

No. 711,151.

Patented Oct. 14, 1902.

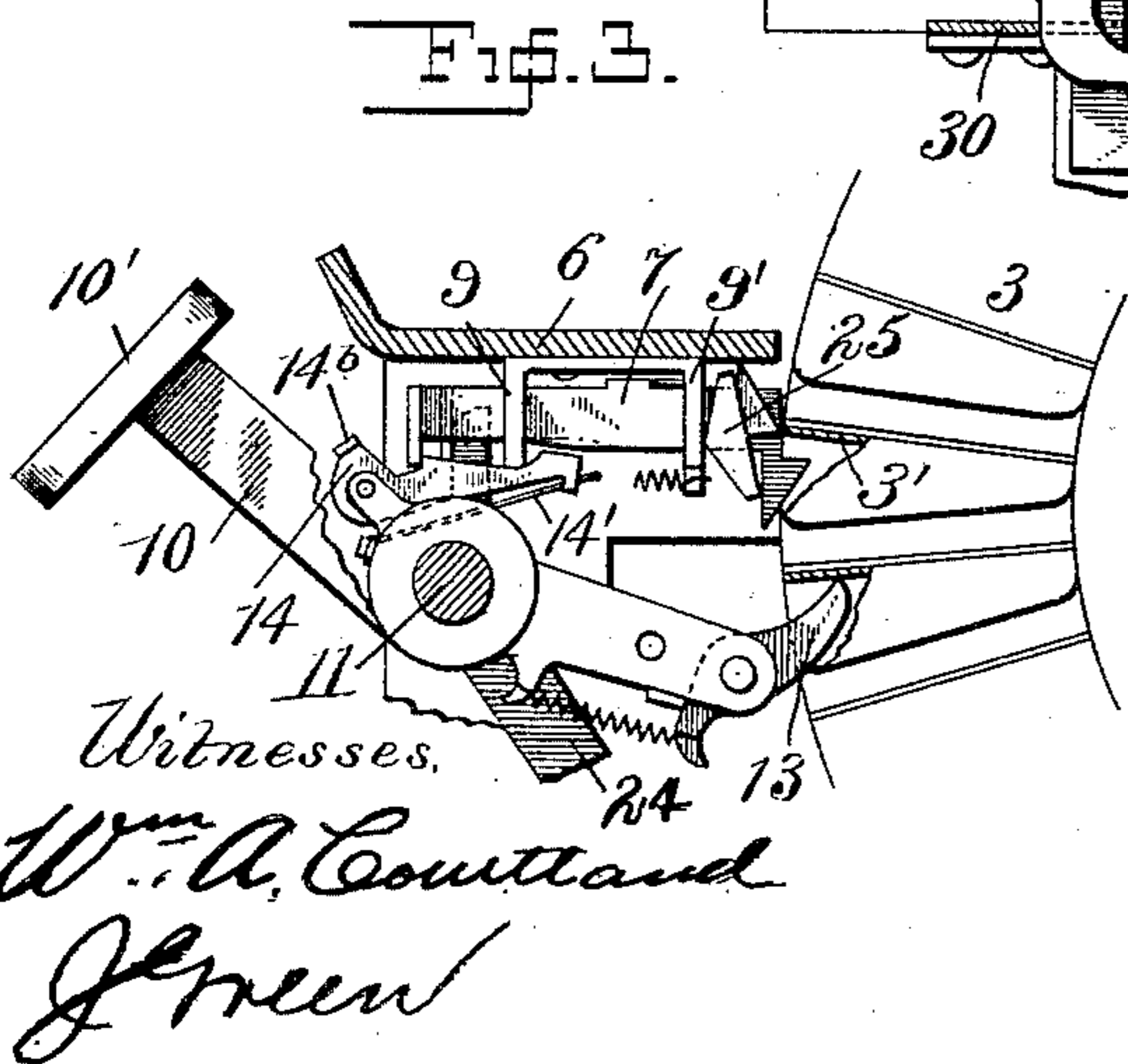
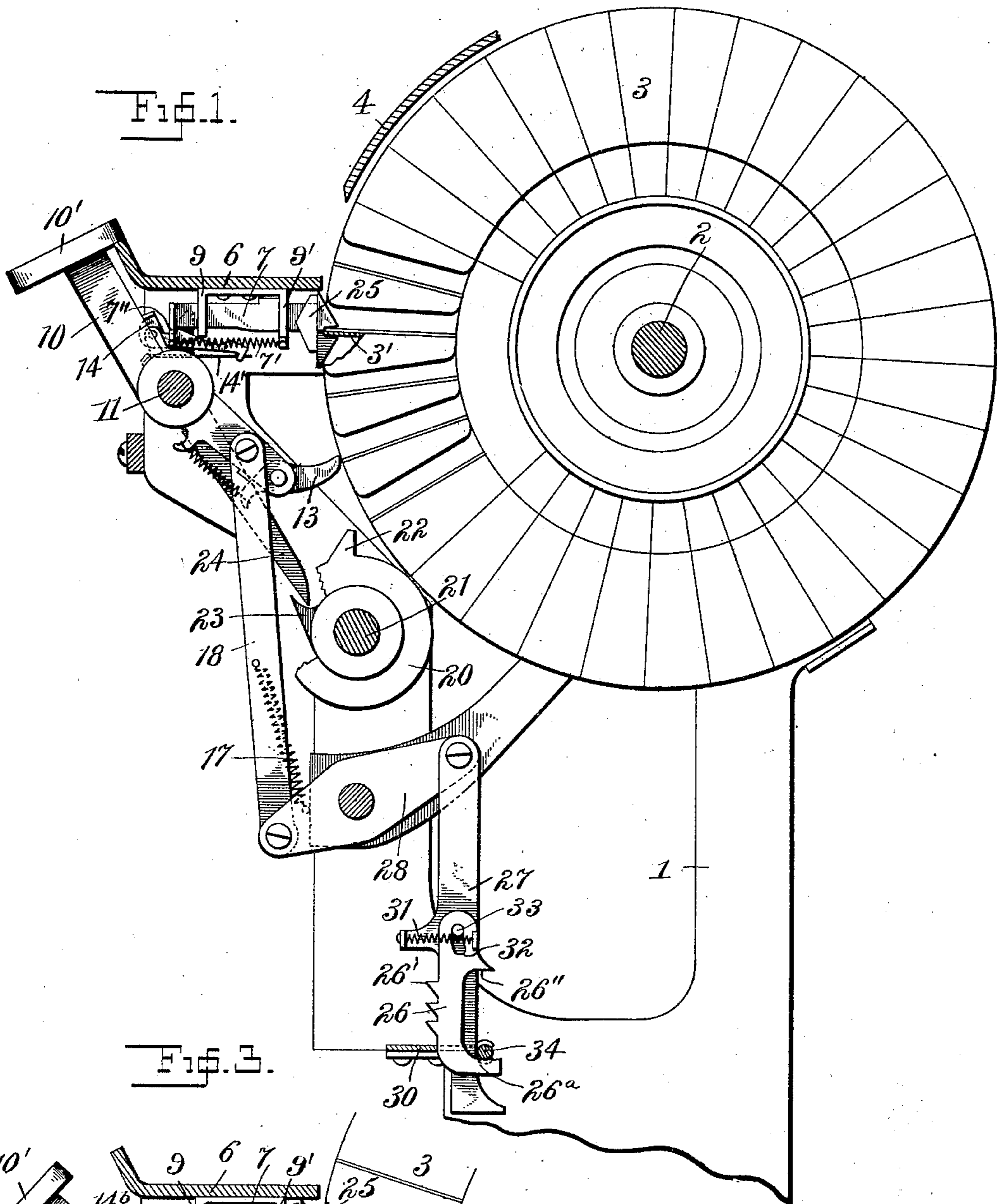
I. S. DEMENT & F. J. HULL.

MECHANICAL CASHIER.

(Application filed Oct. 3, 1901.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses,

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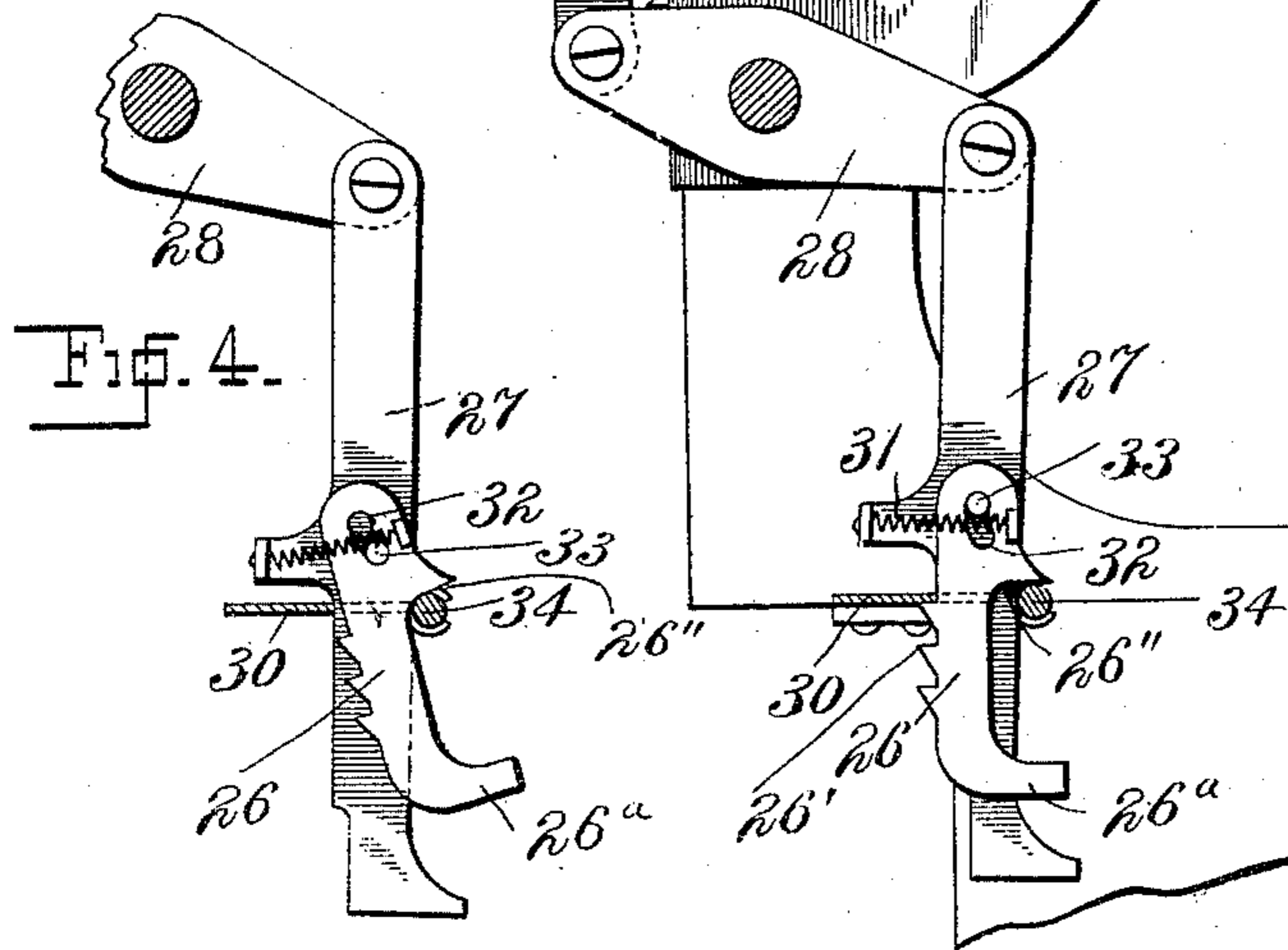
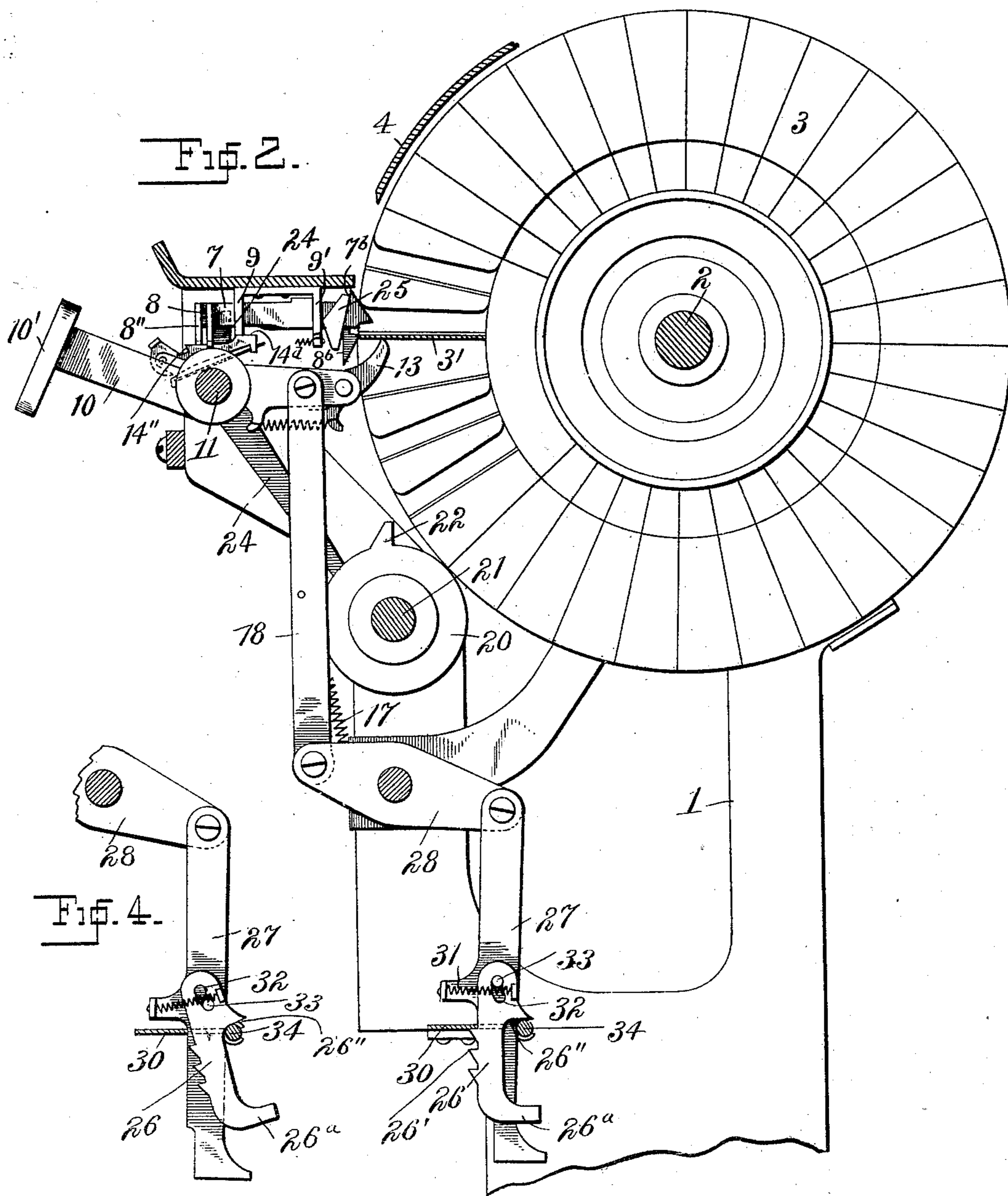
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MECHANICAL CASHIER.

(Application filed Oct. 8, 1901.)

(No Model.)

3 Sheets—Sheet 2.



Witnesses.

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Patented Oct. 14, 1902.

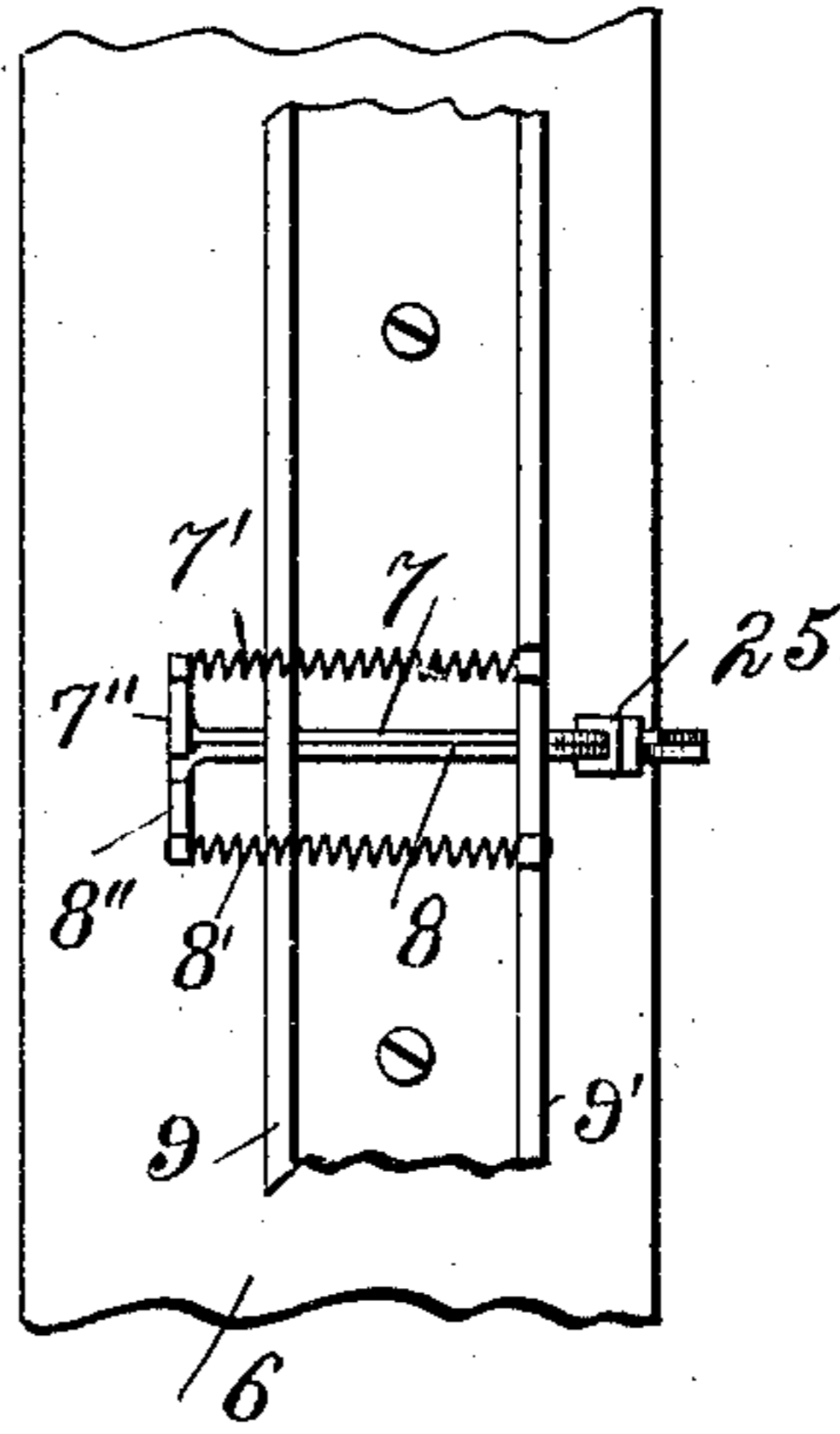
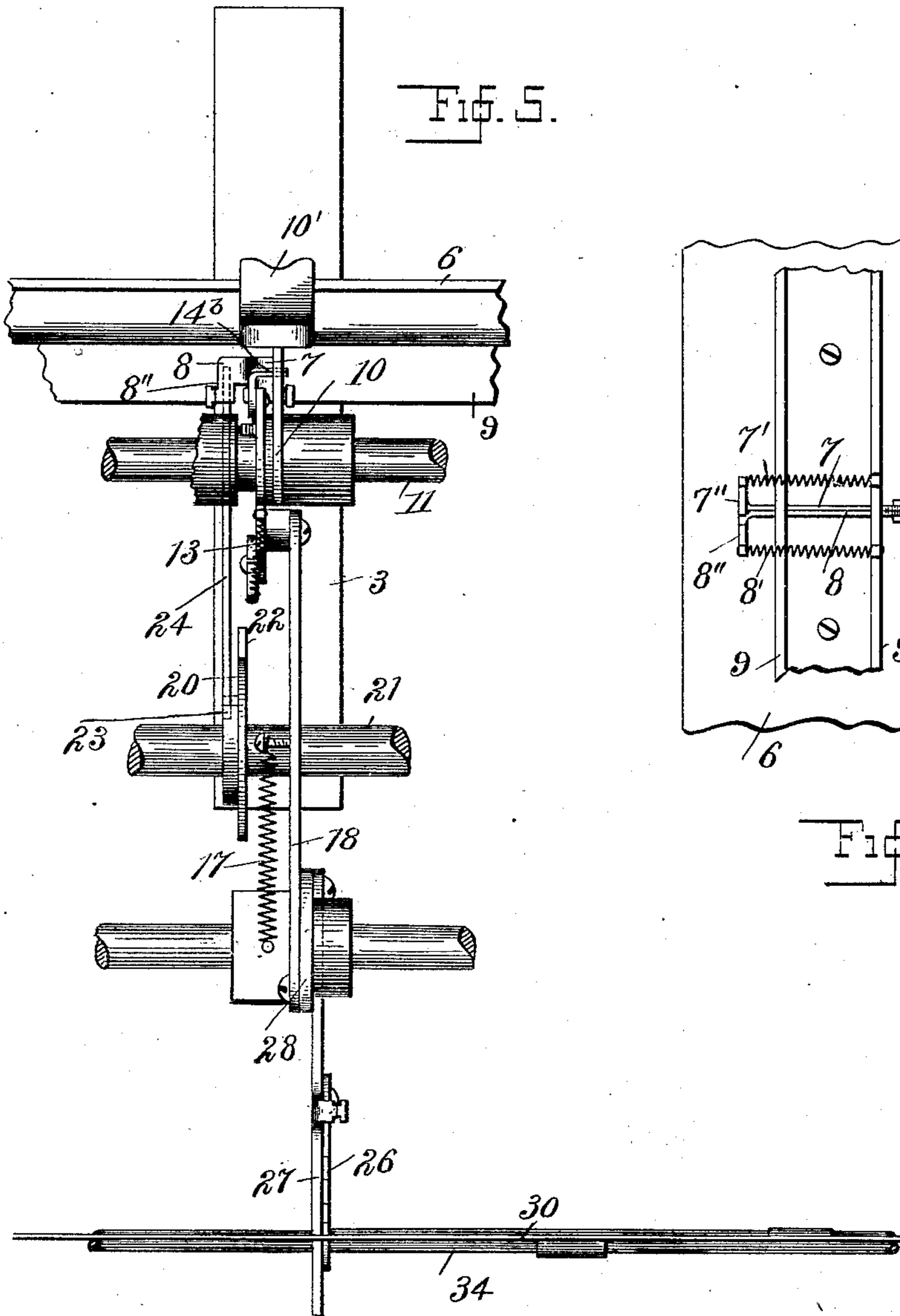
I. S. DEMENT & F. J. HULL.

MECHANICAL CASHIER.

(Application filed Oct. 3, 1901.)

(No Model.)

3 Sheets—Sheet 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ISAAC S. DEMENT, OF EAST ORANGE, NEW JERSEY, AND FOSTER J. HULL, OF BROOKLYN, NEW YORK, ASSIGNORS, BY MESNE ASSIGNMENTS, TO AMERICAN MECHANICAL CASHIER COMPANY, A CORPORATION OF NEW JERSEY.

MECHANICAL CASHIER.

SPECIFICATION forming part of Letters Patent No. 711,151, dated October 14, 1902.

Application filed October 3, 1901. Serial No. 77,474. (No model.)

To all whom it may concern:

Be it known that we, ISAAC S. DEMENT, residing at East Orange, in the county of Essex and State of New Jersey, and FOSTER J. HULL, residing at Brooklyn, in the county of Kings and State of New York, citizens of the United States, have invented certain new and useful Improvements in Mechanical Cashiers, of which the following is a specification.

10 This invention relates to controlling mechanism for the cash-receptacles of mechanical cashiers; and its object is to provide means for locking the cash-receptacles from forward- and backward movement in such manner that
15 said receptacle is normally locked against movement in both directions, and when it is released for movement in one direction it remains locked against movement in the other direction.

20 A further object of our invention is to insure that when a controller is operated to move the cash-receptacle in the reception of money therein it must be operated to its fullest extent before it can resume its normal position. This is to insure that the various operations performed by the controller, and
25 more especially the operation of the cash-receptacle thereby, shall be fully effected each time the controller is operated.

30 In the accompanying drawings, Figure 1 is a vertical sectional view, transverse to the axis, of a cash-receptacle and its controlling and operating mechanism, showing the normal position thereof. Fig. 2 is a similar view
35 showing the position of the parts as the controller completes its operation. Fig. 3 is a detail view of the controller in an intermediate position. Fig. 4 is a detail view of the dogging device for insuring complete operation of the controller. Fig. 5 is a front elevation, and Fig. 6 an inverted plan view, of
40 the locking-dogs.

45 The general operating mechanism of the cashier is not herein shown, as it may be of any suitable construction—for example, that shown in patent to Dement and Bassett, No. 618,932, February 7, 1899. A machine of this character comprises a plurality of cash-receptacles, which may, as in that patent, be mount-

ed side by side on a common axis. As the construction of the controlling and operating means is substantially identical for each such receptacle, we have shown herein only a single element comprising a receptacle, the controller which turns it forward in depositing or receiving the cash, and the operating means whereby it is turned back to deliver the cash.

1 represents a portion of the frame of the machine, which supports a shaft or axis 2, on which the cash-receptacles are adapted to rotate independently. One of such receptacles is indicated at 3 and comprises a circumferential series of pockets formed by and between flanges, ribs, or walls 3', said pockets being brought successively in the rotation of the receptacle opposite an opening formed in the front of the casing 4. When a pocket is in this position, money may be charged into it or ejected from it through said opening, and in the latter case such money is received on a ledge 6.

It is desirable to normally lock the cash-receptacle from movement in either direction except as it is rendered necessary by the cash receiving and delivering operations. To this end we provide two sliding dogs or catches 7 8, sliding in guides 9 9' on the under side of ledge 6 and engaging, respectively, with the top and bottom of a rib or wall 3' of a cash-pocket, thereby preventing the cash-wheel 3 from turning in either direction. Springs 7' 8' normally throw these catches into position to engage the cash-wheel.

To turn the cash-wheel forward after cash has been deposited in a pocket, a controller is provided consisting of a key-lever 10, pivoted on a shaft 11, which is common to all the controllers, said lever having at its rear end a latch 13, adapted when the controller key or handle 10' is depressed to engage a rib or wall 3' of the cash-wheel, as shown in Fig. 2, and turn the wheel one step forward to bring another pocket opposite the opening and remove the last filled pocket from accessible position. To enable this movement of the receptacle to be effected, the catch 7 must first be drawn back, and the controller-lever 10 carries a latch or trip device 14, that is nor-

mally held by a spring 14' in position to engage by its hook 14'' with a lip 7'' on the dog 7, as shown in Fig. 1. When controller-lever 10 is pulled forward and downward, this latch 5 draws the dog 7 forward, as shown in Fig. 3, to release the cash-wheel and allow the latter to be turned forward by the further movement of the controller, as above stated. In this further movement of the controller the latch 14 is drawn forward, as shown in Fig. 2, 10 so that a cam portion 14^a on the tail thereof engages the fixed plate or projection 9 to depress the latch and free its hook from the dog 7, which then springs forward above the next 15 rib or pocket-wall 3' of the cash-wheel. As the controller completes its movement this rib 3' strikes the inclined end of dog 8 and presses same forward, said dog then snapping back below said rib 3', which is then locked 20 between the dogs 7 8. Controller 10 when released by the operator is returned to normal position by a spring 17, connected to a relatively fixed part and to a bar 18, pivoted to lever 10, and in such movement the latch 14 25 slips back under lip 7'' on the dog 7, this movement being aided by a lip 14^b on said latch, which is struck by the lever 10.

The means provided to move the cash-receptacle backward to deliver cash comprises 30 an operator device 20, mounted on a shaft 21 and operated by any suitable means. (Not shown.) A projection 22 on this device engages a rib 3' on the cash-wheel to turn the wheel backward, and another projection 23 35 thereon engages a lever 24, which in turn engages a lip 8'' on dog 8 to press said dog forward to release the cash-wheel for such backward rotation. In such rotation the next 40 upper rib 3' of the cash-wheel passes the inclined end of the catch or dog 7 and the latter snaps back over the rib.

It will thus be seen that by the above-described mechanism only one of the dogs 7 8 is pushed forward at a time. To further insure this, however, we provide a safety device consisting of a link or loose rocking lever 25, that is placed between the shoulders 7^b 8^b at the ends of dogs 7 8 and the fixed plate 9', the front side of said link being angular or doubly beveled, so as to rock on said 50 plate. When either of the dogs is pressed forward, it presses against an end of this link and forcing the link against the plate 9' rocks it so as to throw the other end backward to 55 hold the other dog from being released. If both dogs be pressed forward simultaneously, this link will engage plate 9' and prevent release of either dog.

To insure proper operation of the above-described devices, it is necessary that the controller should be fully operated and should not be pressed down part way and then released. For this purpose we provide a detent-rack 26, connected to the controller, said 60 rack being, for example, pivoted to a bar 27, depending from a lever 28, whose other end is pivoted to bar 18, bar 27 sliding in a slot

in a fixed plate 30. Said rack 26 has ratchet or inclined teeth 26', which are adapted when the bar 27 is depressed to engage the edge of 70 the fixed plate 30, said rack being held toward said plate 30 by a spring 31. The pivot-hole of rack 26 is an oblique angular slot 32, as shown, and the spring 31 is normally below the pivot-pin 33, so as to pull the rack against 75 the dogging-plate 30; but when the rack-bar is fully depressed a projection 26'' thereon engages a fixed rod 34, as shown in Fig. 4, to hold the rack from passing farther downward, and a slight further downward movement of 80 bar 27 carries pivot-pin 33 to the other end of the pivot-hole and to the other side of spring 31, which immediately acts to throw the rack 26 rearwardly away from the dogging-plate 30, said spring acting as a double-throw 85 spring—that is, tending to hold the rack in either position to which it has been moved. As the controller is operated the rack 26 descends, and if the movement of the controller is only partial the rack will be left with one 90 of its teeth engaging plate 30, so that the controller cannot be restored to normal position until it is fully depressed, whereupon, as explained, the rack is freed and is held firm until the controller has about regained normal 95 position. A lug 26^a on rack 26 then engages fixed bar or rod 34 and throws the rack forward to normal position. The bar 27 may also serve as a means of connection or coöperation with the permutating or change-con- 100 trolling mechanism. (Not shown.)

Having thus described our invention, the following is what we claim as new therein and desire to secure by Letters Patent:

1. In a mechanical cashier, the combination 105 of a movable cash-receptacle, controller means for moving said receptacle in one direction, a locking device for preventing this movement, operating means for moving the receptacle in reverse direction, and a locking 110 device separate from the first-named locking device for preventing such reverse movement.

2. The combination with the movable cash-receptacle, of two separate dogging devices controlling its movement in opposite direc- 115 tions.

3. The combination with the movable cash-receptacle, of two separate dogging devices controlling its movement in opposite directions, and means coöperating with both of 120 said dogging devices to prevent operation of one of them when the other is operated.

4. The combination with the movable cash-receptacle, of two separate dogging devices controlling its movement in opposite direc- 125 tions, and means adapted to be operated by each of said dogging devices to prevent operation of the other dogging device.

5. The combination with the movable cash-receptacle, of two separate dogging devices 130 controlling its movement in opposite directions, and means for preventing simultaneous release of said dogging devices.

6. The combination with the cash-wheel, of

two separate dogs engaging therewith to prevent operation of the cash-wheel, each dog tending to move into engagement with the cash-wheel and having an inclined head to permit movement of the cash-wheel into dogged position from either side, and means for operating said dogs separately.

7. The combination with the cash-wheel, the controller, and the operative means for moving it in reverse direction, of two dogs or catches respectively operated by the controller and the operator to release the wheel for movement in the corresponding direction, said dogs or catches tending to move into engagement with the cash-wheel and provided with means engaged by the cash-wheel to permit the latter to move into dogged position in either direction.

8. In a mechanical cashier, a cash-wheel, controlling means therefor, a dogging-rack connected to said controlling means and a fixed detent engaging therewith to prevent back movement of the controlling means, fixed means engaging with the dogging means to cause engagement of same with the fixed

detent when the controller is in normal position, means engaging said dogging-rack on the completion of the controlling movement to cause release of the controller means, and a double-throw spring connected to the dogging-rack and tending to pull it either into or out of dogging position.

9. In a mechanical cashier, the combination of controlling means, dogging means comprising a rack and a detent to engage therewith, a spring connected to said dogging means, said dogging means being relatively movable to cause said spring to move the parts thereof into or out of engagement, and means engaging one of said parts on the completion of the controlling movement to cause the spring to move the dogging parts out of engagement, and on return of the controlling means to normal position, to cause the dogging parts to assume engaging relation.

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