

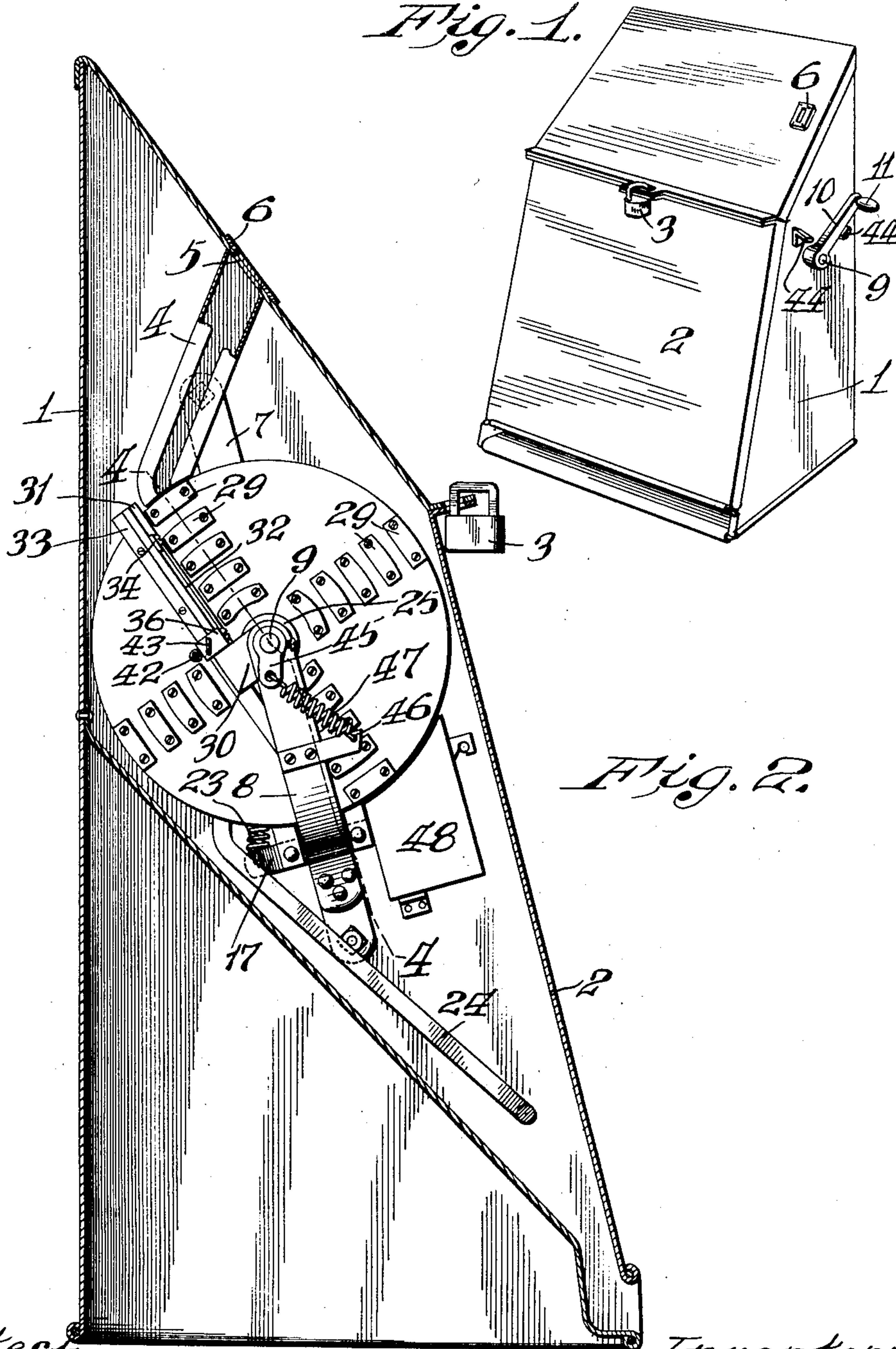
C. A. DAWES.  
 COIN CONTROLLING MECHANISM FOR VENDING MACHINES.  
 APPLICATION FILED OCT. 27, 1909.

967,111.

Patented Aug. 9, 1910.

3 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 2.*

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*N. G. Butler.*

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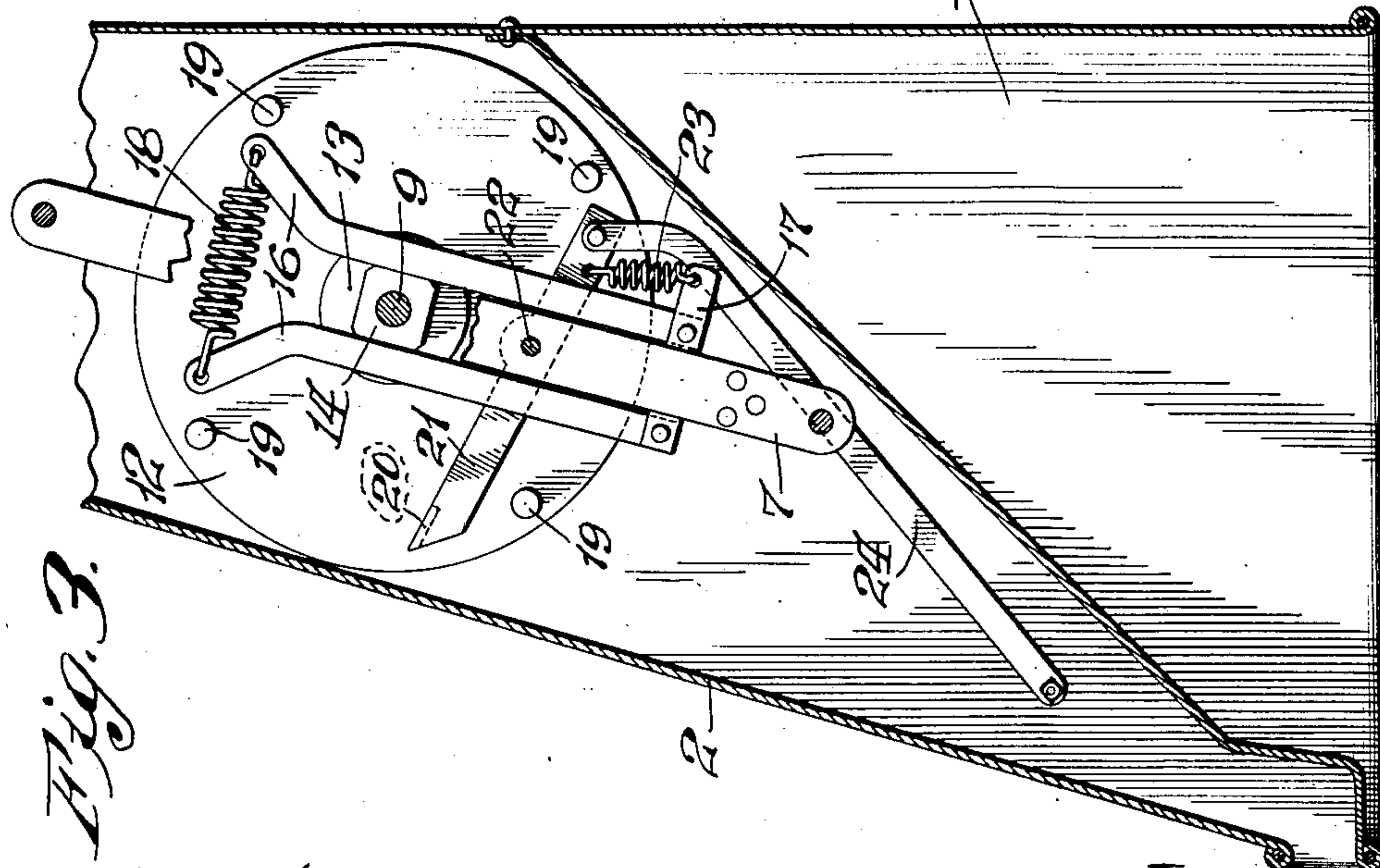
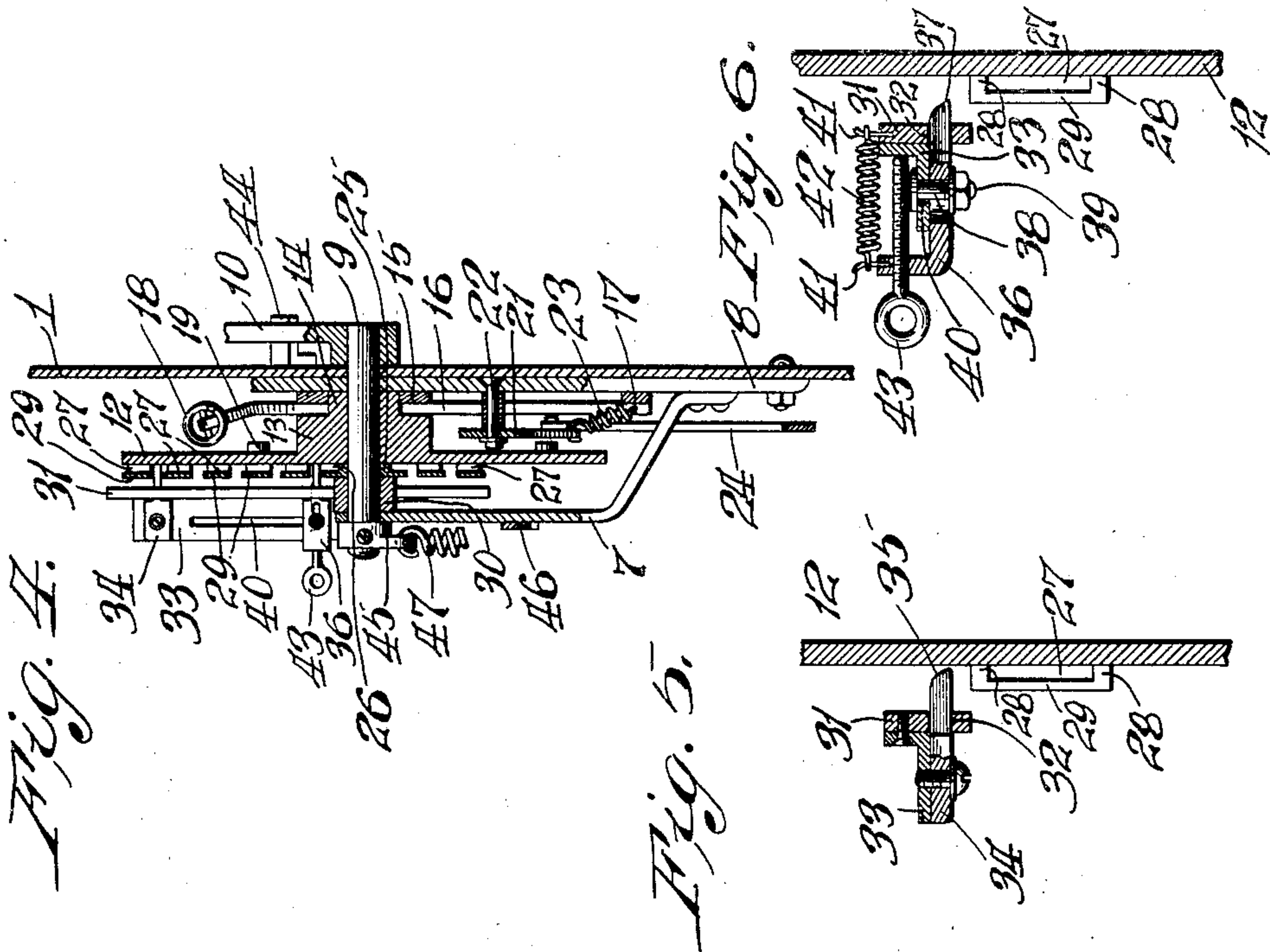


Fig. 3.

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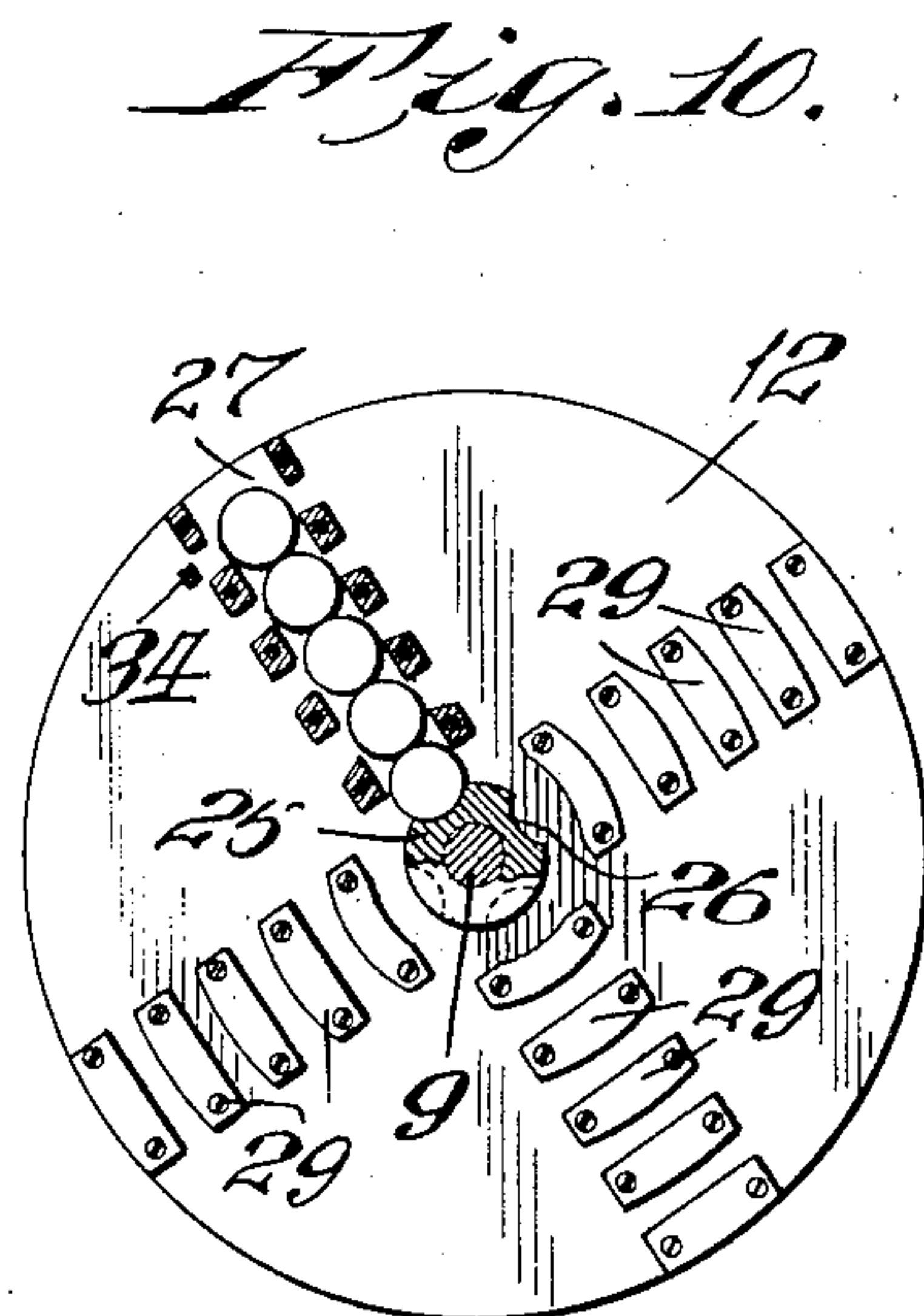
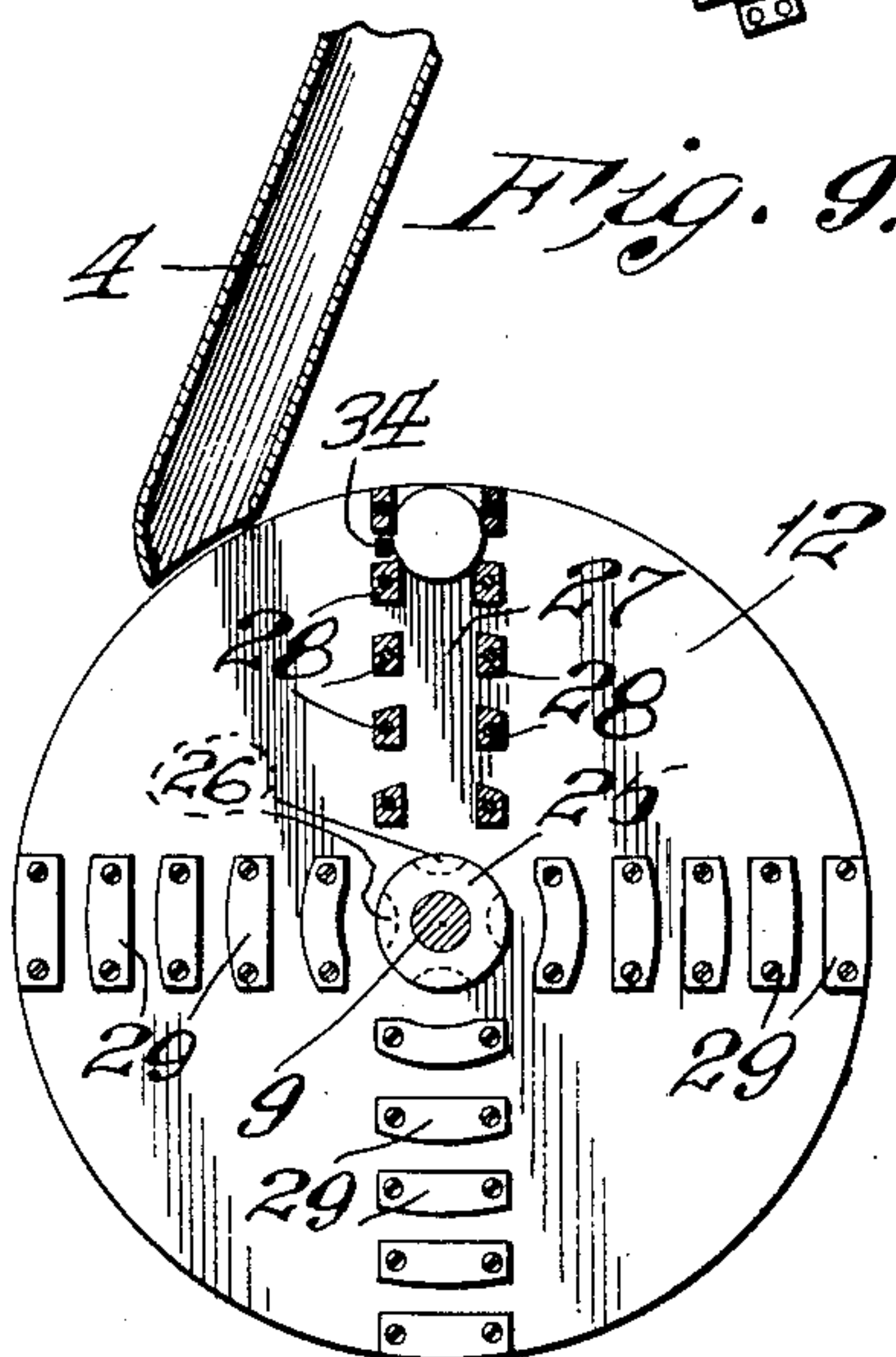
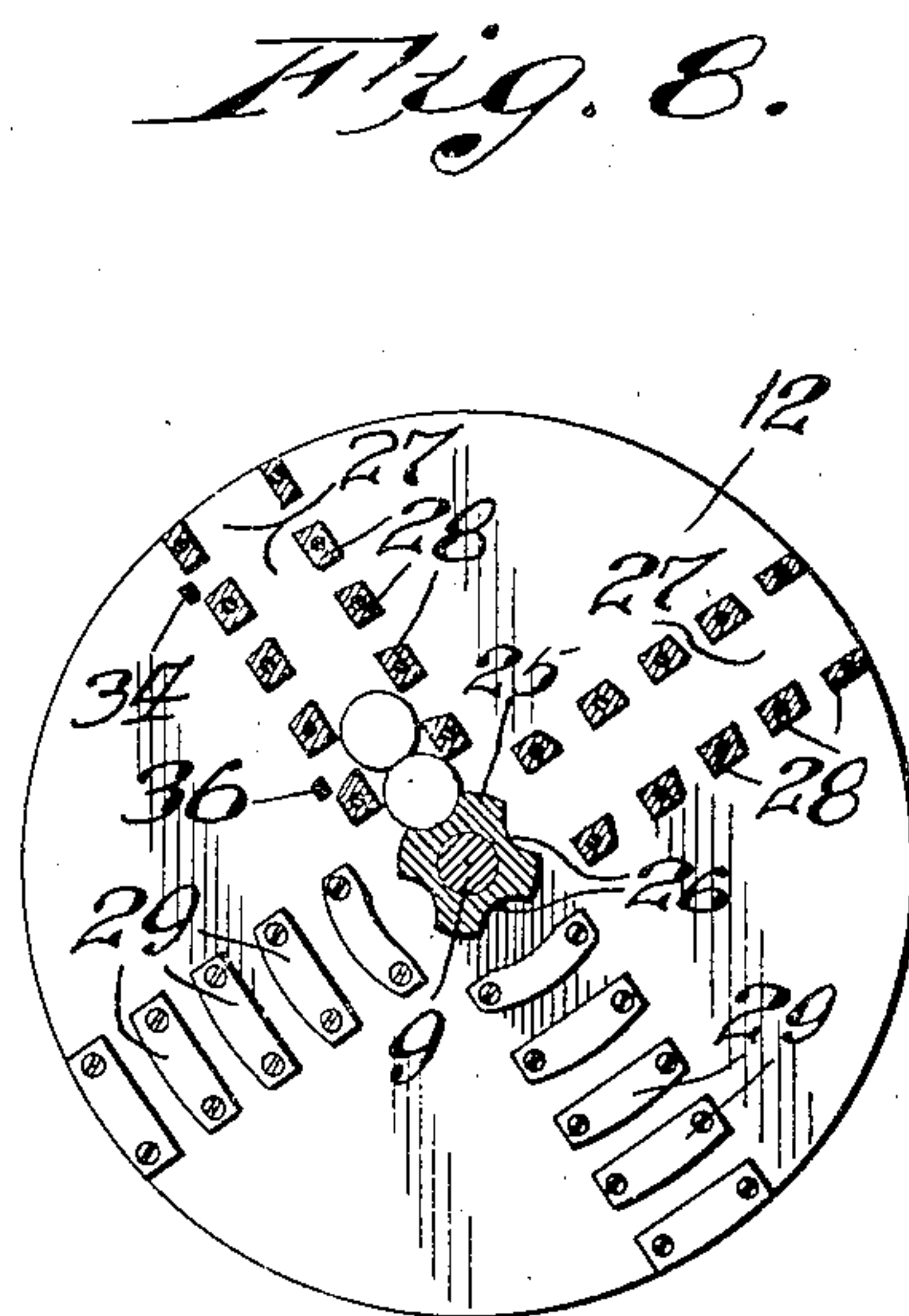
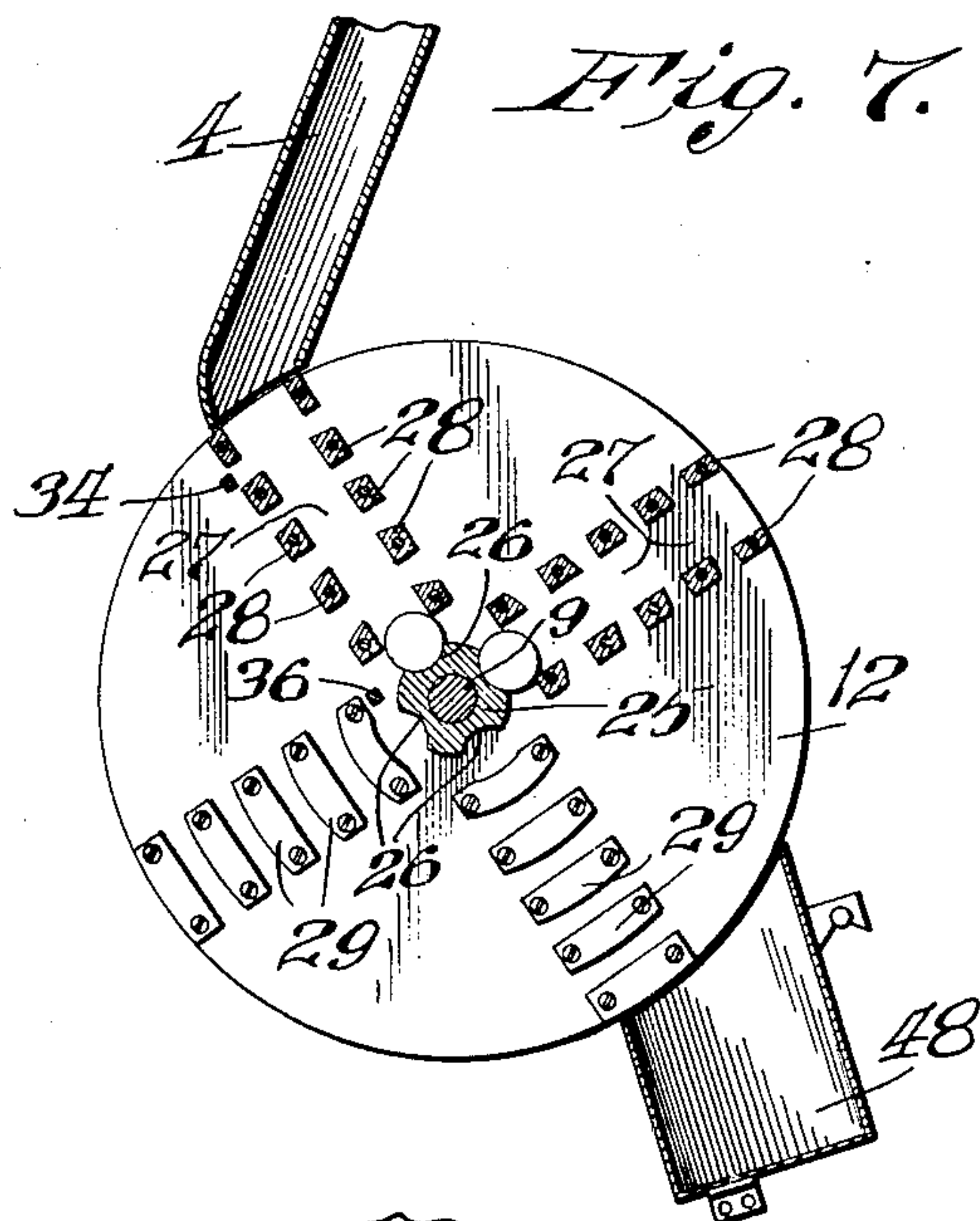


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3 SHEETS—SHEET 3.



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# UNITED STATES PATENT OFFICE.

CHARLES A. DAWES, OF ST. LOUIS, MISSOURI.

COIN-CONTROLLING MECHANISM FOR VENDING-MACHINES.

967,111.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed October 27, 1909. Serial No. 524,774.

*To all whom it may concern:*

Be it known that I, CHARLES A. DAWES, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Coin-Controlling Mechanisms for Vending-Machines, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in coin controlling mechanisms for vending machines, the object of my invention being to construct a mechanism of the type in which the coin serves as a lock between the operating lever and the vending apparatus, which mechanism is arranged to be adjusted so that the mechanism may be operated by coins of different values.

A further object of my invention is to construct a coin controlling mechanism for vending machines in such manner, that the vending apparatus may be actuated by the insertion of either one cent, two cents, three cents, four cents, five cents or in any case by a single coin of the value of five cents.

A further object of my invention is to construct a coin controlling mechanism provided with adjustable coin-engaging devices, so that the vending apparatus may be actuated by the insertion of varying numbers of coins, of varying values.

For the above purposes my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter, more fully described, pointed out in the claims and illustrated by the accompanying drawings, in which:

Figure 1 is a perspective of the complete machine; Fig. 2 is a vertical, sectional elevation illustrating the relative positions of parts of the coin controlling mechanism a portion of the coin slot being in section; Fig. 3 is a sectional elevation of a portion of the machine taken on a line immediately inside the right hand wall, a portion of the supporting bracket being removed; Fig. 4 is a vertical, sectional elevation taken approximately on the line 4-4 of Fig. 2; Fig. 5 is an enlarged, detail, sectional plan of a portion of the coin-carrying disk showing the relative position of the disk and the uppermost fixed coin-engaging device; Fig. 6 is a view similar to Fig. 5 showing the relative position of the disk with the adjustable coin-engaging device; Fig. 7 is an ele-

vation showing the relative positions of the coin chute and the coin-carrying disk, two of the series of coin pockets being in section and showing the arrangement of the devices for engaging the coins in position to be operated by either one cent, five cents or a single coin of the value of five cents; Fig. 8 is a view similar to Fig. 7, the chute being omitted and the coin-engaging devices in positions to act upon two cents or five cents or a single coin of the value of five cents; Fig. 9 is an elevation of the coin disk and chute, the chute and a single series of the coin pockets being in section, the disk being in a position partly rotated and showing the coin-engaging device in engagement with a coin of the value of five cents; and, Fig. 10 is an elevation of the coin disk partly in section showing a coin-engaging device in position to engage the uppermost one of five cents.

Referring by numerals to the accompanying drawings: 1 designates the inclosure for the coin controlling mechanism and 2 a hinged door provided with a lock 3 arranged to be opened to provide access to the coin mechanism. Secured to the top of the inclosure and projecting downwardly at an angle therefrom is a coin chute 4, there being an opening 5 formed through the cover. Fixed to the outer face of the cover is a plate 6 having a slot which coincides with the opening 5.

Secured to the right hand wall of the machine inclosure is a bearing plate 7 and secured to said plate is a bearing plate 8 which projects outwardly and upwardly parallel with the plate 7; each of the plates 7 and 8 being provided with an opening, there being a coinciding opening through the wall to which they are attached. Mounted for oscillation in the openings in the bearing plates 7 and 8 is a shaft 9 and secured to said shaft is a crank arm 10 provided with a handle 11. Loosely mounted upon the shaft 9 is a disk 12, having a cylindrical hub section 13 and an integral squared hub section 14. Embracing the squared hub section 14 of the disk 12 is a washer 15 between which and the cylindrical hub section is a pair of arms 16. The lower ends of the arms 16 are pivotally secured to a strap 17 which is secured to the bearing plate 7, the rear end of the strap being perforated; the uppermost or free ends of the arms 16 are bent outwardly relative to each other and perforated. Car-



ried by the perforated ends of the arms 16 is a contractile coil spring 18 arranged to normally hold the arms 16 against two of the faces of the squared section 14. Projecting from the rear face of the disk 12 are a number of studs 19 arranged for engagement when the disk is rotated with an integral flange 20 formed on the tilting lever 21, which lever is pivotally mounted upon the stub shaft 22 secured to the bearing plate 7.

The end of the lever 21, opposed to the end engaged by the studs 19, is provided with a perforation through which is inserted the end of a contractile coil spring 23, the opposite end of the spring engaging in the perforation in the end of the strap 17. Secured to the lever 21, adjacent the point engaged by the spring 23, is the up-turned end of the lever 24, which lever is arranged to actuate a delivery mechanism (not shown).

Secured to the outer face of the disk 12 is a disk 25 having four radially disposed notches 26 formed in its periphery and arranged upon the inner face of the disk 12 are four series of radially disposed pockets 27, which are preferably formed by securing to the disk 12, a series of blocks 28 having integral bridging plates 29, the outermost pair of each series of blocks being of less thickness than the remaining blocks thus providing for the reception of a single coin of the value of five cents, which coin is held between the blocks of the outermost pocket and is prevented from moving downwardly through the remaining pockets by reason of their being narrower than the diametrical dimension of the coin of the value of five cents.

The coin chute 4 is arranged at such angle within the inclosure as to bring its discharging end immediately over the outermost pocket 27, when said pocket is in its normal initial position the arrangement of said pockets being disposed in such positions relative to the faces of the squared section 14 of the disk 12 that the arms 16 will hold the pockets on the disk 12 in a position relative to said chute to receive a coin or coins which are inserted in the slot.

Non-rotatably secured to the shaft 9, between the bearing 8 and disk 25, is a sleeve 30, and formed integral with said sleeve and at right angles thereto is an arm 31 which is provided with a slot 32. Carried by the arm 31 is an angle plate 33 and secured to the arm 31, adjacent its outer end, is a coin-engaging device 34 having a reduced portion which extends through the slot 32 in the arm 31, which reduced portion is provided with a beveled face 35.

The beveled end of the coin-engaging device is arranged at such position on the arm 31 that it will be adjacent the disk 12 so that its point will move in a line between the

outermost and fourth pocket from the center of the disk so that said point, when the arm 31 is moved, will engage the periphery of a coin of the value of five cents which is carried by the outermost and fourth pocket from the center of the disk and in such manner that a backward movement of the arm will permit the point of the engaging device to ride over a coin without affecting the disk.

36 designates an adjustable coin-engaging device and as shown in Fig. 6 of the drawing, such device is preferably formed of an angle plate provided with an integral, beveled point 37. Carried by the device 36 is a headed bolt 38 provided with a nut 39, which bolt is arranged to be moved in the slot 40 formed in the angle plate 33. The arm 31 and member 36 are provided with pins 41, which pins are embraced by a contractile coil spring 42, the normal tendency of which is to draw the beveled face 37 toward the disk 12. And, when it is desired to position the beveled face so it will not engage the coin, the set screw 43 is manipulated, said screw being threaded to the member 36 and impinging at its free end against the angle plate 33. This adjustable coin-engaging device is employed so that when it is desired to vend papers employing a single coin of the value of five cents only, the point 37 may be drawn to a position so that it will not engage with coins carried by the disk 12.

To limit the movement of the operating lever 10, stubs 44 are secured against the outer face of the right hand wall of the inclosure in such relative positions to permit a movement of the crank arm equivalent to a quarter of a revolution.

To normally hold the operating lever and rotating parts in their initial positions, that is in a position wherein the pockets 27 are in such relation to the coin chute as to receive a coin, a lever 45 is secured to and embraces the inner end of the shaft 9.

A strap 46 is secured to the inner face of the bearing plate 8 and a contractile coil spring 47 connects the outer end of the lever 45 with the outer end of the strap 46, the normal tendency of which spring is to draw the lever 45 in such position as to normally retain the operating crank arm against the rearmost stub 44.

Detachably secured to the inside face of the right hand wall of the inclosure, is a coin receptacle 48, arranged in such position relative to the disk 12 as to receive coins from the pockets 27.

In the practical operation of the machine, assuming that the adjustable coin-engaging device is set to vend an article, the sale price of which is one cent, the coin-engaging device is moved on the angle plate 33 to a position wherein the point 37 will occupy a position adjacent the inside face of the disk 12



between the first and second pockets from the center of the disk 12. A coin is then inserted through the slot and, after the coin has been released manually, it will be moved, 5 by gravity through the chute 4, through each of the pockets 27 and will rest in one of the notches 26 and be engaged by the blocks and plate of the first pocket and held therein. The handle 11 is then grasped and a move- 10 ment forwardly is imparted to the operating lever 10, which movement imparts a rotary movement to the shaft 9, which movement of the shaft 9 imparts a rotary movement to the arm 31; then, by reason of the end of the 15 coin-engaging device engaging with the coin, the entire disk 12 is rotated approximately one fourth of a revolution, the movement being limited by the foremost stub 44. As the disk 12 is rotated one of the studs 19, on the 20 rear face thereof, engages with the integral flange 20 of the lever 21 and imparts a rocking movement to said lever. The movement of the lever 21 imparts a reciprocating movement to the lever 24, which lever is ar- 25 ranged to actuate vending mechanism (not shown).

If it is desired to adapt the machine to vend articles, the sale prices of which are two cents, three cents, four cents or five 30 cents, it is obvious that by reason of the adjustable coin-engaging device the machine may be set as required for vending articles of any of the above named values.

The mechanism was especially designed 35 for use in connection with vending apparatus for newspapers and is to be positioned at places accessible to the public. The provision of the adjustable and fixed coin-engaging devices makes it possible for a cus- 40 tomer, without the exact change, to operate a machine with a single coin of the value of five cents.

I claim:

1. In an apparatus of the class described, 45 a rotatable disk, coin pockets arranged in series on the face of said disk, an arm mounted for movement adjacent the disk, coin-engaging devices carried by said arm and arranged to engage a coin held between a 50 pair of said pockets and a lever for rotating said disk.

2. In an apparatus of the class described, a shaft, an operating lever secured to said shaft, a disk mounted for rotation on said 55 shaft, coin pockets arranged in series on the face of said disk, an arm non-rotatably mounted on the shaft adjacent the disk, a fixed coin-engaging device and an adjustable coin-engaging device carried by said arm, 60 and arranged to engage a coin held between a pair of said pockets.

3. In an apparatus of the class described, a shaft, an operating lever secured to said shaft, a disk loosely mounted on said shaft, 65 an arm secured to said shaft, coin pockets

carried by said disk, a fixed coin-engaging device carried by said arm, an adjustable coin-engaging device carried by said arm, said adjustable coin-engaging device being adjustable longitudinally of said arm and 70 means whereby the adjustable coin-engaging device may be set to a position non-engaging with a coin carried by said pockets.

4. In an apparatus of the class described, an inclosure, a shaft journaled for rotation 75 therein; an operating lever secured to said shaft, a disk loosely mounted on said shaft, coin pockets carried by said disk, an arm secured to said shaft, a fixed coin-engaging device carried by said arm and an adjustable 80 coin-engaging device carried by said arm, a coin chute arranged within the inclosure and means whereby said coin pockets carried by the disk are arranged to aline with the dis- 85 charging end of said chute.

5. In an apparatus of the class described, an inclosure a coin chute, a shaft journaled for rotation within the inclosure an operat- 90 ing lever secured to the shaft outside of the inclosure, stops for limiting the movement of the operating lever, a disk loosely mounted for rotation on the shaft, radially arranged coin pockets carried by the disk, a slotted 95 arm secured to said shaft, a fixed coin-engaging device adjacent the free end of said arm, a second coin-engaging device adjustable longitudinally of said arm, means whereby the movable coin-engaging device is set to a non-engaging position, a lever secured to 100 said shaft, a spring acting on said lever to normally hold the disk in such relation to the chute that the pockets carried thereby will be in a position adjacent the discharg- 105 ing end of the coin chute and also to return the disk and operating parts after being rotated to their initial positions.

6. In an apparatus of the class described, a shaft, an operating lever secured to said shaft, a disk, coin pockets arranged in series 110 on the face of said disk, a coin chute, a squared hub section on said disk, yielding devices engaging said squared section for holding the disk in positions so that the coin pockets will aline with the discharging 115 end of the coin chute and means for engaging coins carried by said pockets to rotate the disk.

7. In an apparatus of the class described, a rotatable shaft, a disk loosely mounted on said shaft, an operating lever secured to the 120 shaft, an arm secured to said shaft, coin pockets arranged in series on the face of said disk, coin-engaging devices carried by said arm, and reduced beveled extensions on the coin-engaging devices arranged to en- 125 gage with coins held between pairs of said pockets.

8. In an apparatus of the class described, a shaft, an operating lever secured to said shaft, an arm secured to said shaft, coin-



engaging devices carried by said arm, bevel faced extensions carried by the coin-engaging devices a disk loosely mounted on said shaft, coin pockets arranged in series on the face of said disk, a coin chute, means for normally holding a series of the pockets to align with the discharging end of said chute.

9. In an apparatus of the class described, a shaft, an operating lever secured to the shaft, an arm secured to the shaft, a fixed and an adjustable coin-engaging device carried by said arm, a disk loosely mounted on said shaft intermediate said arm and operating lever, coin pockets arranged in series on the face of said disk, a coin chute, a hub section carried by said disk having angular faces, yielding devices arranged for engagement with said angular faces for normally holding the coin pockets to align with the discharging end of the coin chute and means for holding the operating lever and the arm carrying the coin-engaging devices in their initial positions.

10. In an apparatus of the class described, a rotatable shaft, an operating lever secured to the shaft, an arm secured to said shaft, a fixed and an adjustable coin-engaging device carried by said arm, a disk loosely mounted on said shaft, coin pockets arranged in series radially on said disk, an angular extension of said disk embracing said shaft the faces of which correspond in number with the number of series of pockets carried by the disk, pivoted arms embracing the angular extension and a spring for holding said arms in engagement with said angular extension.

11. In an apparatus of the class described, a shaft, an operating lever secured to the shaft, an arm secured to the shaft, an angle plate carried by said arm, there being slots formed longitudinally of the arm and the angle plate, a fixed coin-engaging device secured adjacent the free end of the arm, a movable coin-engaging device carried by said arm, means for locking the movable coin-engaging device in various positions on said arm and angle plate, a spring connecting said arm and coin-engaging device, a set screw carried by the coin-engaging device, a disk loosely mounted on the shaft, coin pockets carried by the disk and radially arranged in series thereon.

12. In an apparatus of the class described, the combination with a disk having a second

disk secured thereto, there being radially arranged notches in the periphery of said second disk and a series of coin pockets spaced apart radially arranged on the face of said first mentioned disk in alignment with the notches in said second disk, of an arm, coin-engaging devices carried by the arm, said coin-engaging devices arranged to engage with coins carried by and between a pair of said pockets and a lever for moving said arm.

13. In an apparatus of the class described, the combination with a disk having a second disk secured thereto, there being radially arranged notches in the periphery of said second disk and a series of coin pockets spaced apart radially arranged on said first mentioned disk in alignment with the notches in said second disk, of an arm, a fixed coin-engaging device carried by said arm and an adjustable coin-engaging device carried by said arm, said coin-engaging devices arranged to engage with coins carried by said pockets and a lever for moving said arm.

14. In an apparatus of the class described, an inclosure, a shaft journaled for rotation therein, an operating lever secured to the shaft on the exterior of said inclosure, an arm secured to said shaft inside said inclosure, a disk within the inclosure loosely mounted on said shaft, coin pockets radially arranged in series on the face of said disk, coin-engaging devices carried by said arm arranged for engagement with coins carried by and between said pockets, a coin chute, means for positioning a series of the pockets to normally align with the discharging end of said chute and means for limiting the movement of said disk.

15. In an apparatus of the class described, a movable member, coin pockets arranged in series on the face of the movable member, an arm mounted for movement adjacent the movable member, a coin-engaging device carried by said arm and arranged to engage a coin held between a pair of said pockets and a lever for actuating said arm.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

CHARLES A. DAWES.

Witnesses:

E. E. LONGAN,  
E. L. WALLACE.