

(No Model.)

E. J. GRAVES.
CIGAR VENDING MACHINE.

No. 435,626.

Patented Sept. 2, 1890.

Fig. 1.

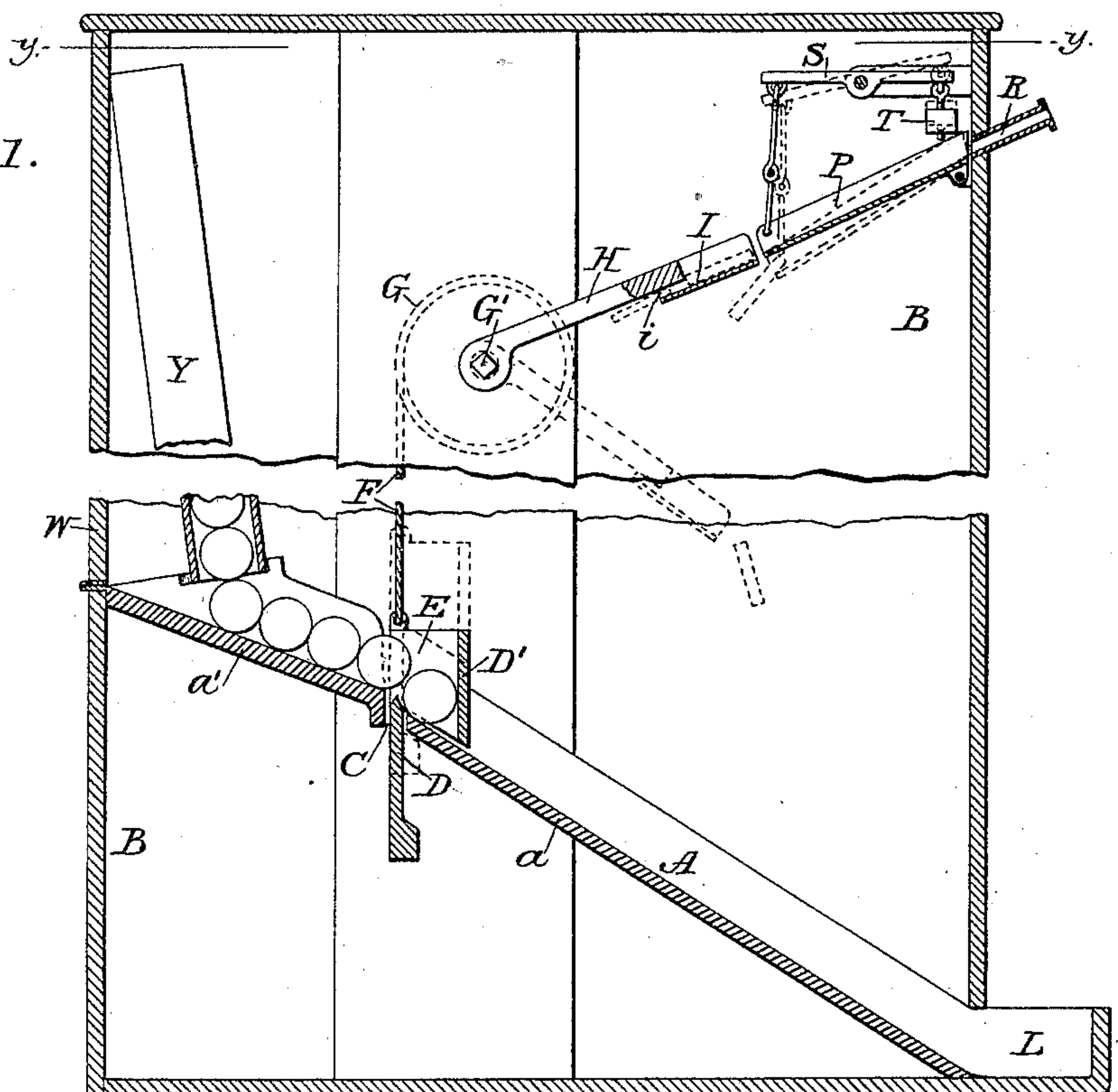
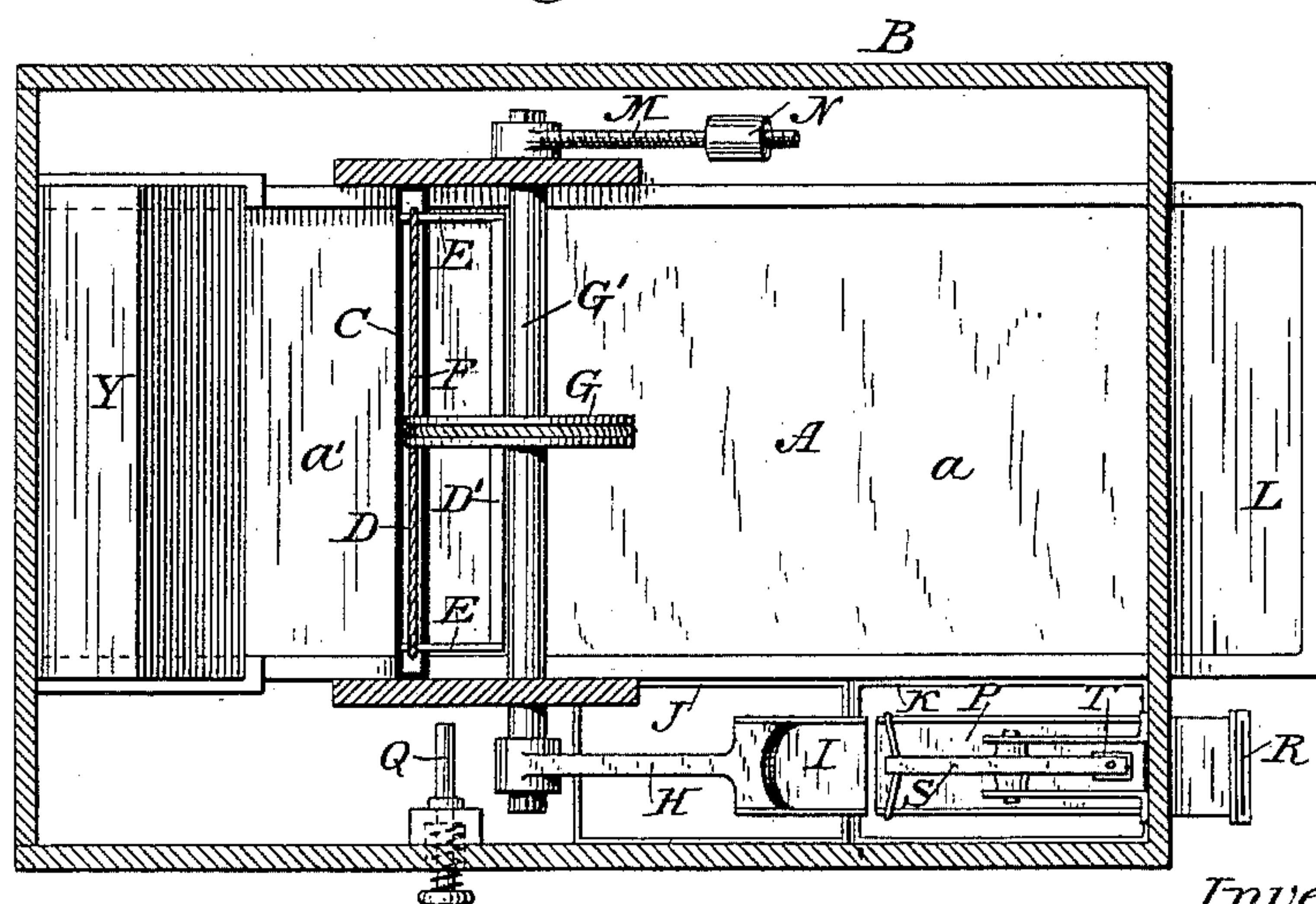


Fig. 2.



Attest:

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CIGAR-VENDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 435,626, dated September 2, 1890.

Application filed September 20, 1889. Serial No. 324,549. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. GRAVES, of the city, county, and State of New York, have invented certain new and useful Improvements in Coin-Operated Machines for Vending Cigars and other Articles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to a coin-operated apparatus for vending cigars and similar articles.

It has for its object to simplify the mechanism for the delivery of a cigar or similar articles upon the deposit of the proper coin, and to provide guards for preventing its operation by the use of spurious coins or false tokens.

It consists in the novel combination and arrangement of devices, hereinafter fully described and claimed, for attaining said object.

In the accompanying drawings, Figure 1 is an irregular vertical section of the apparatus; and Fig. 2, a horizontal section in line *y y* of Fig. 1, affording a top or plan view of the same.

The machine is designed more particularly for use in delivering cigars, but may be employed for the automatic delivery of many other articles, which need not be enumerated.

A represents an inclined way, made smooth and true to facilitate the ready and easy movement of the cigars or other merchandise to be delivered down the slope. This way is inclosed in a suitable case B, and is divided into two sections *a a'* by a transverse slot C, the inclination of the lower section *a* being somewhat greater than that of the upper section *a'*, as shown in Fig. 1. A cut-off consisting of a plate, bar, or rod D is mounted to move up through the slot C, so as to carry its upper edge above the way A far enough to effectually block and arrest the movement of a cigar past it down the incline, and said cut-off D is made to drop down with its upper edge flush with or below the face of the way to permit the free passage of a cigar past it down the incline. A stop consisting of a second plate, bar, or rod D' is mounted trans-

versely above the way A parallel with the cut-off plate D, to which it is connected at each end by suitable arms or brackets E E, so that the two shall move together; and the stop D' is so adjusted with reference to the cut-off D that said stop will rest upon or in close proximity to the face of the way when the cut-off has dropped below it, and will be elevated far enough above the way to allow a cigar to pass under it so soon as the cut-off is raised to intercept and stop the cigars above it. The two connected cut-off and stop plates D and D' thus arranged serve as an escapement for the cigars placed above them on the inclined way. This escapement is suspended by means of a cord F, which is led over the enlarged periphery of a rock-shaft G', running parallel with the slot C and having its bearings in the casing B of the machine, said enlarged periphery constituting a drum whose partial revolution in one direction or the other will cause the required vertical movement of the escapement. A lever H is made fast to one end of said shaft to oscillate therewith. It is so adjusted that when the first stop D of the escapement is depressed the lever H will extend forward with an upward inclination, as shown in Fig. 1 of the drawings.

A receptacle I is formed or fitted upon the outer end of the lever H to receive the coin designed to operate the machine. This coin-receiver I is open at the top and terminates at its inner end in a transverse slot or opening *i*, of a length slightly less than the diameter of the coin by which the machine is to be operated and of a width greater than the thickness of said coin. The inclination of the receiver I, when the lever H is in its normal elevated position, (see Fig. 1,) is sufficient to cause any coin or similar piece deposited thereon to slide freely to its inner end, where, if it be of the proper weight and dimensions, it will be arrested, but if too small in diameter it will slip through the opening *i* and drop into a box or drawer J in the lower part of the casing. The weight of the coin deposited in the receiver will operate to cause the lever H to drop until it has obtained such a downward inclination (see dotted lines, Fig. 1) that the coin will slide off of it into a box or drawer K placed under it.

The downward movement of the lever H will operate to lift the escapement D D', and thereby liberate the cigar lying back of the second plate or stop D' and leave it free to roll down the inclined way A and out through an opening in the casing into a delivery-tray L. As the plate D' is lifted to free the foremost cigar, the cut-off plate D, rising with it, intercepts and stops the next cigar following and holds it until, as the escapement is lowered, the stop D' is returned to its first position. Thus at each successive movement of the lever H, operated by the deposit thereon of a coin of sufficient weight to overbalance it, a cigar is automatically delivered on the tray L. The balance of the lever H and escapement D D' is adjusted to produce the necessary exact counterpoise by means of an auxiliary lever M, Fig. 2, secured to project radially from the shaft G', preferably at its opposite end, and a weight N is fitted upon said auxiliary lever in manner to permit of adjustment to and from the shaft.

To prevent the deposit into the coin-receiver I of a spurious piece heavier than the operating-coin by which the machine is to be properly actuated, an inclined chute P is interposed between the end of the receiver I and the slit R, formed in the casing to permit of the introduction of the coin. This chute P is hinged to the inner face of the casing, and its free end is suspended from the outer end of a pivoted lever S, to whose inner end is attached a weight T. The weight T is adapted to counterbalance exactly the weight of the free end of the chute P plus the weight of the operating-coin, and admits of adjustment for the purpose. Hence when a piece which is heavier than a genuine operating-coin is inserted through the slit R and passes down the chute P, it will, before it

reaches the receiver I, cause the chute to drop far enough to allow the coin to pass under the receiver, as shown by dotted lines in Fig. 1, so as not to actuate the machine.

The cigars may be supplied to the upper end of the feedway A in any suitable manner, but preferably by placing the box or original package Y, in which the cigars are packed at the manufactory, into the machine through a door W at the rear thereof and mounting it in an inclined position above the way, the lower end of the box being opened to allow the cigars to roll freely out of the same upon the way, as shown in Fig. 1. If from any cause the cigars fail to roll freely down the way into the delivery-tray, the way may be jarred by means of a spring-seated striking-pin Q, fitted in one side of the casing, as shown in Fig. 2, to project with its inner end into close proximity to the side of the way A, and which is adapted to contact slightly therewith when driven inward. By tapping upon the outer end of the pin the inclined way will be jarred sufficiently to free a cigar which may lodge thereon without disturbing the adjustments of the way.

I claim as my invention—

The combination, in a vending-machine, of the case, the rock-shaft, the lever projecting therefrom, the coin-receiver upon the lever, the inclined way, and the escapement governing said way and suspended from the rock-shaft, substantially in the manner and for the purpose herein set forth.

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

EDWARD J. GRAVES.

Witnesses:

A. N. JESBERA,
E. M. WATSON.