

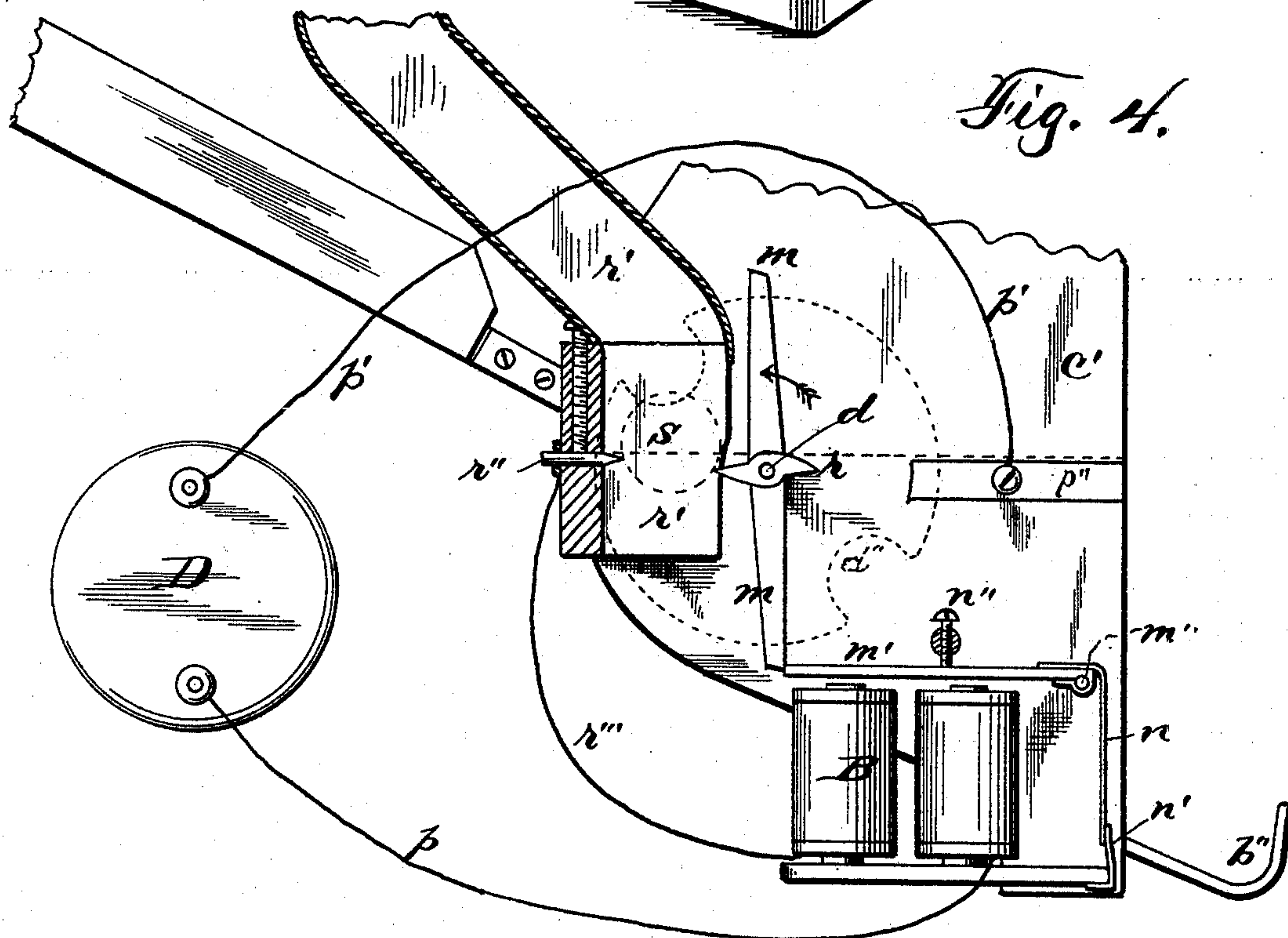
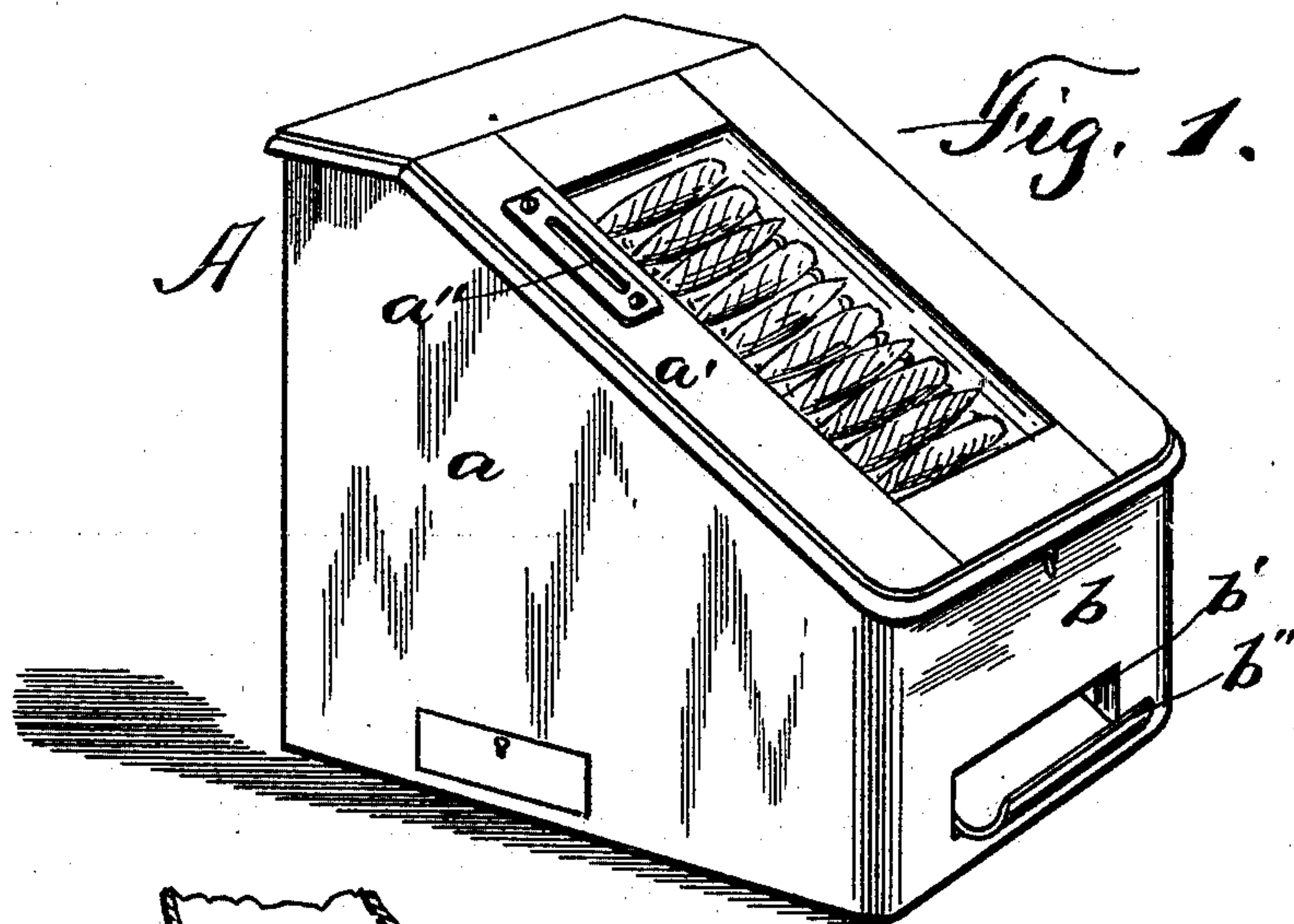
(No Model.)

2 Sheets—Sheet 1

J. M. HENRY.
VENDING MACHINE.

No. 505,793.

Patented Sept. 26, 1893.



WITNESSES:

H. A. Carhart
Q. B. Kinnear

James M. Henry INVENTOR
By Smith & Denison
his ATTORNEYS.

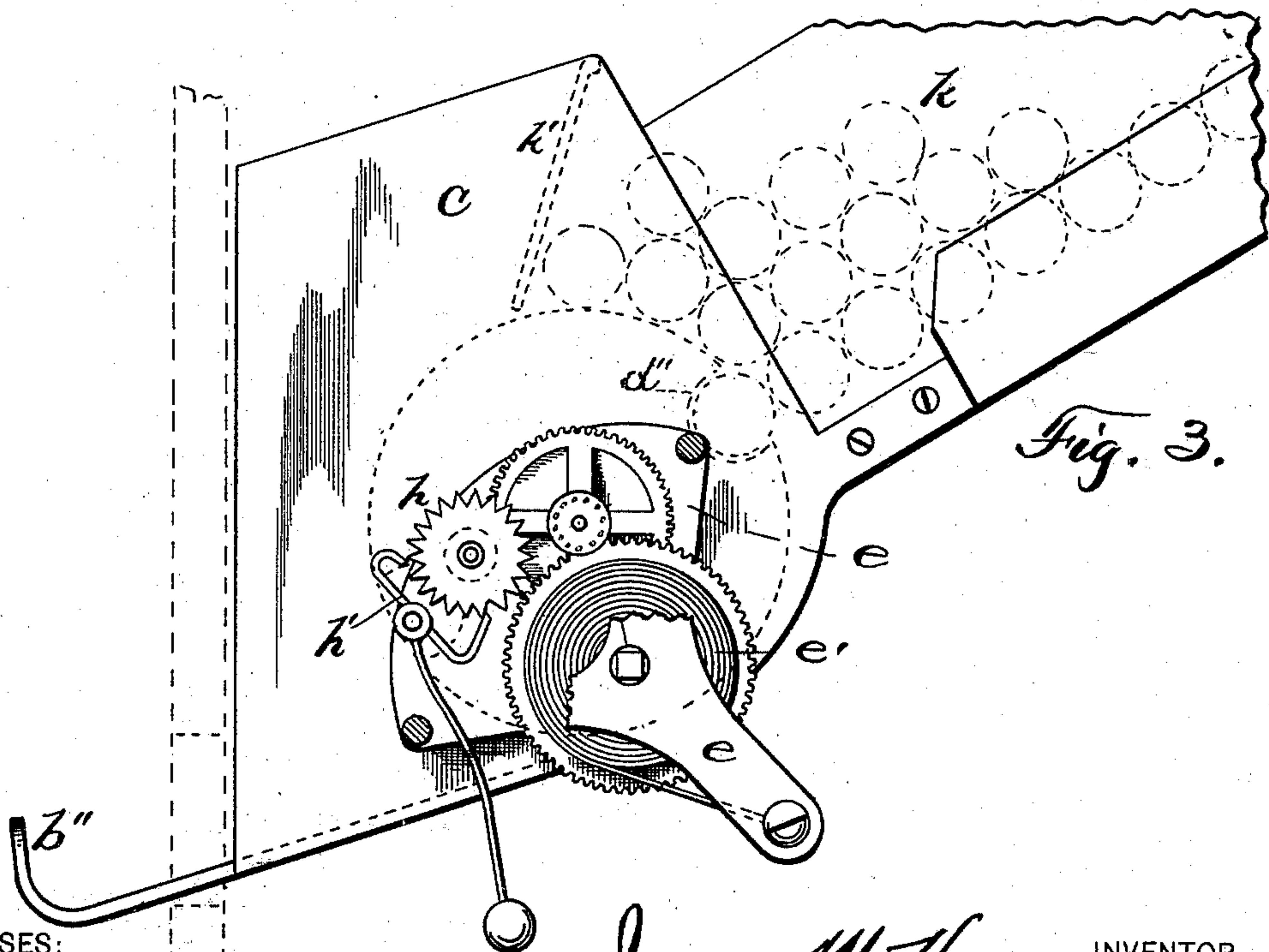
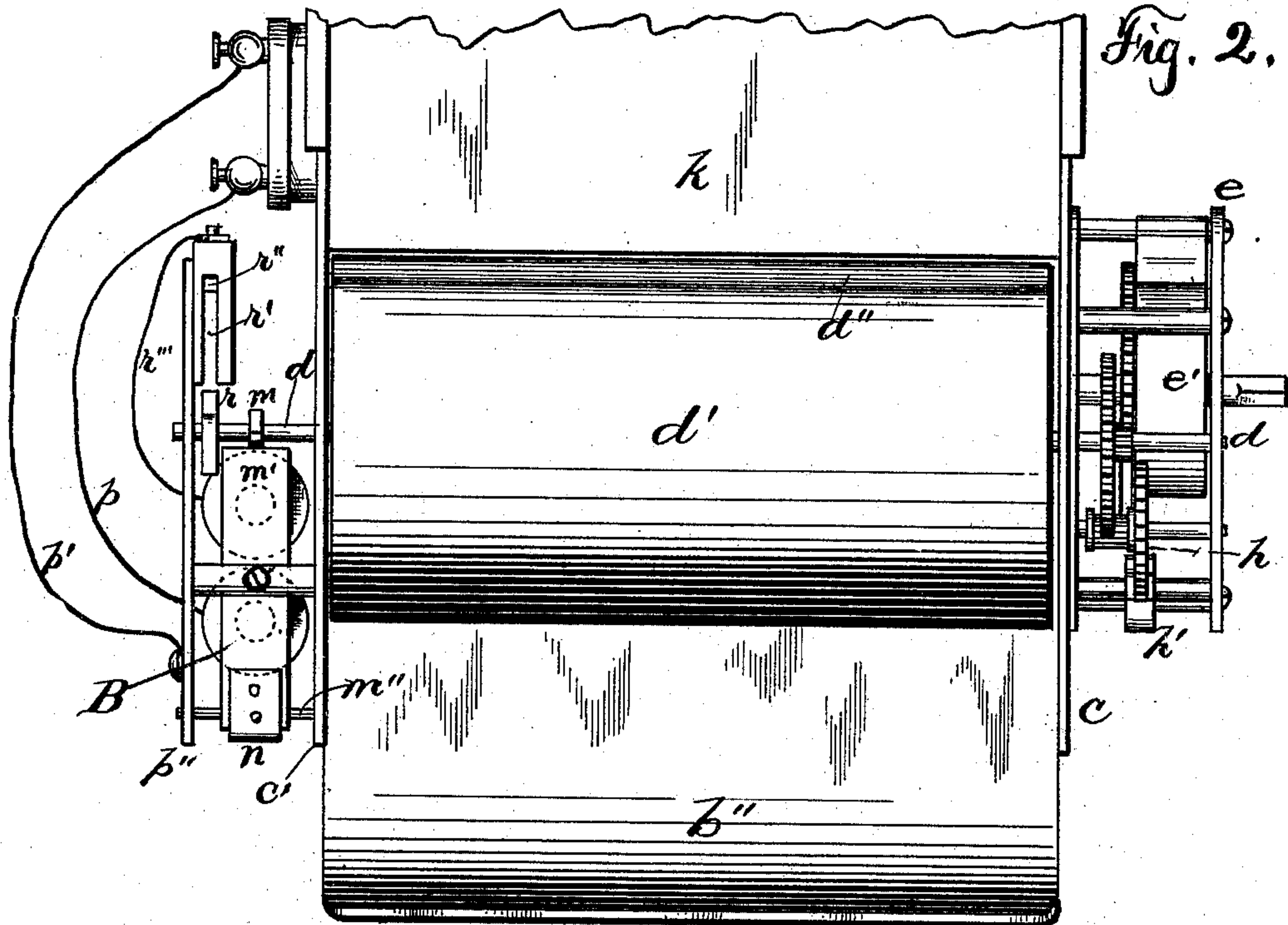
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UNITED STATES PATENT OFFICE.

JAMES M. HENRY, OF EVANS' MILLS, ASSIGNOR TO ARCHIE J. HENRY, OF
WATERTOWN, NEW YORK.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 505,793, dated September 26, 1893.

Application filed January 19, 1893. Serial No. 459,027. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. HENRY, of Evans' Mills, in the county of Jefferson, in the State of New York, have invented new and
5 useful Improvements in Vending-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to coin-vending machines and particularly to that class employing a longitudinally grooved rotating cylinder, and a motor therefor released to intermittently rotate it by the making of an electric circuit through the coin when it reaches
10 a predetermined point in the coin chute, the coin being released and the circuit broken by dropping thereof.

My object is to produce a coin-vending machine of this class in which the longitudinally slotted delivery has an intermittent rotation and a simultaneous vibratory motion imparted to it, by the operation of the motor; in which an electric circuit is made through the coin in the coin-chute where it is detained
20 momentarily; in which said circuit-making releases the motor to rotate the cylinder; and in which an escapement actuated by the motor through a train of gearing, operates to break the continuity of the cylinder rotation
25 by sudden temporary stops, thereby imparting a vibratory or shaking motion to the cylinder.

My invention consists in the several novel features of construction and operation hereinafter described and which are specifically set forth in the claims hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Fig. 1, is a plan perspective of the machine.
40 Fig. 2, is a top plan enlarged, of the machine with the case removed. Fig. 3, is a side elevation of the same, with part of the motor frame broken away. Fig. 4, is a side elevation of the opposite side of the same, showing the coin, in circuit, in dotted lines in the coin-chute, showing the chute in vertical section, and the delivery cylinder in dotted lines.

A, is the outer casing comprising the vertical walls —a—, top —a'— having the external mouth —a''— of the coin-chute, and also
50 having, if desired, part of the top transparent

to exhibit the goods to be delivered, and a front —b— having a slot —b'— through which the delivery chute —b''— projects.

The frame of the machine consists of vertical sides —c—c'— suitably supported or
55 connected, and —d— is a shaft journaled therein, upon which the delivery cylinder —d'— is secured, it being provided with the longitudinal grooves —d''— shown in dotted lines in Fig. 4. Upon the exterior of the side —c—, the motor frame —e— is secured in which a spring motor is mounted comprising a spring —e'— and means to wind it and a train of gearing and pinions substantially as
60 shown, operatively connected to the projecting outer end of the shaft —d— said motor being also provided with a pawl escapement —h— operatively connected to the motor spring and gearing, the pawl —h'— being provided with a counter-balance weight, which
65 creates and regulates the intermittent motion of the escapement wheel, and through it, imparts a jerky and vibratory rotation to the delivery cylinder, breaking the continuity of its rotation, which shakes and agitates the goods
70 in contact with or bearing against it, prevents clogging and insures the accurate dropping of a cigar into each delivery groove, the cigars being fed or rolled from the inclined box —k— to the cylinder, and —k'— is a fender plate to prevent their passing over in front of the cylinder.

Exterior to the side —c'— of the frame the stop-bar —m— is secured upon the shaft —d—;
85 in such manner that one end is normally in engagement with the end of the armature —m'— of the electro-magnet —B—, said armature being pivoted upon a pivot rod —m''— and —n— is a spring secured to said armature and engaging with a stud —n'— and operating to support the armature out of contact with the poles of the magnet, while —n''— is an adjusting screw engaging with the armature. One pole of said magnet is connected to one pole of the battery —D— by
90 the wire —p—, the wire —p'— connects the other pole of the battery to the bar —p''— through which a connection is made to the double contact finger —r— secured upon the shaft —d—, in such manner that one finger
100 always projects into the coin chute —r'— on

one side, and $-r''-$ is another contact point mounted adjustably in the wall of the coin chute and projecting into the chute opposite to the finger $-r-$, the contact point being connected by the wire $-r'''-$ to the other pole of the electro-magnet. Thus, when a coin $-s-$ is dropped into the chute, it engages with said contact point and finger, making a circuit through the coin, bringing the armature into contact with the poles of the electro magnet, releasing the stop-bar, which releases the motor, the latter rotates the delivery cylinder and its shaft carrying around the stop-bar, reversing the presentation of the finger $-r-$ and as the rotation of said shaft and finger has released the coin to drop into the receptacle, the circuit is broken, the armature is released and raised, and the other arm of the stop-bar engages with it and stops the motor and the rotation of said cylinder is stopped at a half revolution, the cigar having dropped therefrom onto the delivery chute and passed down into reach of the operator. During this rotation, the escapement has broken or intermittently interrupted the rotation, and thereby imparted a vibratory motion to the cylinder, shaking up the cigars in contact with it, and also those bearing against it, and one has dropped into the groove then presented; and by this vibratory motion all breakage or damage to the cigar is avoided, and all clogging, arching or bridging is prevented.

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

1. In a coin vending machine, the combination with the rotating delivery cylinder, of a motor, provided with an escapement, to simultaneously rotate and vibrate the cylinder.

2. In a coin vending machine, the combination with the rotating delivery cylinder, of a motor, and an escapement wheel actuated thereby and provided with a counter-balanced pawl, to rotate and vibrate the cylinder simultaneously.

3. In a coin vending machine, a longitudinally grooved delivery cylinder, in combination with a motor provided with an escapement to vibrate the cylinder while rotating and means to release the motor by the insertion of the coin into the coin chute.

4. In a coin vending machine, a longitudinally grooved rotating cylinder, a motor actuating it, and means to intermittently break the continuity of such rotation, in combination with a battery, an electro-magnet, contact fingers normally out of circuit therewith, and a coin chute into which the fingers project and with which the coin engages to complete the circuit.

5. In a coin vending machine a delivery cylinder and means to rotate it intermittently and to simultaneously vibrate it, in combination.

In witness whereof I have hereunto set my hand this 14th day of December, 1892.

JAMES M. HENRY.

In presence of—
WESLEY RULISON,
F. W. LAWTON.