

No. 746,561.

PATENTED DEC. 8, 1903.

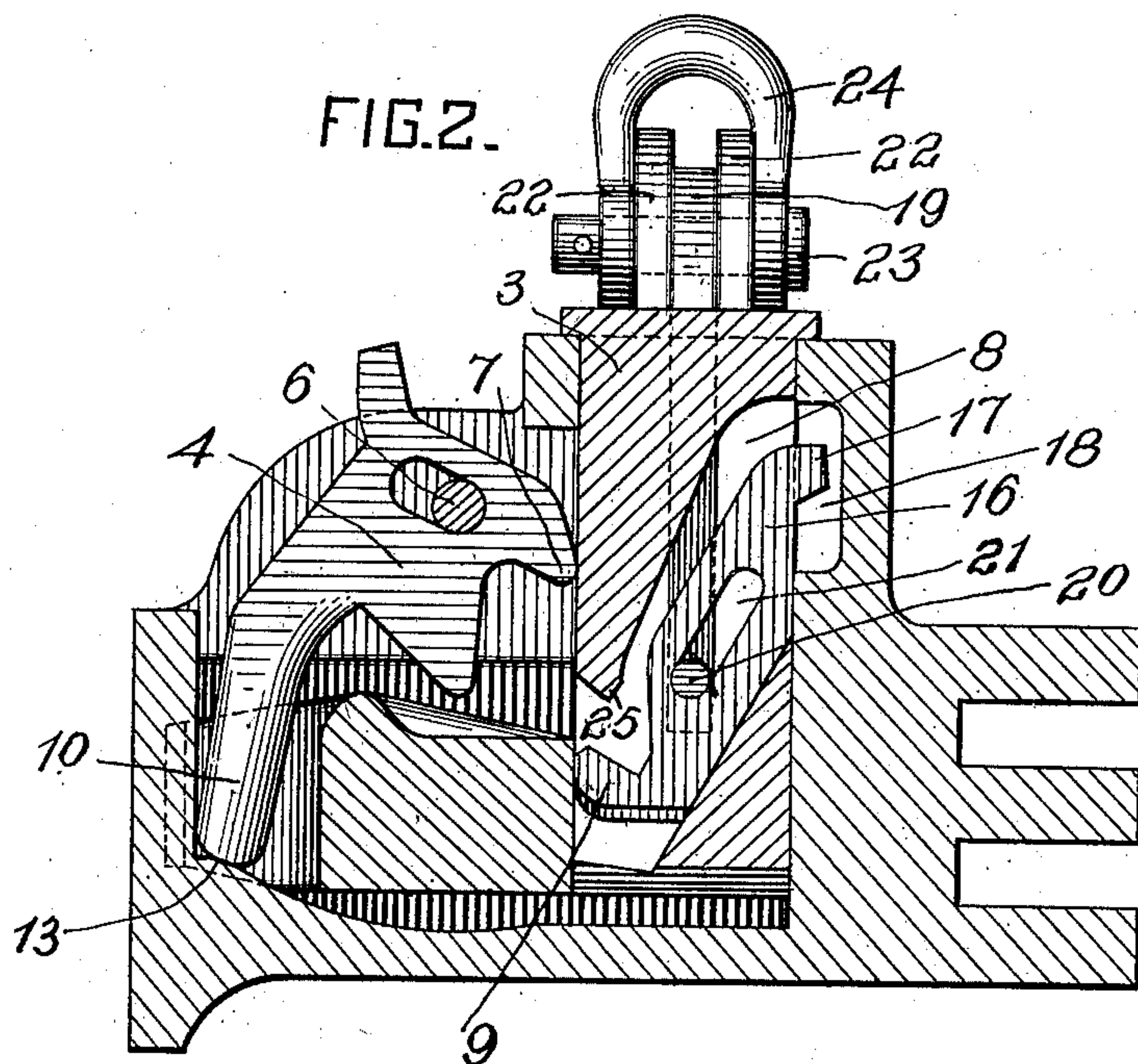
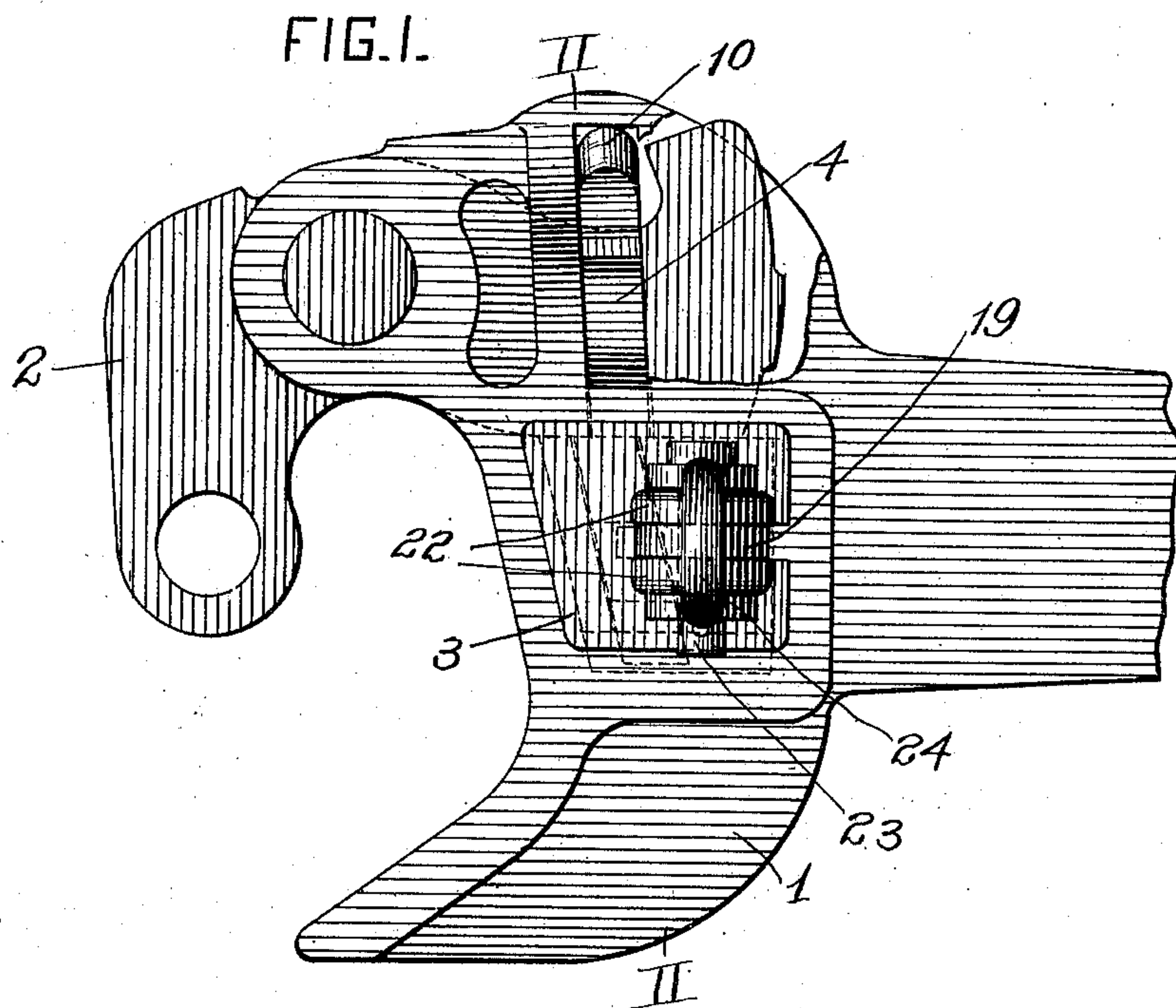
W. McCONWAY, JR.

CAR COUPLING.

APPLICATION FILED AUG. 1, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

*Herbert Bradley*  
*Fred Kirchner*

INVENTOR

*William McConway Jr.*  
*by Christy & Christy Att'ys.*

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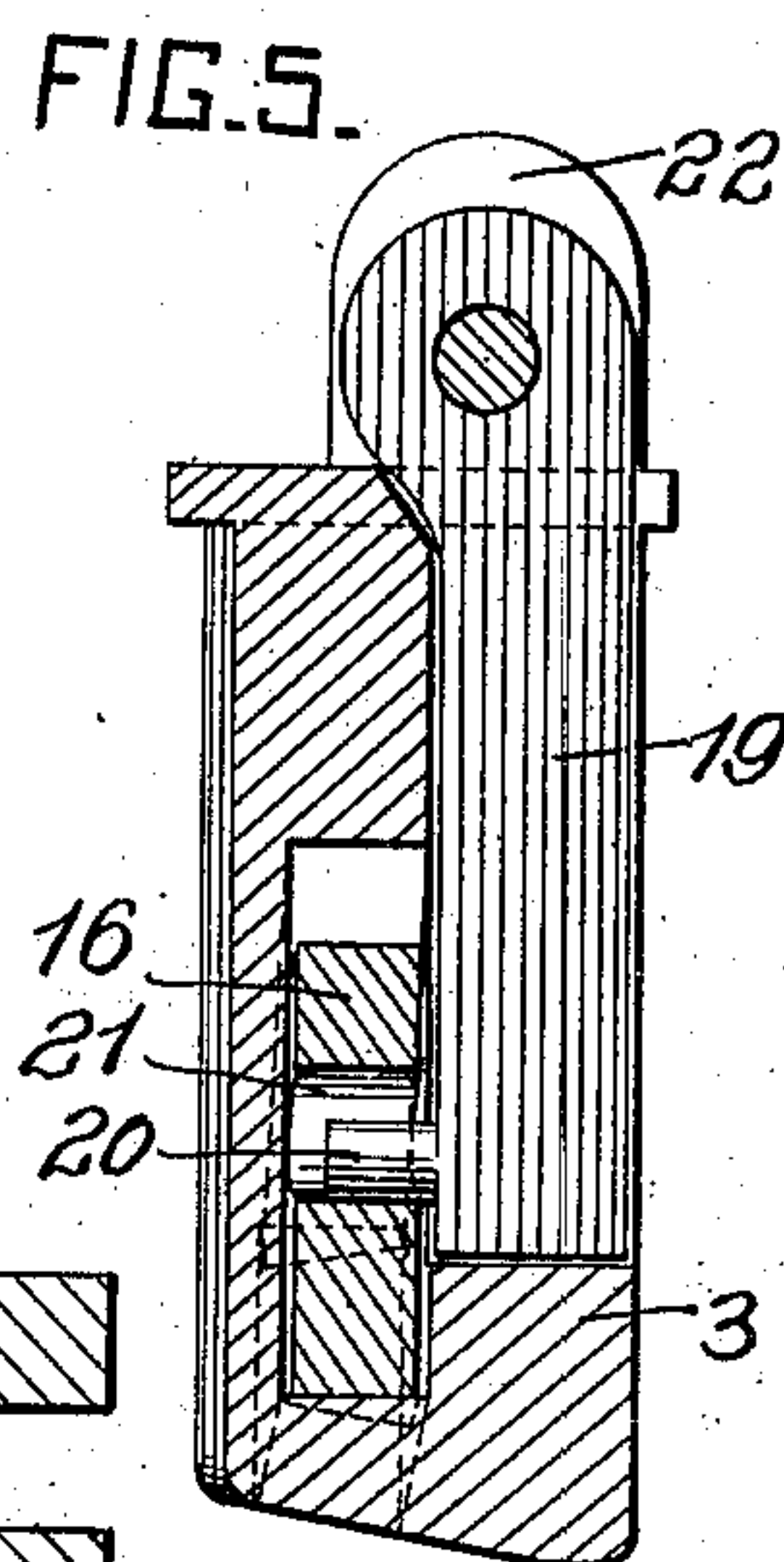
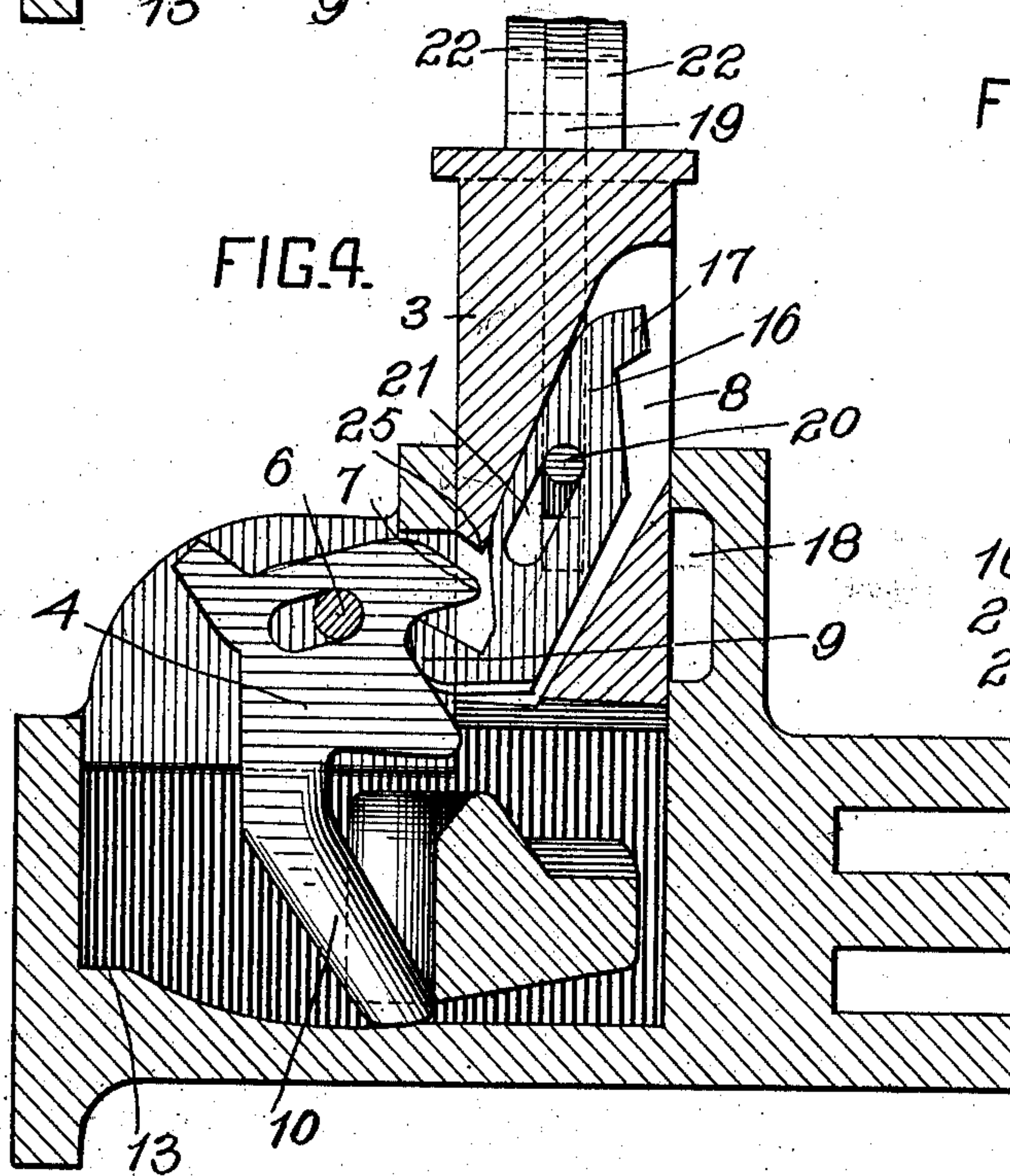
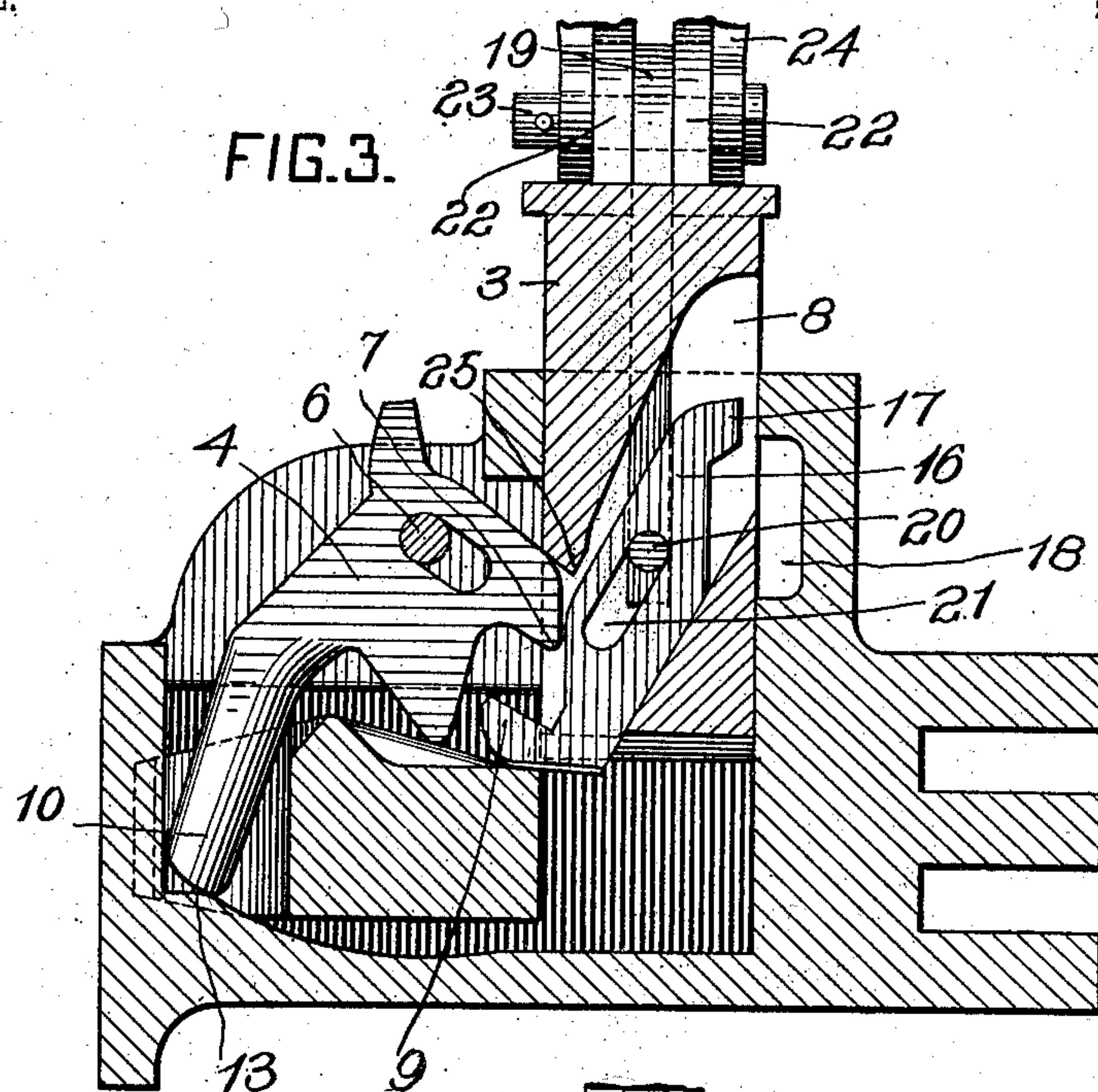
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## CAR COUPLING.

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by Christy & Christy  
Att'ys.



# UNITED STATES PATENT OFFICE.

WILLIAM McCONWAY, JR., OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO  
THE McCONWAY & TORLEY COMPANY, OF PITTSBURG, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 746,561, dated December 8, 1903.

Application filed August 1, 1903. Serial No. 167,862. (No model.)

*To all whom it may concern:*

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

In an application filed December 31, 1902, Serial No. 137,297, I have described and claimed certain improvements in car-couplers of the Master Car-Builders' type, said improvements consisting, generally stated, in means for holding the locking-pin in unlocking position, combined with means operative by the locking block or pin for shifting the swinging hook or knuckle to open position.

The invention described herein has for its object the provision of a movable dog or pawl for preventing an accidental shifting of the locking block or pin, said dog or pawl being so constructed as to engage when shifted from its pin-locking position the knuckle or hook opener.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a top plan view of a Master Car-Builders' type of coupler having my improvements applied thereto. Fig. 2 is a sectional elevation on a plane indicated by the line IIII, Fig. 1, showing the locking block or pin in normal or locking position. Figs. 3 and 4 are views similar to Fig. 2, showing in Fig. 3 the locking block or pin supported in unlocking position and the knuckle closed, and Fig. 4 the knuckle open. Fig. 5 is a sectional elevation of the locking-block with its locking dog or pawl.

In the practice of my invention the coupler is of the usual form of construction as regards the head 1, knuckle 2, and locking-block 3, except as to features hereinafter described. A block 4 is so arranged in a slot formed in the top wall of the coupler-head that it may have a swinging or lateral movement toward and from the locking-block and also a rotating movement to effect an opening of the knuckle. The rocking movement has its center of movement at the lower end of the arm or prop 10, while the rotating movement is about or around a pin 6, passing through a

slot 5 formed in the block 4. This block 6 is provided with a horn 7, which when the locking block or pin is in locking position rests against the side of the latter, as shown. As the locking-block is raised to unlocking position the block 4 will drop forward, the horn 7 entering a recess or opening 8 in the side of the locking-block and by such engagement with the locking-block support the latter in unlocking position, as shown in Fig. 3. This movement has its center at the point where the arm or leg rests on the abutment 13.

As clearly shown in Figs. 2, 3, 4, and 5, a dog or pawl 16 is arranged in the opening or recess 8 in the locking-pin. This opening or recess is inclined so that the dog or pawl may when free to move drop down, thereby causing a toe or projection 9 on the dog to project beyond the walls of the locking-pin, so as to engage the horn 7. The opposite end of the dog or pawl 16 is provided with a projection 17, adapted when the dog is shifted by the tail of the knuckle, as hereinafter described, to project beyond the opposite sides of the locking block or pin and engage a portion of the coupler-head. In the construction shown the projection 17 will extend into a recess 18 in the coupler-head. A rod or bar 19 is arranged in a vertical recess in the locking-pin and is provided with a pin 20, projecting into a slot 21 in the dog or pawl 16. The purpose of this lifting-rod is to shift the projection 17 on the dog or pawl out of the recess of the coupler-head and into the opening in the locking-pin, so that the latter can be lifted by the lifting mechanism. As clearly shown in the drawings, the rod or bar 19 has its upper end arranged between lugs or ears 22 on the locking block or pin, and through these lugs and the end of the bar is passed the pin 23, connecting the shackle 24 to the locking-block. The ears or lugs 22 are slotted, as shown, so as to permit of a movement of the bar or rod 19 independent of the locking block or pin.

The position of the parts with the knuckle closed and locked is shown in Fig. 2, the projection 17 on the dog extending into the notch or recess 18 of the coupler-head, thereby locking the pin as against accidental lifting. When it is desired to unlock the hook or knuckle, the shackle is raised, thereby first lifting the rod or bar 19, causing the pin 20 to



shift or slightly rotate the dog or pawl 17, so as to withdraw the projection 17 from the recess 18 into the locking block or pin. As the upward movement of the shackle continues the locking block or pin will be raised above the tail of the knuckle, thereby permitting the dog or pawl to slide down and its toe or projection 9 to pass beyond the side of the locking-pin, as shown in Fig. 3. As the locking block or pin reaches this position the block 4 will drop forward, its horn 7 passing into the lower end of the recess 8 or just below a shoulder 25 formed by said recess. If it is desired to open the hook or knuckle, the upward movement of the locking block or pin is continued and the toe or projection 9 on the dog or pawl will hook under the horn 7 and rotate the block 4 on the pin 6, thereby bringing the arm or prop 10 against the rear side of the tail of the knuckle and forcing the latter to open position, as shown in Fig. 4. When the knuckle is closed, the arm 10 will be forced back onto the abutment 13, rotating the block 4, its center of movement on the pin 6 being shifted toward the horn 7, as shown in Fig. 4. This rotation of the block will be around the pin 6 while it is at the right hand end of the slot, and in thus turning the horn 7 will be turned out of the path of movement of the shoulder 25, permitting the locking-block to drop. As the locking-block drops the toe or projection 9 will strike against the tail of the knuckle, forcing the dog or pawl up along the slot or recess 8, the projection 17 passing into the slot or recess 18 in the head, as shown in Fig. 2.

As before stated, the movement of the block 4 to lock up the locking block or pin has its center at the lower end of the arm 10, where it rests upon abutment 13. The movement of the block 4 to effect an opening of the coupler is around the pin 6, and its return to normal position is also around the pin, but when the block has been so shifted the pin is at the right-hand end of the slot.

I claim herein as my invention—

1. In a car-coupler of the swinging-hook or

Master Car-Builders' type the combination of a swinging hook or knuckle, a locking block or pin, a knuckle or hook opener and a dog or pawl automatically movable to engage and shift the opener on the upward movement of the locking block or pin, substantially as set forth. 50

2. A locking-pin for a coupler of the Master Car-Builders' type having in combination a transversely-movable dog, automatically movable to position where one end will project beyond the pin and means for shifting the dog to position where its opposite end will project beyond the pin, substantially as set forth. 60

3. In a car-coupler of the swinging-hook or Master Car-Builders' type the combination of a swinging hook or knuckle, a locking block or pin, a knuckle-opener, a dog or pawl automatically movable to engage and shift the knuckle-opener on the upward movement of the locking-pin, and means for shifting the dog or pawl to pin-locking position on the movement of the pin to normal or knuckle-locking position, substantially as set forth. 70

4. In a car-coupler of the swinging-hook or Master Car-Builders' type the combination of a swinging hook or knuckle, a locking block or pin, a knuckle-opener, and a dog or pawl movably mounted in the block or pin and provided with projections adapted to engage the knuckle-opener and the coupler-head, substantially as set forth. 8c

5. In a car-coupler of the swinging-hook or Master Car-Builders' type, the combination of a swinging hook or knuckle, a locking block or pin, a dog or pawl for locking the pin in normal position, and movable to pin-locking position by the tail of the knuckle on the movement of the pin to knuckle-locking position, substantially as set forth. 85

In testimony whereof I have hereunto set my hand.

WILLIAM McCONWAY, JR.

Witnesses:

DARWIN S. WOLCOTT,

F. E. GAITHER.