G. W. EVANS & C. E. LOGAN.

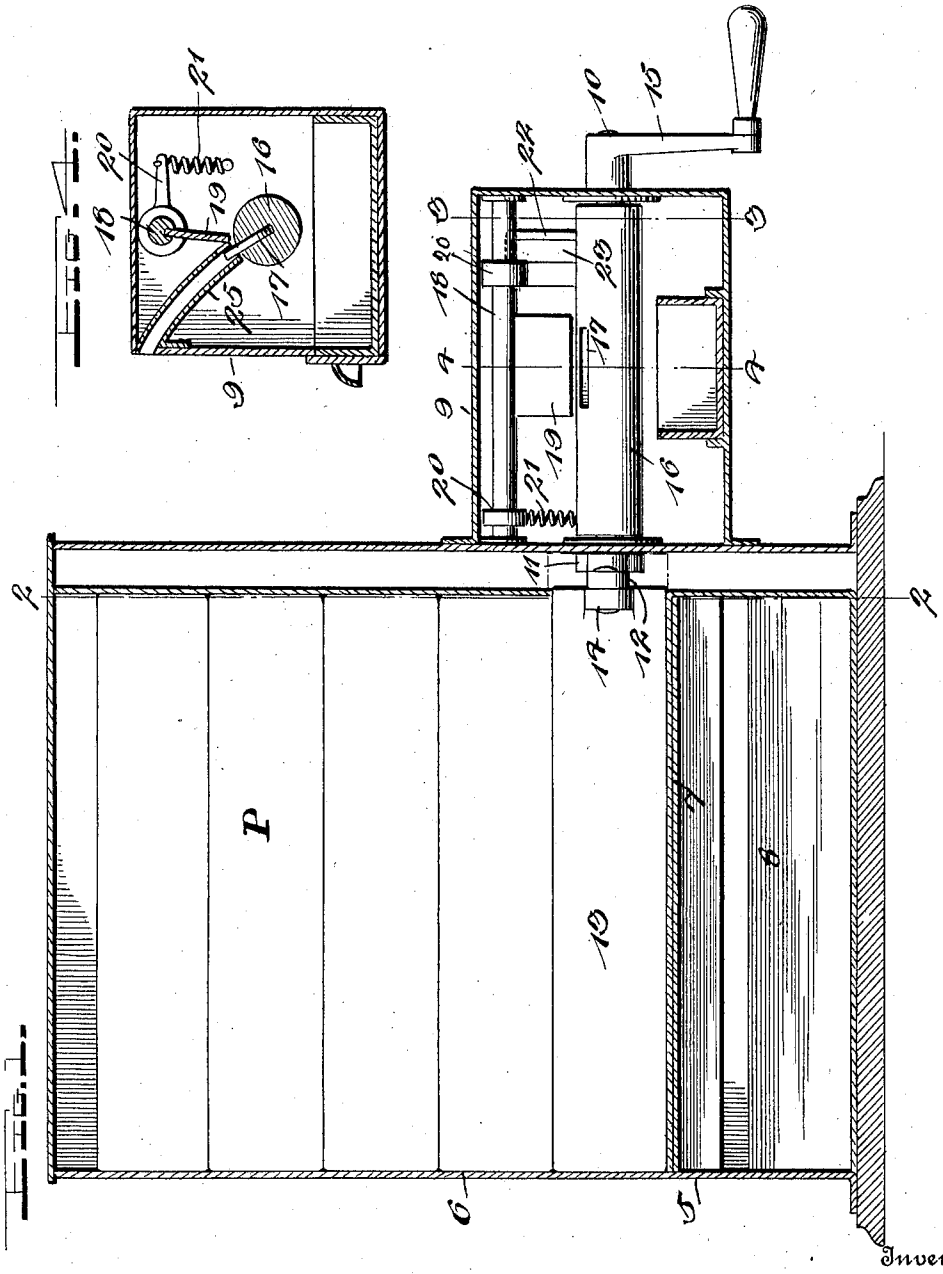
VENDING MACHINE.

APPLICATION FILED APR. 22, 1912.

1,038,330.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.



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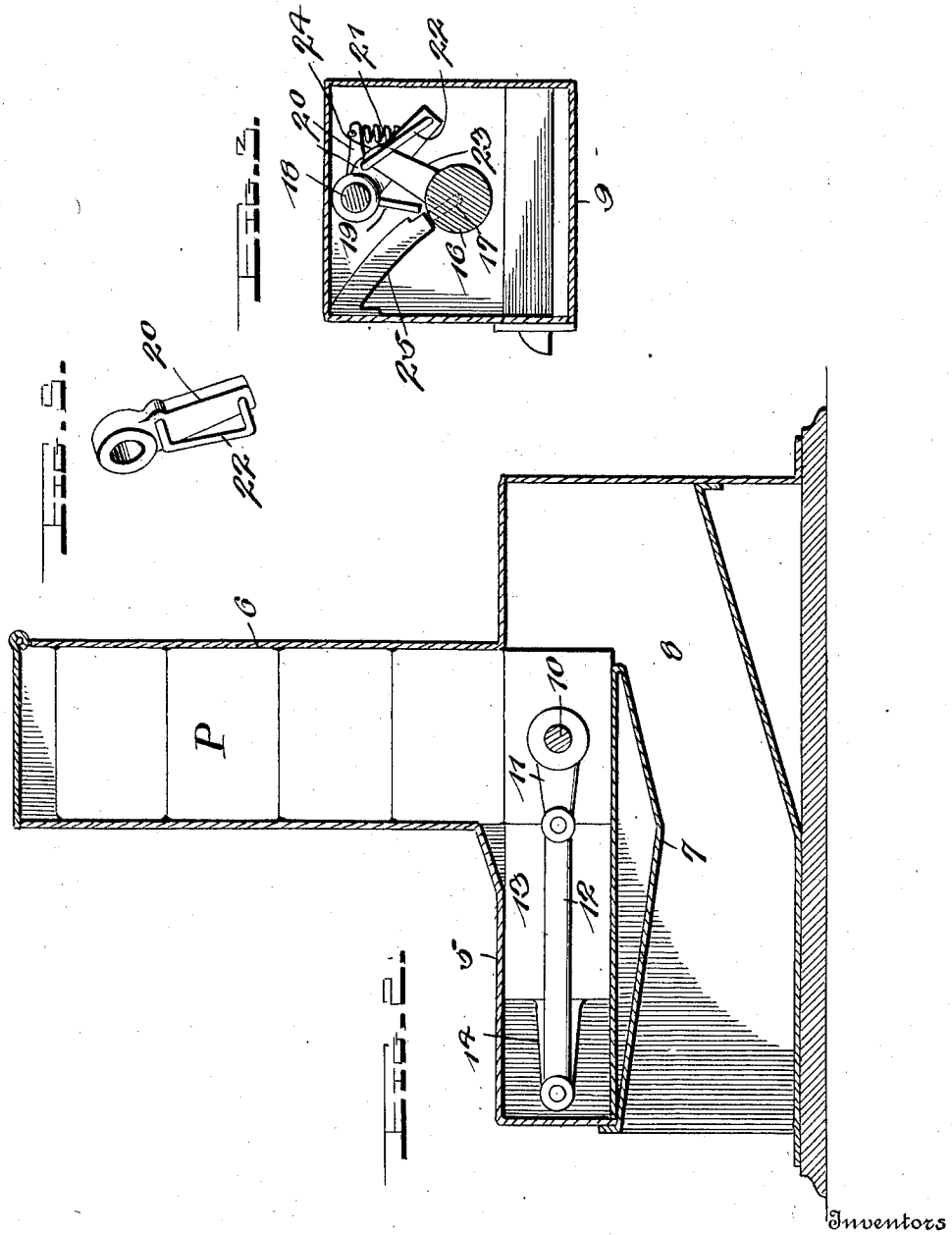

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UNITED STATES PATENT OFFICE.

GEORGE W. EVANS AND CHARLES E. LOGAN, OF CONNELSVILLE, MISSOURI.

VENDING-MACHINE.

1,038,330. Specification of Letters Patent. Patented Sept. 10, 1912.

Application filed April 22, 1912. Serial No. 692,454.

To all whom it may concern:

Be it known that we, GEORGE W. EVANS and CHARLES E. LOGAN, citizens of the United States, residing at Connelsville, in the county of Adair and State of Missouri, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to vending machines and more particularly to a machine for vending towels or other packaged commodities, the invention having for its primary object to provide novel dispensing means operated by a suitable coin controlled mechanism whereby a package is dispensed from the machine upon the insertion of a coin of the proper denomination.

Another object of the invention resides in the provision of a machine of the above character wherein comparatively few elements are employed which are simple in form, durable and efficient in operation and may be manufactured at small cost.

With the above and other objects in view the invention consists in the novel features of construction and in the arrangement and combination of parts hereinafter more fully described, pointed out in the claims, and shown in the accompanying drawings, in which,

Figure 1 is a vertical section of a vending machine embodying the present invention; Fig. 2 is a section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 1; Fig. 4 is a section taken on the line 4—4 of Fig. 1; and Fig. 5 is a detail perspective view of the stop arm.

Referring in detail to the drawings 5 designates the machine case which is provided with a magazine chamber 6. The lower end of this magazine chamber terminates above the bottom or base wall 7 of the case. A package receiving chute or guide way 8 is connected at its rear end to the case 5 and opens thereinto beneath the magazine chamber 6.

The paper receptacles or cartons indicated at P contain the towels or other commodities to be vended, said receptacles being arranged in superposed relation with the lowermost one resting upon the bottom wall 7 of the case. The rear portion of the package receiving chute 8 is sharply inclined downwardly while the forward portion thereof into which the package is directed has its lower wall disposed in a substantially horizontal plane as shown in Figs. 1 and 2.

Upon one of the side walls of the main case 5, a casing or housing 9 is secured in any preferred manner. This casing contains the coin controlled operating mechanism which consists of an actuating shaft 10 journaled at its ends in the opposed side walls of the casings 5 and 9 respectively, one end of said shaft projecting into the casing 5 below the plane of the magazine chamber 6. To this end of the actuating shaft a crank arm 11 is secured. One end of a pitman rod 12 is pivotally connected to the end of this arm, the other end of said rod being similarly connected to the horizontal extension 14 provided upon one end of the movable dispensing block 13. This dispensing block in its normal position is disposed forwardly of the lowermost package P and in a line therewith. To the other end of the actuating shaft 10 a suitable crank handle 15 is attached. The intermediate portion of the shaft 10 is diametrically enlarged as shown at 16 and provided with a short longitudinal slot 17.

A rock shaft 18 is mounted at its ends in the wall of the casings 5 and 9 and carries a radially extending plate 19 which, in the normal positions of the parts is disposed directly above the actuating shaft. The rock shaft 18 has a pair of arms 20 fixed thereon to one of which one end of a coil spring 21 is connected, said spring acting to yieldingly hold the rock shaft in its normal position against oscillatory movement. To the end of the other of the arms 20 a substantially U-shaped loop 22 is fixed at its ends, the parallel end portions of said loop being disposed in different planes with respect to the longitudinal dimension of said arm. This loop is adapted to engage over the end of an arm 23 which is suitably secured upon the actuating shaft 10. The end of this latter arm is reduced in width and is provided with a beveled edge portion indicated at 24, the purpose of which will be made fully apparent in the following description.

A coin chute 25 extends downwardly from a slot provided in the front wall of the casing 9 and has its lower end disposed adjacent to the actuating shaft 10 and immediately above the slot 17 therein. When a coin is deposited in said slot, the same will pro-

ject a sufficient distance from the periphery of the enlargement 16 of the actuating shaft to engage the face of the plate 19 on the rock shaft 18 so as to rock the latter shaft when the crank handle on the actuating shaft is turned.

From the above description the manner of operation of our improved vending machine will be understood as follows. Assuming that the parts are in the position shown in Fig. 1, a person desiring a towel or other article vended by the machine inserts a coin of the proper denomination into the coin slot, the same being conveyed and deposited in the slot 17 of the actuating shaft 10 as above stated. As the loop 22 is loosely disposed over the end of the arm 23 on the shaft 10, when the actuating shaft is rotated, said arm will move in the loop and the coin bearing against the depending plate 19 will rock the shaft 18, thereby elevating the ends of the arms 20 on said shaft and moving the loop 22 out of the path of movement of the arm 23. When the coin carried by the shaft 10 is moved beyond the plate 19 and discharged from the slot in the shaft into a suitable drawer in the bottom of the casing 9, the spring 21 will return the plate 19 to its normal position. When the actuating shaft 10 has made one half of a complete revolution, the movable block 13 will have been moved through the medium of the connections between the same and said shaft to the position shown in Fig. 2 wherein the block is positioned immediately beneath the magazine chamber 6 and has forced the lowermost package P into the discharge chute 8 so that the same will move outwardly and downwardly into the forward end of the chute so that it may be removed. Upon the continued rotation of the shaft 10, the block 13 is returned to its normal position whereupon the package resting thereon will drop to its position upon the bottom plate 7 to be discharged in the next operation of the machine. As the rotation of the actuating shaft is completed, the beveled edge of the arm 23 engages the forward end of the loop 22, thereby elevating the arm 20 and rocking the shaft 18 slightly until the end of the arm 23 is moved within said loop, the spring 21 causing the loop to engage over the end of the arm. As the other end of the loop 22 is disposed in a plane below the beveled edge 24 of the arm 23, any further turning movement of the actuating shaft without depositing the proper coin will be effectually prevented, said loop holding the arm 23 against movement in either direction.

From the foregoing it is thought that the construction and manner of operation of our improved vending machine will be clearly understood.

The device is very efficient and reliable in its action, and owing to its simplicity the same may be manufactured at comparatively small cost.

It will be understood that the packages containing the articles to be vended may be of any desired form and size and that the proportions of the various parts of the mechanism will be made to conform therewith.

While we have shown and described the preferred construction and arrangement of the various elements it will also be understood that the invention is susceptible of considerable modification without departing from the essential features or sacrificing any of the advantages thereof.

What we claim is:—

1. In a vending machine, a coin controlled mechanism comprising a rotary coin receiving member, a rock shaft, a plate on the rock shaft adapted to be engaged by the coin whereby said shaft is rotated, a radially disposed arm on the rock shaft, an arm on the coin receiving member, and means on the first named arm to be engaged by the latter arm to hold said coin receiving member against rotation, the oscillation of the rock shaft disengaging the means on the arm thereof from the arm on said coin receiving member to permit of the rotation of the latter.

2. In a vending machine, a coin controlled mechanism comprising a rotary coin receiving member, a rock shaft, means yieldingly holding said shaft against movement, an arm on the coin receiving member, means carried by the rock shaft to engage said arm and normally hold the coin receiving member against effective rotation in either direction, and additional means upon the rock shaft to be engaged by the coin carried by the coin receiving member whereby the rock shaft is oscillated, and the holding means thereof disengaged from the arm on said member to permit of the rotation of the coin receiving member.

3. In a vending machine, coin controlled mechanism comprising an actuating shaft provided with a longitudinal slot, a rock shaft mounted above the actuating shaft and carrying a radially disposed plate, means yieldingly holding the rock shaft against movement, a radially disposed arm on the rock shaft, an arm on the actuating shaft, means carried by the arm on the rock shaft to engage the arm on the actuating shaft and hold the same against movement in either direction, and a chute to direct the coin into the slot of the actuating shaft, said coin being adapted to engage the plate on the rock shaft to rock said shaft and disengage the holding means on the arm thereof from the arm on the actuating shaft whereby the latter shaft may be rotated.

4. In a vending machine, coin controlled operating mechanism comprising an actuat-

ing shaft provided with a coin receiving slot, a rock shaft mounted above the actuating shaft, a radially disposed plate carried by the rock shaft, means yieldingly holding the rock shaft against movement, an arm on the rock shaft, an arm on the actuating shaft, a rectangular loop fixed to the arm on the rock shaft having its end portions disposed in different planes with respect to the longitudinal axis of said arm, the arm on the oscillating shaft having a beveled edge to engage one end of the loop and elevate the arm on the rock shaft whereby said loop is engaged over the arm on the actuating shaft to hold the same against movement in either direction, and a coin chute to direct the coin into the slot of the actuating shaft, said coin projecting out of the slot to engage the plate on the rock shaft to rock said shaft and disengage the loop from the arm on the actuating shaft whereby the latter shaft may be rotated.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

GEORGE W. EVANS.
CHARLES E. LOGAN.

Witnesses:
J. D. HATFIELD,
J. E. PRATT.