

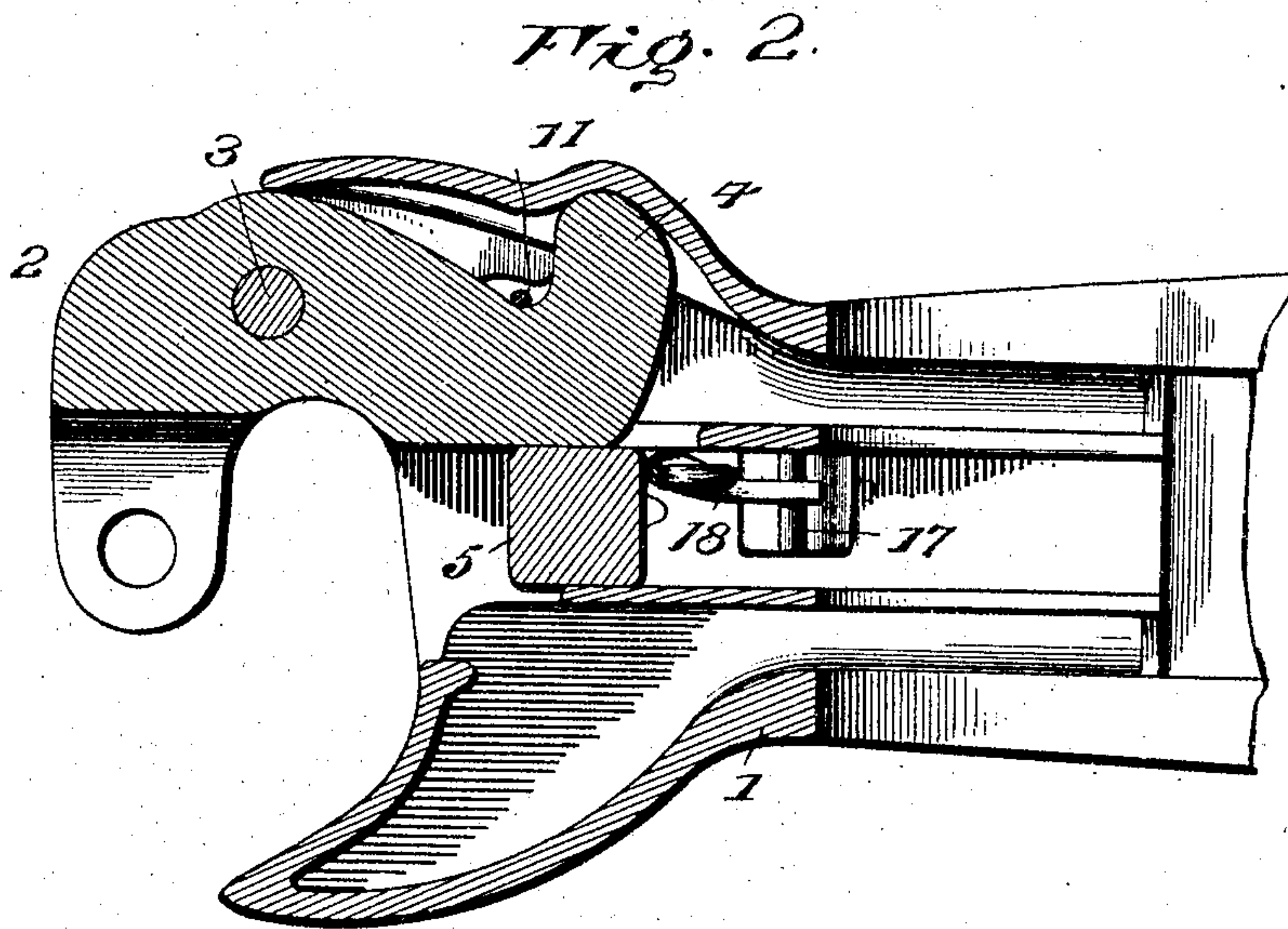
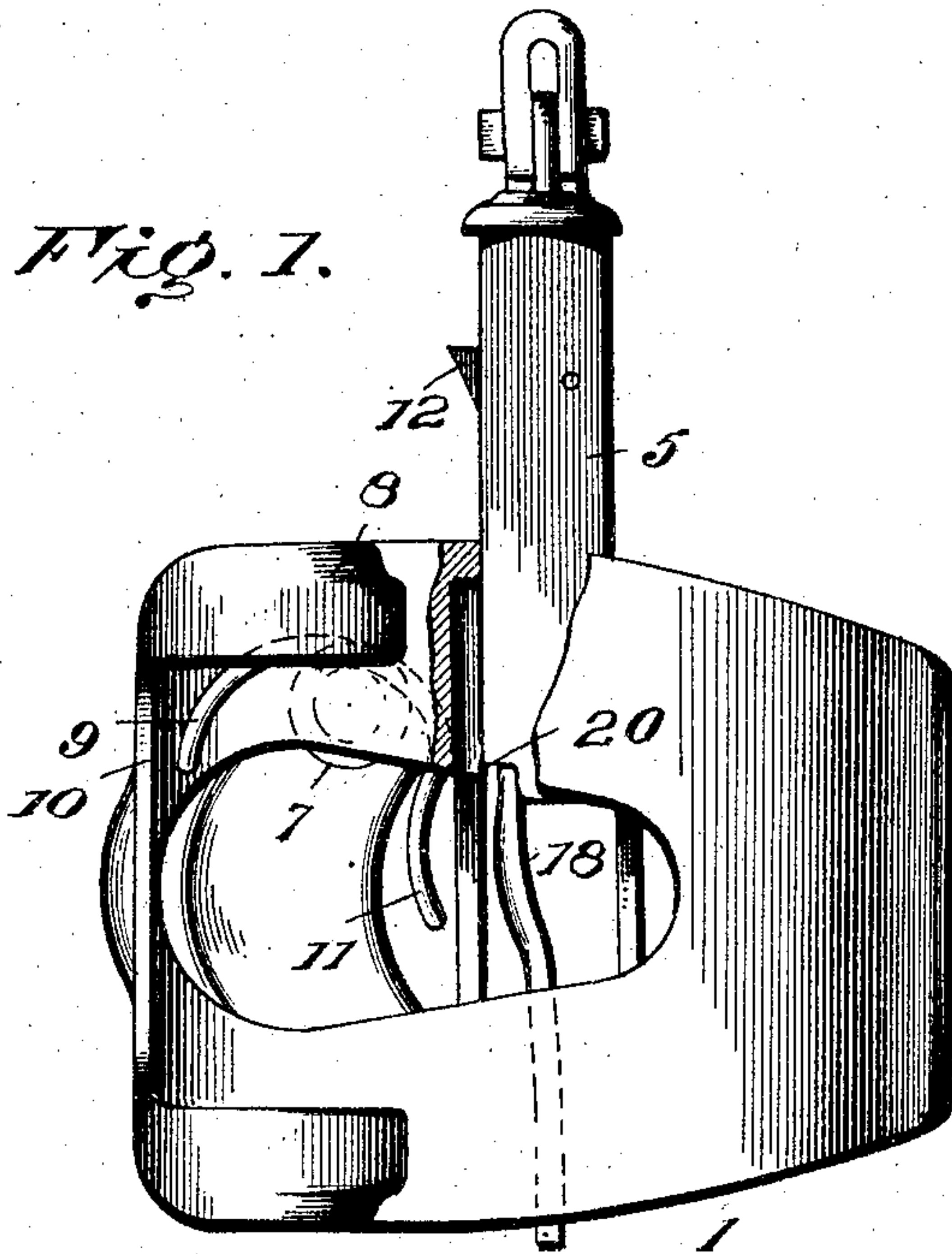
No. 781,126.

PATENTED JAN. 31, 1905.

P. BROWN.  
CAR COUPLING.

APPLICATION FILED FEB. 21, 1902.

2 SHEETS—SHEET 1.



Inventor

Witnesses

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*J. Stewart Rice*

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By  
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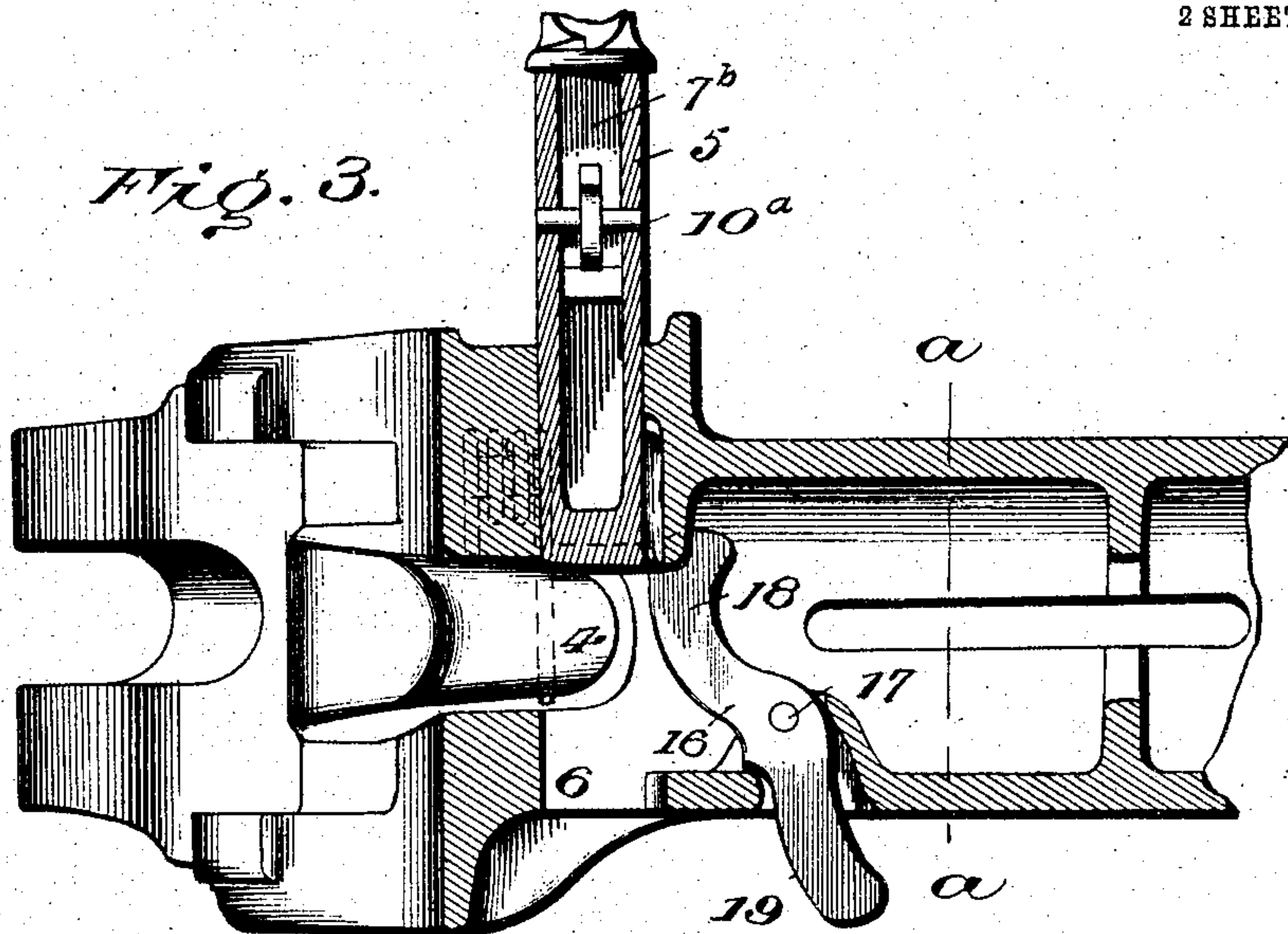
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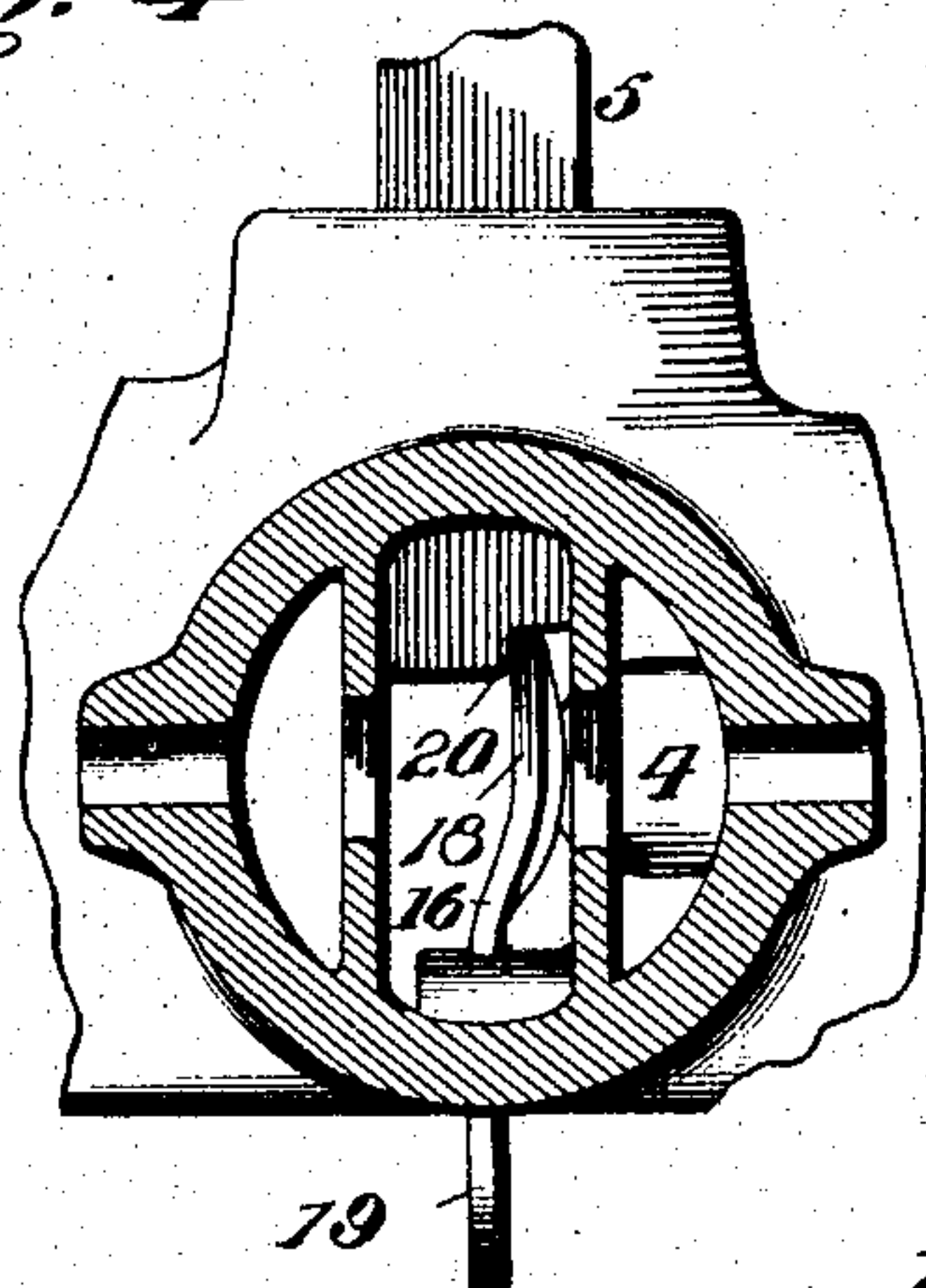
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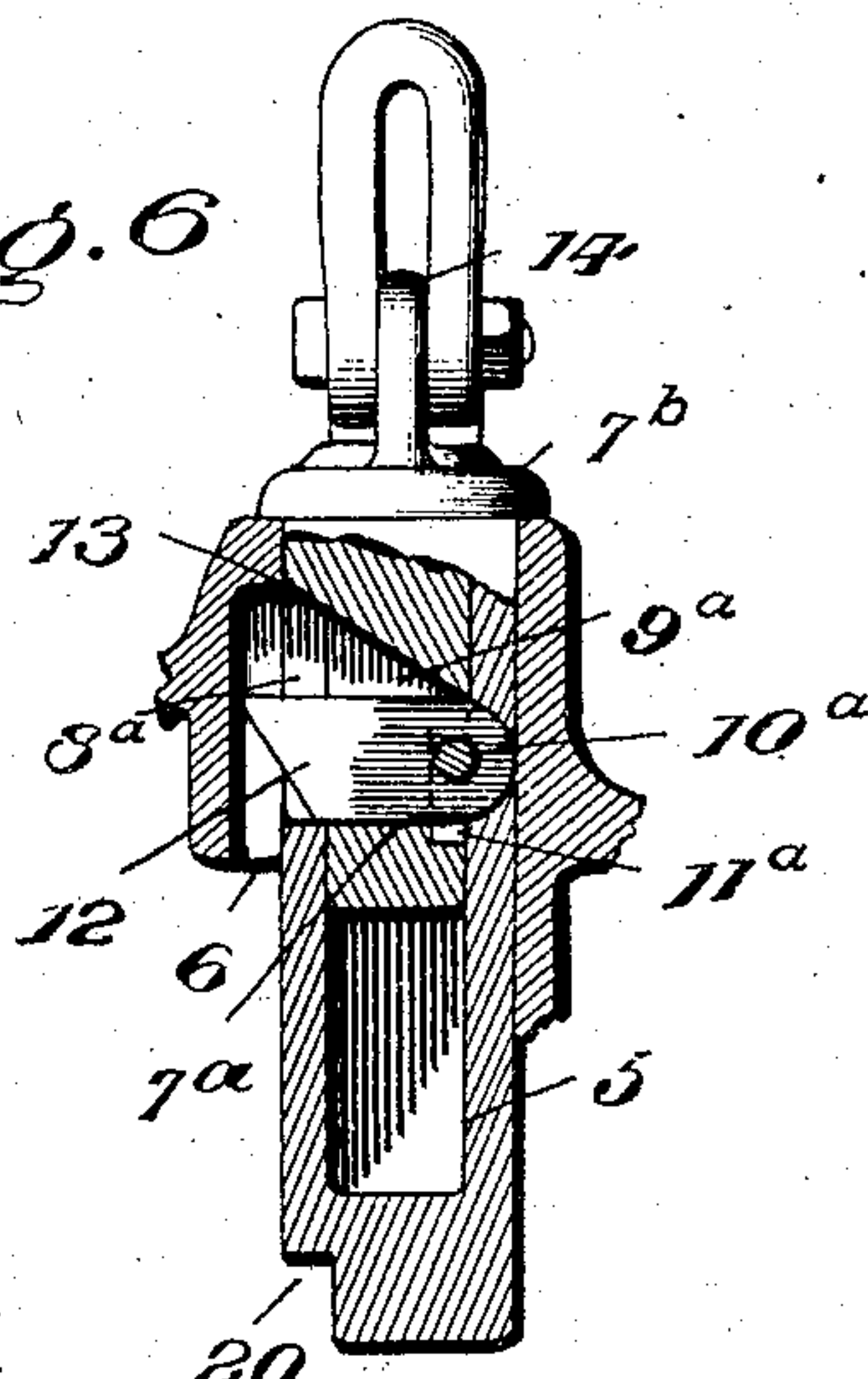
2 SHEETS—SHEET 2.



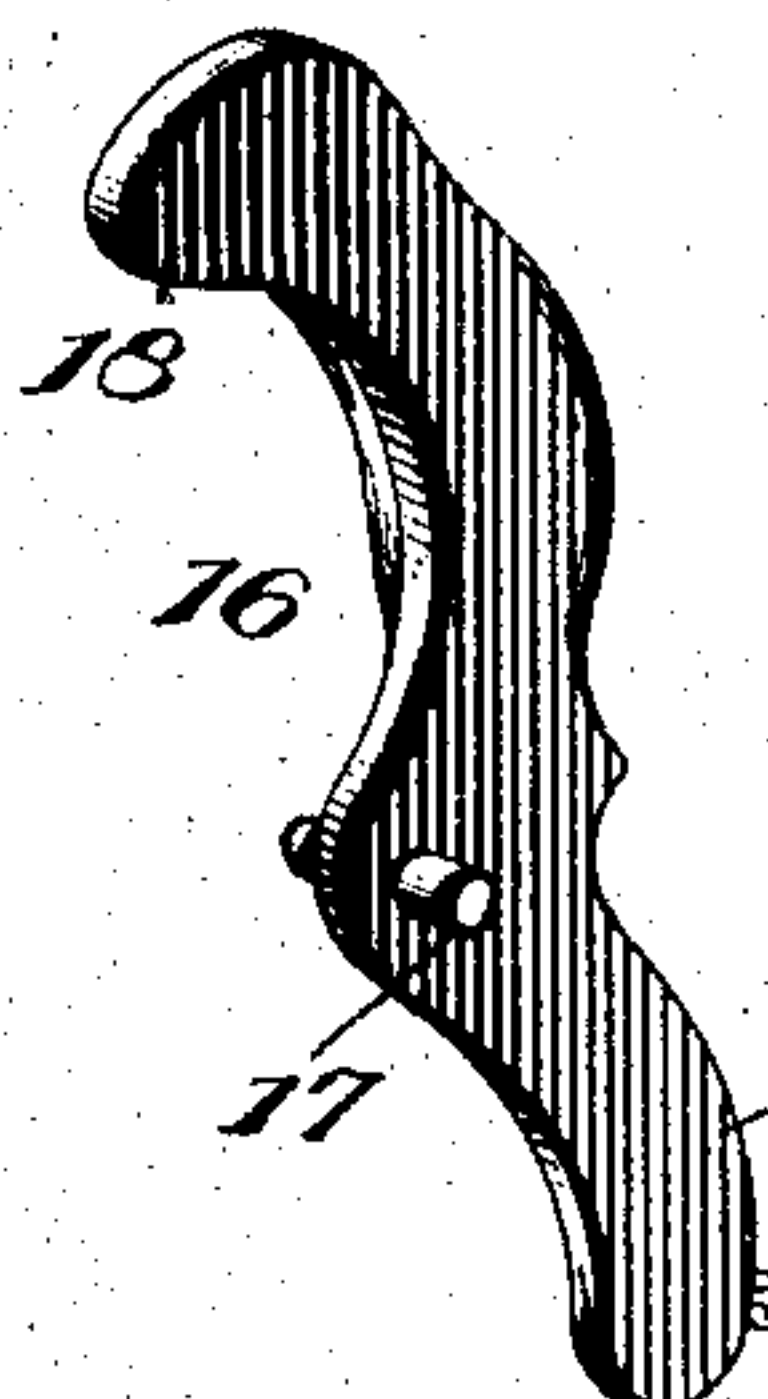
*Fig. 4.*



*Fig. 6.*



*Fig. 5.*



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## UNITED STATES PATENT OFFICE.

PERRY BROWN, OF WILMINGTON, DELAWARE.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 781,126, dated January 31, 1905.

Application filed February 21, 1902. Serial No. 95,100.

*To all whom it may concern:*

Be it known that I, PERRY BROWN, a citizen of the United States of America, and a resident of Wilmington, in the county of Newcastle and State of Delaware, have invented certain new and useful Improvements in Car-Couplings, of which the following is a specification.

This invention relates to an improvement in that class of car-couplings known as "twin-jaw" couplings; and the object of my invention is to provide a coupling of this class in which the knuckle, or rather its locking-pin, may be held in an unlocked position, so that the cars may be readily pulled away from each other. I accomplish this main purpose by employing a holding device for the locking-pin, so that said pin may be held in an elevated position without moving the coupling-knuckle to its uncoupled position.

A further object of my invention is to devise a simple form of locking-pin which will not be liable to the tendency of creeping upward, which is common in quite a number of couplings now in use.

With these objects in view my invention consists in the peculiar construction, arrangement, and combination of parts hereinafter more particularly described and then definitely pointed out by the claims at the end hereof.

In the accompanying drawings, which represent what I now consider the preferable embodiment of my invention, Figure 1 is an end elevation with the knuckle removed and with parts broken away in order to show the interior construction. Fig. 2 is a horizontal section. Fig. 3 is a vertical longitudinal section. Fig. 4 is a cross-section through the line *a a* of Fig. 3. Fig. 5 is a detail perspective of the device for holding the locking-pin in an elevated position. Fig. 6 is a sectional detail of the locking-pin and a portion of the coupling-head for receiving it.

Referring now to the details of the drawings by numerals, 1 represents a coupling-head which may be of any desired construction and in which is pivoted the usual coupling-knuckle 2, which swings on the ordinary pivotal pin 3, as in many forms now in use. The tail 4 of this coupling-knuckle swings

in the interior of the coupling-head and is locked therein by means of the vertically-operated locking-pin 5, which fits within a recess 6 in the center of said coupling-head 1. The knuckle 2 is swung in its uncoupled position when the coupling-pin 5 is raised by means of a spring 7, (shown particularly in Fig. 1, where the knuckle is removed in order that the spring may be more clearly shown.) The spring is coiled around the pivot 8 (shown in dotted lines in Fig. 3) and has one member, 9, pressing against the outer wall 10 of the coupling-head, and its other end, 11, presses against the tail of the knuckle, as shown in Fig. 2. I desire to call particular attention to the location of this spring, for the reason that when it is located in the upper part of the coupling it is not as likely to become inoperative as it would were it coupled in the lower part of the coupling, where dirt and moisture are likely to collect and in winter be liable to freeze.

The locking-pin, which has been mentioned as fitting within a recess 6 in the coupling-head, consists of two main parts 5 and 7<sup>b</sup>, the main part 5 being hollow, as shown, and the part 7<sup>b</sup> fitting within said hollow. Both parts have slots or recesses 8<sup>a</sup> and 9<sup>a</sup> therein, which coincide when the parts are in the position shown in Fig. 6. A pin 10<sup>a</sup> passes through the main part 5 and through a slot 11<sup>a</sup> in the part 7<sup>b</sup>, and this pin supports a dog 12. The construction is such that when the parts are in the position shown in Fig. 6 the dog rests in a substantially horizontal position, and the pin 5 is therefore capable of movement only until the dog 12 strikes the wall 13 of the recess 6. To raise the locking-pin 5, the part 7<sup>b</sup> is lifted by its link 14, and as said part 7<sup>b</sup> has movement on the pin 10<sup>a</sup> (which is permitted by the slot 11<sup>a</sup>) its lower part 7<sup>a</sup> acts on the dog 12 and swings it on its pin within the slots 8<sup>a</sup> and 9<sup>a</sup>, when it is out of the path of the wall 13, and the pin can now be raised.

I am aware that it is old to employ a locking-pin with a dog normally projecting into the path of a wall, and therefore do not claim such broadly.

In order to hold the locking-pin 5 in the raised position shown in Fig. 1, in order that the



cars may be left with the coupling-pins in their raised positions and the cars afterward separated, I employ a holding device 16. (Shown best in Figs. 3 and 5.) This holding device is  
 5 nothing more than a lever journaled on the trunnions 17 and so proportioned that its upper end 18 is heavier than its tail 19, and therefore the holding device normally falls in a forward position. It therefore follows that if the  
 10 locking-pin 5 is raised to its highest position, as shown in Fig. 1, the upper end 18 of the holding device will fall forward under the notch 20 in the locking-pin, and thus prevent said locking-pin from returning to its lowest  
 15 position. The cars may now be left and the attendants may go forward to another car and move its pin in a similar position, so that all that is necessary to do is to draw the forward cars away, the raised position of the coupling-  
 20 pins permitting the knuckles to swing open. When said knuckle 2 is swung open, the tail of the knuckle swings against the upper end of the holding device and pushes it rearwardly, and the coupling-pin now rests on the tail 4 of  
 25 the knuckle, as shown in Fig. 3. In this position the coupling is all ready to be coupled with another car just as though the holding device were not used. The tail 19 forms a handle  
 30 by which the upper end of the holding device may be moved, as it is sometimes desirable to permit the pin to drop again without having uncoupled the cars. To accomplish this purpose when the parts are in the position  
 35 shown in Fig. 1, all that is necessary to do is to move the tail 19, and the upper end 18 is moved out of the path of the locking-pin, and the latter therefore falls, again locking the coupler closed. It will be obvious that  
 40 my device has a certain measure of utility if the tail 19 be omitted, as the upper end 18 is automatic to the extent of dropping under the locking-pin when said pin is raised and of being shoved out of the way by the tail of the knuckle when the latter is open.  
 45 It will be seen from the foregoing and the accompanying drawings that I have invented a very simple form of holding device for supporting the pin in the upper position and that it consists of nothing more than a simple  
 50 lever properly pivoted in the coupling-head. It can be made of one piece, if desired,

and can therefore be made of a malleable casting. I should have stated that the upper end 18 is preferably formed out of the plane of the lower part, as shown best in Fig. 4. 55

What I claim as new is—

1. In a car-coupling, the combination of a knuckle and its locking-pin, of a holding device for supporting the said pin in an unlocked position, comprising an arm arranged 60 to fall under a portion of said pin when the latter is raised, said holding device being located to the rear of said knuckle and locking-pin, and having a portion projecting through the shell of the coupler whereby the holding 65 device may be operated, substantially as described.

2. In a car-coupling, the combination of a knuckle and its pin, of a holding device comprising a single member arranged to project 70 in the path of the locking-pin and holding the same in a raised position, said locking device being located at the rear of said knuckle and locking-pin and projecting through an opening running longitudinally of said coupling and affording a means by which the hold- 75 ing device may be operated, substantially as described.

3. In a car-coupling, a locking-pin comprising two main parts, and a dog pivotally supported with relation thereto, the pivotal pin 80 for said dog also connecting said two main parts together, substantially as described.

4. In a car-coupling, a locking-pin comprising two main parts, one of which moves with 85 relation to the other, a pin for securing said parts together, and a dog pivoted on the said pin, substantially as described.

5. In a car-coupling, a locking-pin comprising two main parts secured together by a pin, 90 one of said parts having a slot through which said pin passes, thus permitting a movement of one of said parts with relation to the other, and a dog pivoted on said pin, substantially 95 as described.

Signed by me at Washington, District of Columbia, this 13th day of February, 1902.

PERRY BROWN.

Witnesses:

GEO. E. FRECH,  
 THOS. E. ROBERTSON.