No. 683,202. Patented Sept. 24, 1901.

E. C. GREWER.

AUTOMATIC VENDING MACHINE.

(Application filed June 5, 1901.)

(No Model.)

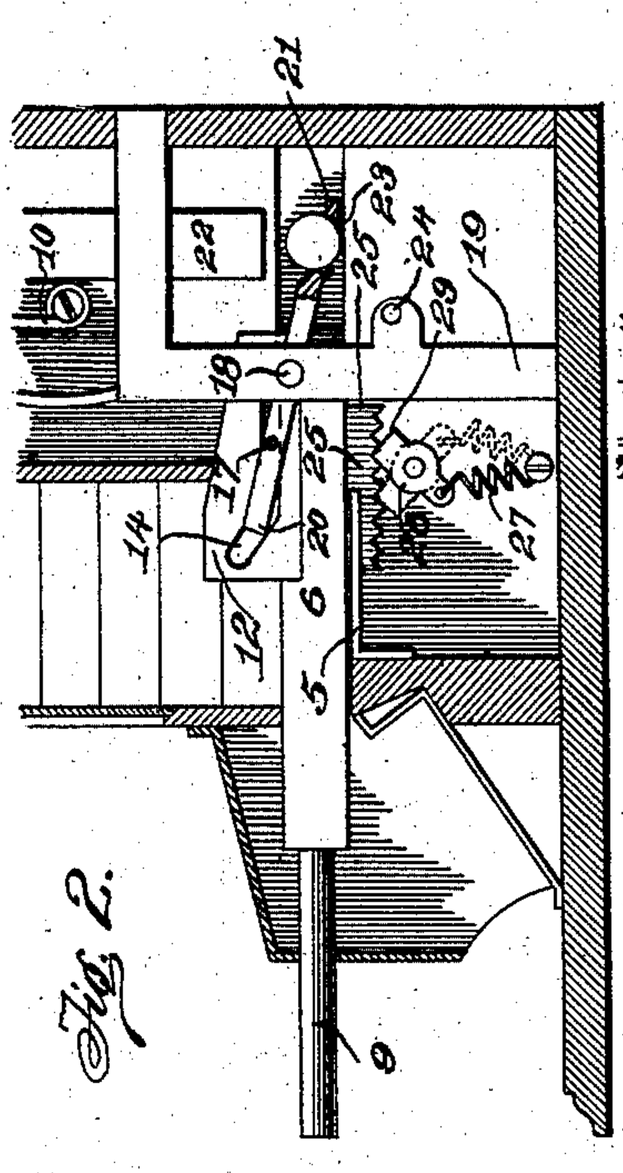

Fig. 2.

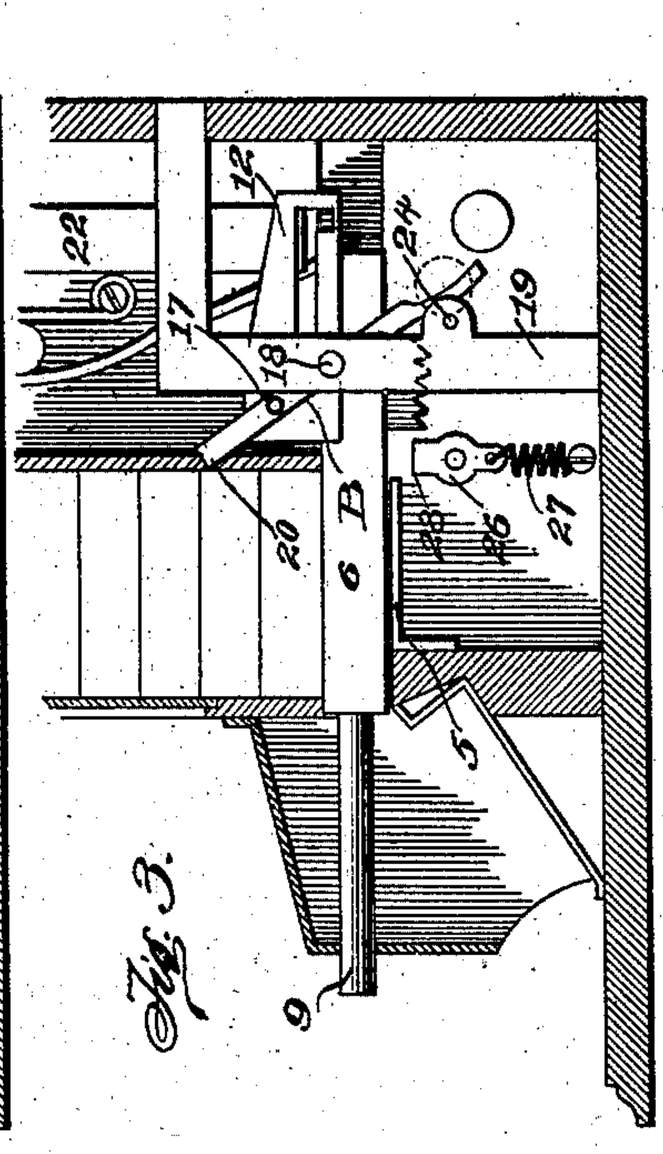

Fig. 3.

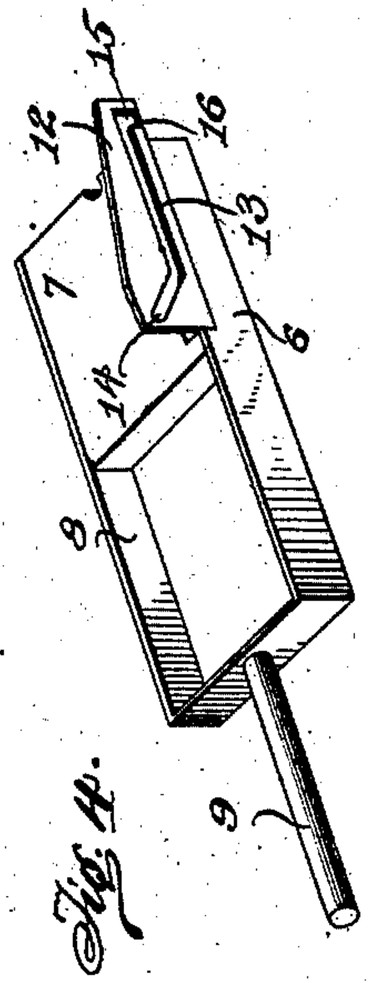

Fig. 4.

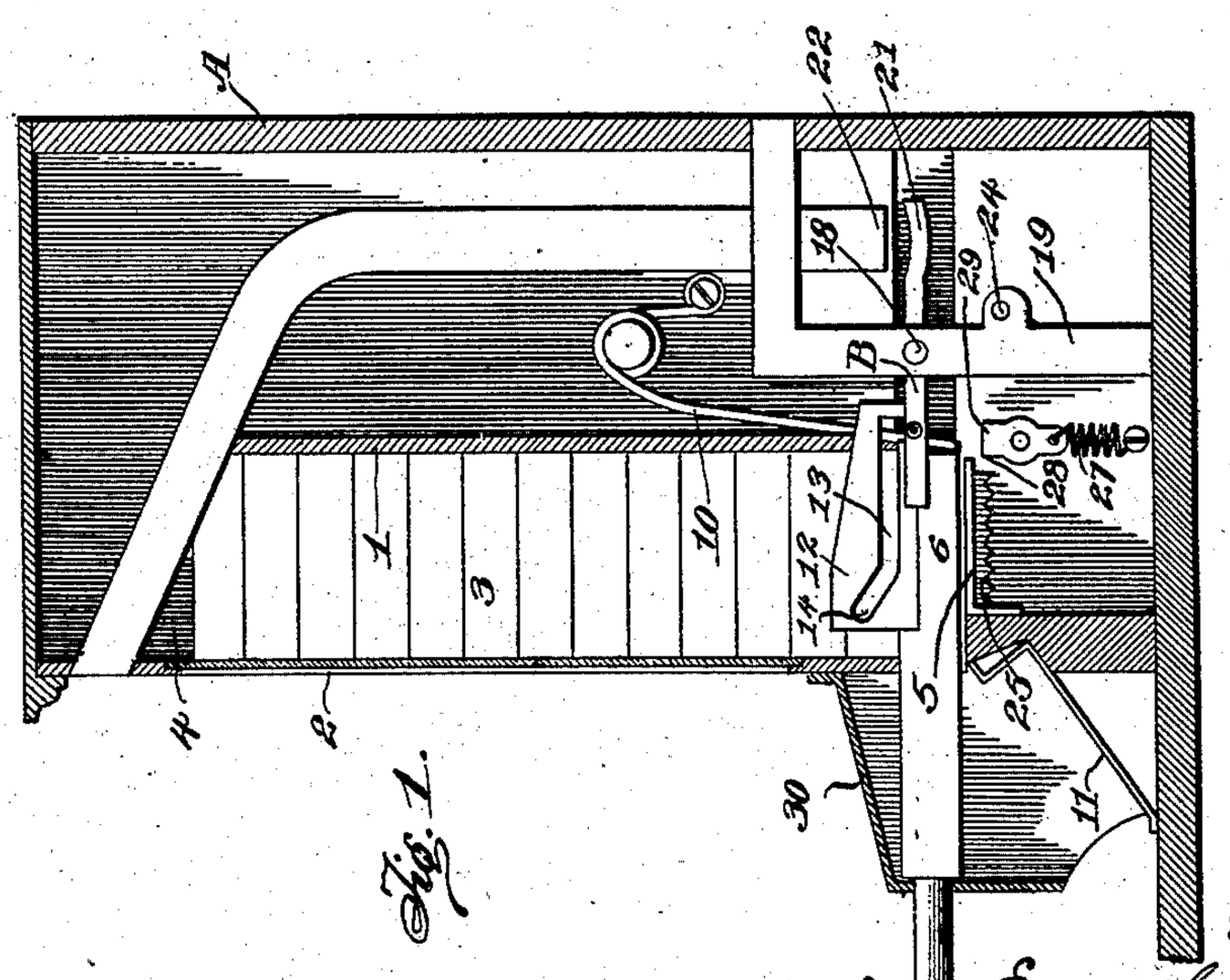

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

EDWARD C. GREWER, OF SCRANTON, PENNSYLVANIA.

AUTOMATIC VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 683,202, dated September 24, 1901.

Application filed June 5, 1901. Serial No. 63,263. (No model.)

To all whom it may concern:

Be it known that I, EDWARD C. GREWER, a citizen of the United States, residing at Scranton, in the county of Lackawanna, State of Pennsylvania, have invented certain new and useful Improvements in Automatic Vending-Machines, of which the following is a specification.

This invention comprises certain new and useful improvements in automatic vending-machines, the details of which will be pointed out in the following specification. This apparatus is intended particularly for vending medicines or remedies which are put up in suitably-formed packages, and the machines are therefore to be arranged in any suitable number of compartments, according to the number of different remedies which are to be sold, each compartment containing a distinct remedy and having a separate coin-chute and delivery mechanism. As the delivery mechanism is the same in each compartment, it will be necessary only to illustrate and describe herein a single compartment of the machine. It will be understood, of course, that the machine may be used for vending articles other than medicines or remedies.

In the accompanying drawings, Figure 1 is a side elevation of the vending device with the side of the casing removed and the parts shown in their normal position. Fig. 2 is a view showing the slide or pusher unlocked by a coin and moved backward a short distance. Fig. 3 is a similar view of the parts, showing the slide in its rearmost position; and Fig. 4 is a perspective view of the slide.

Referring to the drawings, A indicates a suitably-formed casing having therein a vertical partition 1, between which and the front 2 of the casing the packages 3 which are to be sold are arranged in a vertical column. The front of the casing, as is customary in this class of machines, consists of a glass plate, through which the packages within the package-compartment 4 are exposed to view. At the bottom of the package-compartment is a horizontal fixed support 5, adapted to support the packages when the slide 6 is in its rearmost position. This slide, as shown in Fig. 4, comprises a rectangular block 7, which normally rests upon the support 5 and is interposed between the packages and said support when the slide is in its forward position. Projecting forwardly from the sides of the block 7 is a metal strip 8, forming an inclosure slightly larger than one of the packages, and to the forward end of this strip is connected a push-rod 9. The slide is movable back and forth by means of the push-rod upon the support 5 and is guided between the walls of the casing. A spring 10, suitably secured within the casing, bears against the rear end of the slide and continually presses the latter forward. The usual delivery-chute 11 is arranged upon the front of the casing, and a shield 30 extends around the slide to prevent tampering with the contents of the machine. Upon the side of the block 7 is arranged a metal plate 12, having therein a slot 13, the central portion of which is horizontal, or substantially so, while the forward end 14 of the slot is upwardly inclined, and a downwardly-extending notch 15 is formed at the rear end of the slot, thus providing a shoulder 16 in the plate, adapted to be engaged by a pin 17 upon a pivoted locking and releasing lever B. This lever is pivotally secured in the rear of the slide upon a pin 18, connected with a suitable fixed support 19. The forward end 20 of the lever is heavier than the rear end 21, so that when the parts are in their normal position, as shown in Fig. 1, the pin 17 rests within the notch 15 and the rear end of the lever is held directly beneath the lower end of the coin-chute 22. The rear end of the lever is preferably formed with a depression in its upper surface, as shown, and a slot 23 extends vertically through the lever, said slot being slightly shorter than the diameter of a coin of the required size for operating the machine. Small coins placed in the chute will therefore drop through this slot in the lever, while a coin of the required diameter will not pass through. Normally the parts remain in the position shown in Fig. 1, with the pin 17 lying within the notch 15 behind the shoulder 16. It will therefore be seen that the slide will be locked against movement until said pin is raised above the shoulder. When a coin of the proper size is dropped through the chute onto the lever, the latter will be tilted, raising the pin 17 out of the notch. The pin 17 will thus be raised above the shoulder 16 and bear against the upper

wall of the slot in the plate, and the weight of the coin will hold the lever in its released position until the slide is moved backward to its full extent. When the slide is pushed backward, the pin 17 is engaged by the upwardly-inclined or cam portion 14 of the slot in the plate, and the lever is then further tilted, as shown in Fig. 3, until the coin which extends through the slot in the lever comes in contact with a stop pin or arm 24, secured to the support 19. The coin is then forced out of the slide in the lever by the contact of the coin with the arm 24, as shown in Fig. 3.

In order to prevent the device from being operated more than once with the same coin, means are provided whereby after the slide has been started in one direction it cannot be reversed until it is moved through the entire extent of its travel. As shown in the drawings, a rack 25 is secured to the lower side of the slide, and a pawl 26 is pivotally arranged in the rear of the rack when the latter is in its normal position, as shown in Fig. 1. The pawl is held in a vertical position by means of a spring 27, connected to its lower arm, and the upper end of the pawl projects above the teeth on the rack when not in engagement therewith. As shown, the upper end of the pawl is squared, and the corners 28 and 29 are adapted to engage the teeth and prevent reverse movement when the rack has been started in one direction or the other. It will be seen from an inspection of Fig. 2, wherein the slide is shown moved rearwardly for a short distance, that the corner 28 of the pawl engages the rack in such manner as to prevent a forward movement of the slide. After the slide has moved to its rearmost position, as shown in Fig. 3, the rack, which is shorter than the distance through which the slide travels, passes beyond the pawl, and the latter then returns to its vertical position. The slide may then be permitted to move forward by the action of the spring 10, and the corner 29 of the pawl will engage the rack during this forward movement and prevent the rack from moving backward until the slide reaches the normal position, (shown in Fig. 1,) when the rack will pass beyond the pawl, permitting it to assume its upright position, and the slide will be locked by the lever.

From the foregoing description it will be clear that when a coin is dropped into the chute the weight of the coin will release the locking-pin 17 and permit the slide to be pushed backward to its full extent. When the block 7 has passed from under the column of packages, the latter will drop onto the support 5 within the rectangular inclosure formed by the strap 8, and when the slide is released it will be moved forward by the spring 10, the forward edge of the block 7 forcing the lowermost package out of the package-compartment, said package dropping onto the delivery-chute 11. As the slide cannot be reversed after it is once started in either direction, it will be seen that it is impossible to operate the machine twice with a single coin.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a vending-machine the combination with a pivoted lever having one arm adapted to extend across the end of the coin-chute and to receive the coin, and having a projection upon its opposite arm, of a reciprocative slide having a shoulder normally in front of said projection and a surface adapted to engage and tilt the lever so as to eject the coin therefrom when the slide is operated.

2. In a vending-machine a reciprocative slide having a longitudinal slot therein, said slot having an upwardly-inclined portion at its forward end and a notch at its rear end, in combination with a pivoted lever having one arm adapted to extend across the end of the coin-chute, and a pin on its opposite arm normally resting within the notch.

3. In a vending-machine a reciprocative slide having a longitudinal slot therein, said slot having an upwardly-inclined portion at its forward end and a notch at its rear end, in combination with a pivoted lever having one arm adapted to extend across the end of the coin-chute, and a pin on its opposite arm normally resting within the notch, and means for preventing a reverse movement of the slide after it is started in either direction and until it reaches the end of its required movement.

4. In a vending-machine a reciprocative slide, a plate connected with said slide and having a longitudinal slot therein, said slot having an upwardly-inclined portion at its forward end and a notch at its rear end, in combination with a pivoted lever having one arm adapted to extend across the end of the coin-chute and a pin on its opposite arm normally resting within the notch, and means for preventing a reverse movement of the slide after it is started in either direction and until it reaches the end of its required movement.

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

EDWARD C. GREWER.

Witnesses:
CHAS. W. DAWSON,
SARAH A. SCHOFIELD.