(No Model.) 3 Sheets—Sheet 1.

W. CAHOON, Jr.

VENDING APPARATUS.

No. 454,425. Patented June 16, 1891.

Fig. 2.

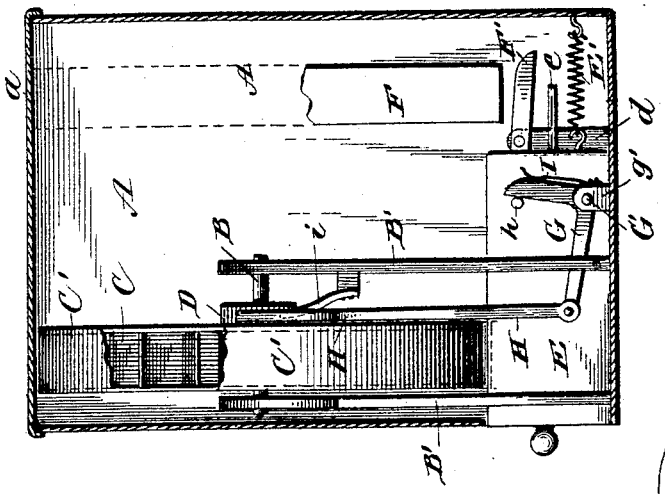


Fig. 1.

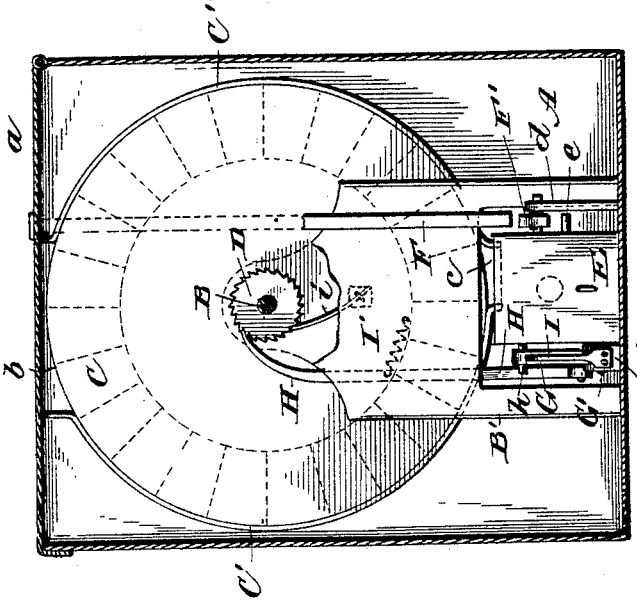
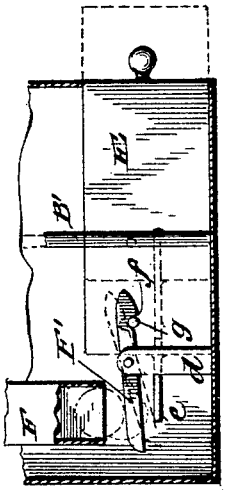


Fig. 3.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 5.

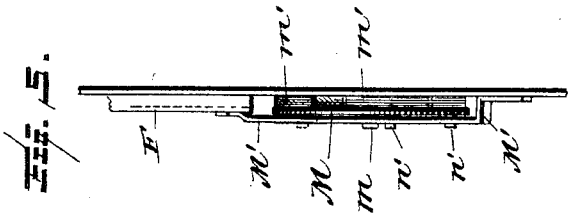
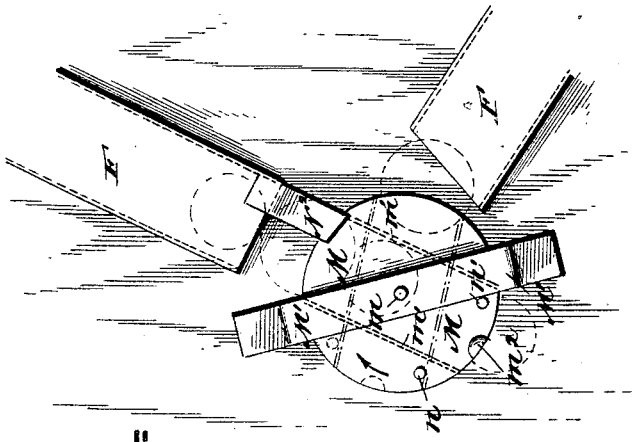


Fig. 4.



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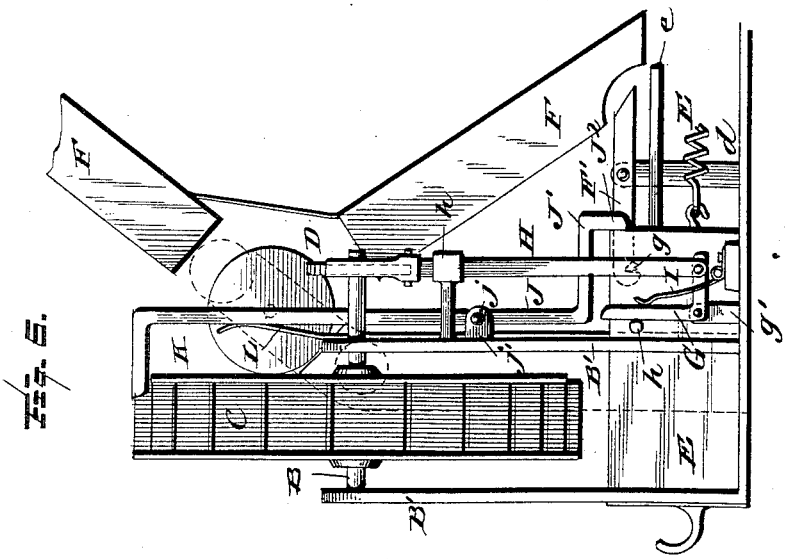

Fig. 5.

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UNITED STATES PATENT OFFICE.

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VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 454,425, dated June 16, 1891.

Application filed March 24, 1891. Serial No. 386,239. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CAHOON, JR., a citizen of the United States, residing at New York, in the county of New York, State of New York, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in coin-controlled devices, and while it is designed, primarily, for the sale of postage-stamps, I of course do not intend to restrict myself to such use, as it is evident that it may be used for a variety of articles of merchandise, and I propose to make the pocket-wheel removable and interchangeable, so that wheels may be used in accordance with the nature of the articles to be dispensed by the machine.

The novelty in the present instance resides in the features hereinafter set forth, and specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, in which—

Figure 1 is a rear end view of my improved device with parts broken away and others in section. Fig. 2 is a side view with the side of the box removed, parts broken away and others in section. Fig. 3 is a sectional detail showing the coin-operated latch which holds the drawer locked. Fig. 4 is a side elevation of the coin-detector. Fig. 5 is an edge view of the same. Fig. 6 is a fragmentary view of a modified form of wheel-actuating mechanism.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates an inclosing case of any suitable material and provided with detachable cover *a*, designed to be secured in place in any preferred manner.

B is a horizontal shaft held in suitable bearings, such as the standards B′, suitably supported within the case, as shown, and upon this shaft is carried the pocketed wheel C, which is open at its periphery and designed to revolve within an inclosing case C′, which is open at the top, as shown at *b* in Fig. 1, and at its lower side provided with an outlet *c* for the discharge of the contents of the pocket of the wheel into the drawer. In Figs. 1 and 2 this case C′ is shown, but in Fig. 6 it is omitted, although of course it will be understood that one is to be employed in the construction shown in the latter figure. The number of pockets in the wheel may be varied, as may also their shape and size, to conform to the character of the article for which the device is designed.

D is a ratchet-wheel upon the shaft B and designed to be engaged by a pawl, which is actuated by the movement of the drawer to rotate the wheel. In Figs. 1, 2, and 3 I have shown one form of mechanism for accomplishing this purpose.

E is the drawer, which is designed to be normally held closed by means of a spring E′, connecting the rear end of the drawer with the rear wall of the case A, as shown in Fig. 2. Extending from the rear end of the drawer is a shelf or leg *e*. F is the coin-chute arranged with its delivering end in line with and above the coin latch or lever F′, which is pivoted upon a suitable standard or support *d* within the case, and at its outer end provided with a notch *f*, designed to engage over a pin *g*, projecting from the side of the drawer, as seen best in Fig. 3.

G is a bell-crank lever pivoted at G′ to a suitable support or lug *g′* on the bottom of the case, and to the outer end of the horizontal arm of said lever is pivotally connected the vertical pawl H, which is curved at its upper end and arranged to engage the ratchet-wheel G, as shown best in Fig. 1. The free end of the vertical arm of this lever G engages behind a lateral pin *h* on the drawer, as seen in Fig. 2, and I is a spring arranged to exert its force against the said upper end of the vertical arm of this lever, as seen in said Fig. 2 and also in Fig. 1.

i is a retaining-pawl secured to some fixed part—as, for instance, one of the standards B′—and arranged to engage the ratchet-wheel D to prevent retrograde movement thereof, as seen in Fig. 1.

I′ is a spring acting to hold the pawl H in engagement with the ratchet-wheel, as seen in Fig. 1.

The operation will be readily understood. As shown by full lines, the drawer is in and locked. When a coin is put into the coin-chute, it falls to the bottom thereof and falls upon the free end of the coin latch or lever F′ and raises its front end from engagement with the pin *g*, as indicated by dotted lines in Fig. 3. This leaves the drawer free to be drawn out, and as the drawer is pulled out the shelf *e*, which has up to this time held the coin from dropping into the box by reason of the engagement of the coin latch or lever with said shelf, is moved away from said lever, when the coin forces it into the position indicated by dotted lines in Fig. 3, and the coin falls into the bottom of the box and the lever resumes its normal position by gravity. When the drawer is pulled out, the article which was in the pocket of the wheel which was brought coincident with the opening *c* in the case C′ can be removed by the pressure. As the drawer is pulled out, the pin *h* is withdrawn from engagement with the vertical arm of the bell-crank lever G, and the spring I forces said arm forward, and consequently pulls the pawl H downward. As the drawer is pushed in, the pin *h* engages the free end of the vertical arm of the lever and pushes it backward, thus forcing the pawl H upward, and said pawl being in engagement with the ratchet-wheel B moves the pocket-wheel forward, so as to bring the next pocket coincident with the dischange-opening *c* in the case C′.

By the construction shown in Fig. 6 the same result is accomplished in practically the same way, the parts being, however, differently arranged. The coin-latch engages a pin *g* on the drawer and is actuated by the coin and held by the shelf in the same manner, as illustrated in Fig. 2. The bell-crank lever G is pivoted to the standard *g′*, and the spring I acts upon its vertical arm, which engages the pin *h* on the drawer; but the position of the lever is reversed, its vertical arm being to the front instead of to the rear. The pawl H is pivoted to the horizontal arm of the lever and actuates the ratchet-wheel in the same manner as the pawl of Figs. 1 and 2. In this construction I dispense with the retaining-pawl *i* of Fig. 1, and in lieu thereof employ a stop-lever J, which is pivoted at *j* to a lug or projection *j′* on one of the standards B′, and near its lower end provided with a horizontal portion J′, the end of which extends downward, as shown at J², and engages the rear end of the drawer. Its upper end is bent horizontally forward toward the front end of the machine, and is designed to work between the partitions of the pocket-wheel, as shown in Fig. 6, the back plate K of the pocket-wheel in this instance being of less diameter than the front plate, as shown, to allow said horizontal portion of the stop-lever to engage with the projecting ends of the division-plates of the wheel when the drawer is in.

L is a spring secured to some fixed part and bearing upon the front face of the stop-lever above its pivot to force the horizontal portion out of engagement with the division-plates of the wheel when not otherwise held. The operation of this stop-lever will be readily understood. When the drawer is in, the rear end thereof engages the depending portion J² of the lever and forces its upper end forward into engagement with the pocket-wheel. As the drawer is pulled out the spring L forces the upper end of the stop-lever back out of engagement with the wheel, and leaves the same free to be revolved by the outward movement of the pawl H. Said pawl may be guided by a suitable guide *h′*, if desired.

In order to prevent the operation of the device by other than a predetermined coin, I employ the coin selector and detector shown detached in Figs. 4 and 5. F is the coin-chute, which in this instance, and as also shown in Fig. 6, consists of two separated portions arranged at different angles, and between the adjacent ends of the two portions of the chute I arrange a disk M, pivoted at its center at *m* beneath the bracket M′ and upon its underside provided with parallel guide-bars *m′*, which are at such a distance apart as to just prevent a passage therebetween of the predetermined coins. The upper face of the disk opposite the coin-entrance is provided with stop-pins *n n′*, designed to engage the edge of the bracket M′ and limit the rotation of the disk, which is pivoted to move freely on its pivot beneath the bracket. A guard-finger N² may be employed to insure the passage of the coin to the disk and prevent the said coin from becoming edged up, which it might otherwise do and prevent successful working of the device. When a predetermined coin comes in contact with the disk, the weight of said coin will turn the disk on its pivot in the direction of the arrow in Fig. 4, and the coin will fall through the lower portion of the chute; but a coin of less diameter will pass directly through the passage-way between the guides *m′*, as indicated in Fig. 4. The disk should be counterweighted, as shown at *m*², to return to its normal position after the passage of the coin.

What I claim as new is—

1. The combination, with the pocketed wheel and the drawer, of the coin-actuated lever arranged to lock the drawer, a bell-crank lever, and a pawl carried thereby and arranged to actuate the wheel, substantially as specified.

2. The combination, with the pocketed wheel and the ratchet-wheel on the shaft thereof, of the drawer, the coin-latch for holding the drawer locked, and the vertically-movable pawl engaging the ratchet-wheel and actuated by the movement of the drawer

through the medium of an interposed bell-crank lever, substantially as specified.

3. The combination, with the pocketed wheel and the drawer, of the bell-crank lever having its vertical arm engaging a lateral projection on the drawer, and the vertically-movable pawl pivotally connected with said lever and arranged to actuate the wheel, substantially as specified.

4. The combination, with the pocketed wheel and the drawer, of the bell-crank lever, the vertical arm of which engages a projection on the drawer, the pawl pivotally connected with the horizontal arm of the lever, and a spring arranged to exert its influence in opposition to the inward movement of the drawer, substantially as specified.

5. The combination, with the pocketed wheel and the drawer, of the lever carrying the pawl for actuating the wheel and having an arm engaging a projection on the drawer, and the coin-latch pivoted to a fixed support and engaging a projection on the drawer, substantially as specified.

6. The combination, with the pocketed wheel having its back plate of less diameter than its front plate, of a locking-lever actuated by the movement of the drawer and having one portion extended between the division-plates of the wheel, substantially as described.

7. The combination, with a pocketed wheel having one plate of less diameter than the other, of the drawer and the locking-lever pivoted between its ends and having one part in the path of the drawer and the other adapted to move between the division-plates of the wheel, substantially as specified.

8. The combination, with a pocketed wheel and the drawer, of a locking-lever having one end arranged in the path of the drawer with the other end extended between the back and front plates of the wheel, and a spring acting upon the locking-lever to force the upper end away from the wheel, substantially as described.

9. The combination, with the pocketed wheel, the drawer, the coin-released locking mechanism and the wheel-actuating mechanism arranged to be actuated by the drawer, and the pivoted locking-lever having a portion arranged in the path of the drawer and the other end arranged to pass between the division-plates of the wheel, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM CAHOON, JR.

Witnesses:
T. W. CARPENTER,
WM. S. HATCH.