

(No Model.)

W. McCONWAY.

CAR COUPLING.

No. 412,405.

Patented Oct. 8, 1889.

FIG. 1.

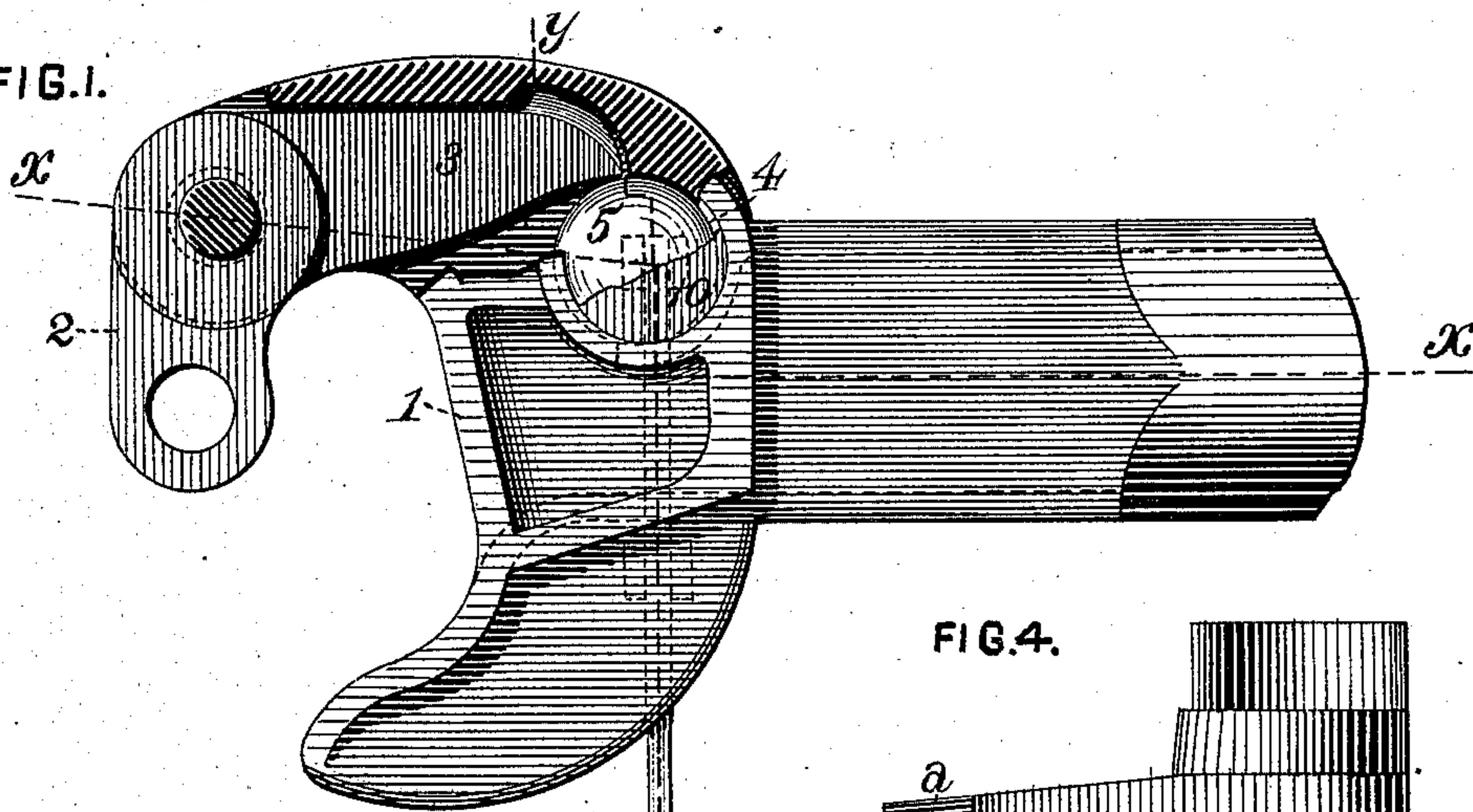


FIG. 4.

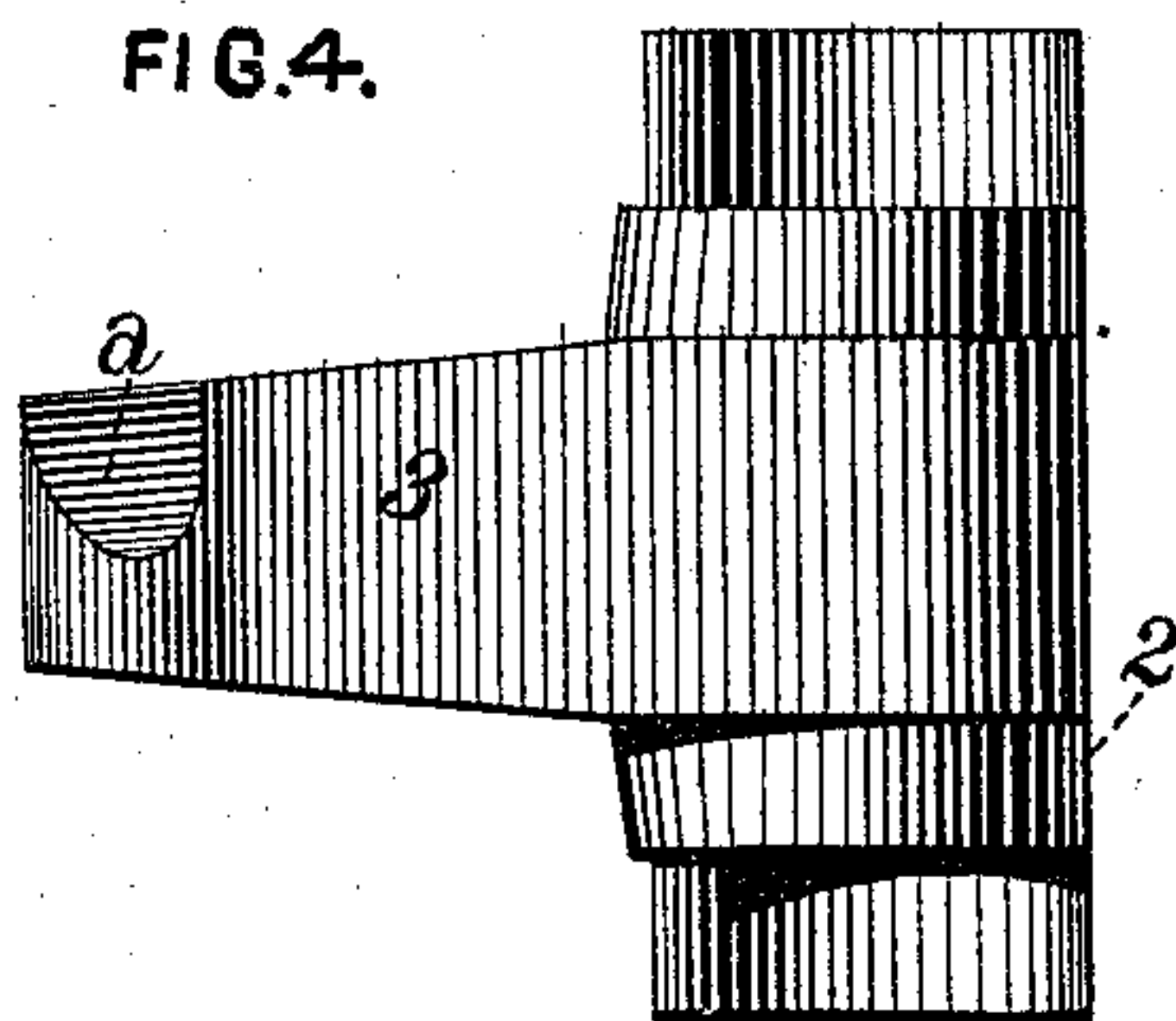


FIG. 2.

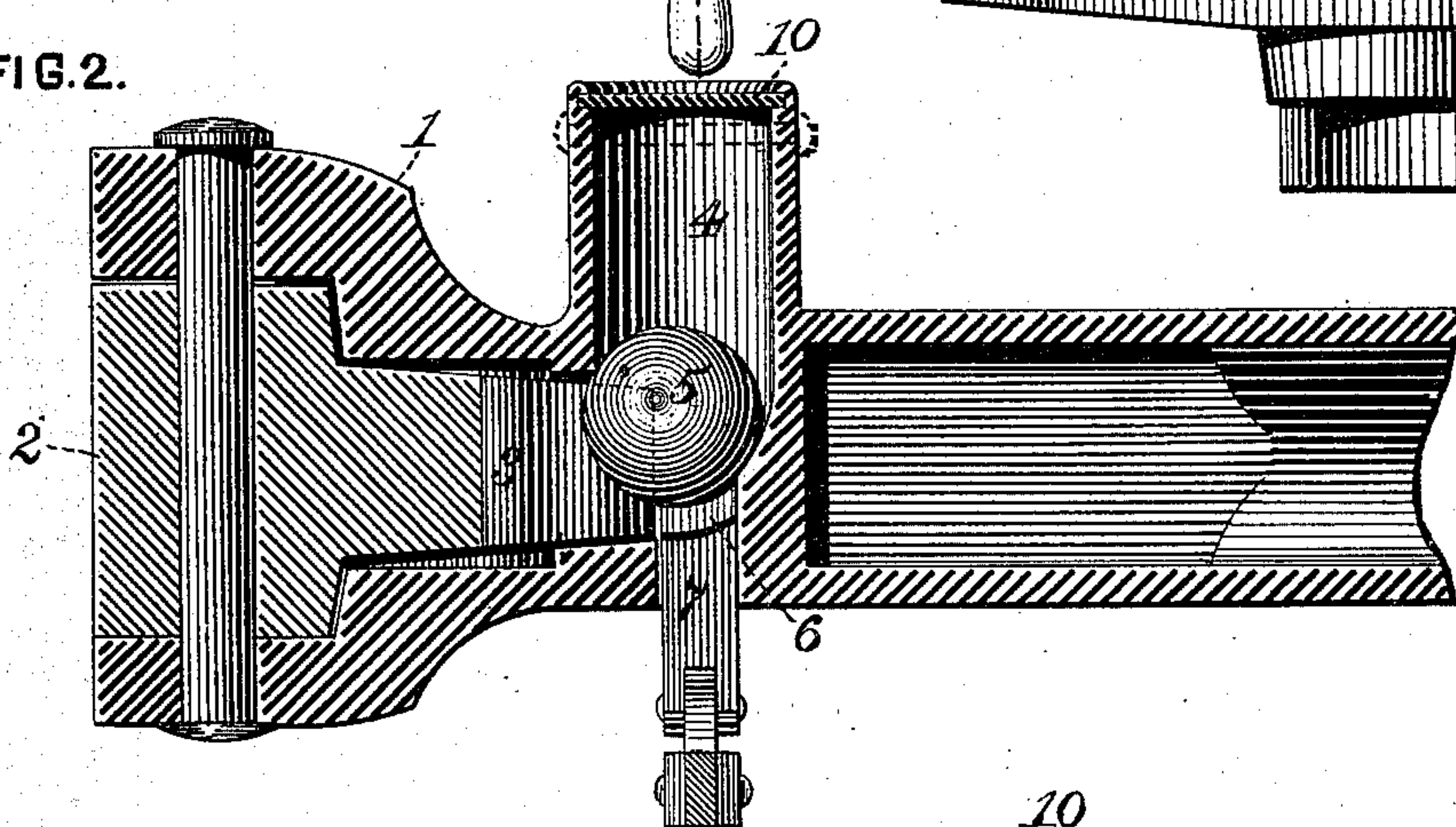
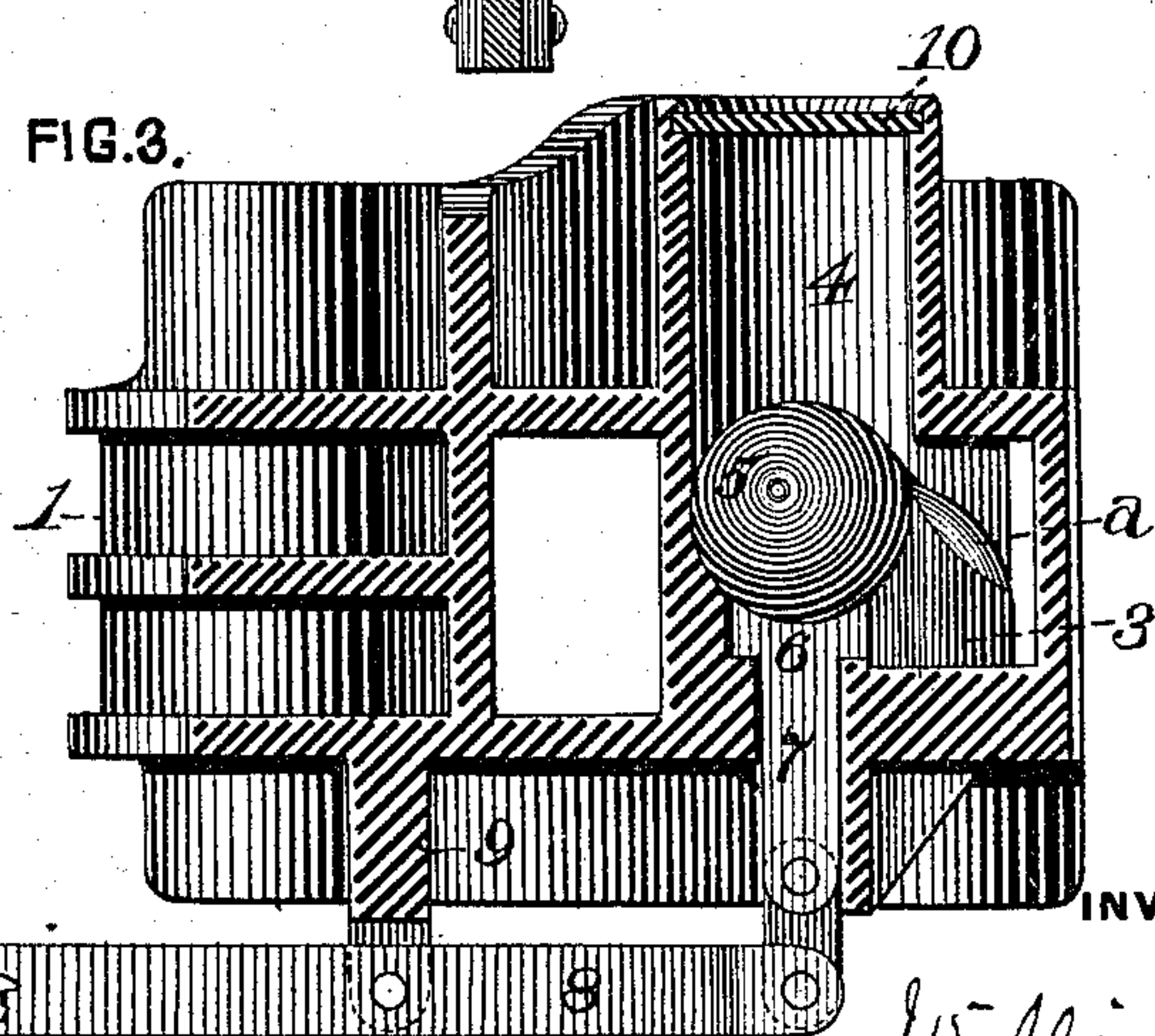


FIG. 3.



WITNESSES:

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INVENTOR,

William McConway  
by George H. Christy  
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# UNITED STATES PATENT OFFICE.

WILLIAM McCONWAY, OF PITTSBURG, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 412,405, dated October 8, 1889.

Application filed August 8, 1889. Serial No. 320,082. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM McCONWAY, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered a certain new and useful Improvement in Car-Couplers, of which improvement the following is a specification.

The invention described herein relates to certain improvements in car-couplers of the Janney or swinging-hook type, and has for its object a new form of lock for the swinging hook, the lock being of such form and construction as will prevent any unequal wear thereof and will reduce the friction of the tail of the hook and the lock on each other.

In general terms, the invention consists in the construction and combination of mechanical devices or elements, all as more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view, partly in section, of a coupler embodying my invention. Figs. 2 and 3 are sectional views of the same on the lines *xx* and *yy*, respectively, of Fig. 1; and Fig. 4 is a view in side elevation of the tail portion of the swinging hook.

The draw-head 1 and swinging hook 2 are of the usual form and construction found in the Janney or other analogous class or kind of swinging-hook coupler. Immediately in front of the tail 3 of the hook, when in its closed position, I form a circular opening or well 4, whose wall extends a short distance above the body of the draw-head, as shown in Figs. 2 and 3. Within this well is placed a ball 5, adapted to drop in front of the tail of the hook, the well being made of such a depth and so located transversely of the line of movement of the tail 3 that the end portion of the tail will overlap the ball vertically and horizontally to such an extent as to prevent any tendency on the part of the tail to raise the ball when a strain or pull is exerted upon the hook. In the bottom of the well, but outside of the path of movement of the

tail, is placed a lifting-plate 6, on which the ball 5 rests, as shown in Figs. 2 and 3, and whereby it may be raised out of engagement with the tail 3. This lifting-plate is provided with a stem 7, extending down through a suitable opening in the draw-head and connected at its lower end to one end of a lever 8, which is pivoted to a bracket 9, secured to the under side of the draw-head. The front face of the tail 3 is made flat or straight, so that it will not have any lifting action upon the ball, as hereinbefore described; but the rear face is beveled off, as at *a*, so that the lower end of such beveled or inclined portion will pass partly under the ball during the closing movement of the hook, and, lifting the ball, will slip past it into its closed position.

In order to prevent the ball from being thrown out of the well, a stop 10 is arranged transversely of the well at the top thereof. This stop may consist of a pin or bar passing through the wall of the well, as indicated by dotted lines in Figs. 2 and 3, or, preferably, of a plate fitting in a rabbet formed in the upper end of the wall of the well and held therein by upsetting the vertical wall of the rabbet over onto the plate, as shown. The locking device 5, being spherical, or so nearly so as to permit of rotation, will constantly present new surfaces for wear.

I claim herein as my invention—

1. In a car-coupler, the combination of a swinging hook provided with a tail, and a ball for locking the hook in a closed position, substantially as set forth.

2. In a car-coupler, the combination of a swinging hook provided with a tail, a ball for locking the hook in a closed position, and a lifting device for moving the ball out of the path of travel of the hook, substantially as set forth.

In testimony whereof I have hereunto set my hand.

WILLIAM McCONWAY.

Witnesses:

WM. A. SHAW,  
M. HOWLAND.