

(No Model.)

J. K. BYWATER.

CAR COUPLING.

No. 310,788.

Patented Jan. 13, 1885.

Fig. 1.

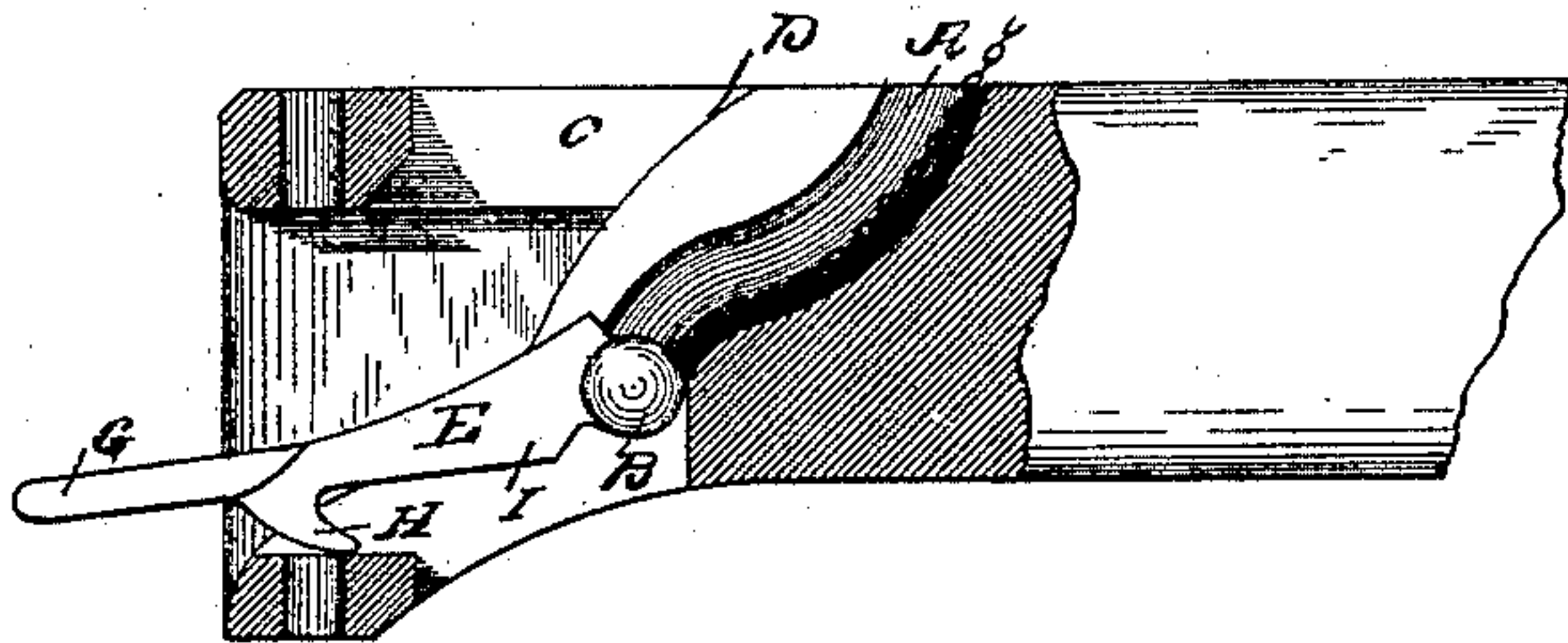


Fig. 2.

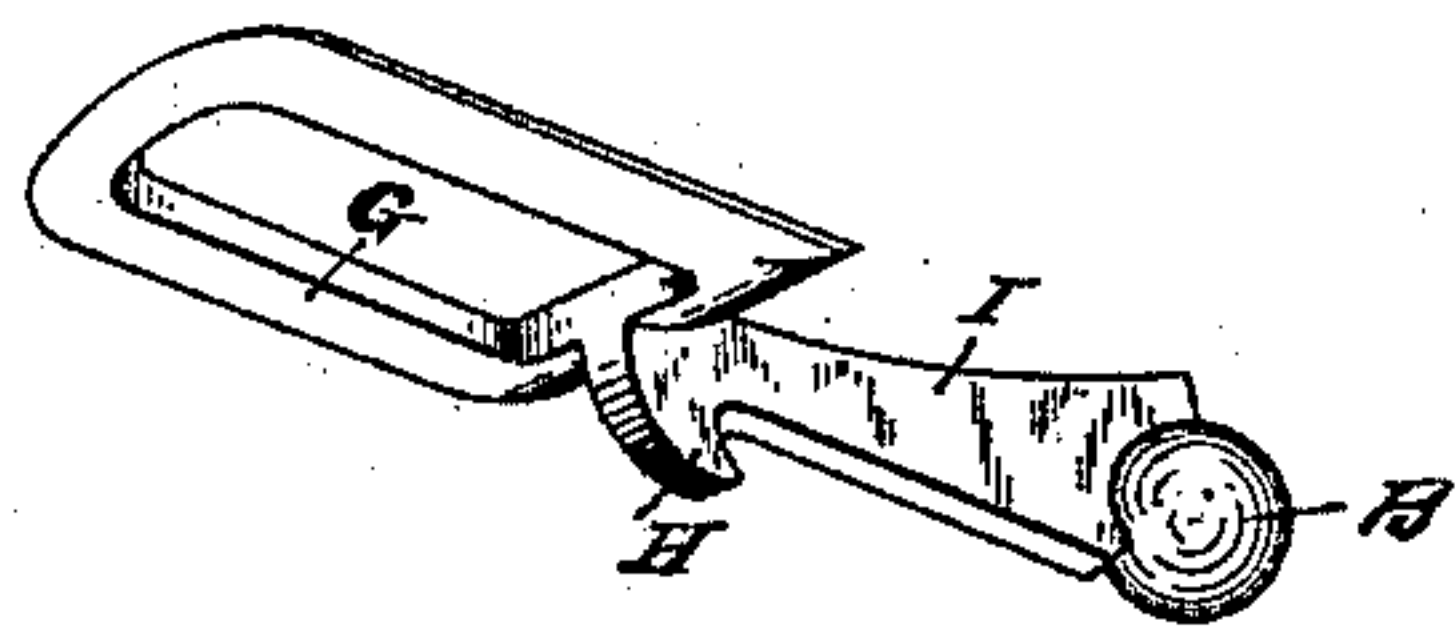
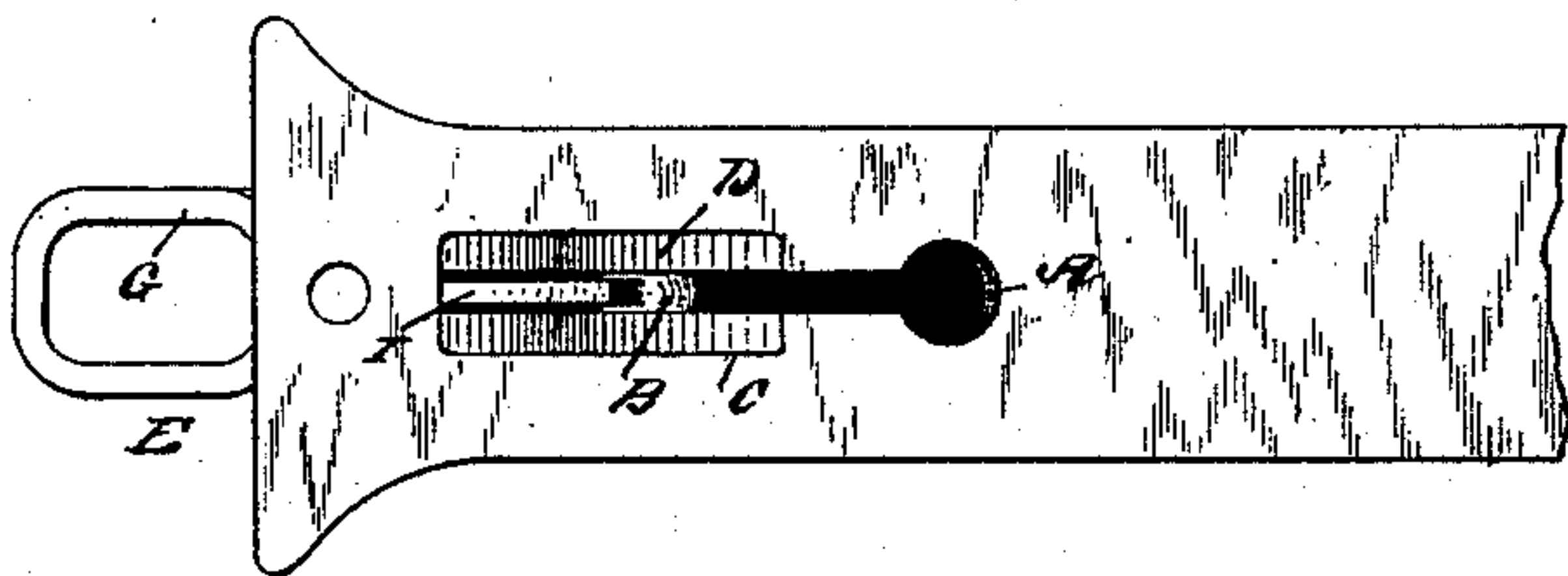


Fig. 3.



Witnesses:

*W. M. Harrison*  
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*per Ed. M. Muddock*  
*att'y.*

# UNITED STATES PATENT OFFICE.

JOSEPH K. BYWATER, OF PARIS, TEXAS.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 310,788, dated January 13, 1885.

Application filed November 8, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH K. BYWATER, a citizen of the United States, residing at Paris, in the county of Lamar and State of Texas, have invented new and useful Improvements in Car-Couplers, of which the following is a full and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to improvements in car-couplers; and it consists in the peculiar construction of the link and draw-head hereinafter fully set forth.

Car-couplers have been subject heretofore to the inconvenience of attaching any car not supplied with the same coupler as the one to which it is desired to be attached.

The object of my invention is to obviate this difficulty, which I do by the means shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of the draw-head provided with my improvements. Fig. 2 is a detailed view of the hook and link. Fig. 3 is a plan view of the draw-head.

Referring to the drawings, A is a passage in the rear of the draw-head, in which the ball B moves. C is a slot in the top of the draw-head, large enough for the passage of the ball B. D is an inclined plane formed by the rear of the draw-head, upon which the link portion of the coupler E moves when forced back out of the way. F is an ordinary pin set in the ordinary way in the draw-head. E is the coupler above referred to, and consists of the link or loop G, hook H, connecting-bar I, and ball B, all operating conjointly, as will be more fully set forth.

When the cars being coupled are provided with my coupler, the operation is as follows: If the link of the approaching car is poised above the link of the stationary car, the link of the former will ride that of the latter, and in drawing off the hook of the former will engage the link of the latter, thus coupling them.

If the link of the approaching car swagged below that of the stationary car, the link of the latter will ride that of the former, and in drawing off the hook of the latter will engage the link of the former. Now, if either car were supplied with the ordinary link and pin, the coupling E of the other would be drawn back out of engagement by means of the chain attached to the ball B and the pin F allowed to engage the loop, as in the ordinary mode of coupling. Should accident occur and the coupler E be broken, it could be taken out and a new one replaced in the following manner: The ball B is drawn back through and out of the passage A, the beveled edge of the link or loop part G of the coupler E allowing this. Then it is passed forward and drawn down through the slot C and out of the draw-head. In replacing it by another this operation is reversed, the ball being passed through the head and slot C and carried back and placed in the passage A, when its weight carries it to the bottom, and the coupler is ready for use. In the operation of coupling there is no danger of this action taking place, as the action is close.

It is obvious that I do not confine myself to any particular form of incline passage or slot for the ball to move in, nor indeed to the ball, as any friction roller would accomplish the same purpose; but

What I do claim, and desire to secure by Letters Patent, is—

In a car-coupler, the coupler E, having at its forward end a loop or link, G, hook H, and connected rigidly with the ball B or any suitable device moving in a passage, A, substantially as set forth and described.

In testimony whereof I have hereunto set my hand this 28th day of October, A. D. 1884.

JOSEPH K. BYWATER.

Witnesses:

W. L. BURDETT,  
H. C. RISING.