

No. 829,514.

PATENTED AUG. 28, 1906.

R. J. DICKIE.

VENDING MACHINE.

APPLICATION FILED OCT. 19, 1905.

2 SHEETS—SHEET 1.

Fig. II.

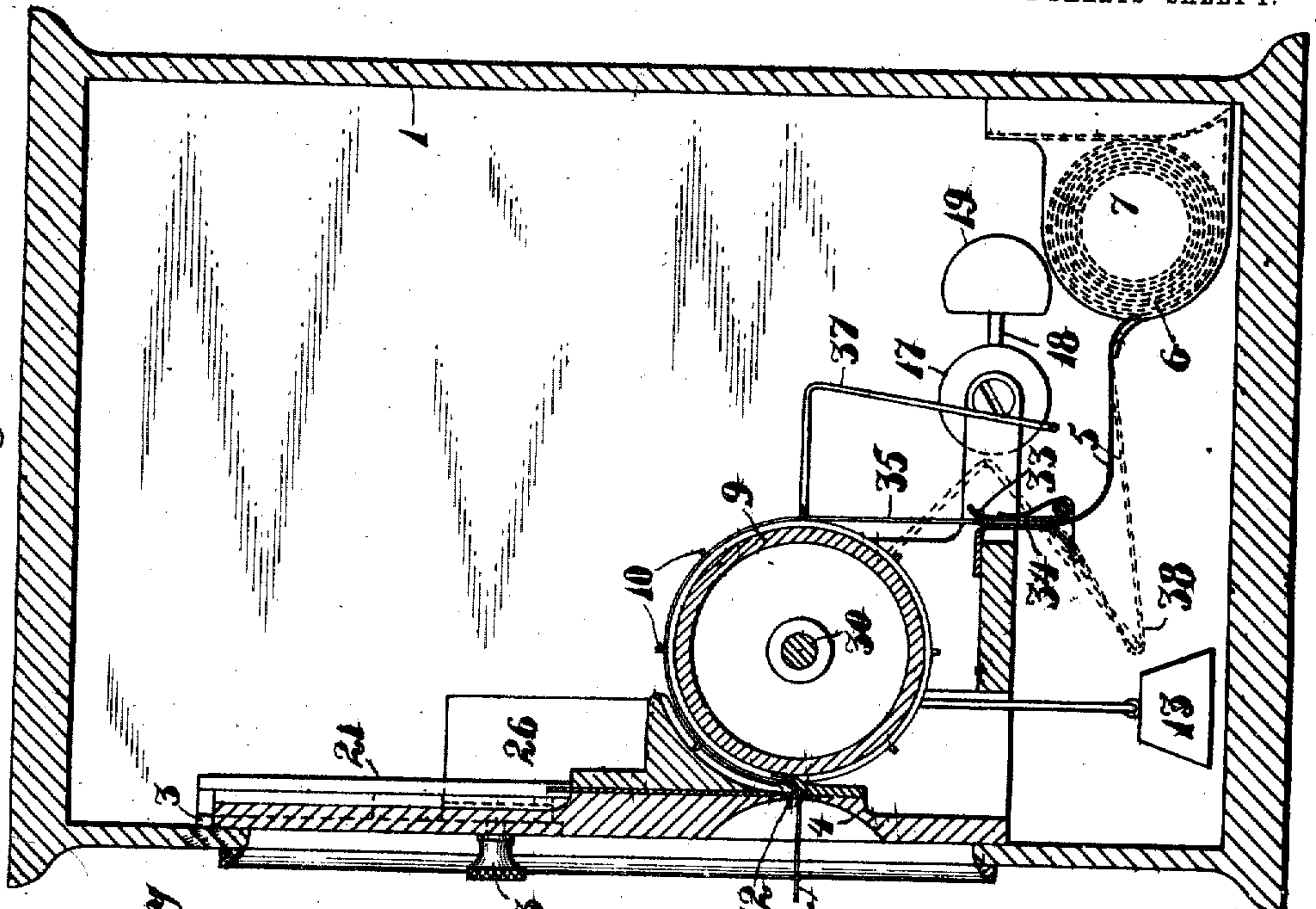
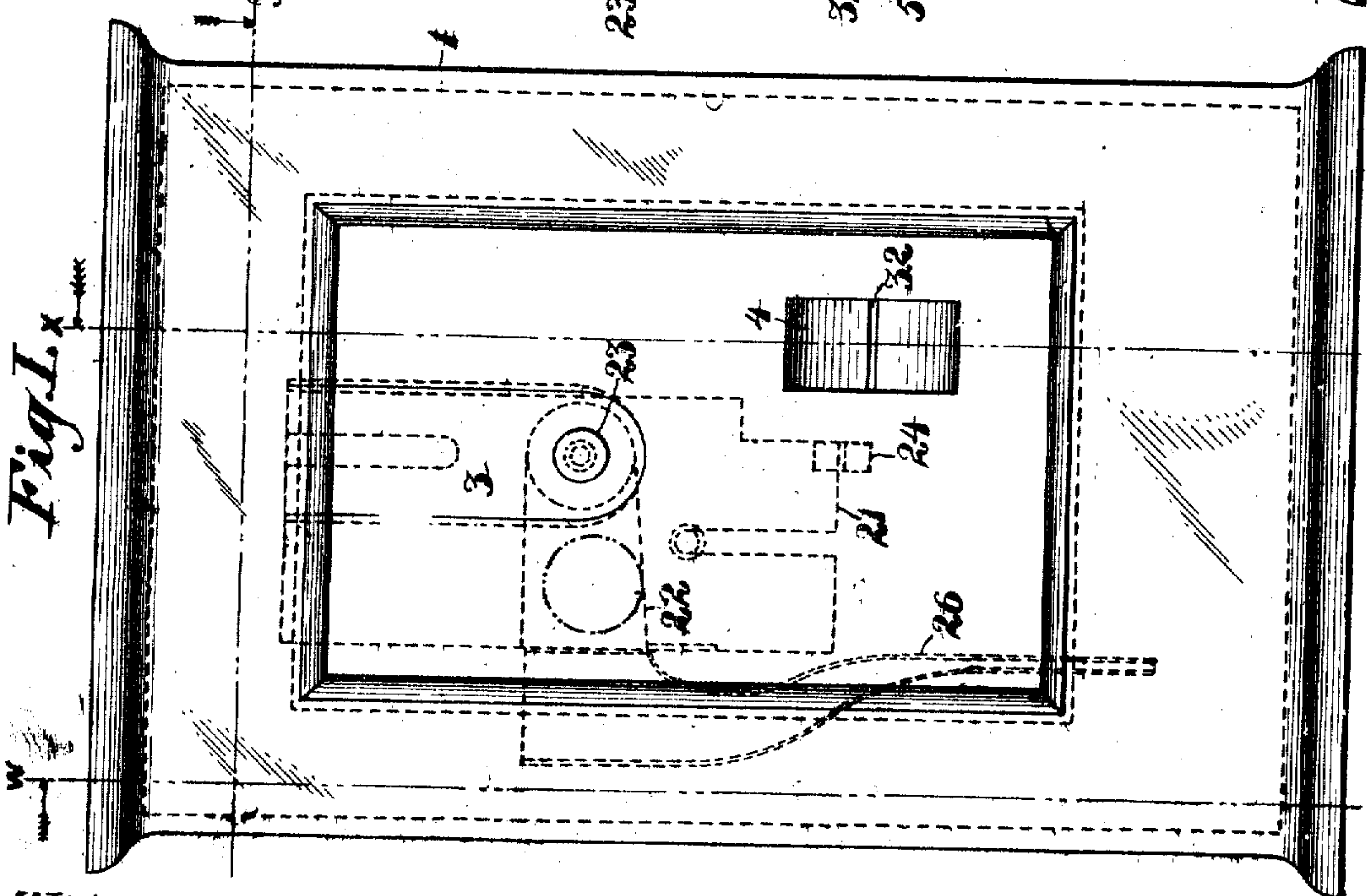


Fig. I.



Witnesses:-

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Elmer Wickes.

Inventor,

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by J. Richards & Co.  
Attys.

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2 SHEETS—SHEET 2.

Fig. II.

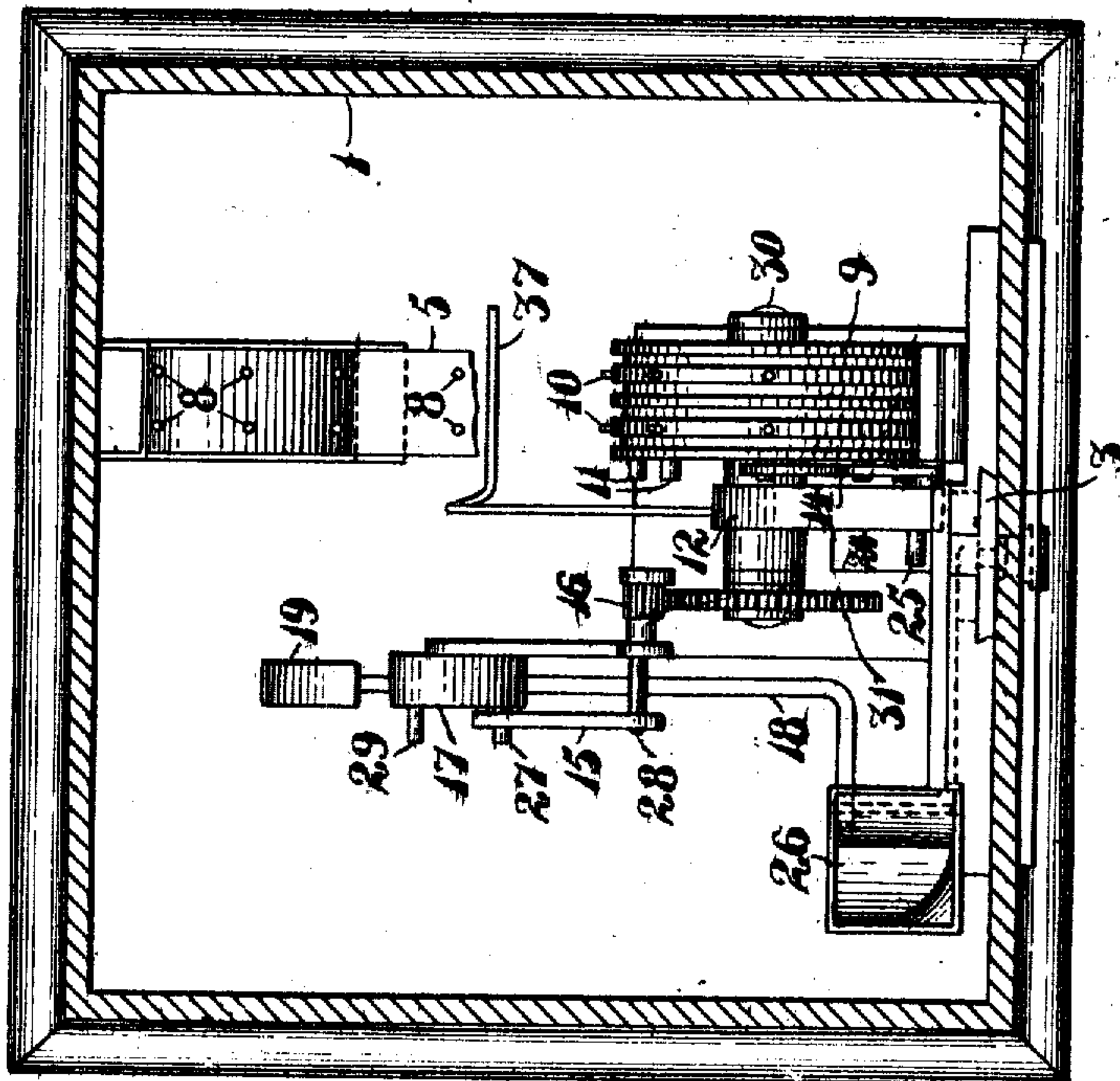
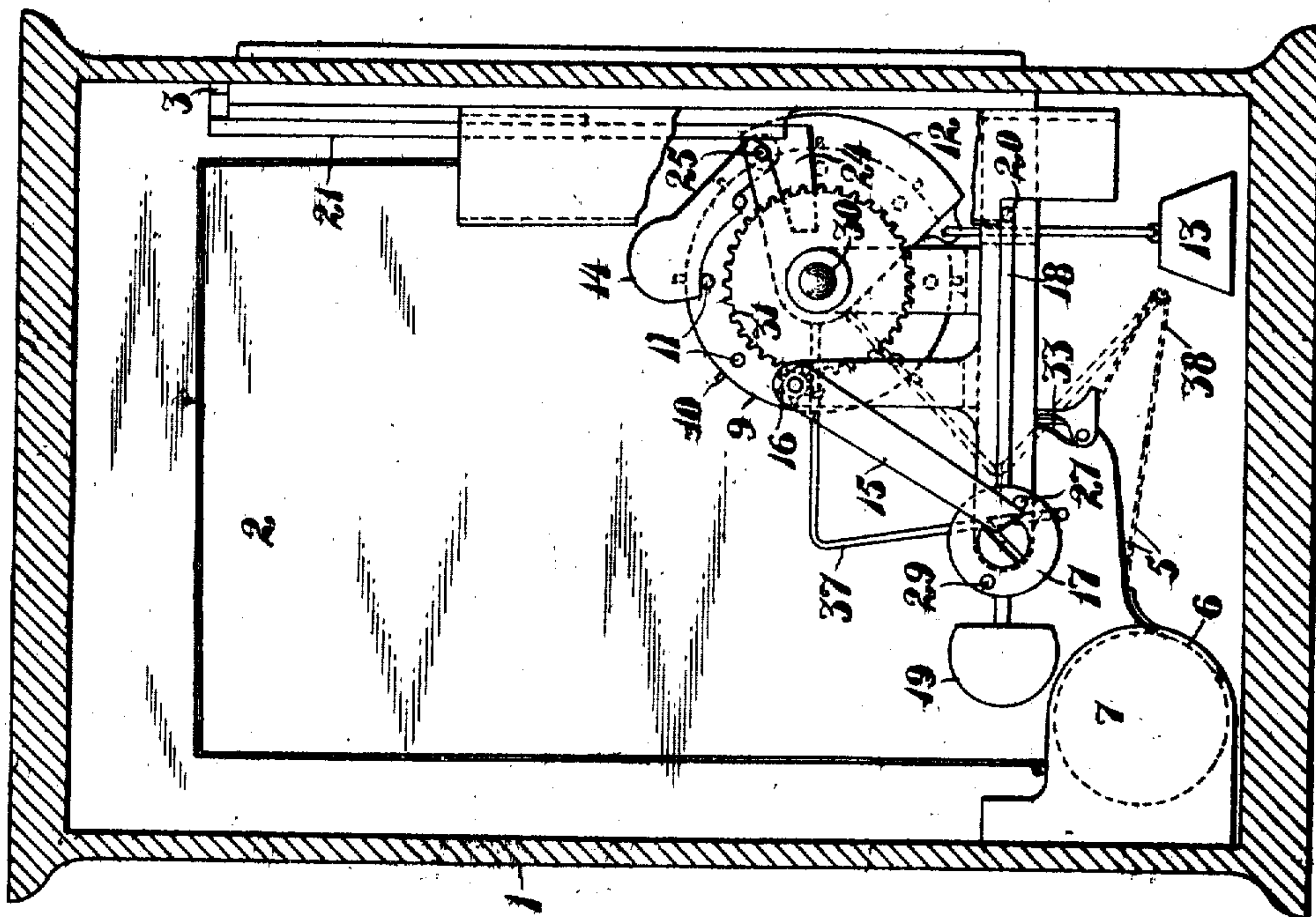


Fig. III.



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# UNITED STATES PATENT OFFICE.

ROBERT JAMES DICKIE, OF WELLINGTON, NEW ZEALAND.

## VENDING-MACHINE.

No. 829,514.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed October 19, 1905. Serial No. 283,487.

*To all whom it may concern:*

Be it known that I, ROBERT JAMES DICKIE, a subject of the King of Great Britain, residing at Wellington, New Zealand, have invented certain new and useful Improvements in Vending-Machines; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to a machine or device for automatically delivering postage-stamps, tickets, or like articles of uniform size and value in return for coins deposited, commonly called "vending-machines," and to certain improvements in such machines, as hereinafter described, and illustrated by drawings that form a part of this specification.

My improvements consist in a sliding wicket behind which coins can be inserted, the opening movement of which supplies a relay force required for the machine's action in a peculiar tortuous passage for the coins that prevents their abstraction through the wicket, in a rotary delivering disk or wheel the periphery of which is provided with pins at spaced distances corresponding to perforations in a strip or ribbon composed of postage-stamps, tickets, or the like that are moved forward and presented one at a time, also consists in devices for escapement of and locking the rotary disk at each delivery and in other features that will be more fully explained by the aid of the drawings.

The objects of my invention are to avoid the expense, care, and uncertainty of personally dispensing stamps and the like, to preserve an accurate record of the amounts sold, and to provide a convenient means whereby the public can procure stamps, tickets of admission or transportation, and the like at once and by their own act.

To these ends I provide a machine or structure as shown in the accompanying drawings, Figure I being a front view of a vending-machine made according to my invention; Fig. II, a vertical section on the line *x* in Fig. I; Fig. III, a vertical section on the line *w* in Fig. I; Fig. IV, a transverse section on the line *y* in Fig. I.

In the sale of postage-stamps and other small articles of uniform size and value a personal vender's duties are perfunctory, liable to error, and necessarily consume a great deal of time that is lost by purchasers awaiting their turn. The sales are confined to par-

ticular hours and to inclosed places not always accessible to the public. These impediments are removed by my invention, the operating parts of which I will now proceed to describe with the aid of the drawings.

1 is a containing-case provided with a door 2 of convenient size at one side, giving free access to the interior and the mechanism therein. At the front is an upward-sliding wicket 3 and behind this a passage for coins, and at 4 on the right is an indented delivery-passage through which stamps or tickets 5 are protruded.

The main operating elements of the machine are of a simple nature and include a suitable receptacle 7 to hold a coil 6 of stamps or tickets arranged in ribbon form with equal spaced characters and perforations 8, as shown in Fig. IV, a delivery disk or wheel 9, provided with a series of projecting spurs 10, that register with and enter the perforations 8 in the ribbon 5. An impelling-quadrant 12 is raised by the sliding wicket 3, the sliding plate 21 connecting thereto, and is depressed by a weight 13. A pawl 14 on the quadrant 12 engages the pins 11 in the wheel 9 and turns the latter a predetermined distance each time the wicket 3 is raised and a coin is deposited. A detent device 17 acts as an escapement for the fly-lever 15, the pinion 16, and wheel 9. A light lever 18, attached to device 17, is depressed at 20 by a coin descending the spiral passage 26. (Shown in Fig. IV and indicated by dotted lines in Fig. I.)

The operation of these devices is as follows, given in sequence as nearly as possible: The wicket 3 is raised by means of a handle 23, exposing the aperture for inserting a coin or token and drawing upward at the same time the quadrant 12 and the weight 13 by means of the sliding plate 21, that has at the bottom an extension 24, passing under the pin 25 in the quadrant 12 to raise the latter. When the wicket 3 is raised, a coin is inserted flatwise behind it and rolls laterally on the inclined surface (indicated by dotted lines at 22 in Fig. I) and falls down the spiral passage 26 when the wicket 3 is entirely closed and strikes at 20 with its edge on the end of the light lever 18, depressing that and raising the weight 19. This movement of the lever 18 turns the detent-disk 17 until the pin 27 releases the fly-lever 15, so this latter and the pinion 16 and spindle 28 make nearly one revolution and the fly-lever 15 is arrested by



the pin 29. When the lever 18 is freed from the falling coin at 20, it rises by action of the weight 19, releases the lever 15 from the pin 29, and permits it to move to the pin 27, as seen in Fig. III, making one complete revolution. The pinion 16 meshes into a wheel 31, which with the wheel 9 are fastened on the shaft 30. Consequently these parts and the lever 15 receive the turning strain imparted by the weight 13 and the quadrant 12, so that a revolution of the pinion 16 permits the perimeter of the wheel 9 to move forward the length of one stamp or ticket, and the end one is projected through a slot 32 in the front of the machine, as seen in Figs. I and II.

To cause the ribbon 5 to fit around the wheel 9, I provide a frictional device for resistance, (shown at 34 in Fig. II,) consisting of a spring 33, that bears lightly on the face of the ribbon 5, causing some tension at 35.

The motions that result from the falling of the coin being sudden and the inertia of the coil 6 of the ribbon 5 offering resistance to the sudden motion of the wheel 9, I provide a pivoted lever 37, depressed by the quadrant 12, to which the lever is attached. When the wicket 3 and the slide-plate 21 are raised, this lever 37 depresses the ribbon 5, as indicated by dotted lines at 38 in Figs. II and III, thus furnishing slack for the next movement to the next space of the wheel 9.

It will be understood that the form and purpose of the ribbon 5 and the perforations therein, also the form of the wheel 9 and the kind of coins or tokens required to operate the machine, can be modified to suit the circumstances of use without departing from my invention.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an automatic vending-machine, a casing, a series of stamps arranged consecutively in a rolled strip, having spaced perforations therein, a revoluble wheel having spaced projections on its periphery to engage said perforations, a weight to periodically operate said wheel, a sliding hand-operated wicket to raise the weight to operative position, and a

tripping device to set the wheel in motion, whereby a stamp is projected from the roll, substantially as specified.

2. In an automatic vending-machine, a casing, a rolled strip of stamps, having spaced perforations therein, a revoluble wheel having spaced projections thereon corresponding to said spaced perforations, a weight to operate said wheel, a sliding wicket to raise said weight, a pivoted detent-lever geared to said wheel to control its revolutions, and a tripping-lever to engage said detent-lever and disengage it when operated by a suitable applied force, substantially as specified.

3. In an automatic vending-machine, a casing, a rolled strip of stamps, having spaced perforations therein, a revoluble wheel having spaced projections thereon to engage said perforations, a weighted quadrant to operate said wheel, a pawl attached to said quadrant to engage and move the wheel in one direction periodically, a sliding wicket to engage and lift said weight, a pivoted detent-lever to control the movements of said wheel, geared to the latter, a pivoted escapement to engage and disengage said detent-lever, and a light balanced lever controlling said escapement, substantially as specified.

4. In an automatic vending-machine, a slotted casing, a rolled strip of stamps therein, a sliding wicket, means for projecting said stamps one at a time through the slot in the casing, connected with said sliding wicket, to be set for action on the raising of the latter, a revoluble pivoted detent-lever controlling said projecting device, a pivoted escapement alternately engaging and disengaging said detent-lever, and a light balanced lever connected with said escapement, holding the detent-lever out of operation normally but releasing the same when depressed by a suitable applied force, substantially as specified.

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

ROBERT JAMES DICKIE.

Witnesses:

ALFRED A. ENQUIST,  
ELMER WICKES.