No. 668,808. Patented Feb. 26, 1901.

D. B. STUART & J. C. BECKFIELD.

COIN CONTROLLED DELIVERY APPARATUS.

(No Model.) (Application filed May 2, 1900.)

Fig. 1

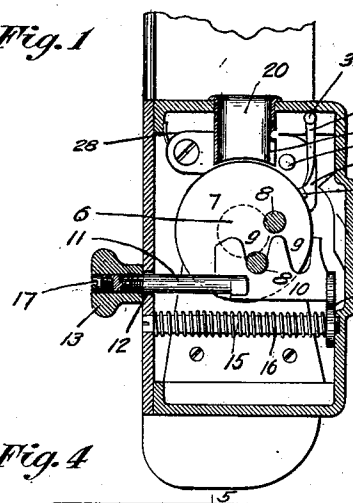


Fig. 2

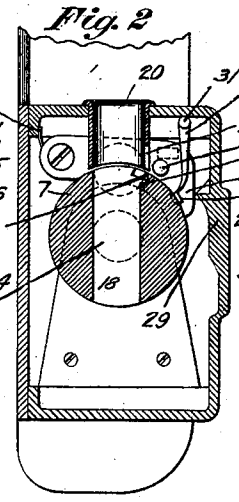


Fig. 3

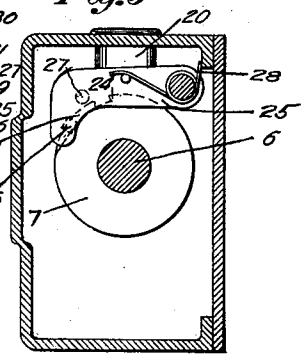


Fig. 4

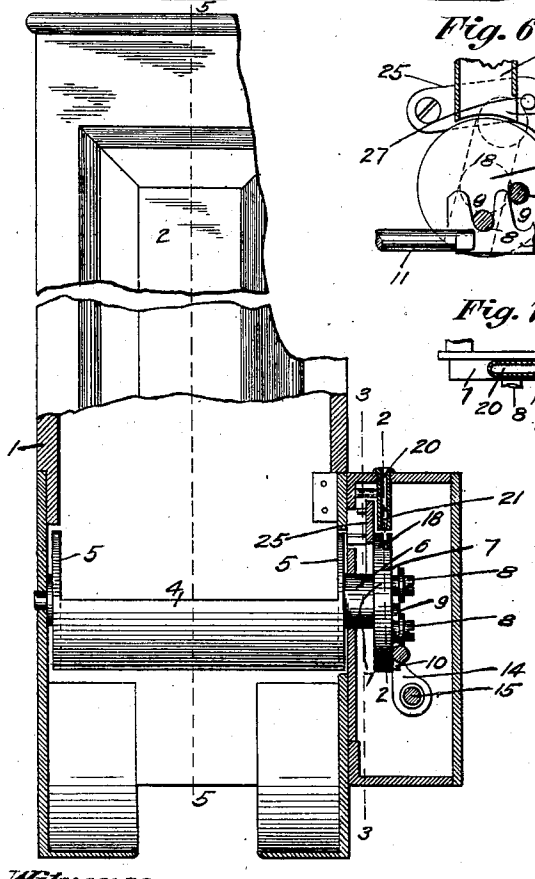
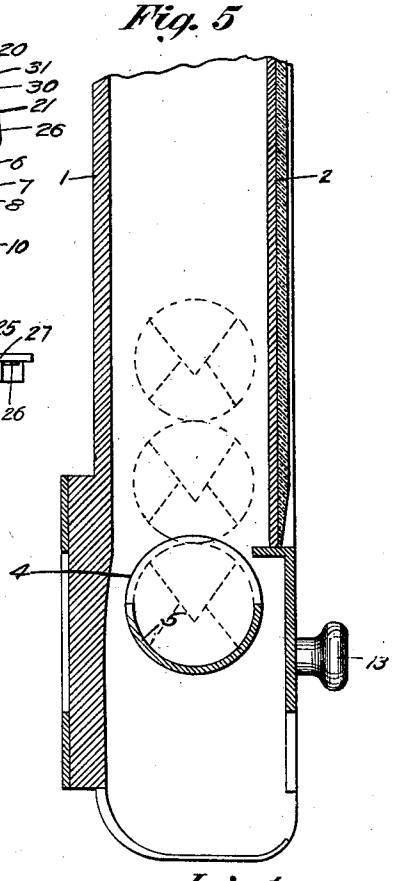


Fig. 6

Fig. 7

Fig. 5



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UNITED STATES PATENT OFFICE.

DAVID B. STUART, OF EDGEWORTH, AND JOHN C. BECKFIELD, OF PITTSBURG, PENNSYLVANIA, ASSIGNORS, BY MESNE ASSIGNMENTS, TO THE NATIONAL CASE AND CARTON CO., OF PENNSYLVANIA.

COIN-CONTROLLED DELIVERY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 668,808, dated February 26, 1901.

Application filed May 2, 1900. Serial No. 15,195. (No model.)

To all whom it may concern:

Be it known that we, DAVID B. STUART, a resident of Edgeworth, and JOHN C. BECKFIELD, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Coin-Controlled Delivery Apparatus; and we do hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to apparatus for delivering articles by means of coin-released mechanism; and its object is to provide an apparatus of this character which is simple and reliable in operation and which is particularly adapted to deliver articles formed into cylindrical packages.

To enable others skilled in the art to make and use our invention, we will now describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is an end view of the coin-controlled operating mechanism, the casing being broken away. Fig. 2 is a transverse section on the line 2 2, Fig. 4. Fig. 3 is a transverse section on the line 3 3, Fig. 4, looking in the opposite direction from the view shown in Fig. 2. Fig. 4 is a front view of the apparatus with parts broken away. Fig. 5 is a transverse section of the reservoir and delivery-trough on the line 5 5, Fig. 4. Fig. 6 is a detail showing the manner of unlocking the delivery-trough, and Fig. 7 is a top view of the disk and locking-pawl.

The reservoir for containing the articles comprises the casing 1, having its front inclosed by the glass 2 and provided with a suitable door (not shown) at the top, through which the articles may be placed in said reservoir. The articles in the particular mechanism disclosed are of cylindrical form, as clearly disclosed in Fig. 5. At the lower end of the reservoir, suitably journaled in the casing, is the oscillatory delivery-trough 4, which is substantially half of a hollow cylinder provided with circular end flanges 5 5. To one journal 6 of said trough is secured the disk 7, said disk having on its outer face the studs 8 8, with which engage the notches 9 9 of a slide 10, extending transversely of the casing in which said disk is inclosed. The slide 10 has secured thereto a rod 11, projecting through an opening 12 in the casing and provided at its outer end with the knob 13, by means of which the slide 10 may be reciprocated. Depending from the inner end of the slide 10 is a flange 14, which is perforated to slide upon a rod 15, mounted in the casing below the slide 10. Surrounding said rod 15 is a coiled spring 16, which bears at one end against the casing and at the other end against the flange 14 and which tends to hold the slide 10 in its innermost position, as shown in Fig. 1, and thereby restore the disk 7 and trough 4 to their normal positions. The knob 12 is secured to the rod 11 in any suitable manner, such, for instance, as by means of the screw 17.

The disk 7 has a slot 18 extending entirely through the same, said slot being slightly enlarged at its upper end, as shown at 19, to receive and hold a coin of the proper denomination, but to allow a coin smaller than the proper one to readily drop through the same. Through the top of the casing in line with the slot 18 in the disk 7 is a suitable coin-chute 20, having on one of its sides the cut-away portion 21 to allow the coin to be moved therethrough. The disk 7 on its inner side is cut away for a portion of its periphery, as shown at 23, Fig. 3, the cut-away portion ending in the shoulder 24. On one side of the casing above the disk 7 is pivoted the locking-pawl 25, which is provided with the lug 26, which rests upon the cut-away portion 23 of the disk 7 and is adapted to contact with the shoulder 24 to hold said disk against rotation. Said pawl is also provided with the stud 27, which is of sufficient length and in position to be engaged by a coin held in the disk 7 to raise the pawl 25 and release the lug 26 from the shoulder 24. In order to firmly hold the pawl 25 against the disk 7, a suitable spring 28, Fig. 3, may be employed. The lug 26 of the pawl 25 normally rests upon the cut-away portion 23 of the disk, but is not in engagement with the shoulder 24, so that said disk may be rotated a short distance before the lug comes in contact with said shoulder; but the amount of rotation is not suffi-

cient to allow the article held in the delivery-trough 4 to be removed therefrom. The object in allowing a slight rotation of the disk 7 is to enable said disk to carry the coin held therein underneath the stud 27 to raise the pawl 25 and permit the complete oscillation of the disk and trough.

At one side of the disk 7 the casing is thickened to form the curved guard 29, against which the coin projects, said guard serving to prevent the coin from leaving the disk 7 until the disk and trough have made a sufficient rotation to permit the article to be removed from the trough.

To prevent backward rotation of the disk and trough after the coin has passed a given point, we prefer to provide a pawl 30, pivoted to the casing, as at 31; but such pawl is not absolutely necessary, as the mechanism will operate perfectly without it. This pawl depends freely, as shown in Figs. 1 and 2, and as the coin is rotated with the disk 7 the pawl is swung to the right to clear said coin; but as soon as the latter passes the pawl swings back into vertical position behind the coin and prevents the backward rotation of the disk, as will be readily understood. The object of this is to prevent the return of the trough to its normal position without first discharging the coin, thereby preventing a person from receiving two or more articles with a single coin.

In the use of our apparatus the casing with the articles therein will be suitably secured in place, the lowermost of the cylindrical articles resting in the trough 4 and the others extending in a column above the same. In this condition a coin is inserted in the chute 20 and if of the right denomination will be received and held in the upper portion of the slot 18 in the disk 7. By then pulling on the knob 13 the slide 10 is moved to oscillate the disk 7, the cut-away portion 23 of the disk permitting this slight rotation, which is sufficient to carry the coin underneath the stud 27 on the pawl 25, raising the latter to hold the lug 26 above the shoulder 24, thereby permitting a complete oscillation or semirotation of the disk and trough. As soon as the article is delivered from the trough by merely releasing the knob 13 the spring 16 will restore the slide 10, together with the disk 7 and trough 4, to their normal positions, thereby allowing the next article to fall into said trough in position to be delivered therefrom at the next oscillation thereof. When no coin in inserted in the apparatus, by pulling on the knob 13 a partial rotation can be given to the disk 7 and trough 4; but this rotation is limited by the lug 26 coming in contact with the shoulder 24 and is not sufficient to permit an article to be removed from the trough.

Instead of having the face of the disk provided with studs 8 8 and the slide 10 with recesses 9 9, as disclosed, it is obvious that the slide 10 could have the form of a toothed rack engaging a toothed segment on the disk 7. The operation of this mechanism, however, would be precisely the same as that disclosed.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In coin-controlled delivery apparatus, the combination with a reservoir, of the delivery-trough, locking means for said trough, and an oscillatory disk provided with a coin-recess in position to carry a coin to unlock the delivery-trough.

2. In coin-controlled delivery apparatus, the combination with a reservoir, of the oscillatory delivery-trough therefor, locking means for said trough, a disk provided with a coin-recess, and actuating means for said disk to carry the coin to unlock the trough and rotate the latter.

3. In coin-controlled delivery apparatus, the combination with a reservoir, of the oscillatory delivery-trough therefor, a disk on said trough, locking means engaging said disk to allow slight rotation thereof, and a coin-recess in said disk in position to carry a coin therein to unlock the trough.

4. In coin-controlled delivery apparatus, the combination with a reservoir, of the delivery-trough, locking means for said trough, an oscillatory disk provided with a coin-recess in position to carry a coin to unlock the delivery-trough, and a pivoted pawl arranged to drop behind the coin to prevent a return of the disk to its normal position until the coin is discharged.

5. In coin-controlled delivery apparatus, the combination with a reservoir, of the oscillatory delivery-trough therefor, a disk on said trough provided with a cut-away portion ending in a shoulder, a pawl lying in said cut-away portion and adapted to engage said shoulder, and a coin-recess in said disk in position to carry a coin therein to raise the pawl out of said cut-away portion.

6. In coin-controlled delivery apparatus, the combination with a reservoir, of the delivery-trough therefor, the disk on said trough, coin-controlled means for locking said disk, a spring-pressed reciprocating rod, and connections between said rod and disk for rotating the latter.

In testimony whereof we, the said DAVID B. STUART and JOHN C. BECKFIELD, have hereunto set our hands.

DAVID B. STUART.
JOHN C. BECKFIELD.

Witnesses:
F. W. WINTER,
ROBERT C. TOTTEN.