

H. D. HINCKLEY.
VENDING MACHINE.

No. 496,656.

Patented May 2, 1893.

Fig. 1

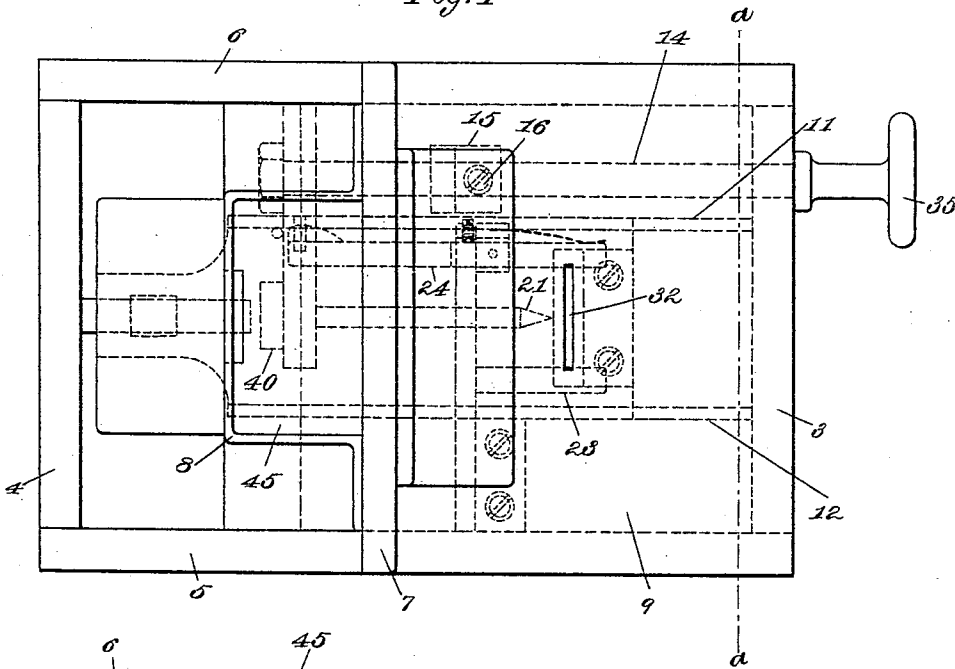
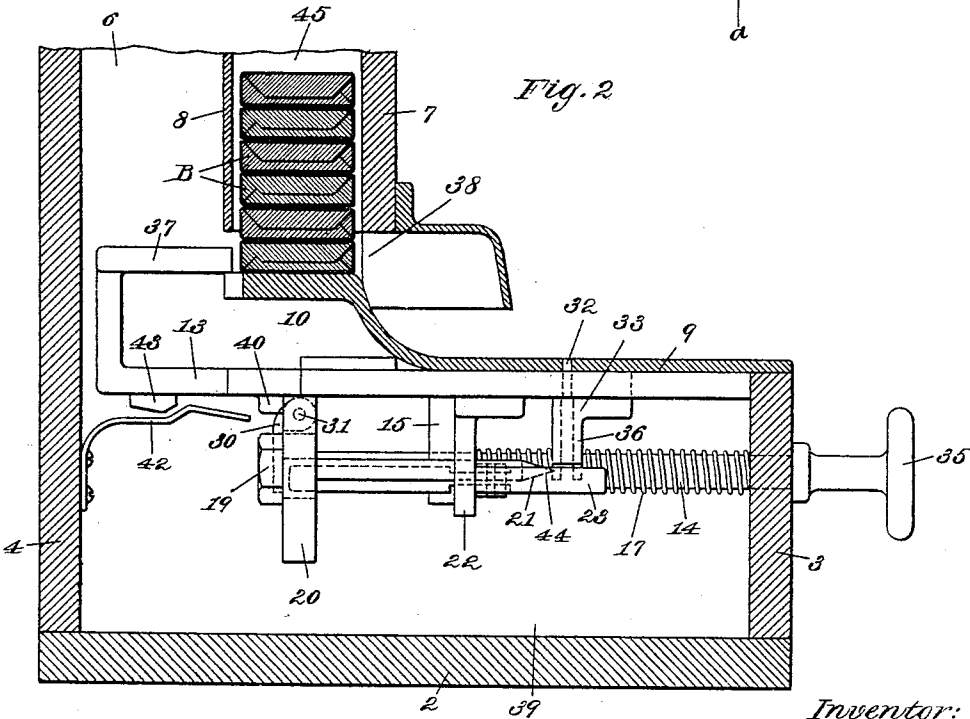


Fig. 2



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Inventor:
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By his Attorney,
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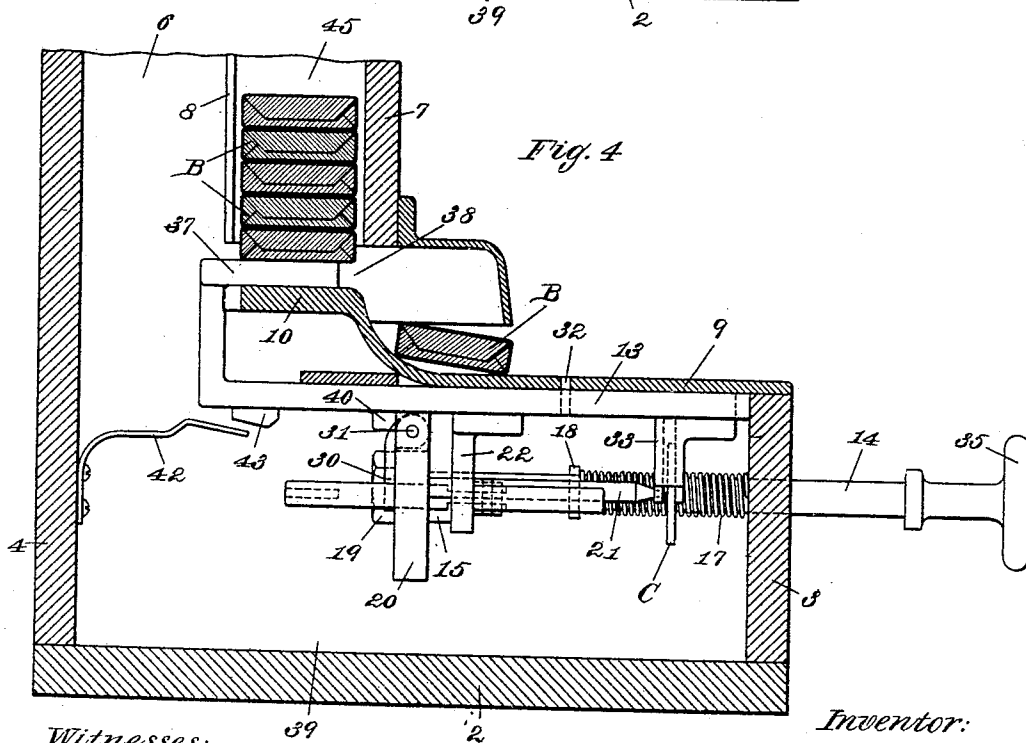
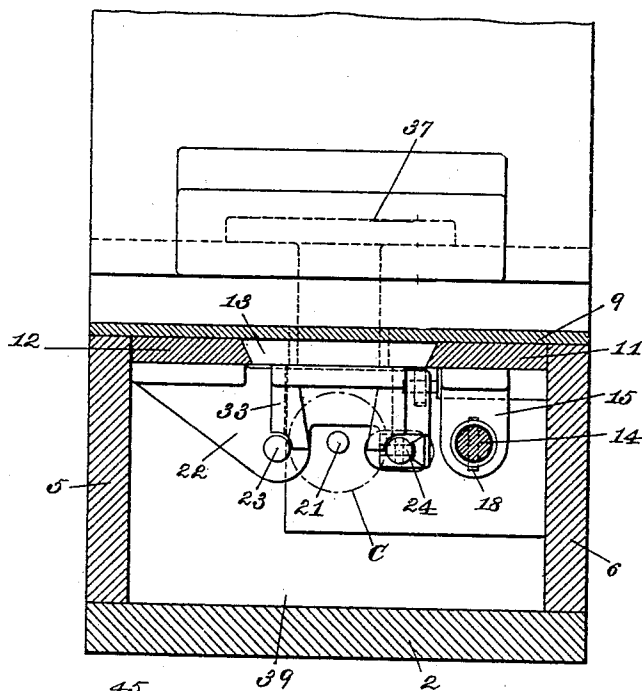
(No Model.)

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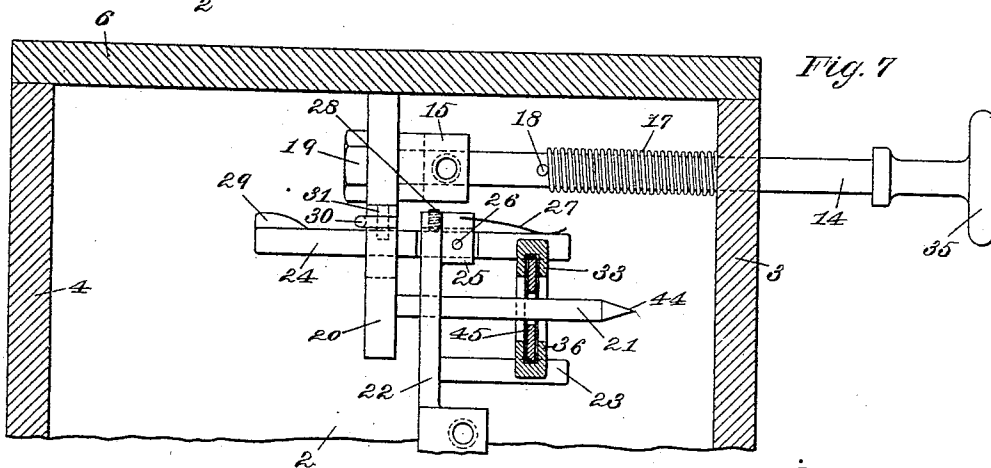
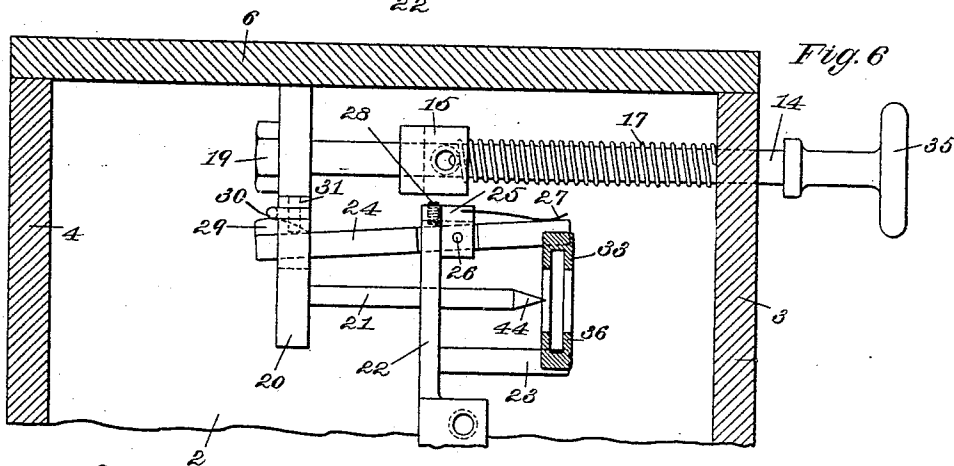
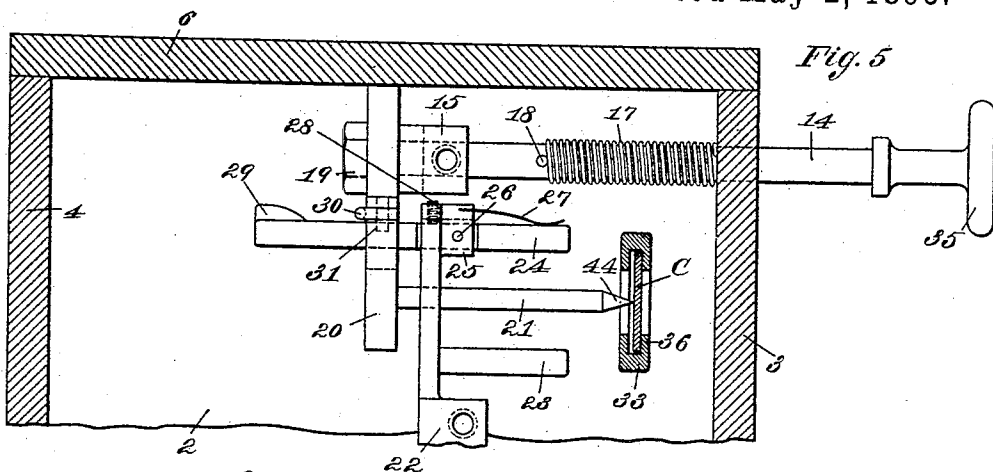
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3 Sheets—Sheet 3.

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UNITED STATES PATENT OFFICE.

HENRY D. HINCKLEY, OF HARTFORD, CONNECTICUT.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,656, dated May 2, 1893.

Application filed June 23, 1892. Serial No. 438,303. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. HINCKLEY, a citizen of the United States, residing at Hartford, 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 coin-actuated vending-machines; the object being to provide for this class of machines a mechanism constructed to operate the machines by means only of perfect coins, and to prevent the operation thereof by means of perforated washers and other fraudulent devices.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view of a vending machine embodying my present improvements. Fig. 2 is a side elevation, partially in section, of the machine. Fig. 3 is a sectional elevation, in line *a a*, Fig. 1. Fig. 4 is a view similar to Fig. 2, showing the operative parts in a different position. Fig. 5 is a sectional plan view of a portion of the machine, showing the parts at the close of the forward stroke of the slide. Fig. 6 is a view similar view to Fig. 5, showing the slide nearly retracted, for illustrating the operation of the coin-discharging apparatus. Fig. 7 is a view similar to Fig. 5, but showing a perforated washer in place in the coin-receiver instead of a coin.

Similar characters designate like parts in all the figures.

This invention is, in part, in the nature of an improvement upon certain features of the vending machine described and claimed in Letters Patent of the United States, No. 433,004, granted to me July 29, 1890.

The casing or cabinet which contains the operative parts of my improved vending machine, may consist, as herein shown, of the base or bottom-piece 2, the front wall 3, the rear wall 4, and the two side walls 5 and 6; said rear and side walls extending upward to form a receptacle, or storage compartment, for the goods to be vended. The front of said compartment is shown in the drawings formed by the wall 7, which in practice may be a door giving access to said compartment. In the present instance, said wall 7 is supposed to be a fixed wall, and is shown having fixed to the inner side thereof a guide-trough 8, which may be formed of sheet-metal bent

to the required shape and size to accommodate the goods to be vended. A plate, 9, preferably and usually formed of a light metal-casting, is fixed to the front wall 3 and the forwardly-projecting lower portions of the side walls 5 and 6; the inner portion, 10, of said plate 9 extends underneath the guide-trough 8, and forms the receiving-plate, or floor, of the goods-chamber 45; on which floor the goods rest. To the under side of the plate 9 are fitted the guides 11 and 12, (Figs. 1 and 3,) between which the slide 13 of the goods-carrier 37 is fitted to slide. Said slide 13 is designed to be drawn forward to deliver a package of goods, by means of a suitable pull-rod, as 14, connected to said slide through the medium of a coin. The pull-rod 14 is fitted to slide freely in a bearing formed therefor in the front wall 3 of the casing, and in another bearing, 15, which may be fixed to the under side of the plate 9 by means of a screw, as 16, or otherwise. A push-spring, 17, is shown carried on the rod 14, one end thereof abutting against the inside of the wall 3, and the opposite end against a pin, as 18, fixed in said rod; said spring being provided for the purpose of retracting the rod 14 and the parts connected thereto. To the inner end of the rod 14 is fixed, by means of a nut, as 19, a bar, or slider, 20, carrying the coin-engaging push-pin 21. One end of said bar 20 engages the side wall 6 for the purpose of preventing any rotation of the pull-rod.

A bracket, 22, is fixed to the under side of the plate 9 by means of screws or otherwise, and carries a fixed coin-supporting pin, 23, and a laterally-movable (and, in this instance, pivotally-supported) coin-supporting pin, 24. Referring to Figs. 5, 6 and 7, the pin 24 is shown pivotally-supported by means of a pivot-pin, 26, in a bearing, 25, formed therefor on the bracket 22. A spring, 27, fixed to the bracket 22, engages the forward end of the pin 24 for normally holding said pin in the position shown in Fig. 5; an adjusting-screw, 28, carried by said bracket, serves as a means for regulating the distance between the forward, or coin-supporting, ends of the pins 23 and 24. A cam, 29, is formed on the rearward end of the pin 24, and a cam-engaging pawl, or arm, 30, is pivotally supported on a pin, 31, in the bar 20. Said cam and pawl are of the nature of a "by-pass," being operative on the movement of the slide in

one direction only, as hereinafter more fully set forth.

The coin, as C, for connecting the pull-rod 14 with the slide 13 is placed in the machine through a slot, 32, formed therefor in the plate 9, and drops into the coin-receiver 33, which is fixed to the under side of the slide 13; said coin resting on the pins 23 and 24, as illustrated in Fig. 3.

The general operation of my improved vending machine is as follows: The machine having been supplied with packages of goods, as B, for delivery, a customer wishing to purchase one of said packages drops a coin, C, of the required denomination, into the slot 32; the coin passes into the receiver 33, and rests on the supporting-pins 23 and 24, as illustrated in Fig. 3. Previous to using the machine, however, the distance between said pins 23 and 24 is to be adjusted by means of the screw 28, so as to properly support a coin of the required size only, and to permit a smaller coin to drop through between said pins without effecting the desired connection of the operative parts, the slot 32 having been formed of a length to permit of the passage of a coin of the required size and to exclude coins of larger sizes. The operator, having deposited the proper coin, grasps the knob 35 of the pull-rod and pulls the same toward him; during this movement the pin 21 engages the coin C, pressing the same against the front wall, 36, of the receiver 33, and thereby draws forward the slide 13 until the part 37 thereof, engaging the lowermost of the packages B, forces said package outward through the opening 38 in the front of the casing, the several parts coming to the position shown in Fig. 4. On the release of the knob 35, the spring 17 returns the parts to the position shown in Fig. 2, the coin is released and allowed to drop into the space 39, in the lower part of the cabinet, and the remaining packages drop down onto the supporting floor 10. On the release of the rod 14, the slide 13 is returned to place by means of the slider 20 engaging the lug, 40, formed on the slide. The release of the coin is accomplished by means of the "bypass" device hereinbefore described. On the drawing forward of the rod 14, the pawl 30, being fitted to swing freely toward the left-hand on its pivot 31, rides over the cam 29 without effecting any movement of the pin 24; but on the return movement of the said rod and the parts operated thereby, the pawl 30 engages the cam 29 and operates to swing the pin 24 on its pivot 26 against the power of the spring 27; this widens the distance between the fixed pin 23 and the pin 24, thus releasing the coin. See Fig. 6.

As a means for preventing the operation of the machine by the use of paper or cardboard disks, I have provided a resistance-spring, 42, which may be fixed to the back wall of the casing by means of a screw, said spring being preferably of the form shown in Figs. 2 and 4. A correspondingly-shaped

projection, or lug, 43, is formed on or fixed to the slide 13 to engage said spring on the forward movement of the slide. The engagement of the spring 42 with the slide necessitates the use of considerable force to draw forward the slide, sufficient, in practice, to push the sharp end, 44, of the pin 21 through a cardboard disk of considerable thickness placed in the coin-receiver; this, of course, would prevent the drawing forward of the slide and the delivery of the goods. Likewise, if a ring, or perforated washer, as 45, Fig. 7, be placed in the coin-receiver, the pin 21 will pass through the central hole thereof, and the slide remain inoperative. But notwithstanding this inaction, the by-pass guide-actuating device will operate to drop the washer, and thus leave the machine, on the return of the pull-rod or slider, ready for use.

Having thus described my invention, I claim—

1. In a vending machine, the combination with a goods-carrier arranged for reciprocating movement and constructed to be forwardly actuated through an interposed coin, of a slider substantially as described adapted to draw forward the goods-carrier through an interposed coin, a coin-supporter constructed for an opening movement to release the coin, and a by-pass device constructed and arranged for actuating the coin-supporter to release the coin on the return movement of the slider, whereby a washer in the coin-receiver will be released on the return of the slider, substantially as described.

2. In a vending machine, the combination with a goods-carrier having a coin-receiver, of a coin-supporter having a fixed support and a movable support, a slider carrying a pin arranged to bear about centrally against the coin in said receiver, and a by-pass device constructed and arranged for engaging the movable coin-supporter on the movement of the slider, substantially as described.

3. In a vending machine, the combination with a goods-carrier having the coin-receiver 33, of the fixed coin-guide, the movable coin-guide, a slider having the pin 21, and a by-pass guide-actuator intermediate to said slider and movable coin-guide, substantially as described.

4. In a vending machine, the combination with a goods-carrier having a coin-receiver, of a pair of coin-guides, one of which guides is yieldingly held in a normal position, means for adjusting the normal position of said yieldingly-held guide, a slider substantially as described, and a cam and latch, one carried on the slider and one on the movable guide, for operating said guide on the return movement of the slider, substantially as described.

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