

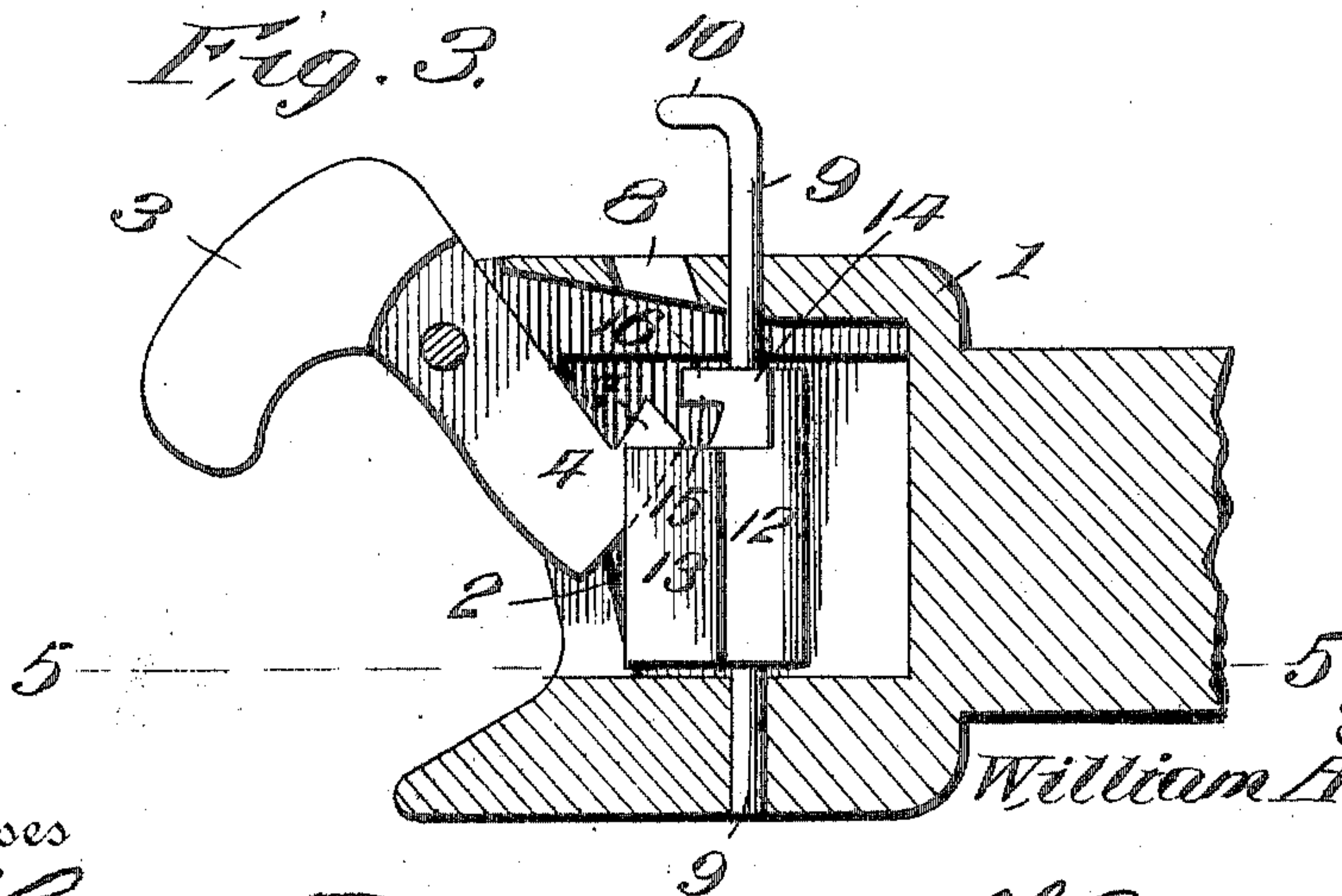
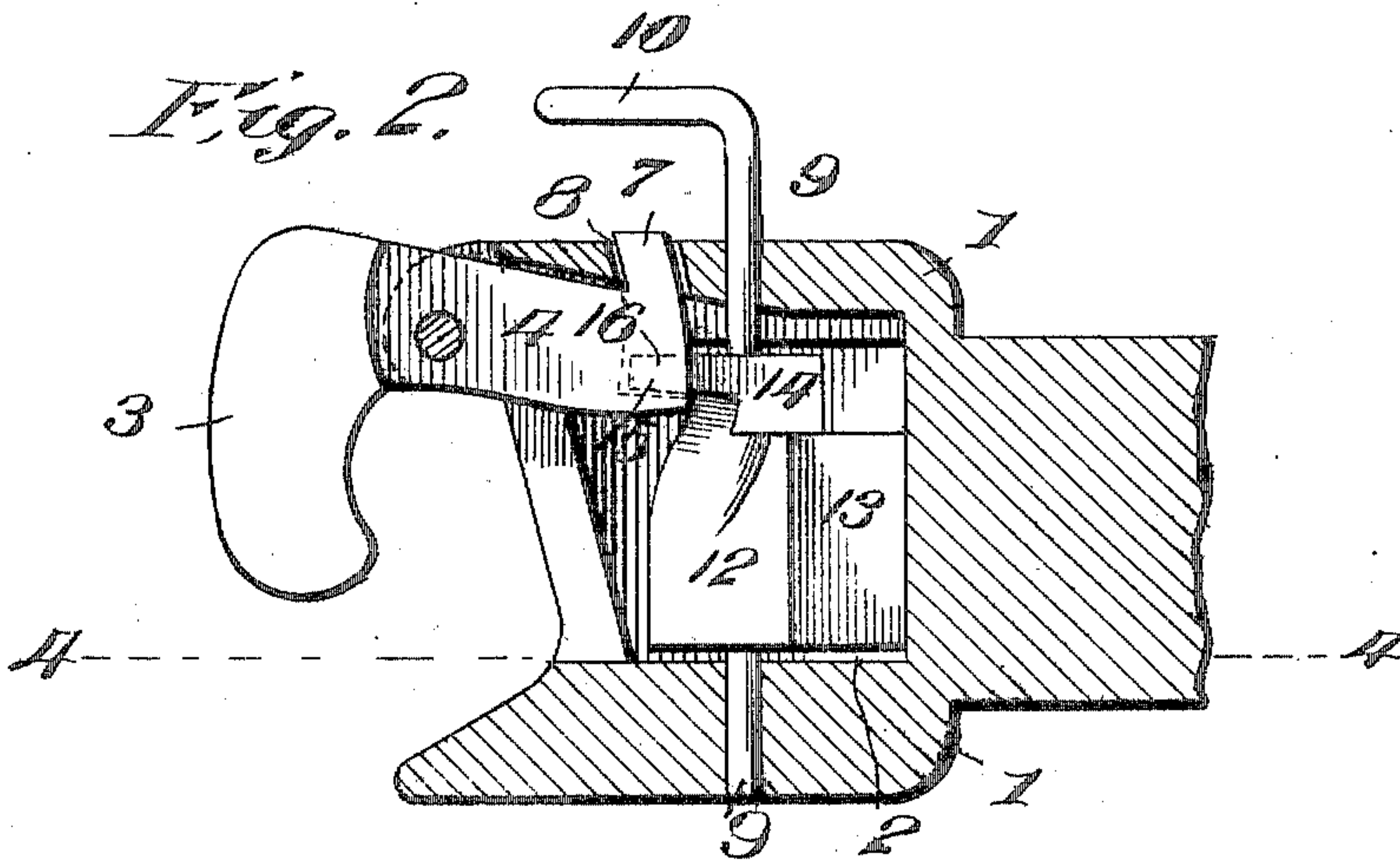
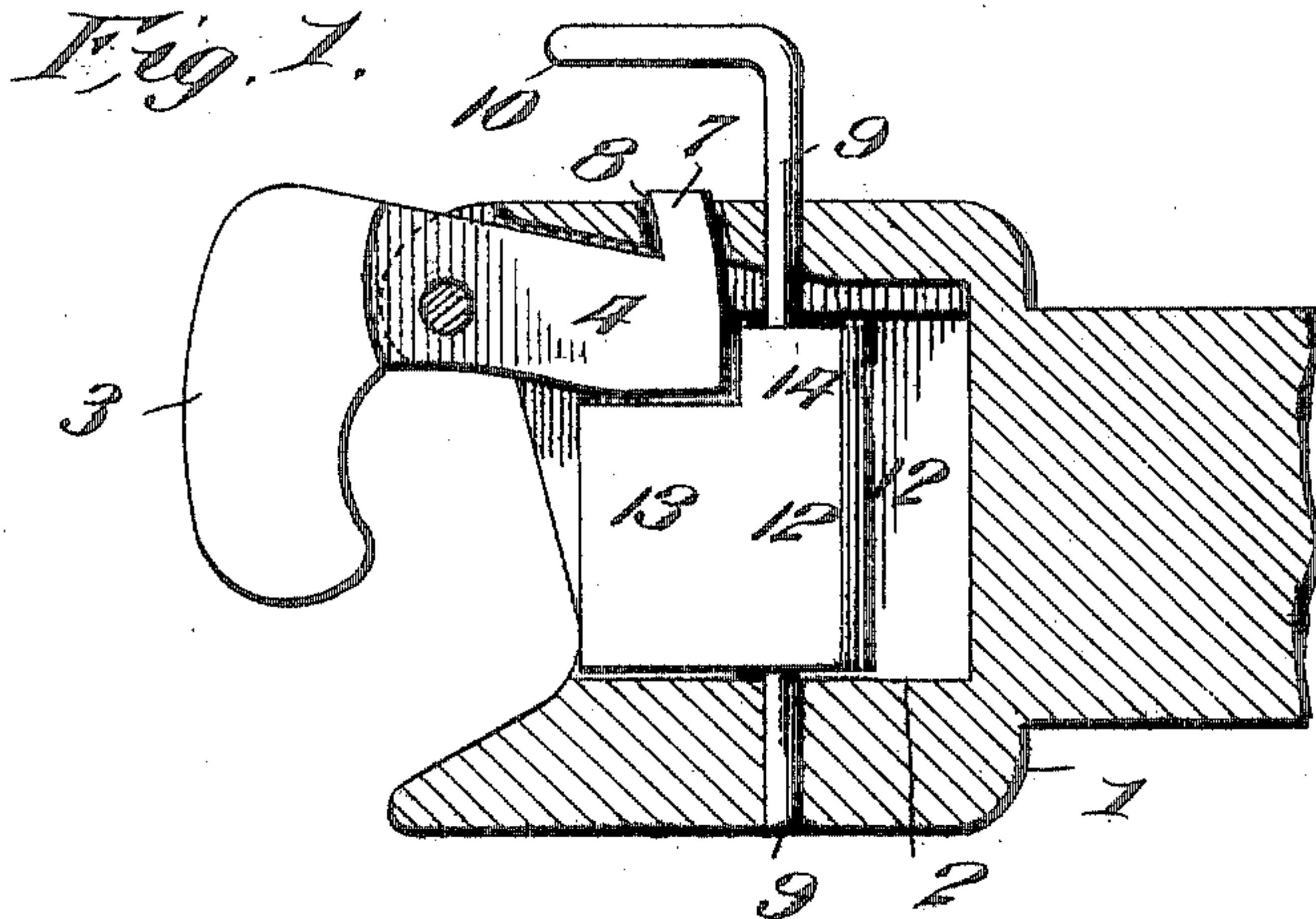
No. 817,307

PATENTED APR. 10, 1906.

W. A. ENGEL.
CAR COUPLING.

APPLICATION FILED NOV. 9, 1905.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 4.

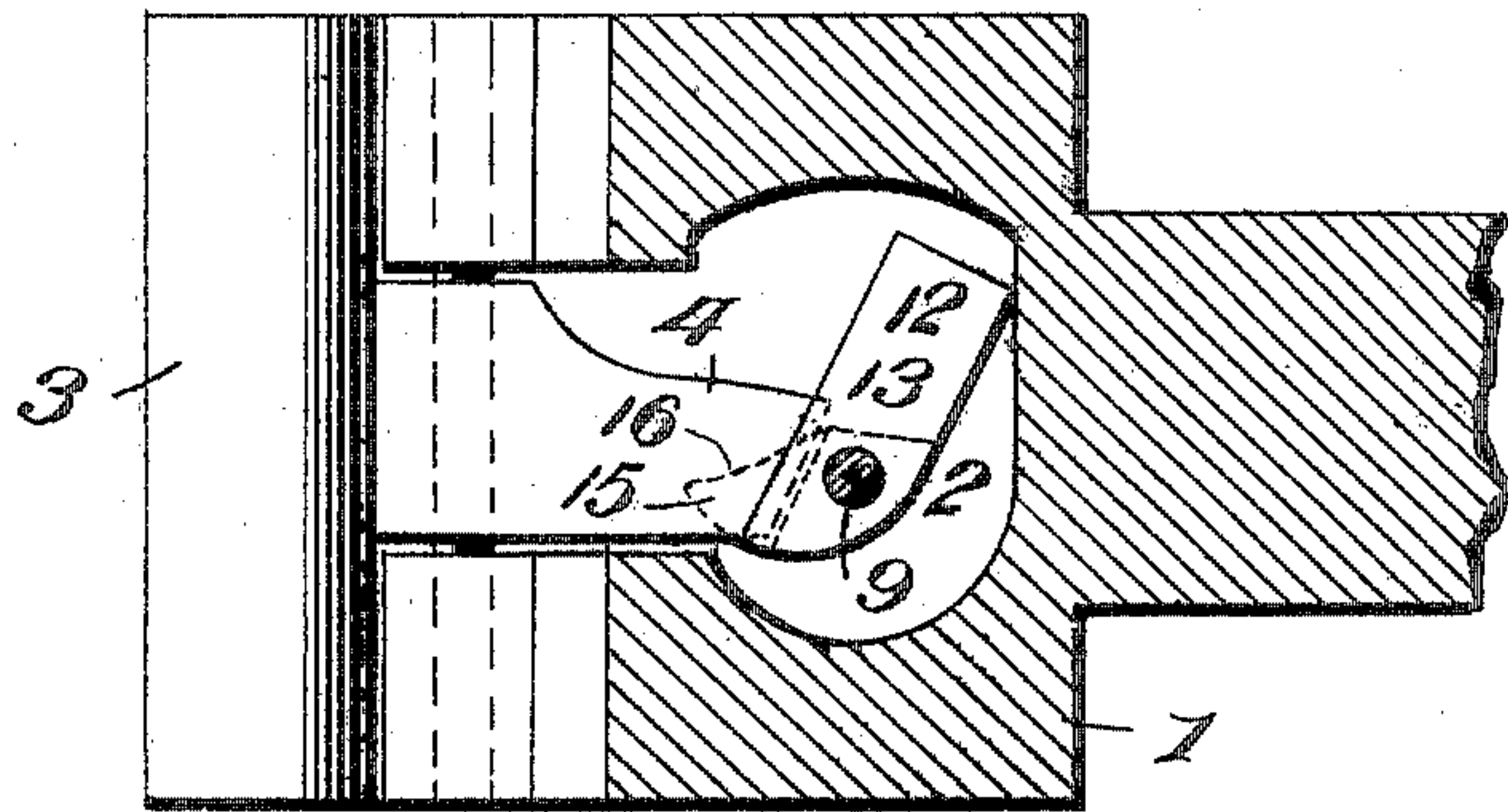


Fig. 5.

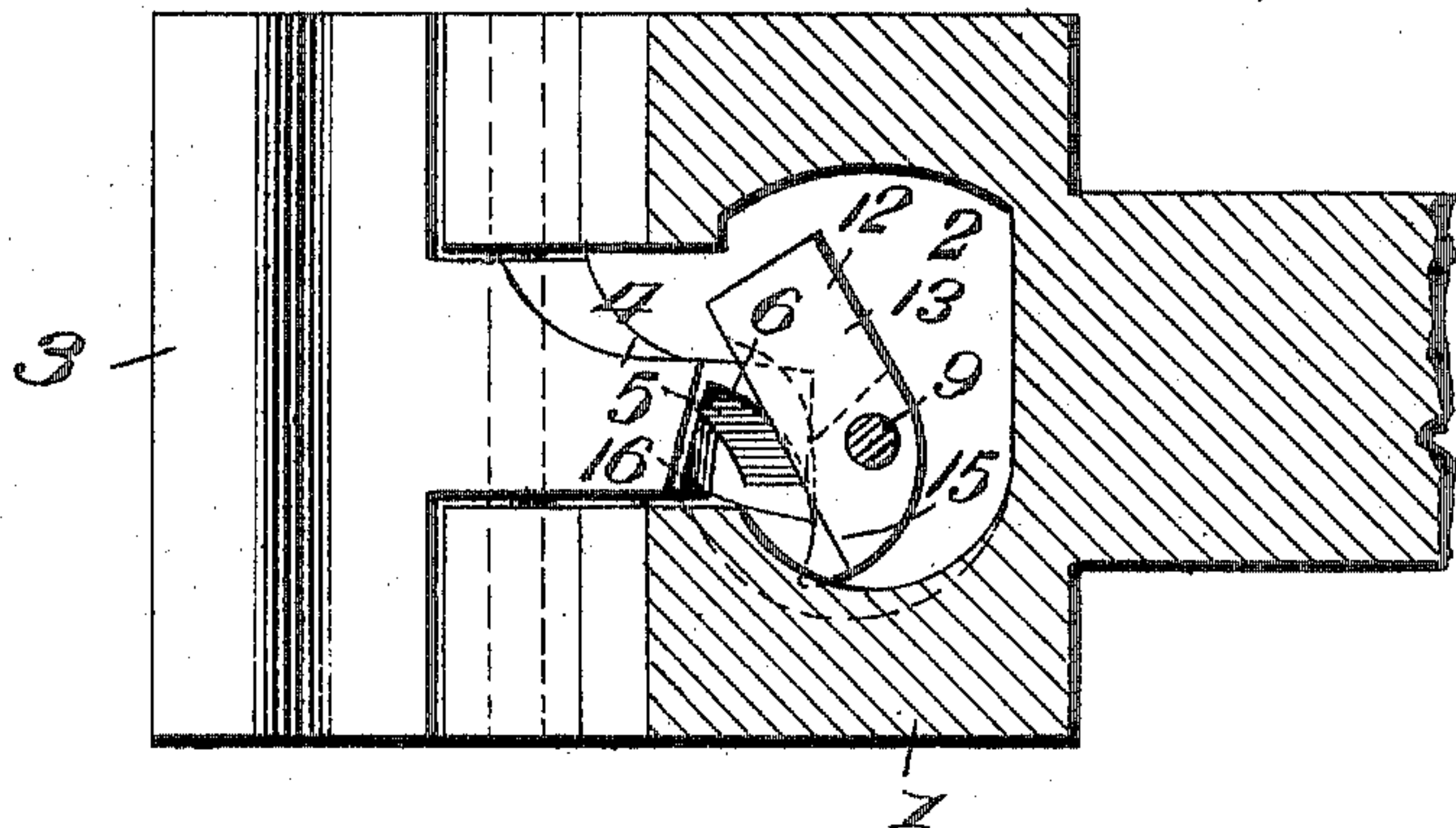


Fig. 6.

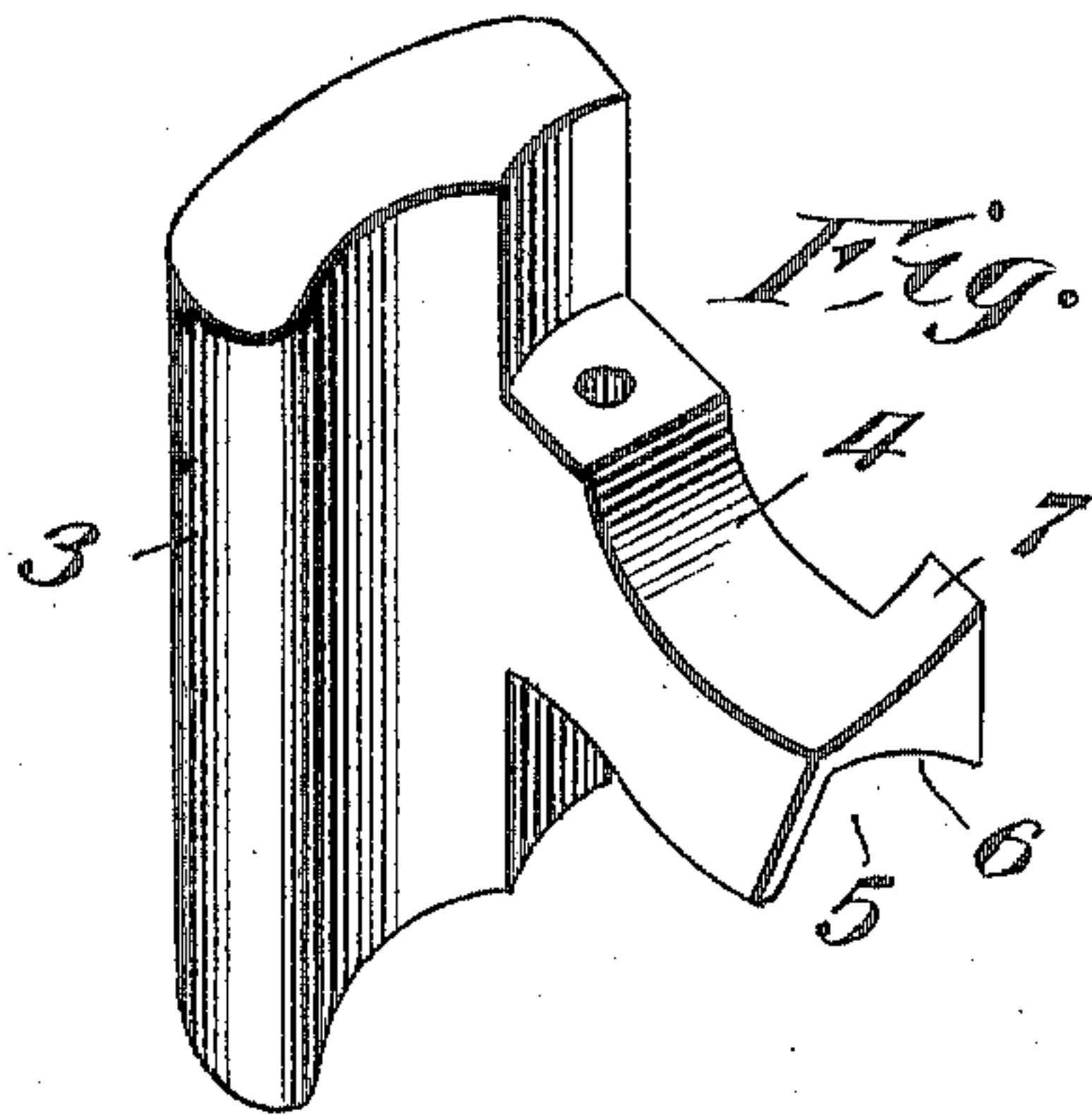
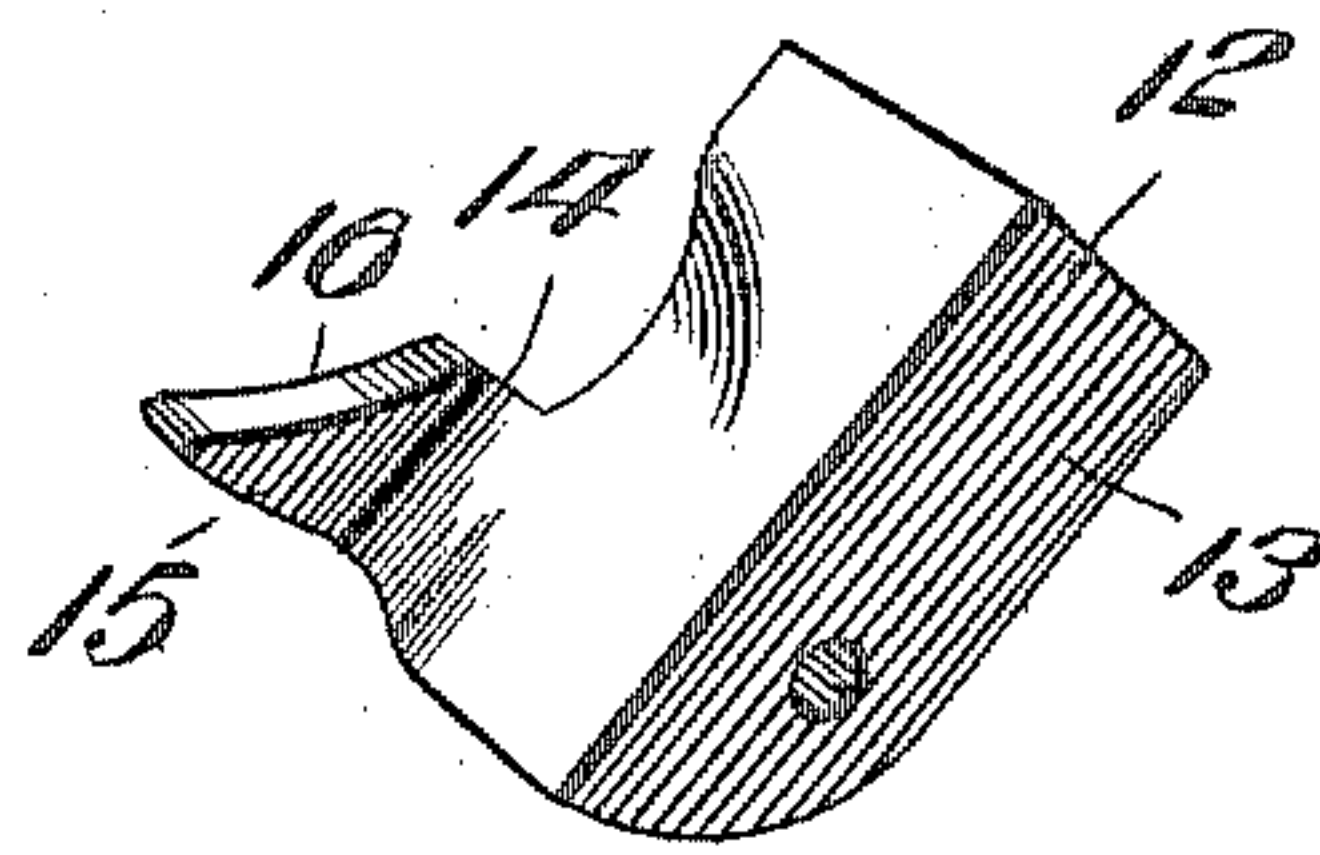


Fig. 7.



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UNITED STATES PATENT OFFICE.

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CAR-COUPLING.

No. 817,307.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed November 9, 1905. Serial No. 286,608.

To all whom it may concern:

Be it known that I, WILLIAM A. ENGEL, a citizen of the United States, residing at Split Rock, in the county of Shawano and State of Wisconsin, have invented certain new and useful Improvements in Car-Couplers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in car-couplers.

The object of the invention is to provide a coupler the knuckle of which will be automatically locked when brought to a closed position and which after being unlocked will remain in this condition until the knuckle has been swung outwardly to a position of release by the uncoupling or separation of the cars, which movement of the knuckle causes the locking member of the coupling to be automatically set, so that when the knuckle is again closed said locking member will drop by gravity into a position to hold the knuckle in such closed or coupled position.

With the above and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a horizontal sectional view of a coupler constructed in accordance with the invention and showing the knuckle of the same in coupled or locked position. Fig. 2 is a similar view showing the knuckle unlocked but still in coupled position. Fig. 3 is a similar view showing the knuckle in an uncoupled position. Fig. 4 is a longitudinal vertical section on the line 4 4 of Fig. 2, illustrating the arrangement of the parts as shown in this figure. Fig. 5 is a similar view on the line 5 5 of Fig. 3, illustrating the arrangement of the parts as shown in this figure. Fig. 6 is a detail rear perspective view of the knuckle removed from the coupler, and Fig. 7 is a perspective view of the gravity-operated locking-dog.

Referring more particularly to the drawings, 1 denotes the coupler, which is preferably constructed in the form of the Janney type, consisting of a hollow-head portion 2 and a pivoted knuckle 3. The knuckle 3 is provided with a right-angular inwardly-projecting finger 4, in the inner end of which is formed a recess 5, the upper wall 6 of which

is beveled or inclined downwardly, as shown. Said inner end of the finger 4 is also provided with a laterally-projecting lug 7, the under side of which forms a continuation of the inclined wall 6 of the recess 5. In one side of the coupler is formed an opening 8, into which the lug 7 is adapted to project when the knuckle 3 is in a closed or coupled position.

In the head 2 is mounted a horizontal transversely-disposed shaft 9, one end of which projects beyond the side of the head and is provided with a crank-handle 10. On the shaft 9 within the hollow head 2 of the coupler is fixedly mounted a locking-dog 12, consisting of a knuckle-engaging block 13, which when the knuckle is in closed or coupled position is adapted to drop by gravity between the inner end of the finger 4 and the adjacent inner side wall of the coupler-head, thereby locking or holding the knuckle in closed position. On the inner end of the dog 12 is formed a laterally-projecting lug 14, provided on its underside with a downwardly-extending projection 15, having an inclined forward edge 16, which is adapted to be engaged by the inclined lower wall 6 of the recess 5 in the inner end of the knuckle 4.

When it is desired to uncouple a car, the shaft 9 is turned by means of the crank-handle 10 to raise the locking-dog 12 to the position shown in Figs. 2 and 4, thereby unlocking the knuckle 3. Owing to the rearwardly-inclined position to which the eccentrically-mounted locking-dog 12 has been moved, the same will remain in this position without danger of being jarred or casually brought to a locking position while the car to be uncoupled is being shifted or backed, thus permitting the unlocking of the coupler previous to the separation of the train and avoiding the necessity of the trainmen holding said locking-dog in an unlocked position. After the car to be uncoupled has been backed or shifted to the desired location and the forward end of the train pulled in the opposite direction the knuckle 3 will be swung outwardly to an uncoupled position, as shown in Fig. 3. When the knuckle 3 is thus moved outwardly, the inclined wall 6 of the recess 5 in the rear end of the finger 4 of said knuckle will be brought into engagement with the inclined forward edge 16 of the extension 15 on the lug 14 of the locking-dog, thereby rocking or tilting said locking-dog forwardly to cause the forward portion or block 13 of the same to drop onto the upper side of the finger

4 and to rest thereon until the coupler is again brought into engagement with the coupler of another car, at which time the knuckle 3 will be swung back to a closed or coupled position, thus moving the finger 4 from beneath the block 13 on the locking-dog and permitting said dog to drop by gravity between the end of the finger 4 and the adjacent inner side wall of the coupler, thus automatically locking said knuckle in a closed or coupled position.

From the foregoing description, taken in connection with the accompanying drawings the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

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

In a car-coupler, the combination with a hollow draw-head, of a knuckle 3 pivoted to swing horizontally therein, a locking-finger 7 formed on said knuckle, said finger having in its inner end a recess 5 and an inclined wall 6, a locking-dog 12 pivotally mounted on a horizontal axis in said draw-head, and a crank-shaft 9 connected to said locking-dog to move the same to an unlocked position, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM A. ENGEL.

Witnesses

ADOLPH F. KNUDSEN,
HERMAN E. KAROLUS.