

S. R. BEAL & J. D. CRANDELL.
 COIN CONTROLLED APPARATUS.
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993,641.

Patented May 30, 1911.

Fig. 1.

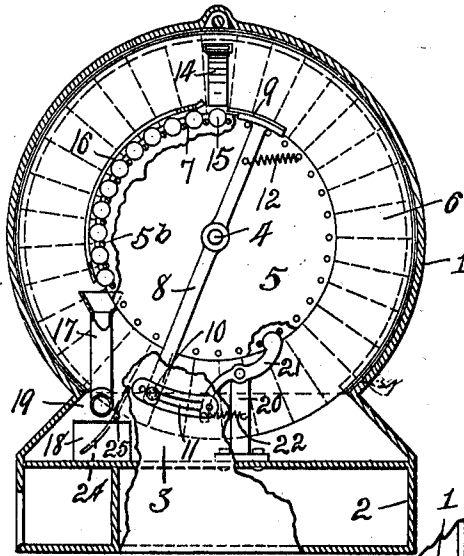


Fig. 2.

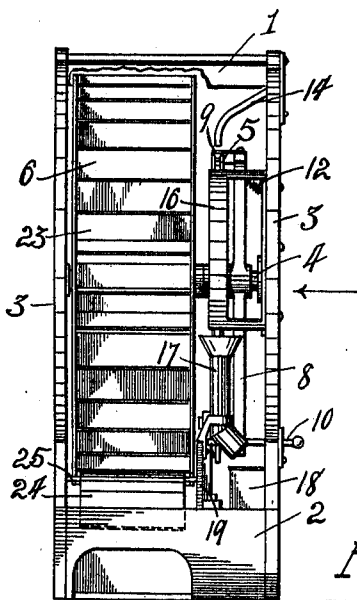
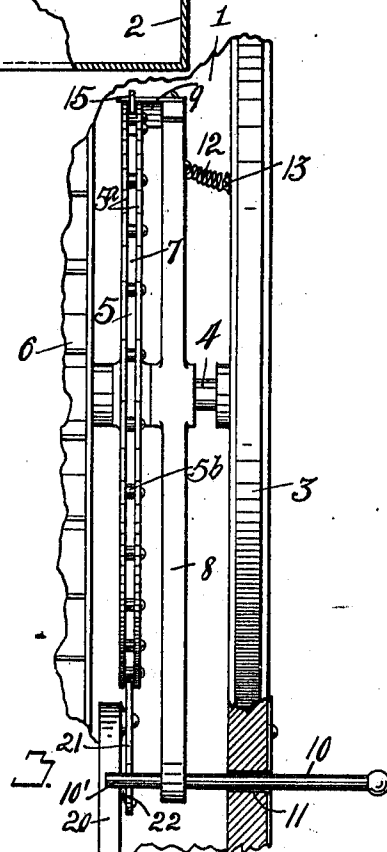


Fig. 3.



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UNITED STATES PATENT OFFICE.

SAMUEL R. BEAL AND JAMES D. CRANDELL, OF ADRIAN, MICHIGAN, ASSIGNORS TO
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COIN-CONTROLLED APPARATUS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, SAMUEL R. BEAL and JAMES D. CRANDELL, citizens of the United States, and residents of Adrian, in the county of Lenawee and State of Michigan, have invented a certain new and useful Coin-Controlled Apparatus; and we do hereby 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to coin controlled apparatus and has particular reference to machines of the class adapted for the vending of package goods, but is not restricted to such use as it may be used in any connection for which it may be adapted or appropriate.

The object of our invention is the provision of an improved apparatus of this class which is simple, light and strong in its construction, inexpensive to manufacture, and easy, accurate and efficient in its operation, and in which the deposited coin acts in conjunction with parts of the mechanism to move the package carrying parts.

The invention is fully described in the following specification, and a preferred embodiment of the same illustrated in the accompanying drawings, in which,—

Figure 1 is an end elevation of a machine embodying the invention with a portion of the end casing broken away, and with the operative parts in normal position. Fig. 2 is a front elevation thereof with the front casing removed, and Fig. 3 is an enlarged front elevation of the coin control mechanism with parts removed and in section.

Referring to the drawings, 1 designates a cylindrical casing having the supporting base portion 2. Journaled in the ends 3 of the casing 1 are the opposite ends of a shaft 4, which is shown in the present instance as having both a coin carrying wheel 5 and a package or article carrying and delivering wheel 6 mounted thereon to turn in unison.

The coin-wheel 5 is provided with a plurality of successively arranged peripheral pockets 7 into which coins drop and are carried with their outer edges projecting beyond the periphery of the wheel and their

axes in substantial parallelism with the shaft 4, as shown. A simple form of coin carrying wheel consists in mounting two disks 5^a on the shaft 4 in suitably spaced relation to permit a coin of the desired denomination to freely pass flatwise therebetween, and then connecting the outer peripheral portions of the disks at suitable intervals with uniting means 5^b, which serve to space the disks and to coöperate therewith to form the pockets 7 and limit the inward movements of the coins therein.

A lever 8 is fulcrumed on the shaft 4 at one side of the wheel 5 for oscillatory movements relative thereto and has its upper end provided with a lateral extension or lip 9 which works over the periphery of such wheel in close relation thereto. A rod 10 projects laterally from the lower end of the lever 8 through a segmental slot 11, in the casing end and provides a handle which may be moved laterally within the slot to swing the lever from the inoperative position in which it is normally held by the contraction spring 12, which spring attaches at one end to the lever and at its other end to a point on the casing, as at 13, Fig. 3.

Coins are delivered to the pockets in the top of the wheel 5 through a chute 14, leading from a point without the casing 1. Upon the depositing of a coin 15 in the chute 14 the operator pushes the handle 10 to the rear thus throwing the lip 9 at the upper end of the lever forward into engagement with the projecting edge of the coin, and upon the continued forward movement of such lip, acts through the coin upon the wheel to force it ahead a predetermined distance to place the next pocket 7 into register with the chute.

16 designates a guard plate, which is provided around the forward portion of the wheel 5 to prevent the coins from leaving the wheel pockets until in position to drop into the delivery-chute 17 by which they are delivered to a suitable receptacle 18. The chute 17 is supported by a standard or frame part 19.

Beneath the wheel 5 is disposed a standard 20 to which a spring-pressed finger or detent 21 is pivoted. This finger has its upper end fashioned to engage into each coin pocket 7 of the wheel as it moves into register therewith and to yieldingly act thereon to prevent free movements of the wheel. A spring

22 acts on the tail-piece of the finger to yieldingly retain it in engagement with the wheel. When the finger 21 is out of locking engagement with the wheel 5 its tail-piece 5 is disposed in position to be engaged by the inner projected end 10' of the handle rod 10 adjacent the limit of its rearward stroke, thus providing means for positively moving the finger 21 into engagement with a registering wheel pocket 7 should the spring 22 fail to act.

The package or article carrying wheel 6 is shown in the present instance as comprising a plurality of peripheral pockets 23 into which the packages or articles to be vended may be positioned. The pockets 23 correspond in number and spacing to the pockets 7 of the coin-wheel 5, whereby each intermittent movement of the coin wheel moves the wheel 6 to successively place the pockets 23 into package discharging position, as is apparent. The cylindrical casing 1 closely embraces the wheel 6, except at the bottom thereof, to prevent the packages from leaving the pockets 23 until each reaches discharging position.

To prevent a package from prematurely dropping from a pocket 23 or until a pocket has been moved to full discharging position and also to require the lever 8 to be swung the full extent of its movement at each operation, a plate 24 is pivotally mounted beneath the wheel 6 immediately to the rear of a pocket of such wheel when in discharging position, such plate being pivotally carried by a pivot rod 25 mounted beneath the wheel as shown. A portion of the plate 24 extends above the rod 25 within the pocket 23 which is immediately to the rear of the pocket which has last discharged its package, and upon a rotary movement of the wheel the forward partition of the pocket into which the plate extends passes over and rocks such plate and throws the lower portion thereof into position to close the discharge passage from the wheel. Immediately prior to the wheel 6 reaching the limit of its partial movement the partition engaging the plate 24 passes from engagement therewith and permits the plate to swing by gravity to its normal open position, as indicated.

In the use of our improved machine the operator drops a coin into the coin chute, which chute delivers it to a registering pocket 7 of the coin wheel 5. The operator then pushes the handle 10 to the limit of its rearward movement within the slot 11 thus

causing the lip 9 at the upper end of the lever 8 to move into contact with the deposited coin and to communicate a predetermined movement to the coin wheel 5 through the medium of such coin, said movement being sufficient to move the next succeeding coin pocket 7 into register with the coin chute 14. The coin wheel being secured to the package carrying wheel causes such wheel to revolve therewith and each intermittent movement of the coin wheel moves the succeeding pockets 23 into package-discharging position. As each partition of the package wheel thus moves over the plate 24 such plate is oscillated and remains in pocket closing position until the wheel has moved substantially the width of a pocket when the partition in engagement with the plate passes therefrom and permits the plate to return by gravity to its normal pendent position.

It is apparent from the above description and from the drawings that we have provided a simple and efficient form of coin control apparatus in which a deposited coin coöperates with the operating lever to actuate the movements of the coin wheel and associated parts, and also that a package will not be delivered from the package carrying wheel except upon a full stroke of the operating lever.

We wish it understood that our invention is not limited to any specific construction or arrangement of parts except in so far as such limitations are specified in the claim.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is,—

In a coin controlled apparatus, the combination of a coin wheel having peripheral pockets therein, a spring pressed member yieldingly coacting with such pockets to resist a rotation of the wheel, a lever for coacting with the coin carried by the wheel for imparting rotation thereto, said lever being adapted to coact with said member at a predetermined point in the movement thereof to positively force such member into engagement with a registering wheel pocket.

In testimony whereof, we have hereunto signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL R. BEAL.
JAMES D. CRANDELL.

Witnesses:

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E. E. THOMAS.