffer on the adjacent car, and as the cars are moved together the projecting end of the bar is guided by the converging surface of the buffer-face into and through the annular portion of the mortise, when its gravity causes it to descend into the diminished portion of the mortise, when the shoulder of the enlarged ends of the bar is brought in contact with the rear surface of the buffer, preventing the same from drawing through the mortise, coupling the cars together, and by the incline of the rear surface of the buffer the bar is caused to rest at the lower end of the mortise when the cars are in motion, thus preventing the bar from ascending so as to allow its enlarged end to pass through the annular portion of the mortise, preventing the cars from uncoupling.

Having thus described our invention, we claim—

1. In combination with the draw-bar A, provided with the concussion-block F, adapted to receive and hold the coupling-pin, the sheet-metal buffer-head B, made in form described, and secured to the draw-bar, as specified.

2. In combination with the buffer-head B and draw-bar A, the brace G, as specified.

The above specification of our invention signed by us this 10th day of March, 1875.

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