

No. 757,993.

PATENTED APR. 19, 1904.

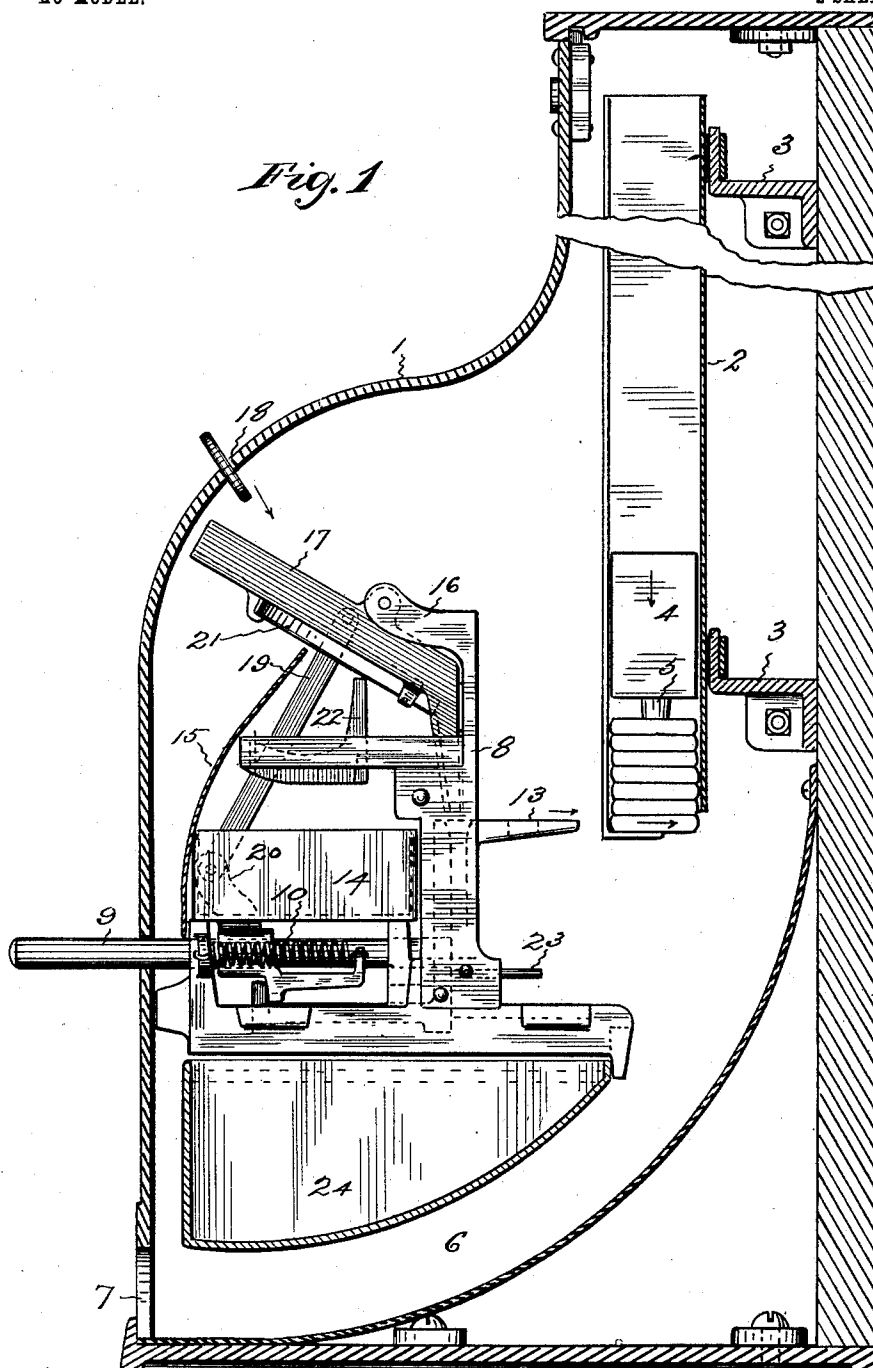
D. O. COLEMAN & A. SHEPARD.

VENDING MACHINE.

APPLICATION FILED NOV. 5, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2

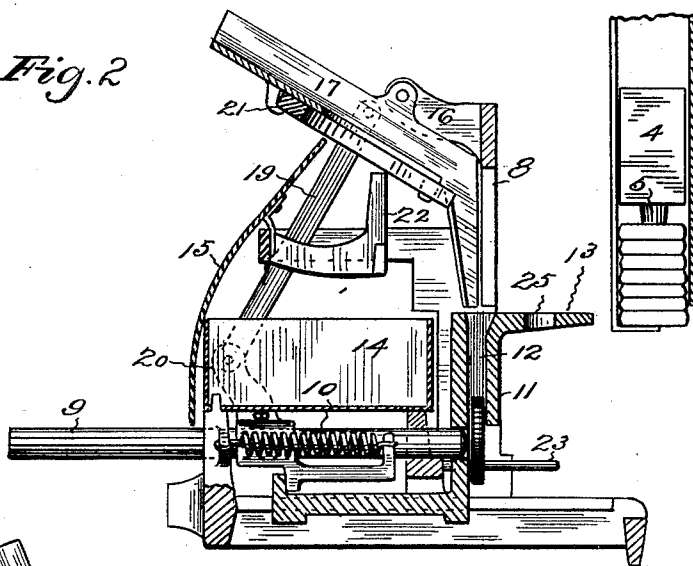


Fig. 4

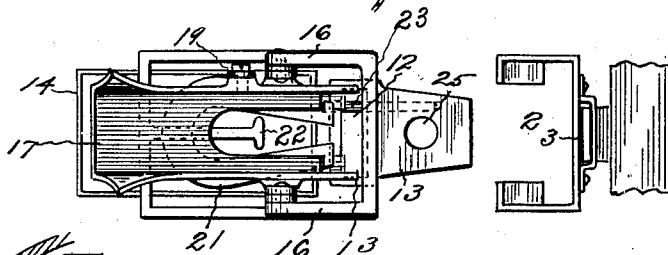


Fig. 5

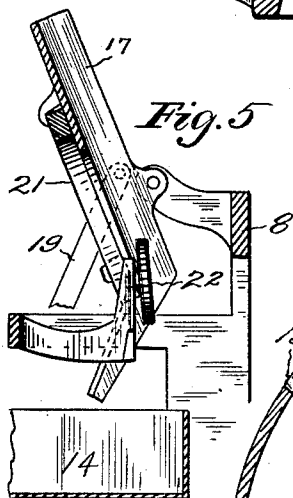
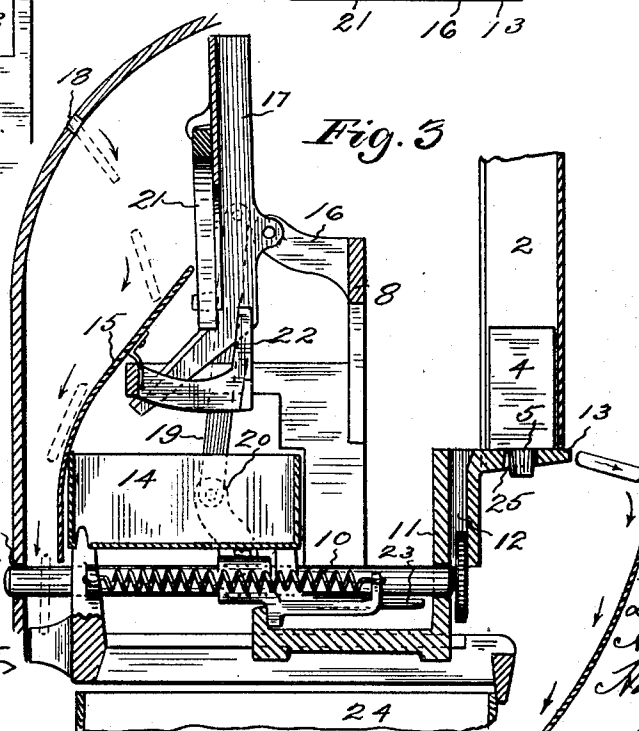


Fig. 3



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UNITED STATES PATENT OFFICE.

DORR O. COLEMAN AND AMOS SHEPARD, OF SOUTHTON, CONNECTICUT;
SAID SHEPARD ASSIGNOR TO SAID COLEMAN.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 757,993, dated April 19, 1904.

Application filed November 5, 1902. Serial No. 130,134. (No model.)

To all whom it may concern:

Be it known that we, DORR O. COLEMAN and AMOS SHEPARD, citizens of the United States, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention relates to a vending-machine in which the effective connection between the operative plunger and the slide that releases the merchandise is mechanically made by means of a coin.

The object is the production of a machine of this nature which will not operate when slugs are introduced instead of coin, which will return coin, so that they may be recovered if the merchandise is exhausted or if the mechanism is inoperative, and which will clear the coin-passage of foreign matter, such as matches, toothpicks, paper, and the like. Coin inserted through the slot in the case of the machine that is illustrated drop upon a pivotally-hung trough that carries a magnet and is connected with a plunger. Good coin slip down the trough into a channel in the slide and so lodge that the plunger when pushed in encounters the coin and forces the slide back and causes it to push a package from an opening in the bottom of the merchandise-receptacle. If there is no coin in the channel when the plunger is pushed in, the slide is not moved, but the trough is oscillated. If a bogus coin has been retained by the magnet or other means or if foreign matter is caught in the trough, it is knocked off into a pocket by an arm when the trough is oscillated and does not pass into the channel in the slide. Above the merchandise is a follower that is arranged to engage and retain the slide in its rear position after the last piece of merchandise has been pushed out. This holds the trough tilted, and coin then inserted through the slot will not pass into the channel in the slide or into the slug-pocket, but drop down in front, where a package of merchandise would ordinarily be deposited.

Figure 1 of the accompanying drawings is a vertical section of this vending-machine

with the operating mechanism shown in side elevation. Fig. 2 is a vertical section through the operating mechanism, showing the parts in their normal positions and a coin in the channel in the slide back of the plunger. Fig. 3 is a similar view with the plunger pushed in and the slide pushing out the last package of merchandise, the parts being in the positions which they will occupy after all of the merchandise has been removed from the receptacle. Fig. 4 is a plan view of the operating mechanism. Fig. 5 is a vertical-section showing the trough tilted and a slug about to be knocked off into the slug-pocket.

The case 1 may be formed of any suitable material to any desired shape. The merchandise-receptacle 2 is supported within the case by brackets 3 in a common manner. This receptacle is open at the bottom, so that packages of merchandise may be pushed out in the usual way. In the receptacle above the merchandise is a follower 4, with a downwardly-projecting lug 5.

When the packages of merchandise are pushed out from the bottom of the receptacle one by one, they drop into the channel 6 and slide down to the opening 7 at the bottom of the front of the case.

The operating mechanism is supported by a frame 8, that is secured to the case by any suitable means. The plunger 9 is movable in and out through perforations in the frame. A spring 10 normally draws the plunger toward the front. The inner end of the plunger extends into an opening in a slide 11. This slide has a vertical channel 12 and a rearwardly-projecting arm 13 at the top. In front of the slide and above the plunger is a pocket 14. In front of the pocket is a shield 15. Pivotally held by arms 16, that project from the top of the frame, is a trough 17. The upper end of this trough is beneath the slot 18 in the front of the case, so that coin thrust through the slot will be deposited in the trough when in its normal position. The lower end of the trough extends downwardly nearly to the top of the vertical channel through the slide. A link 19 connects the trough with an arm 20, that extends upwardly

from the plunger, so that when the plunger is pushed in the trough is tilted. The lower end of the trough is slotted, and attached to the under side of the trough of the machine shown is a magnet 21. Extending rearwardly from the frame below the middle of the trough is an arm 22.

When a good coin, as a copper cent, is inserted through the slot and drops onto the trough, it slips down past the magnet into the channel in the slide and is lodged back of the plunger by the pin 23, that projects rearwardly from one side of the bottom of the slide. If the plunger is now pushed in, it engages the coin and pushes the coin and slide rearwardly, so that the arm 13 will push the lowest package of merchandise from the receptacle and allow it to drop into the discharge-passage. If there is no coin in the channel of the slide, the plunger when pushed in does not move the slide. When the slide has been moved in sufficiently far to push a package of merchandise from the bottom of the receptacle, the coin is carried beyond the end of the lodging-pin and drops into the coin-tray 24. The slide returns to its normal position when the pressure on the plunger is released.

If a slug or bogus coin of iron or steel is inserted through the slot, it is retained in the trough by the magnet until it is knocked off by the arm that projects from the frame, when the trough is tilted by the pushing in of the plunger. A slug knocked off in this manner drops into the slug-pocket and does not pass into the channel, so that the slide will be moved by the plunger. Toothpicks, matches, paper, and similar substances inserted through the slot onto the trough will be knocked off in a similar manner.

When the last package of merchandise is thrust out of the receptacle by the arm 13, the lug 5 at the lower end of the follower drops into the opening 25 and holds the arm so that the plunger cannot move forward to its normal position. This indicates that the receptacle is empty, and when the plunger is held

in this manner the trough is tipped so that coin inserted through the slot in the case will drop past the trough and slide down the shield in front of the mechanism into the discharge-trough, where it may be recovered.

If the mechanism should become disarranged or the spring that draws the plunger forward should become broken and the trough were tipped up, coin instead of passing into the machine would drop out where they could be recovered.

But one mechanism has been described. Of course this mechanism could be duplicated, if desired. In fact, machines of this nature usually have three sets of these mechanisms side by side in a single case. That a receptacle is empty is indicated to a customer, although if the fact is not observed he does not lose his coin. The mechanism is simple and durable and not likely to get out of repair and could be used without the magnet.

We claim as our invention—

1. A check-controlled apparatus for a vending-machine having an oscillating trough, a magnet attached to and movable with the trough, a plunger connected with and adapted to oscillate the trough at each reciprocation, a slide with a vertical channel adapted to be connected with the plunger through the medium of a coin, and mechanism which when the trough is tilted projects into the trough and removes articles retained therein, substantially as specified.

2. A check-controlled apparatus for a vending-machine having an oscillating coin-trough, mechanism for oscillating the trough, means for retaining blanks therein, and mechanism which when the trough is oscillated projects into and removes from the trough articles retained therein, substantially as specified.

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