(No Model.) 2 Sheets—Sheet 1.

M. B. MILLS.

COIN ACTUATED VENDING APPARATUS.

No. 450,336. Patented Apr. 14, 1891.

Fig. 1.

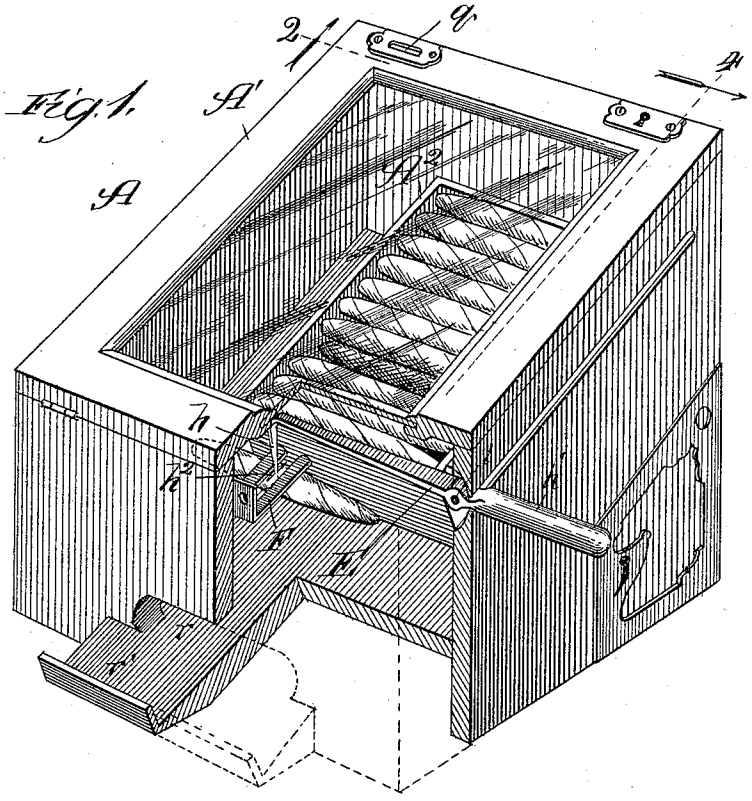


Fig. 2.

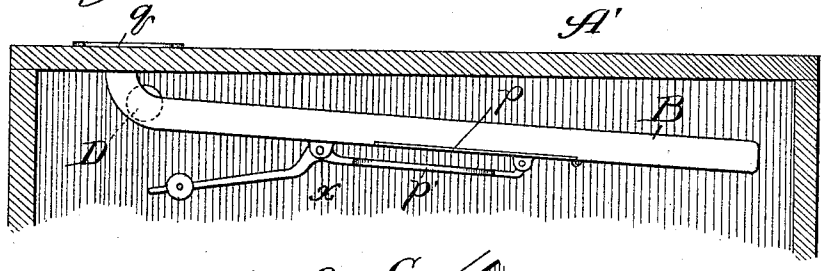
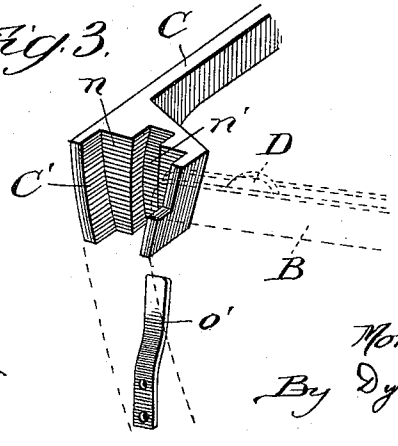


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

M. B. MILLS.

COIN ACTUATED VENDING APPARATUS.

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Fig. 4.

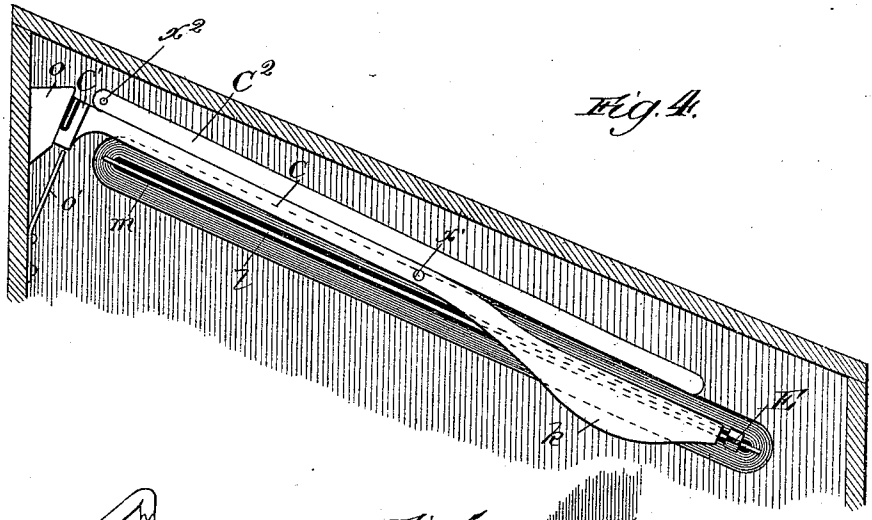


Fig. 5.

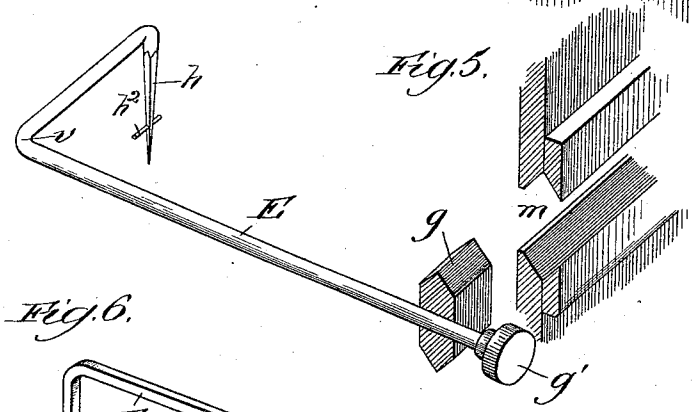


Fig. 6.

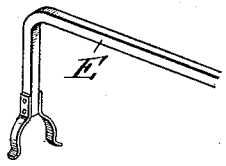
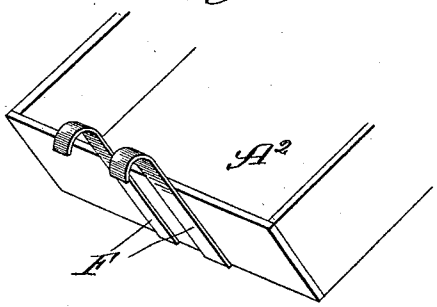


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

MORTIMER B. MILLS, OF CHICAGO, ILLINOIS.

COIN-ACTUATED VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 450,336, dated April 14, 1891.

Application filed January 10, 1891. Serial No. 377,362. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER B. MILLS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Coin-Actuated Vending Apparatus, of which the following is a specification.

My invention relates to an improvement in the class of apparatus involving as its essential generally stated features of construction a case for containing and confining the article to be vended, a coin-chute leading from an insertion-slot to mechanism operating normally to obstruct or "lock" the delivery, but which is controlled by engagement with it of the inserted coin to unlock the delivery mechanism, and the mechanism for delivering the article, the purchase price of which is supposed to be represented by the inserted coin or token.

The more important object of my improvement is to provide a delivery implement which, when released or "unlocked" by the action of the inserted coin, shall be under the control of the operator (purchaser) to permit him to manipulate it in a manner to cause it to seize any particular article desired in the case, (thus allowing selection,) abstract such article bodily from its position of confinement, and carry it to the point of delivery. The aforesaid manner of delivery is especially advantageous where the article to be delivered by the apparatus is of the nature which it is desirable or necessary to vend from original packages, the latter being the case with cigars for vending which my improvement is especially designed, though I do not limit its use in connection with cigars, since it may be employed for vending many other articles.

A further object of my invention is to provide a generally-improved construction of coin-actuated vending apparatus.

In the accompanying drawings, Figure 1 is a broken perspective view of a vending apparatus constructed in accordance with my improvement. Fig. 2 is a section taken on the line 2 of Fig. 1, viewed in the direction of the arrow and enlarged. Fig. 3 is a broken perspective view showing details of the coin-chute and lever mechanism controlled by the coin. Fig. 4 is a section taken on the line 4 of Fig. 1, viewed in the direction of the arrow and enlarged. Fig. 5 is a sectional perspective view in the nature of a diagram, showing a modified construction of the delivery mechanism. Figs. 6 and 7 are broken perspective views of modified details.

A is a case, which should be supported in an inclined position, or the base of which at least should incline toward a delivery-opening r in one side, so that the article delivered may emerge from the case by gravity. Inside the case A, extending along one side thereof, is an inclined chute B, leading from an insertion-slot q to the lever mechanism of the delivery, hereinafter described.

To preclude the possibility of a coin or token of a greater weight than that representing the predetermined purchase price being permitted to gain access to the lever mechanism of the aforesaid delivery, I provide a hinged door p in the base of the coin-chute, held normally in its closed position by a lever p', pivotally connected with it at one end, fulcrumed, as at x, and weighted at its opposite end to resist opening of the door by a coin passing through the chute of the denomination representing the purchase price.

The chute B leads to a lever C, fulcrumed, as shown at x' in Fig. 4, between its extremities to extend along a lateral inner side of the case A and terminating at its extremity adjacent to that of the coin-chute in a head C', the outer end of which is recessed to form a species of socket n for the coin, an end closure for the socket being afforded by a rigid projection o, extending in line with the lever C from the side of the case A along which the chute leads, the sides of the socket inclining in a downward direction toward each other. At its upper end the socket n is amply wide to admit a coin D of proper denomination, but is narrower toward its tapering end than the diameter of the coin, whereby the latter will not pass through it. From below the projection o extends a finger o', inclining toward the socket n, with its free end in position to enter with the depression of the head end of the lever C a recess n' in the back of the said socket, thus behind a coin in the latter. A suitable box (not shown) should be provided in the case A in position to receive the coins

dropped from the head C′ in the manner hereinafter described.

In the side of the case A lengthwise of and adjacent to the lever C is a slot *m*, along which extends a guide-rod *l* for the delivery implement E, hereinafter described. The lever C is expanded toward its rear end or that opposite the end provided with the head C′ to form a cam *k*, projecting normally across the slot *m*, the normal position of the said lever being yieldingly maintained by a weight or spring suitably connected with it, or as an equivalent therefor by the lever C^2, fulcrumed near one end, as shown at x^2, there to form a stop against undue rise of the head C′ and extending toward its free end along the lever C to bear against it when raised and operate to return it when released to its normal position by the weight of the lever C^2.

The implement E in its form illustrated in Fig. 1 comprises a bar supported to be slid back and forth on the rod *l*, across which it extends through the slot *m*. The outer end of the bar is provided with a handle *h*′, and toward its inner end the bar is formed into a sharp-pointed finger *h*, extending at a right angle therefrom. At the inner side of the forward end of the case or side, in which the opening *r* is provided, is a bifurcated projecting stop or "stripper" F.

The cover A′ of the case A should be transparent and should to that end be formed with glass.

As represented in Fig. 1, the article to be vended is cigars in their box A^2 or the original package, which is confined in the case A, the cigar-box lid being off and exposing to view the cigars through the glass of the cover A′. The cigars may be of different grades of color or otherwise involve different qualities, rendering selection from their number desirable to suit different tastes.

To operate the apparatus containing the mechanism thus far described in detail, a coin of proper denomination is inserted into the slot *q*, whence it enters and passes through the chute B, falling into the socket in the head C′ of the lever C. It should be stated that the normal position of the delivery implement E is beyond the end of the lever C opposite that provided with the head C′, where it normally occupies the position of crossing the slot *m*, thus obstructing the movement therein of the said implement, and therefore locking the delivery. The lever C is so balanced that with the access of the coin into the socket *n* in the head C′ the weight of the coin depresses the head end of the lever sufficiently to raise the opposite end above the plane of the slot *m*, whereby its obstructing function to the implement E is overcome. Then by grasping the handle *h*′ the implement E may be readily slid in the slot *m*, its movement therein producing its engagement with the cam *k*, whereby the head end of the lever is still further depressed to cause its socket *n*′ to pass over the finger *o*′, which, owing to its inclined position, thereby lifts the coin in the socket as the lever-head descends in the arc of the circle it describes, and withdraws the coin from the forward open side of the socket, which, with the lever depressed, as stated, is brought below the projection *o*, whereby the coin, not being there obstructed by the said projection, may fall out into the receptacle stated to be provided for it.

The operator slides the implement E to bring the pointed finger *h* over any cigar he may select, when by tipping the implement upward at the handle the finger *h* may be caused to penetrate the selected cigar, which is lifted from the box by lowering the handle *h*′, and when thus withdrawn is to be carried toward the stripper F by sliding the implement E back to its normal position, which brings the cigar below the stripper. By then depressing the delivery implement at its handle the cigar is raised against the stripper, being thereby stripped off the finger *h* and allowed to fall upon the inclined base of the case A in advance of the cigar-box, whence it rolls out at the opening *r* upon a ledge *r*′.

If desired, the stripper F, which may have any suitable form other than that described, may, as represented in Fig. 7, be on an end of the cigar-box or other receptacle for the particular article to be vended, and the seizing end of the delivery implement may be a light bifurcated spring, as indicated in Fig. 6, to clasp the article selected instead of penetrating it. Other forms of the seizing portion of the implement E than those shown and described may be provided without departing from my invention, though if the pointed finger be used it should, as shown in Fig. 5, be provided with a stop h^2 to prevent further penetration than desirable into the selected article.

Instead of the delivery implement E being adapted, as described, to be worked by raising and lowering the handle portion to lower and raise the seizing end *h*, it may be constructed as indicated in Fig. 5. The last-named construction involves a block *g*, adapted to dovetail in the slot *m*, suitably formed to receive it and in which it is confined, (though shown separate from it in the diagram by way of illustration.) The block affords a bearing for the cylindrical bar of the implement E passing through it, and which is provided with a knob *g*′ at its outer end. The said bar is bent to a right angle, as shown at *v*, and is provided at its inner extremity with the pointed finger *h*, (or other form of seizing appendage.)

To operate the last-described form of the implement E, it is slid, after being unlocked by the inserted coin in the manner already explained, to the position desired in the slot *m*, wherein the finger *h* is brought over the cigar desired for delivery, which it is caused to engage by properly turning the knob *g*′ in its bearing *g* to turn the bar on its axis. The

implement is then raised to lift the cigar out of the box by turning the knob in the opposite direction, when it is manipulated to slide the block *g* back to its normal position, wherein the cigar is brought to the stripper and forced off by again turning the knob to raise the seizing end. The stripper employed with the last-named construction of the delivery implement should be provided on the box, as shown in Fig. 7.

Obviously when the implement E is returned in the delivery operation to its normal position it leaves the lever C at its end nearest the delivery in the position of crossing the slot *m* to lock the delivery implement and at its head end in the position to receive a coin for another operation.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a coin-operated vending apparatus, the combination, with the case containing a coin-chute leading from the insertion-slot, of lever mechanism to be engaged by the coin and actuated thereby to unlock the delivery, and a hand-controlled delivery implement adapted when so unlocked to be moved by hand from outside the case to engage the article to be delivered, abstract it from its receptacle, and carry it to the point of delivery, substantially as described.

2. In a coin-operated vending apparatus, the combination of the case containing a coin-chute leading from the insertion-slot and provided with an opening in one side, lever mechanism to be engaged by the coin and actuated thereby to unlock the delivery, and a delivery implement comprising a bar supported to extend transversely through and be movable in the said opening and forming on its outer end a handle and provided at the end inside the case with a seizing-finger extending at an angle to the bar, the implement being adapted when so unlocked to be moved in the said opening to engage at its said finger the article selected, abstract it from its receptacle, and carry it to the point of delivery, substantially as described.

3. In a coin-operated vending apparatus, the combination of the case having an outlet toward which it inclines and containing a coin-chute leading from the insertion-slot, lever mechanism to be engaged by the coin and actuated by the gravity thereof to unlock the delivery, a stripper near the said outlet, and a delivery implement adapted when so unlocked to be moved to engage the article to be delivered, to withdraw it from its receptacle, and carry it to the stripper, substantially as described.

4. In a coin-operated vending apparatus, the combination of the case A, having an outlet *r*, toward which it inclines and containing a coin-chute B, leading from the insertion-slot *q*, a guide-slot *m* in a side of the case, a lever C, fulcrumed in the case to extend along the slotted side thereof and provided at one end with a head C′, containing a socket to which the chute leads and toward its opposite end with a cam *k*, the said lever being normally held yieldingly in position to obstruct, at its said cam end, passage lengthwise through the slot *m*, means for removing the coin from the socket by the descent of the head end of the lever C, and a delivery implement E, confined in the slot *m*, the whole being constructed and arranged to operate substantially as described.

5. A coin-operated vending apparatus comprising, in combination, a case A, having an outlet *r*, toward which it inclines, a coin-chute B, leading from the insertion-slot *q*, a guide-slot *m* in a side of the case, a lever C, fulcrumed in the case to extend along the slotted side thereof and provided at one end with a head C′, containing a socket in its outer end to which the coin-chute leads and toward its opposite end with a cam *k*, the said lever being normally held yieldingly in positionto obstruct at its said cam end passage lengthwise through the slot *m*, a closure *o* for the socket *n*, a finger *o′*, inclining upward toward the said socket, a delivery implement E, confined in the slot *m*, and a stripper F near the outlet *r*, the whole being constructed and arranged to operate substantially as described.

MORTIMER B. MILLS.

In presence of—
J. W. DYRENFORTH,
M. J. FROST.