No. 718,765. PATENTED JAN. 20, 1903.

F. E. HUXLEY.

VENDING MACHINE.

APPLICATION FILED JUNE 11, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

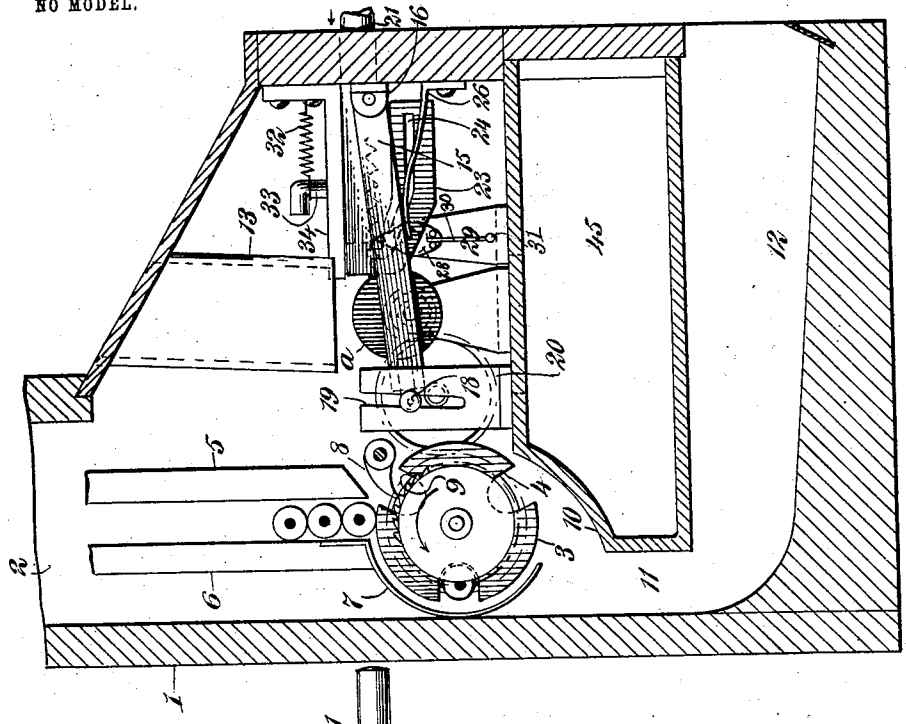


Fig. 2

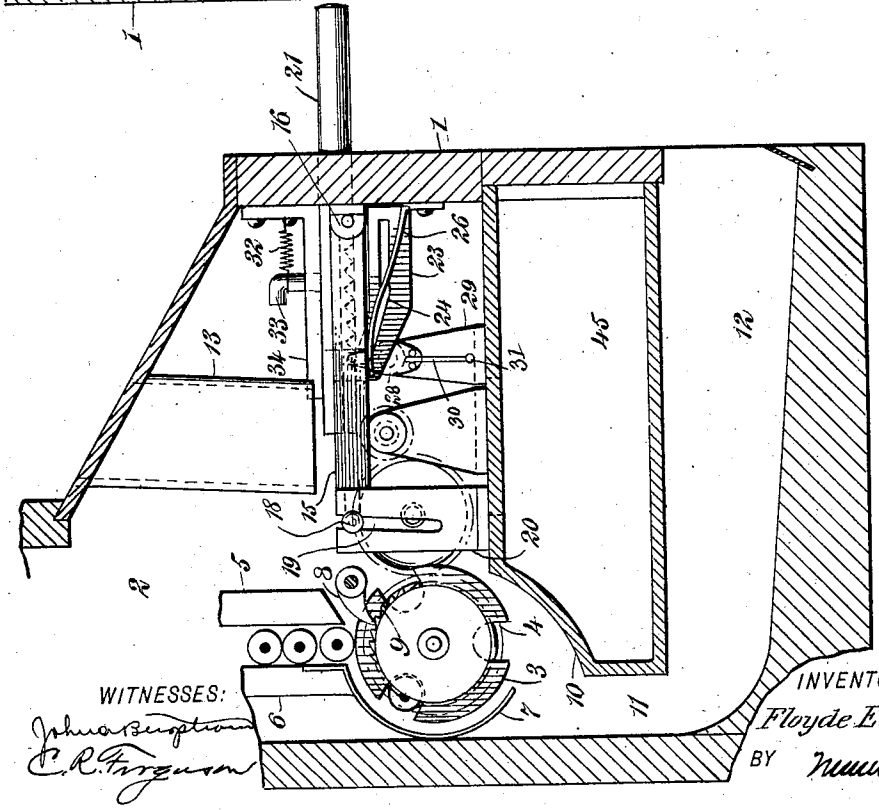


Fig. 1

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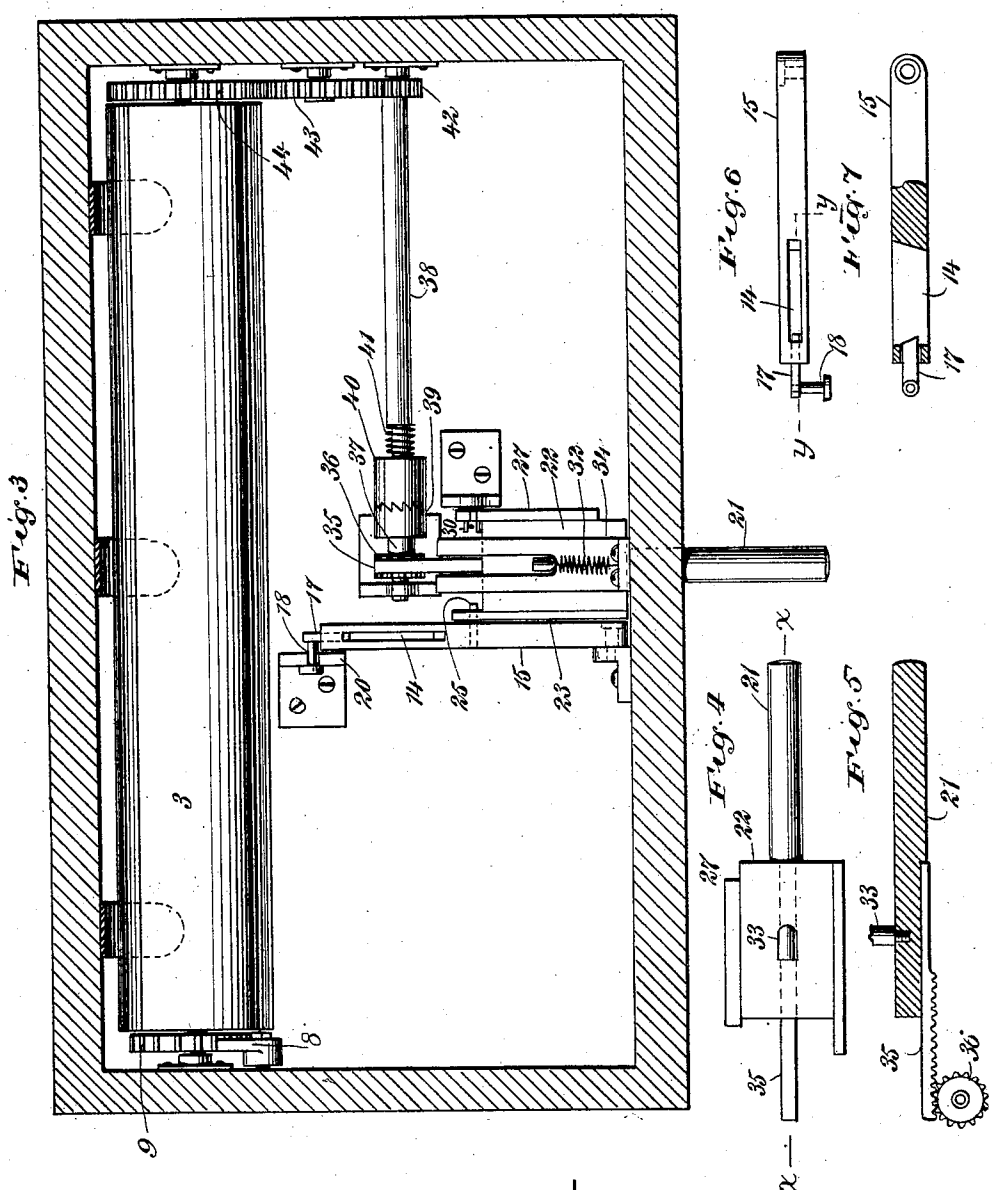
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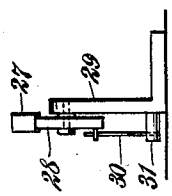
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UNITED STATES PATENT OFFICE.

FLOYDE E. HUXLEY, OF ROCHESTER, NEW YORK.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 718,765, dated January 20, 1903.

Application filed June 11, 1902. Serial No. 111,144. (No model.)

To all whom it may concern:

Be it known that I, FLOYDE E. HUXLEY, a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in coin-controlled vending-machines for lead-pencils, slate-pencils, or like articles, the object being to provide a machine of this character of simple construction and having no parts liable to get out of order.

I will describe a vending-machine embodying my invention and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section of a vending-machine embodying my invention. Fig. 2 is a similar section, but showing the parts in different positions. Fig. 3 is a plan view with the casing in horizontal section. Fig. 4 is a plan view of a push-bar employed. Fig. 5 is a section on the line $x\ x$ of Fig. 4. Fig. 6 is a plan view of the coin-receiver. Fig. 7 is a section on the line $y\ y$ of Fig. 6, and Fig. 8 is a detail view hereinafter more particularly described.

The machine comprises a casing 1, having a storage-chamber 2 at one side for holding pencils or other articles to be sold. Arranged in the casing is a discharging-cylinder 3, provided with longitudinal channels 4 for receiving the pencils, which are guided into these channels by guide-strips 5 6, arranged on the end walls of the casing. The pencils are prevented from falling outward until reaching a lowermost position by means of retarding-fingers 7, which are curved around one side of the cylinder. The cylinder is held from backward movement by means of a pawl 8, engaging with a ratchet-wheel 9 on one end of the cylinder. The pencils fall upon an inclined deflecting-plate 10, then pass through an opening 11 into a receiver-chamber 12, the bottom wall or floor of which is inclined downward, so that the pencil will roll to the front, from which it may be readily removed.

A coin *a* of the proper denomination is to be inserted through a chute 13, and it falls from the chute into an opening 14, formed in a receiving-lever 15, pivoted to a lug 16 in the machine-casing. A stop-pin 17 is movable through an opening in the end wall of the slot 14 and projects slightly into said slot, and on this stop-pin 17 is a lug 18, which projects into a slot 19, formed in a standard 20, and, as plainly indicated in Fig. 1, the walls of this slot 19 are inclined downward and inward, the object of which will be hereinafter described.

A push-bar 21 is movable through an opening in the front wall of the casing, and attached to the inner end of this push-bar is a plate 22, on one side of which is a downwardly-extended plate 23, having a cam-slot 24, the inner end of which is extended vertically, and from this vertical portion the slot is inclined downward for a portion of its length, and the remainder of the slot is extended on a horizontal line. A pin 25 on the receiving-lever extends into this slot, and when the said pin is in the vertically-disposed portion of the slot it forms a lock to prevent inward movement of the push-bar. The receiving-lever 15 is held in its normal or upper position by means of a spring 26.

On the opposite side of the plate 22 is a rack-bar 27, engaged by a pawl 28, pivoted on a standard 29 and held yieldingly in engagement with the rack 27 by means of a spring 30, extended upward from a stud 31 on the standard 29 and between pins extended outward from the lower end of the pawl. A spring 32 is connected at one end to a fixed portion of the casing and at the other end is connected to a pin 33, which passes upward from the plate 22 through a slot in a guide-plate 34, attached to the casing. On the inner end of the bar 21 is a rack 35, which meshes with a pinion 36, attached to a sleeve 37, mounted loosely on a shaft 38 and having connected to it a clutch member 39, having ratchet-teeth adapted to engage with a similar clutch member 40, mounted on the shaft 38, so as to rotate therewith, but having a slight longitudinal movement on the shaft. The clutch member 40 is held in yielding engagement with the clutch member 39 by means of a spring 41. On the shaft 38 is a

pinion 42, meshing with an idler-gear 43, which meshes with a gear 44 on one end of the cylinder 3.

In operation upon dropping a coin *a* in the chute 13 it will fall into the slot 14 of the receiving-lever 15, and the weight of the coin *a* will be sufficient to overcome the resistance of the spring 26 and move the receiving-lever downward, as indicated in Fig. 2. As it moves downward the inclined walls of the slot 19 will cause the pin 17 to move outward, permitting the coin to fall out and pass through an opening and into a receiving-drawer 45. During this movement of the receiving-lever the pin 25 will be moved downward from the vertical portion of the slot 24. Then the push-bar may be moved inward. The inclined portion of the slot 24 will cause a further downward movement of the receiver-lever, which will cause a sufficient movement of the pin 17 to permit the dropping of the coin, as before mentioned. Upon the inward movement of the push-bar the rack 27 will swing the pawl 28 at an angle with its engaging point in the direction of the line of movement, and the push-rod therefore cannot be drawn out until the pawl passes off the rear end of the rack and is lifted to vertical position by the spring 30. Upon releasing the push-bar the spring 32 will move it outward, and during said movement the rack will pass over the pawl, holding it at a reverse angle to that first described until it passes off the front end of the rack. The inward movement of the push-bar through the medium of the rack 35 and the gear connections will cause a one-third rotation of the delivery-cylinder 3, so as to discharge a pencil or the like. Upon the return or outward movement of the push-bar the clutch-section 40 will yield, permitting the pinion 36 to rotate without imparting rotary movement to the shaft 38.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a coin-controlled vending-machine, a casing, a coin-receiving lever mounted to swing and having a slot to receive a coin, a pin movable in one end of said slot, means for moving the pin outward as the receiving-lever swings downward, a push-bar, means carried by the push-bar for forcing the lever downward, and a delivering device operated by an inward movement of the push-bar, substantially as specified.

2. A vending-machine comprising a casing, a receiving-lever mounted to swing in the casing and having a slot, a pin movable through an opening in the end wall of said slot, a standard having an inclined slot, a lug extended from said pin into said slot, a push-bar, a plate extended downward from one side of the said push-bar and having a cam-slot, the said slot having a vertical part, an inclined part and a horizontally-disposed part, a pin extended from the lever into said slot, a spring for moving the lever upward, and a delivering device operated by an inward movement of the push-bar, substantially as specified.

3. A vending-machine comprising a casing, a lever mounted to swing in the casing and having a slot for receiving a coin, means for releasing the coin from the slot, a push-bar having a plate-like portion at the inner side of the casing, a plate extended from one side of said plate-like portion and provided with a cam-slot, a pin extended from the lever into the cam-slot, a spring for moving the lever upward, a rack on the opposite side of said plate-like portion of the push-bar, a spring-pressed pawl engaging with said rack, a delivery-cylinder, and gear connections between said cylinder and the push-bar, substantially as specified.

4. In a coin-controlled vending-machine, a casing, a delivery-cylinder arranged therein, a coin-receiving lever mounted to swing in the casing, the said receiving-lever having a slot in which a coin may pass, a pin movable in said slot, means for moving the pin outward when the lever swings downward, a push-bar, connections between the push-bar and receiving-lever, whereby the receiving-lever is moved downward by an inward movement of the push-bar, gear connections between said push-bar and the delivery-cylinder, and a spring for moving the push-bar outward upon being released, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FLOYDE E. HUXLEY.

Witnesses:
C. G. HARTMAN,
L. S. FOULKES.