

No. 789,724.

PATENTED MAY 16, 1905.

T. N. GOFFE.
VENDING MACHINE.
APPLICATION FILED NOV. 8, 1904.

2 SHEETS—SHEET 1.

Fig. 2.

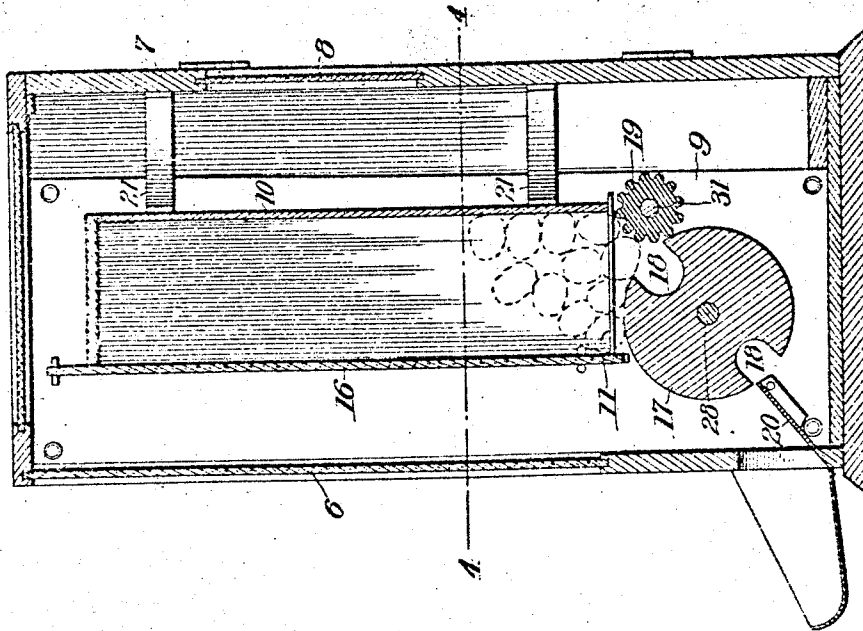
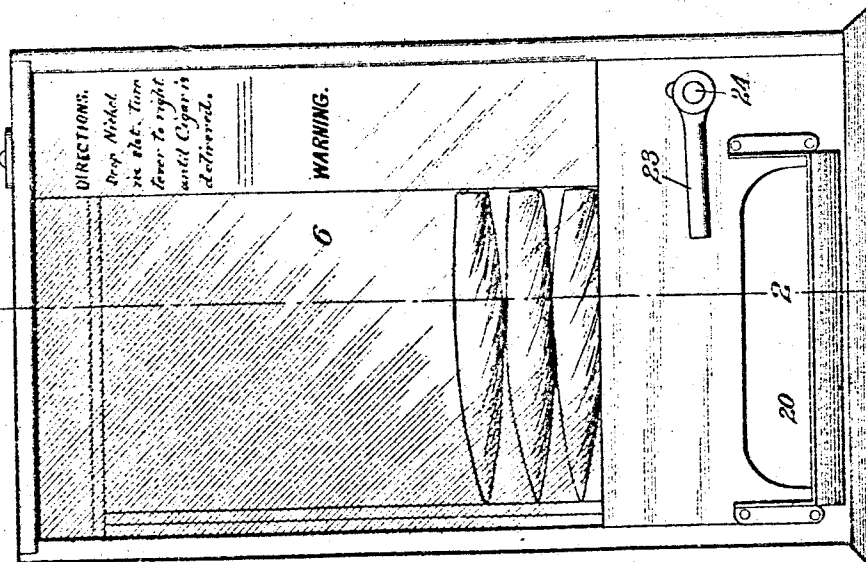


Fig. 1



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2 SHEETS—SHEET 2.

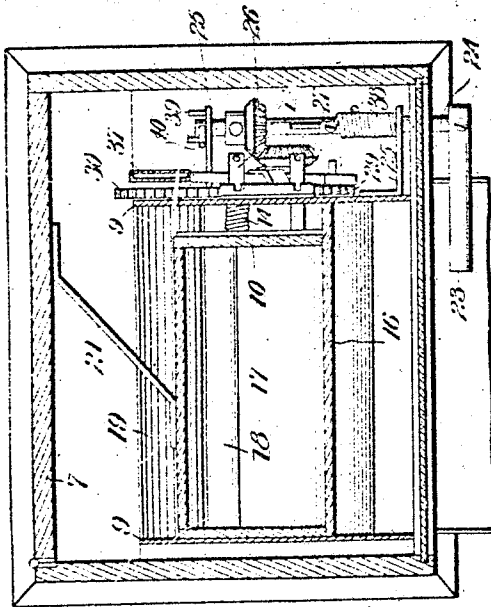


Fig. 4.

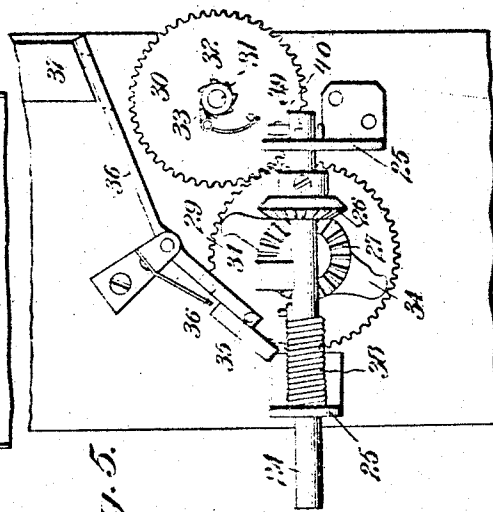
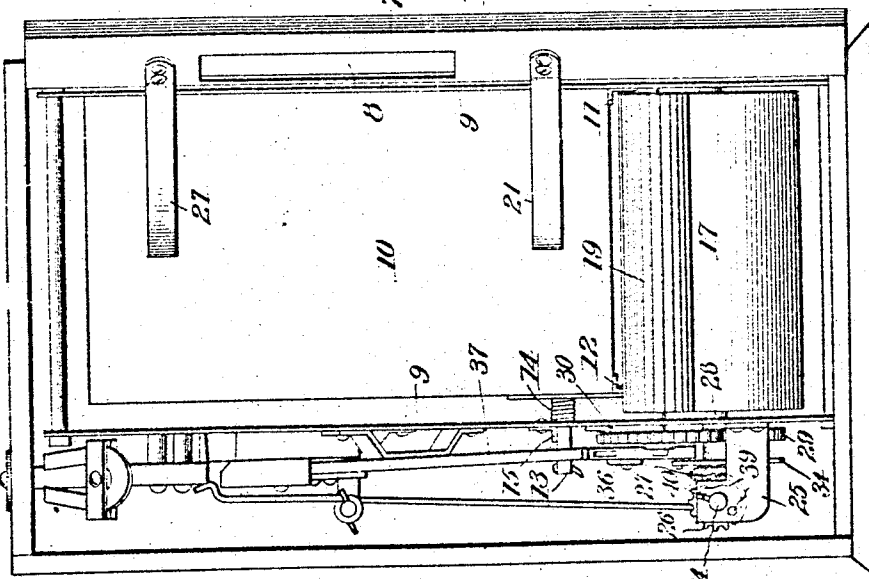


Fig. 5.

Fig. 3.



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UNITED STATES PATENT OFFICE.

THEODORE N. GOFFE, OF SPRINGFIELD, MISSOURI.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 789,724, dated May 16, 1905.

Application filed November 8, 1904. Serial No. 231,901.

To all whom it may concern:

Be it known that I, THEODORE N. GOFFE, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented new and useful Improvements in Vending-Machines, of which the following is a specification.

This invention is a delivery apparatus for vending-machines, particularly adapted for cigar-vending machines.

The object of the invention is to form an improved delivery apparatus characterized especially by novel means for feeding the cigars to a delivery-rocker to avoid "bridging" or choking of the cigars in the box.

Another novel feature is the means for supporting the box in position.

Various other novel features will be apparent from the following description and the accompanying drawings.

In the drawings, Figure 1 is a front view of the device. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a rear view, the rear side or door of the casing being open. Fig. 4 is a horizontal section on the line 4 4 of Fig. 2. Fig. 5 is a detail in elevation of the escape-mechanism.

Referring specifically to the drawings, the casing of the machine has a window 6 in front and a door 7 in the back, the latter having a window 8, so that both sides of the cigar-box may be seen, as required by the United States revenue laws. Metal side plates 9, which fit within the casing, support the operative parts of the device. The box to hold the cigars or other articles to be vended is indicated at 10. This stands vertically on end, the lower end of the box being removed, so that the cigars may fall therefrom. The box is supported at one side by a shelf 11, fixed to one of the side plates 9, and at the other side by a movable shelf 12, which yields laterally to permit the easy insertion or removal of the box and to accommodate boxes of different widths. To effect this result, the shelf is supported by two rods 13, which work at a close fit through holes in one of the side plates 9. One of the rods has a spring 14 coiled around it. A

flange 15, bearing on top of the rods on the other side of the supporting-plate 9, maintains the rods in a horizontal position, permitting, however, the longitudinal yielding movement of the rods referred to. The box fits at the front against a glass plate 16, which is supported on the side plates, the box-cover being opened and folded around to the side, so that the contents of the box are visible through the glasses 6 and 16.

A delivery-rocker is indicated at 17, mounted to rock under the lower end of the box. This rocker has grooves 18, only one of which, however, is in use at the same time. The grooves are of different sizes, so that by reversing the rocker either groove may be used, according to the size of the cigars, the smaller groove being used with small cigars and the larger groove with large ones.

At 19 is a fluted or corrugated roller, which acts as an agitator or tumbler and prevents the formation of a "bridge" by the cigars in the box. This rotates intermittently in a direction opposite to the delivery movement of the rocker 17, the rotation being simultaneous with the forward or delivery movement of the rocker.

It is a defect of some existing machines of this kind that the cigars, being supported upon a single roller, will form a bridge or arch, especially with a full box, which prevents the feed to the delivery-roller. In my construction, as above described, the cigars rest upon the rocker 17 and the roller 19, and at each operation the latter agitates or tumbles the cigars resting thereon, so that the formation of a bridge is prevented and the drop of a cigar into the groove 18 is assured. The roller 19 by a proper pawl-and-ratchet mechanism is caused to rotate in one direction only and that away from or contrary to the rocker 17, so that pinching of the cigars between the rocker and the roller is prevented.

20 indicates a delivery-shelf onto which the cigar is dropped when the rocker turns forward.

21 indicates a pair of flat springs which are attached to the door and which when the door

is closed press against the back of the box 10 and hold it closely against the glass plate 16.

The delivery devices above described are actuated by a crank-handle 23 on a rock-shaft 24, which is supported in suitable bearing-brackets 25 and projects through the front of the casing. This rock-shaft carries a bevel-gear 26 in mesh with a corresponding gear 27 on the shaft 28 of the rocker 17. Said shaft also carries a gear 29 in mesh with a gear 30, loose on the shaft 31 of the roller 19. A ratchet 32 on the shaft, engaged by a pawl 33 on the wheel 30, produces movement in one direction, while permitting back slip in the other. The shaft 28 of the rocker 17 also carries arms 34, arranged to strike a pin 35 on the escapement-lever 36. When the escapement-lever is not actuated, the arm 34 strikes and stops against the pin 35, preventing the part 17 from rocking sufficiently to deliver a cigar. When the escapement-lever is actuated, it lifts the pin 35 so that the arm 34 will pass. A spring 38, coiled around the rock-shaft 24, restores the parts to original position. Movement of the rock-shaft 24 is limited by stops 39 in the path of a pin 40, projecting from the shaft. Two arms 34 are provided corresponding to the two grooves 18, although if the rocker be made so that it can be loosened and turned on its shaft only one arm is necessary. The preferable means, however, of setting the rocker to use either groove is to loosen the gear-wheel 27 and then give the shaft a half-turn.

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

1. In a vending-machine, delivery mechanism comprising a grooved rocker, a rock-shaft having a handle, gearing between said shaft and the rocker, an arm projecting from the shaft of the rocker, and an escapement-lever having a stop against which the arm normally stops.

2. In a vending-machine, the combination with a box for the stock of articles, of a delivery-rocker and agitating-roller thereunder, means to rock the rocker, gearing between the rocker and roller including a pawl-and-ratchet mechanism which produces movement of roller in one direction only, an arm projecting from the rocker-shaft, and an escapement-lever having a stop against which the arm normally stops.

3. In a vending-machine, the combination with a box for the stock of articles, open at its lower end, of a rocker and a roller, forming a support for the articles, under said end, the rocker having a groove to receive and deliver an article, means to turn the rocker back and forth, and means actuated thereby to rotate the roller.

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

THEODORE N. GOFFE.

Witnesses:

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