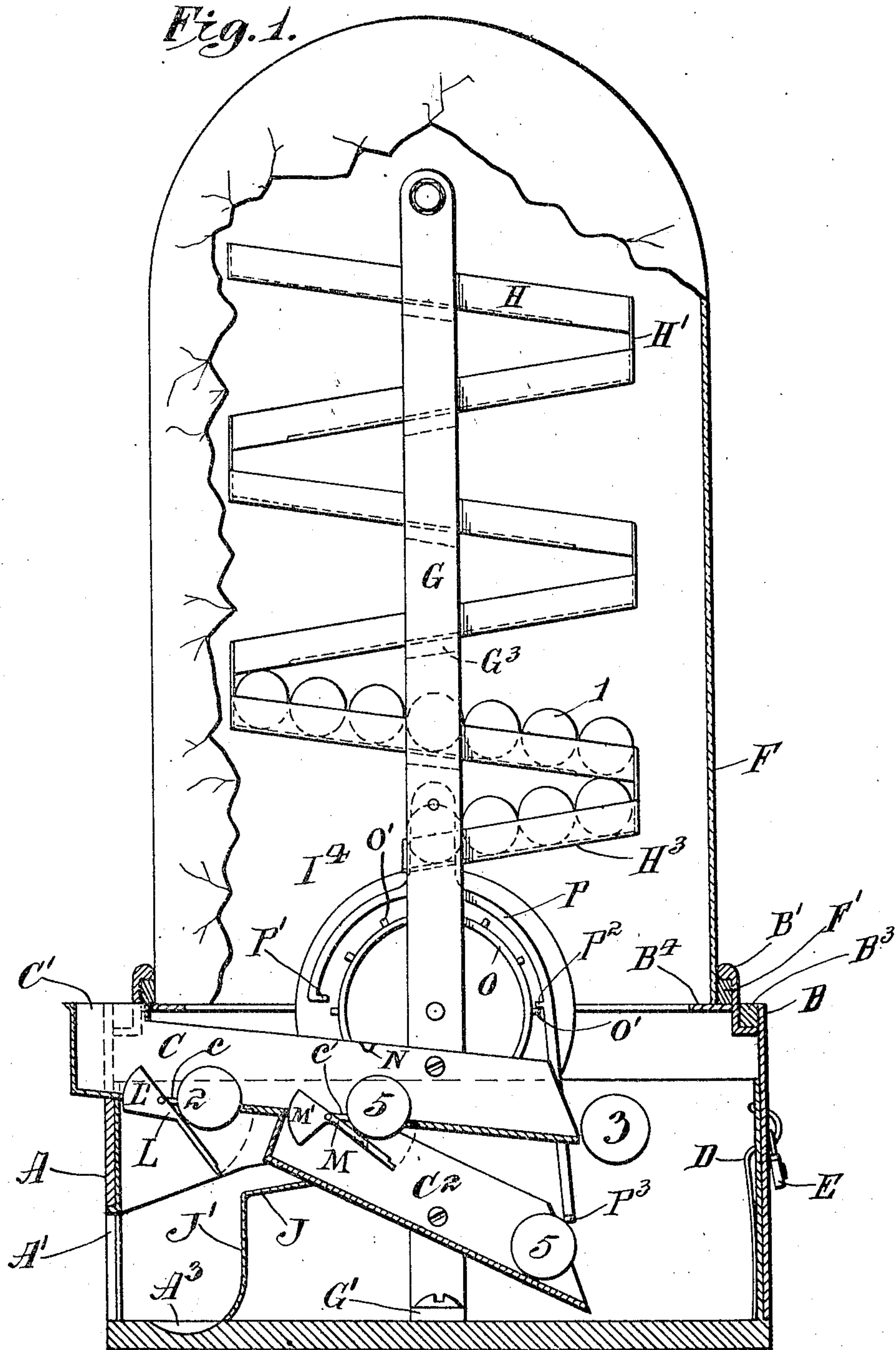


No. 843,127.

PATENTED FEB. 5, 1907.

R. R. BALL.  
VENDING MACHINE.  
APPLICATION FILED FEB. 29, 1904.

3 SHEETS—SHEET 1.



Witnesses  
*Bartlett J. Smith*  
*E. M. Titus*

Inventor  
*Robert R. Ball*  
By his Attorney *Stephen J. Cox*

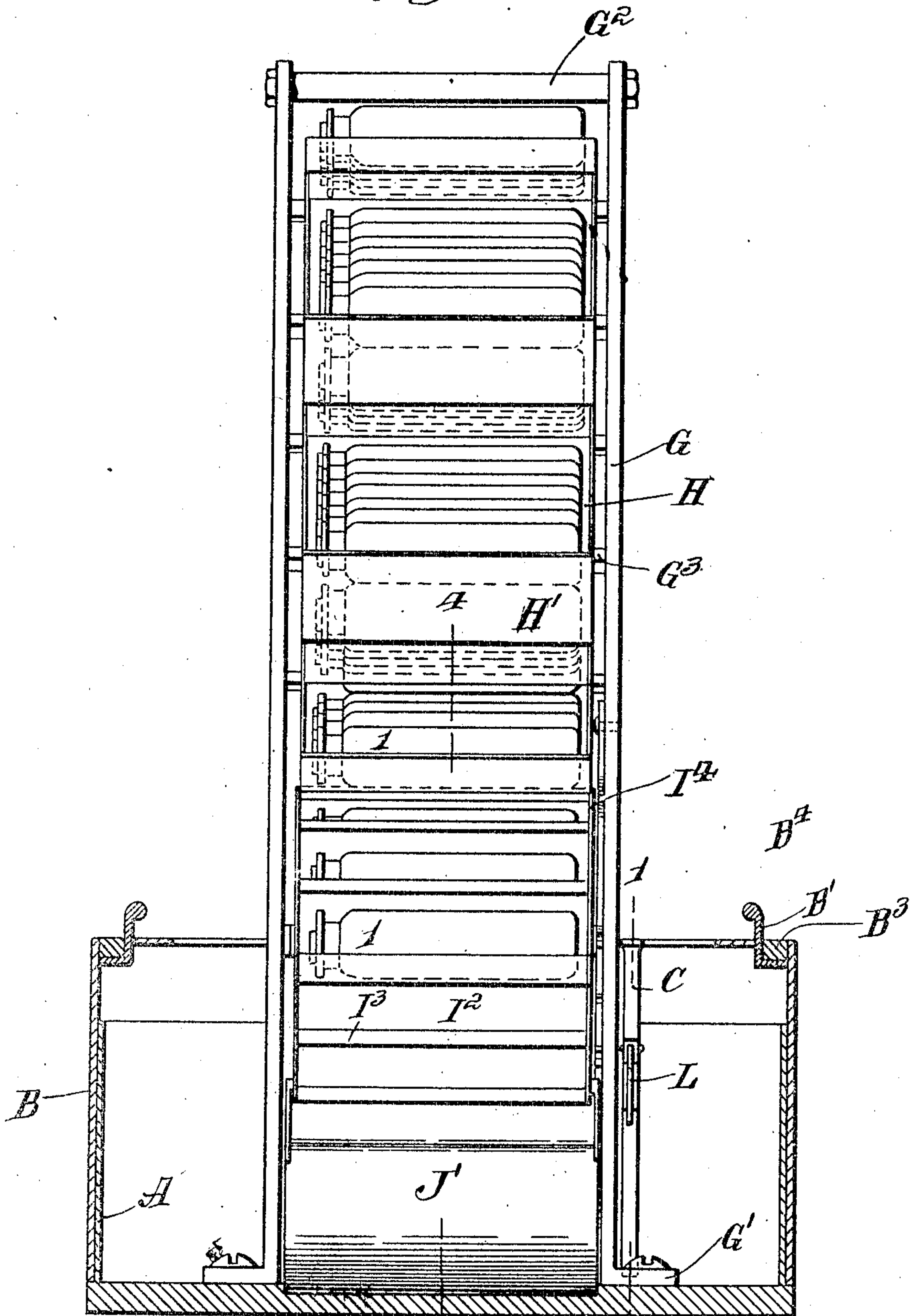
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3 SHEETS—SHEET 2.

Fig. 2.



Witnesses  
Bartlett J. Smith  
C. M. Titus

At

Inventor  
1 Robert R. Ball  
By his Attorney Stephen J. Cox





# UNITED STATES PATENT OFFICE.

ROBERT R. BALL, OF WESTFIELD, NEW JERSEY, ASSIGNOR TO KENT K. STEARNS, OF ELIZABETH, NEW JERSEY.

## VENDING-MACHINE.

No. 843,127.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed February 29, 1904. Serial No. 195,766.

*To all whom it may concern:*

Be it known that I, ROBERT R. BALL, a citizen of the United States, and a resident of Westfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My improvements relate to what are commonly known as "slot-machines" or machines adapted to be operated by a coin inserted through a slot. They relate particularly to machines of this character adapted to be used for the vending of small articles.

The objects of my invention among others are to provide a simple, strong, and durable structure, the parts of which may be easily manufactured and assembled and which in operation will act with certainty and precision.

The invention consists of the structure and arrangement of parts hereinafter described and claimed and illustrated in the accompanying drawings.

In the said drawings, Figure 1 is a side view of a vending-machine embodying my invention, the base of said machine being shown in cross-section substantially on the line 1 1 of Fig. 2. Fig. 2 is a front view of the same with the glass dome removed and the base-casing shown in cross-section. Fig. 3 is a plan of the machine with the glass dome in medial horizontal section. Fig. 4 is a vertical section of the lower portion of the machine substantially on the line 4 4 of Fig. 2.

The base-casing A is circular in form and has its vertical sides set in slightly from the outer edge of the bottom or base. The base-cover B telescopes with the base and is secured thereto by means of the hasp D, which passes through the overlapping portions of the base and cover and is engaged on the outside by a padlock E or other suitable device. The base and cover are provided with slots A<sup>2</sup> and B<sup>2</sup>, respectively, to receive the curved upper portion of the fastening device.

The principal parts of the machine are supported by the posts or standards G, which are secured to the base by their feet G', and are connected at their upper ends by the cross-bolt G<sup>2</sup>.

The inclined trays H, forming the continuous feed-chute, are secured to the uprights by means of small flanges G<sup>3</sup>, which are inclined

at the proper angles and support the said trays. The trays are arranged in zigzag form and are connected by the end pieces H'. Each tray is provided with an opening H<sup>2</sup> at its lower end, which is of suitable size to admit the passage of the round or cylindrical carton 1. The lower tray H<sup>2</sup> terminates directly over the axis of the delivery-wheel and has an opening H<sup>4</sup> at this point.

The overshot delivery-wheel consists of the hub I of polygonal form, rotatably mounted between the uprights G and the radial carriers, each composed of a flange I', embedded in the hub, the curved portion I<sup>2</sup>, and the outer lip I<sup>3</sup>. In operation the carton falls from the short tray H<sup>3</sup> into the pocket or carrier directly beneath it and is retained within the carrier until the rotation of the wheel brings it to the point where it will be discharged therefrom by gravity. The vertical edges of the pockets or carriers are secured to the end disks I<sup>4</sup>, which also act to prevent the cartons from slipping out of said carriers endwise or coming in contact with any of the other parts of the machine.

The delivery-chute consists of the upper inclined table J and the depending portion J', which is curved at its lower end and terminates at the recess A<sup>3</sup> in the base. Directly opposite these parts is the opening A<sup>2</sup>, through which the fingers may be inserted to receive or extract the carton when it is delivered from the wheel.

In the drawings I have shown a suitable coin-actuated operating device which comprises a coin-chute C, secondary chute C<sup>2</sup>, and slot C' for receiving and guiding the coin, a trap consisting of a pivoted arm L, provided with a weight L', another trap consisting of the arm M with the weight M', which traps open and close the slots c c', the coin being thrown against the latter by a stop N. The secondary coin-chute C<sup>2</sup> receives the coin intended to actuate the mechanism and guides it to the pin P<sup>3</sup> on the arm P, pivoted to the standard G above the ring O, which ring is secured to one of the disks I<sup>4</sup> and has teeth O' corresponding with the pockets of the delivery-wheel. The arm P is parallel with the ring O at its upper part and has a tooth P' at its outer end and another, P<sup>2</sup>, diametrically opposite.

The rotation of the delivery-wheel is caused by the weight of the cartons 1, and as



soon as a carton is delivered from the lowermost carrier of the wheel the one at the opening  $H^4$  will fall into the pocket beneath it, which is brought into proper position to receive the carton by the rotation of the delivery-wheel. The lips  $I^3$  perform an important function in this operation by holding the carton immediately at the opening until the pocket is in the exact position to receive it.

The glass dome  $F$ , incasing the upper part of the machine, is secured to the base by means of a flange  $F'$ , extending around the lower edge thereof on the outer side and secured to the dome by the use of cement or other suitable substance. In this connection I use the ordinary bell glass or dome of commerce, which is constructed without a flange, and apply a flange, as herein described, for my purpose, which enables me to build my apparatus at a very much less cost than if I have a glass dome molded to order. I use this bell glass or dome entire, avoiding hazardous and expensive cutting or grinding. The clip  $B'$  extends from the upper edge of the base-cover over the flange  $F'$ , and thus prevents the removal of the glass dome. A block  $B^3$  is fitted in between the lower angular end of the clip or hook  $B'$  and the upper edge of the base-cover and assists in securing the said parts together.

It will be seen that in assembling the parts the dome with its flange may be first placed in position resting upon the annular flange  $B^4$  of the base-cover and the hook or clip  $B'$  then inserted through the rectangular opening in the flange  $B^4$  and placed in its proper position, after which the block  $B^3$  is inserted together with cement or other suitable substance, and the fastening thus completed.

The hook  $B'$  may also be cemented to the flange  $F'$ , if desired, and the fastening thus rendered more secure.

In the drawings I have shown four fastening devices on the lower edge of the glass dome; but any desired number may be used.

In order to facilitate an understanding of the operation of the coin-chutes and traps and the manner in which the delivery mechanism is tripped, I have shown disks 2, 3, and 5, representing heavier coins, lighter coins, and the genuine coins, respectively.

What I claim is—

1. In a vending-machine, the combination of a base, a cover for said base, means for

fastening the said cover to the base, a dome of transparent material inclosing the parts of the machine above the base and having its lower edges secured to the base by means of a flange secured to its exterior at the lower edge, a hook secured to the upper edge of the base extending above the same and over said flange.

2. In a device of the character described, the combination of a base, a cover for said base, means for fastening the said cover to the base, a dome of transparent material inclosing the parts of the apparatus above the base, a flange secured to said dome and extending outwardly from its lower edge and a hook secured to the upper part of the base extending above the same and over the flange.

3. In a device of the character described, the combination of a base, a cover for said base, a plurality of vertical posts secured rigidly to the base extending above the said base and cover and connected at their upper ends, trays secured between said posts and supported by the same and a transparent dome provided with a flange on its exterior lower edge and a hook secured to the upper part of the base extending above the same and engaging said flange.

4. In a device of the character described, the combination of a bell-glass, a supporting-base and means between the said base and bell-glass for fastening the same together, comprising a flange secured to the exterior lower edge of said bell-glass and composed of different material and a hook secured to the base and engaging the said flange.

5. In a device of the character described, the combination of a base, a glass dome inclosing parts above the base and means of securing the said dome to the base, comprising a flange secured to the exterior of the dome at its lower edge, a hook engaging said flange and extending into the base, an angular portion at the lower end of said hook and a block secured to the hook and the vertical wall of the base beneath which the angular portion of the hook extends.

Witness my hand this 18th day of February, 1904, at the city of New York, in the county and State of New York.

ROBERT R. BALL.

Witnesses:

HERMAN MEYER,  
BARTLETT J. SMITH.