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PATENTED AUG. 9, 1904.

H. C. HART.
ATTACHMENT FOR COIN ACTUATED MACHINES.

APPLICATION FILED MAY 2, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

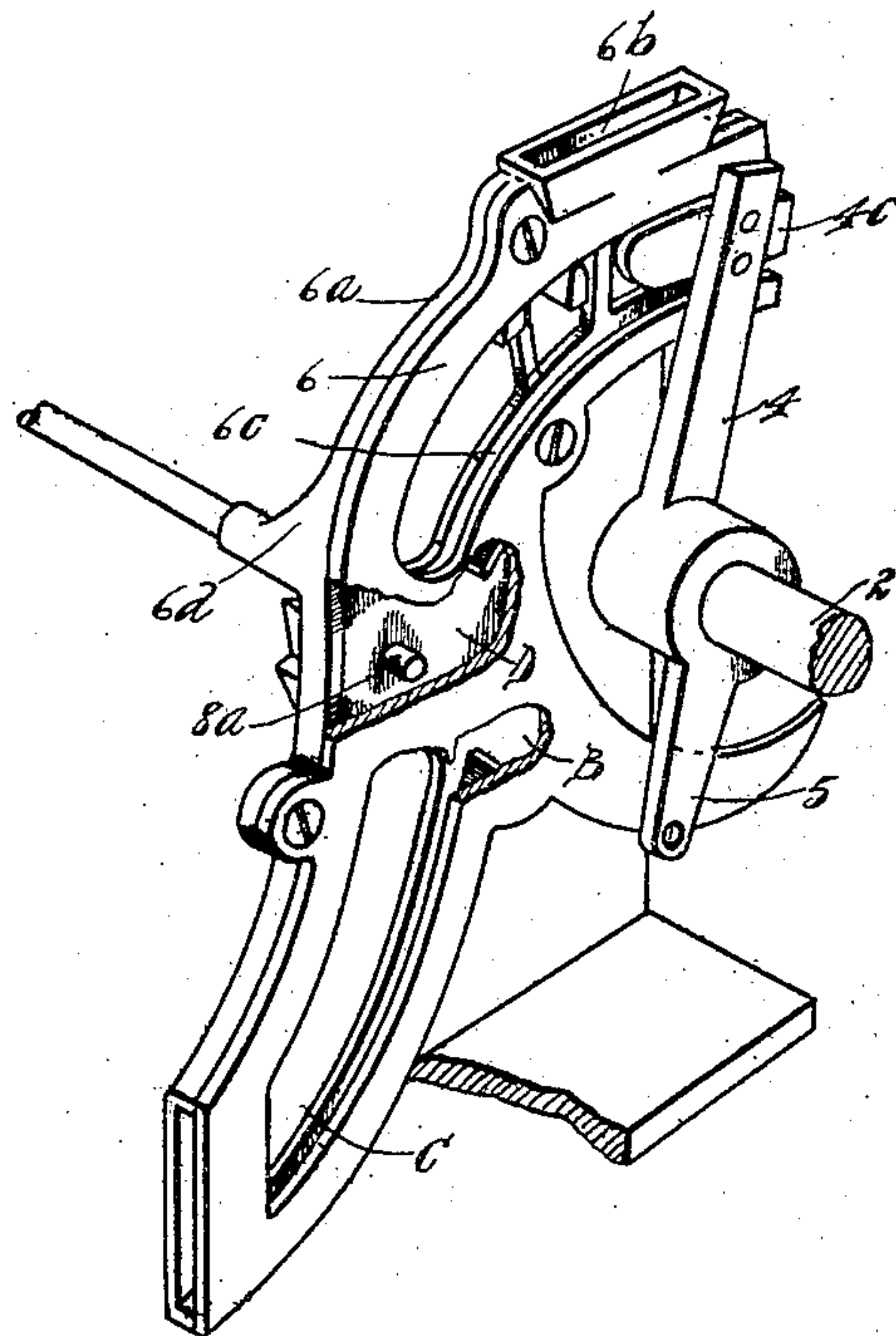


Fig. 1.

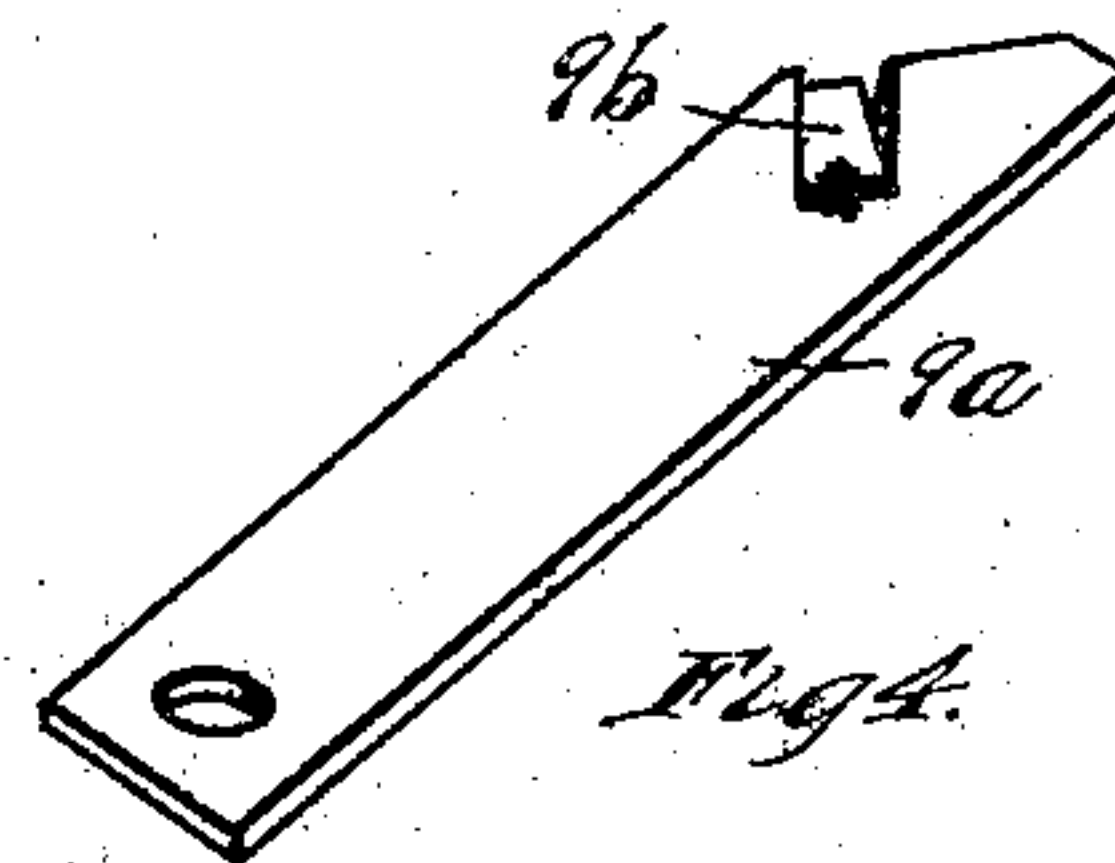


Fig. 2.

WITNESSES

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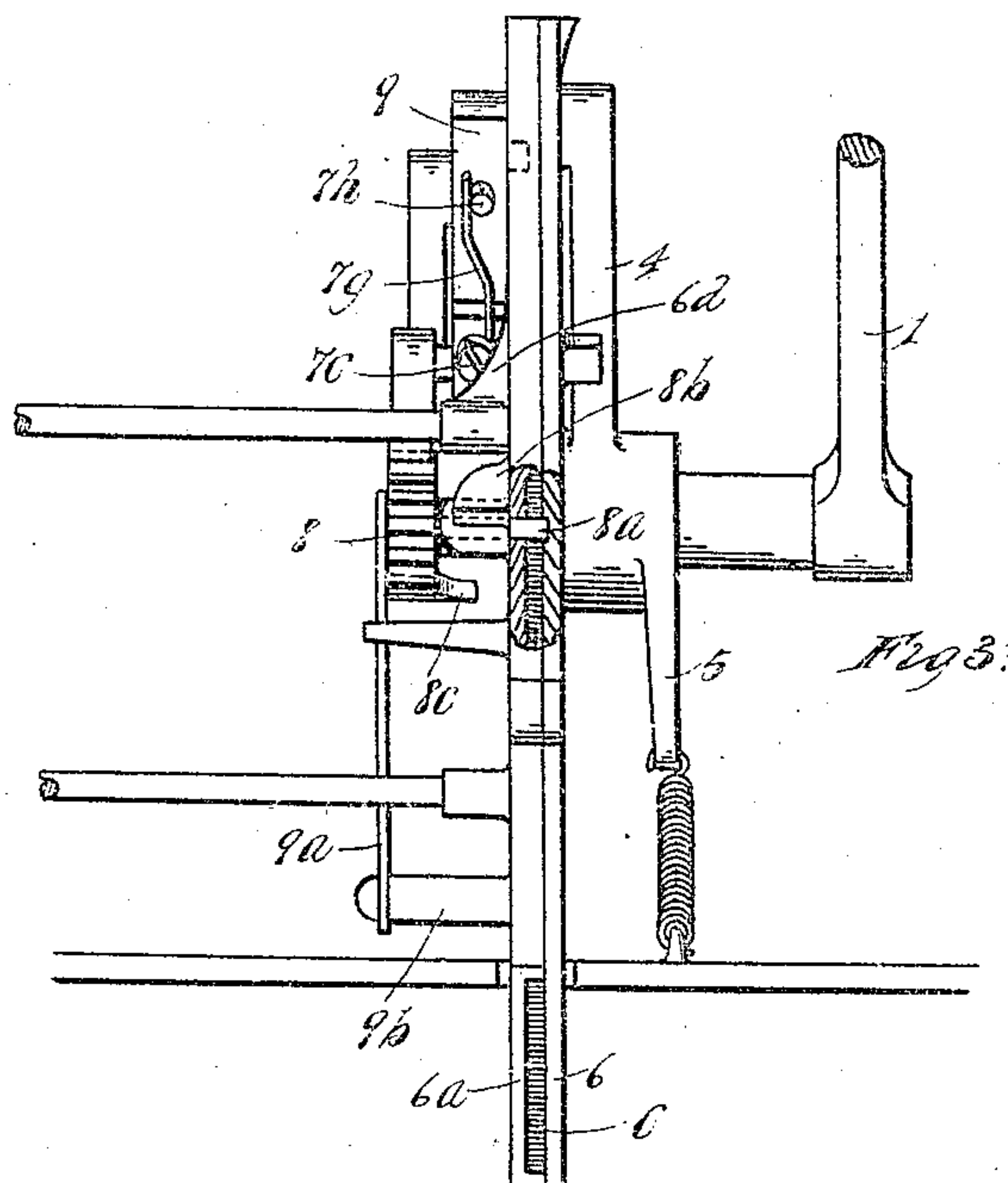
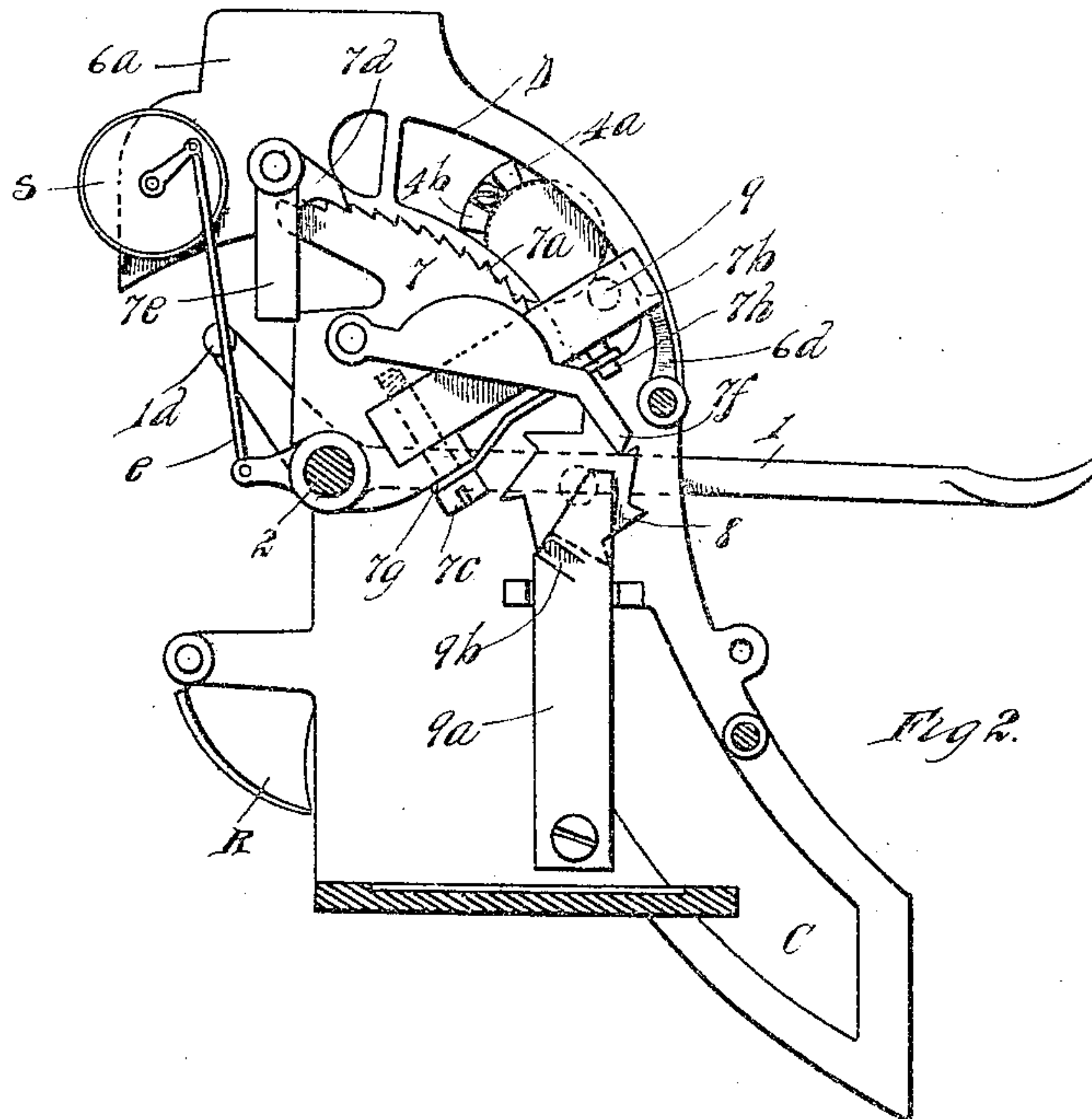
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UNITED STATES PATENT OFFICE.

HENRY C. HART, OF DETROIT, MICHIGAN, ASSIGNOR TO PURITAN MACHINE COMPANY, LIMITED, OF DETROIT, MICHIGAN.

ATTACHMENT FOR COIN-ACTUATED MACHINES.

SPECIFICATION forming part of Letters Patent No. 767,338, dated August 9, 1904.

Application filed May 2, 1904. Serial No. 205,972. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. HART, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Attachments for Coin-Actuated Machines; and I 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 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to coin-actuated machines, and has for its object the automatic division of the receipts of such machines into two or more parts according to some definite prearranged plan.

Coin-actuated machines for vending or amusement purposes are frequently used in a way to require a division of the receipts—one part, for instance, going to the owner of the machine, the second part to the proprietor of the location, and possibly a third part to some other person in interest. This division of the receipts has heretofore been accomplished by removing the total receipts, counting, and dividing them into portions; and the object of this invention is to provide automatic mechanism by use of which the division of the total receipts into prearranged portions and the deposit of each share into separate receptacles can be accomplished. Means are provided for checking the results.

Coin-actuated machines are of many varieties, and the function of the coin, which in every case must be deposited in the machine, varies greatly. In some cases its mere weight or its impact operates the mechanism which delivers the goods or produces the desired results. In other cases the coin is interposed between a manually-actuated handle and the mechanism to be operated, and other methods of operating are frequently employed. As in this invention the distribution of the coin (after the operation of the machine has been effected) is the object in view, no preference is made for any method for operating the machine, although in the drawings a mechanism is shown operated by the interpo-

sition of a coin between an actuating-handle and the mechanism to be actuated, and the described device by which the division of the coins is effected is one especially adapted for this particular method of operation. That the operation of these machines as regards the division of its receipts may be rendered more satisfactory to the person in interest a counter is attached to the mechanism of the machine in such a manner that it will register the number of operations made and coins deposited, and by comparing these figures with the number of coins received each person may check up his individual receipts with the total number of coins received.

In the drawings, Figure 1 is a perspective showing that side of the mechanism to which the main actuating-crank is connected. Fig. 2 is an elevation of the side of the machine opposite to the crank. Fig. 3 is a front elevation. Fig. 4 is a perspective indicating the spring-stop.

The parts of the machine are actuated by the actuator or the lever 1 and the parts immediately connected with it.

The machine which performs the vending or delivery or other functions, of whatever nature they may be, forms no part of this invention, and is not shown in the drawings or described herein, no parts being shown except those which are required to bring about the desired regular distribution of the coins which pass into and during the period of their passage become a part of the actuating mechanism for the operation of the machine.

The lever 1 is secured to the shaft 2, to which is also secured a rock-arm 4 and an arm 5. The arm 4 swings in close engagement with the face of a slotted plate 6, and the plate 6 forms one part of the main framework of the machine and is channeled or hollowed out or is made double with a companion plate 6^a to provide a passage for the travel of a disk or coin. The channel or passage 6^c has an entrance-opening 6^b, through which the disk or coin is inserted into the channel. From the opening the channel extends in a quadrant curve toward the front and downward. There

are slots through the plates 6 and 6^a into the channel at each side. Through the slot on the right side next adjacent to the lever 1 is a spur or spurs 4^a and 4^b, that project from the arm 4 through the slot into the channel. In front of the spurs, partly filling the slot and extending slightly into the channel, but not entirely across it, is a guard-plate 4^c, that prevents the disk or coin from escaping sidewise through the slot. On the left side of the channel-plates 6^a and 6, mounted on the arbor 2, is an arm 7, provided with a quadrant ratchet-face 7^a and having pivotally secured to its face an arm 7^b, which oscillates with the arm 7 but is capable of an independent oscillatory movement around a pin 7^c. This independent oscillatory movement is at right angles to the movement which it has around the axis of the arbor 2. The quadrant rack-face 7^a is a full-stroke mechanism, and to compel the full stroke the teeth of the quadrant are engaged by a pawl 7^d, that is journaled on a pivot secured to the plate 6^a. The pawl 7^d is provided with a hanging arm 7^e, that hangs in the path of an arm 1^d, projecting from the hub of the lever 1, which trips the pawl, and the quadrant oscillates back before the operator can release the handle 1. The arm 7 has pivoted to it an actuating-pawl 7^f, that engages with a ratchet-wheel 8. The axle of the ratchet-wheel 8 both rotates and slides in bearings in the face-plate 6^a. A spur 8^b projects from the face-plate 6^a, extending parallel with the axle of the wheel 8 and provided with an inclined face which engages against a spur 8^c, that extends from the face of the wheel 8. The spur 8^c is also provided with an inclined face, and the two inclined faces of the two spurs engage together once in each revolution of the ratchet-wheel 8. The ratchet-wheel 8 is driven one part of a revolution with each forward oscillation of the arm 7 and corresponding actuating movement of the pawl 7^f, and because of the engagement between the spurs 8^b and 8^c the ratchet-wheel 8 is forced to move axially to the left once in each revolution and carries its shaft 8^a with it. The shaft 8^a of the wheel 8 normally projects into the channel between the plates 6^a and 6, and while in its normal position the shaft serves as a stop or obstacle and prevents the passage of disks or coins through the part C of the channel and compels the disks or coins to travel through the part B of the channel, which forks or diverges from the main channel D just above the obstacle 8^a.

The shaft 8^a remains as an obstacle in the channel for a number of consecutive actuations of the lever and is withdrawn from the channel and ceases to be an obstacle during one actuation of the lever or for one or a given number of consecutive actuations of the lever. As shown in the drawings, the spur-wheel 8 has seven teeth and has spurs 8^c and 8^b, which act to shift the spur-wheel during the passage

of only one tooth. Six coins will go through the channel B and one coin through the channel C at each revolution of the wheel 8.

The motion of the lever 1 is communicated to the arm 7 by the interposed coin, which engages in front of the two spurs 4^a and 4^b and behind a spur or pin 9, that projects from the face of the arm 7^b through the slot in the face-plate 6^a into the passage D. Unless the coin be interposed the swing of one lever will not actuate the other; but if the coin be interposed the swing of the lever 1 always actuates the succeeding mechanism. As the arm 7^b approaches the end of its forward and downward throw the end of the arm engages with a throw-off cam 6^d on the face-plate 6^a, the arm 7^b swings on its pivot 7^c, and the pin 9 is drawn sidewise from in front of the disk *d*. The return movement of the arm 7^b is produced by a spring 7^e, that is fixed to the support on which the arm 7^b swings and bears against a pin 7^h, that projects from the arm 7^b. The return movement of the wheel 8 to its normal position, with its shaft engaging as an obstacle in the passage between C and D, is brought about by a plate-spring or leaf-spring 9^a, that is secured to a post 9^b on the face 6^a and which bears against the face of the wheel 8. The spring 9^a is provided with a toothed part bent to engage behind a tooth of the ratchet-wheel and serve as a detent-stop against possible recoil or reverse motion of the wheel 8. Coins or disks which are prevented from entering the channel C because of the obstacle 8^a drop into the receptacle R at the rear of the separating device. If the obstacle does not prevent, the coin drops directly from the channel D into the channel C, and that it may do so the channel C is a direct continuation, with the connecting part between it and the channel D on a substantially vertical line, whereas the channel B leads on an incline to the rear.

The details of the special mechanism by which the result may be accomplished may be varied widely; but I am not aware that any one has devised or constructed a machine in which a secondary train of mechanism is put in operation from a primary by means of an interposed coin or disk which is afterward compelled to travel along one of several possible paths, which path is selected according to an arranged and definite plan such that at regularly-recurring intervals one path is chosen and at all other intervals another path or other paths are chosen, and I consider the scope of this invention to include mechanism which will produce this result.

S is the counter and registers the number of operations of the lever 1 and is actuated by the link *e*.

What I claim is—

1. In a coin-actuated device, a plurality of paths adapted to direct the travel of the coin (after the operation of the machine has been

accomplished) and means actuated by operation of the delivery portion of the machine for selecting in a predetermined order the path to be traveled by the coin and for guiding said coin thereinto, substantially as described.

2. In a coin-actuated machine, in combination with a plurality of paths for the travel of the coin, means for determining (after the operation of the machine has been effected) in a previously-arranged sequence the path to be traveled by said coin, and means connected therewith for guiding said coin thereinto, substantially as described.

3. In a coin-controlled machine, in combination with a primary actuator and a secondary actuator, a counter registering the total number of coins received, a plurality of paths for the reception and travel of the coin, and means actuated by one of said actuators for determining in a prearranged manner the exact path to be traversed in each case by said coin, substantially as described.

4. In a coin-controlled machine, a movable member journaled transversely to the line of travel of the coin (after the operation of the machine has been effected), adapted to be actuated by the operative mechanism of the machine and to guide the further movement of the coin according to its position, and means connected therewith for changing the position of said member in a prearranged sequence, substantially as described.

5. In a coin-actuated machine, and as a means for directing the travel of the actuating-coin, a primary train of mechanism, and a secondary train of mechanism with means for engaging the primary and secondary trains with an interposed coin, a plurality of paths for the travel of the coin after being so interposed, and means for selecting at regular intervals the travel-path of such coins.

6. In a coin-actuated machine, the combination of a manipulated train of mechanism, a secondary train of mechanism normally dis-

connected therefrom, means for engaging the two mechanisms with an interposed coin, a movable device in the line of travel of the coin leaving its actuating position in said machine adapted to determine by its position the further direction of travel of said coin.

7. In a coin-actuated device, in combination a primary movable mechanism, and a secondary movable mechanism normally not in engagement, a disk-receptacle formed by adjacent parts of said mechanisms adapted to hold a disk in position to cause the primary mechanism to actuate the secondary mechanism, a plurality of guiding devices adapted to direct the travel of said disk after leaving the receptacle, and means actuated by the secondary mechanism, to determine the direction of travel of said disk after leaving said receptacle.

8. In a coin-controlled mechanism, in combination a primary actuator, a secondary actuator, normally not in engagement with the primary, a disk-receptacle formed by adjacent parts of said primary and secondary actuators, a plurality of passages to direct the disk after leaving said disk-receptacle, an obstacle closing one of said passages, and means for removing said obstacle at regular multiples of the movements of said secondary actuator.

9. In a coin-controlled machine, in combination with a primary actuator and a secondary actuator, means for interposing a coin between the primary and secondary actuators, a plurality of passages for the travel of said coin after leaving its interengaging position, a movable part and means for moving the same across the one of said paths of travel, and means for actuating said movable part at regular recurring intervals.

In testimony whereof I sign this specification in the presence of two witnesses.

HENRY C. HART.

Witnesses:

CHARLES F. BURTON,
LOTTA LEE HAYTON.