

No. 756,154.

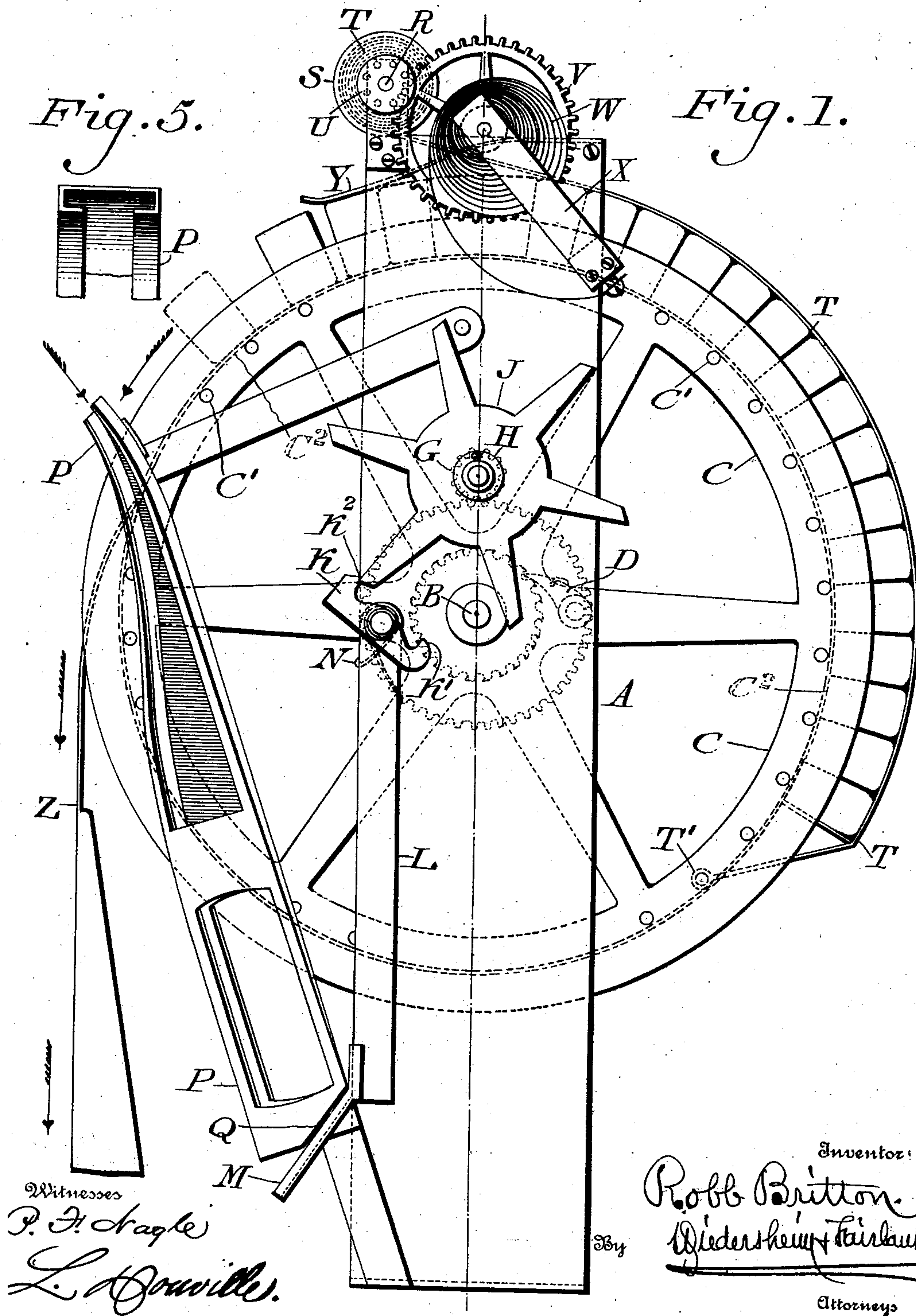
PATENTED MAR. 29, 1904.

R. BRITTON.  
VENDING MACHINE.

APPLICATION FILED OCT. 17, 1903.

NO MODEL.

8 SHEETS—SHEET 1.



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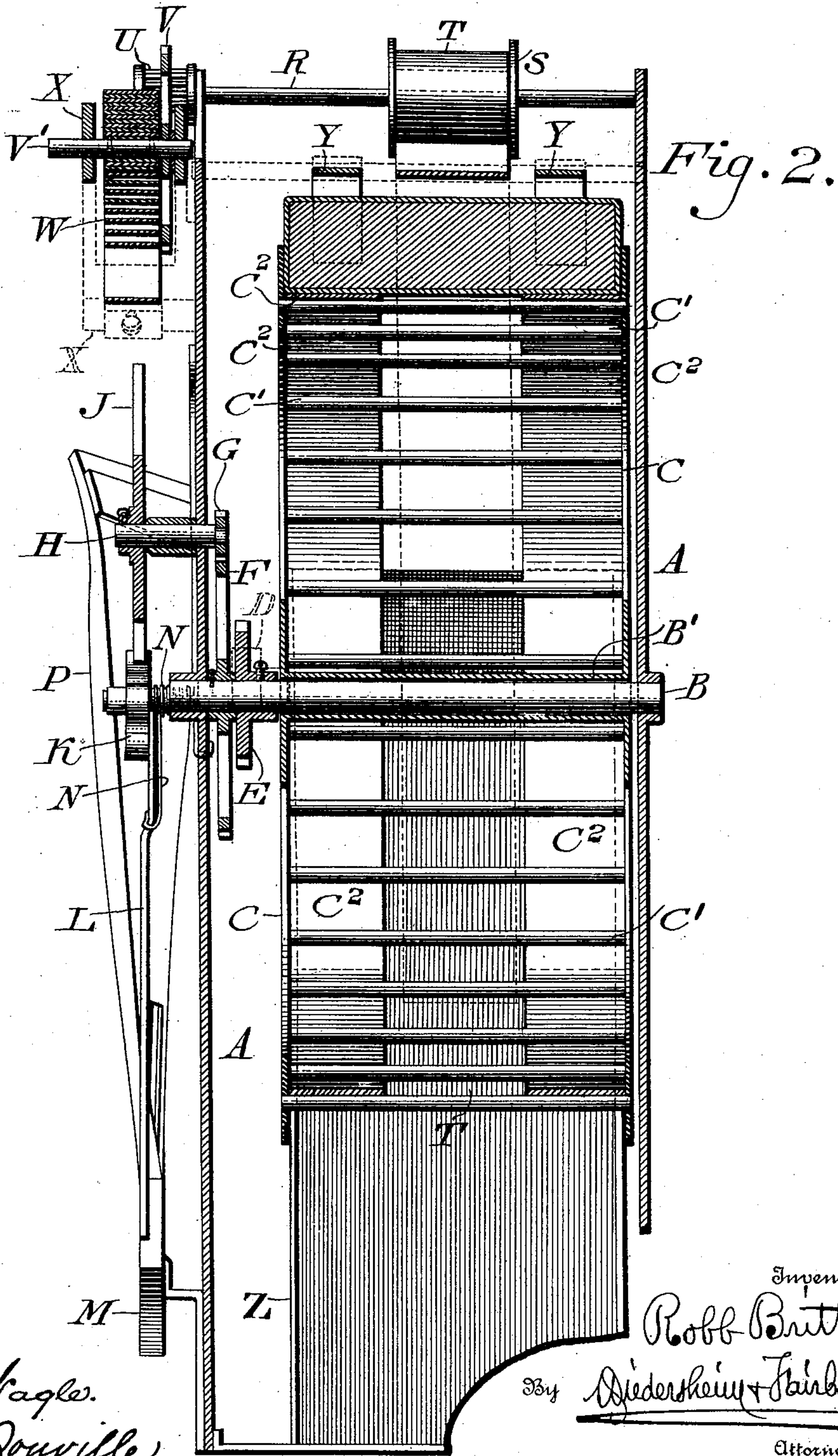
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3 SHEETS—SHEET 2.



Witnesses

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Attorneys



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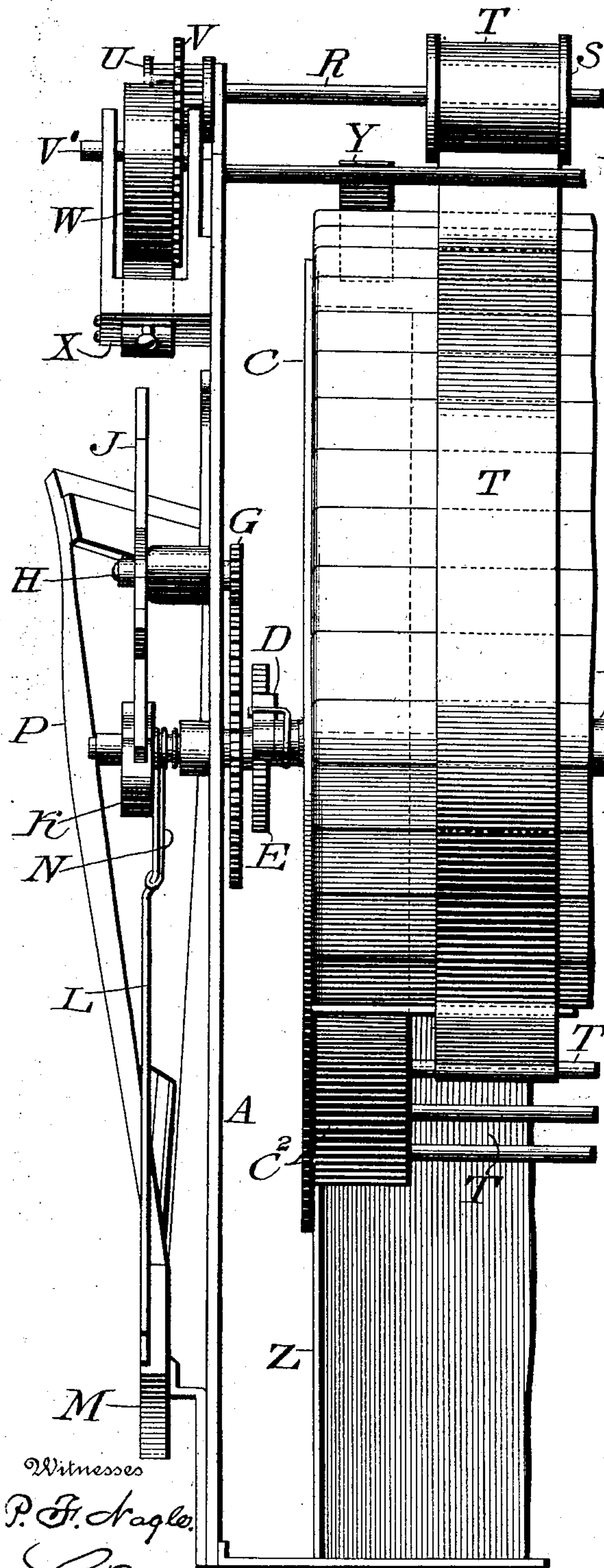


Fig. 3.

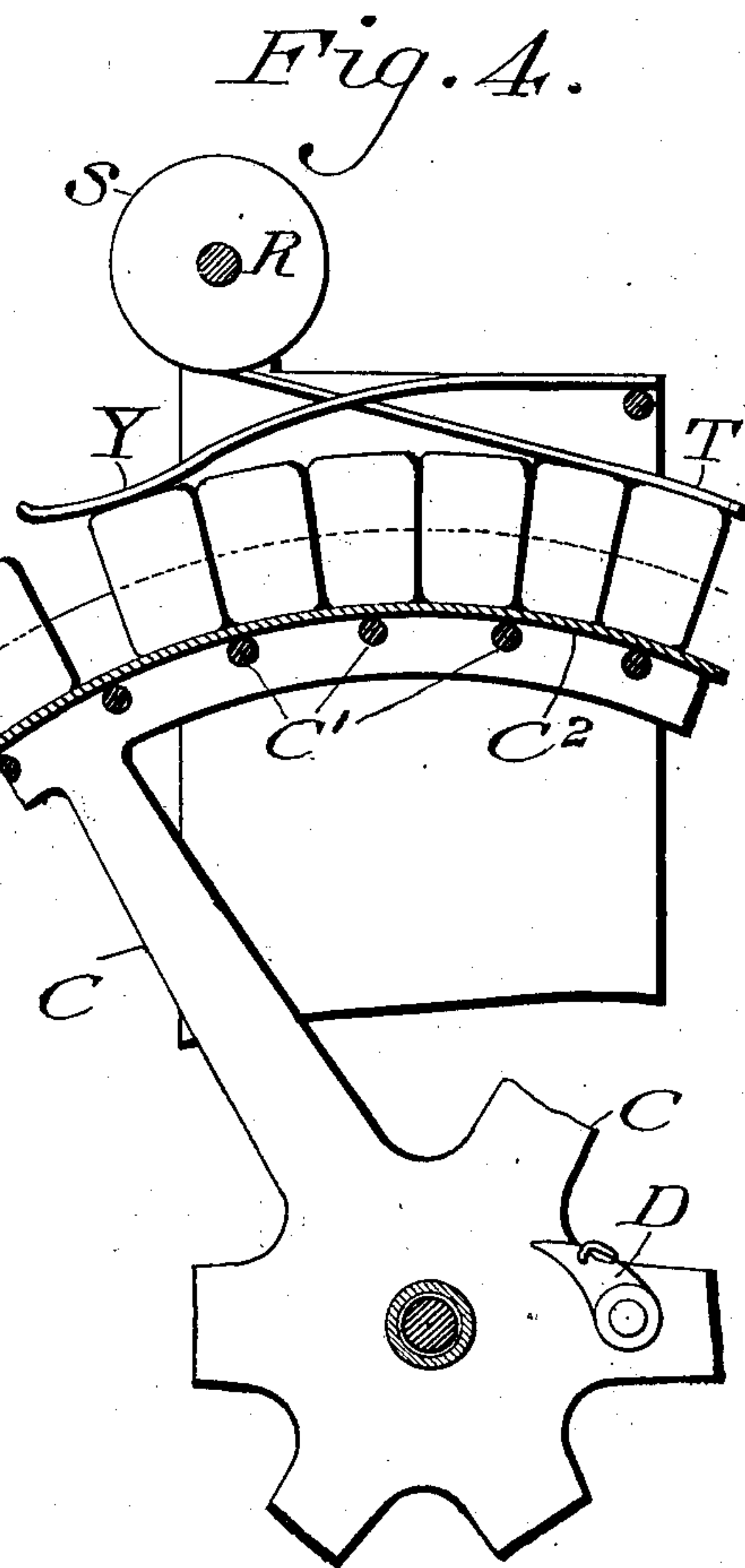


Fig. 4.

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# UNITED STATES PATENT OFFICE.

ROBB BRITTON, OF CLIFTON, PENNSYLVANIA, ASSIGNOR TO FRANK H. FLEER & COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

## VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 756,154, dated March 29, 1904.

Application filed October 17, 1903. Serial No. 177,411. (No model.)

*To all whom it may concern:*

Be it known that I, ROBB BRITTON, a citizen of the United States, residing at Clifton, in the county of Delaware, State of Pennsylvania, have invented new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to a vending-machine of the order of coin controlled or operated embodying a drum, a reel, cylinder, or other shaped carrier upon which pieces, cakes, or other objects may be primarily stored and from which they may be successively released, said carrier being subjected to the action of spring, which imparts motion to the same, controlled intermittently by intermediate mechanism which is primarily actuated by a coin properly introduced into the machine.

The invention consists of the novel construction of parts, as will be hereinafter described, and pointed out in the claims.

Figure 1 represents a side elevation of a coin-operated vending-machine embodying my invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents a side elevation of a portion thereof at a right angle to Fig. 1. Fig. 4 represents a section of a portion of parts shown in Fig. 1 detached. Fig. 5 represents a perspective view of the upper portion of the coin-chute employed.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the frame of the machine, on the upright portions or standards of which is mounted the horizontally-extending shaft B.

C designates a drum, reel, cylinder, or other shaped carrier, which is mounted freely by its central sleeve B' on said shaft B and has at its side the spring-pressed pawl D, which is adapted to engage with the teeth of a ratchet E, whose hub is firmly secured to said shaft B. Secured to said shaft aside of said ratchet is a spur-wheel F, which meshes with the pinion G, whose shaft H is mounted on the adjacent portion of the frame A and carries the escapement J. Mounted on the frame below the escapement J is the verge or pallet K,

from which depends the arm L, whose lower end is provided with the inclined foot M. Connected with said verge and adjacent portion of the frame A is the spring N, whose tendency is to assist in returning said verge to its normal position and holding it thereat.

P designates a chute which is adapted to receive the coin by which the machine is primarily operated, the same being firmly secured to a proper portion of the frame A and open throughout from top to bottom, its lower end being inclined, as at Q, against which abuts the foot M in the normal position of the verge K. Mounted on the upper portion of the frame is the shaft R, to which is firmly secured the roller S, on which is wound the strap T, which extends from said roller over the periphery of the drum C and has its outer end portion set out from the drum and connected with the latter by a loop at T', it being noticed that said strap is pliable or flexible in its nature, so as to yield and permit of the storage of the pieces, cakes, or other objects to be vended on said drum between the same and said strap, it being noticed that the periphery of said drum is composed in part of cross-rods C' and encircling bands C<sup>2</sup>, whereby said objects are properly sustained on said periphery and prevented from falling therethrough. The bands C<sup>2</sup> leave portions of the lengths of cross bars or rods C' uncovered, so that the loop of the strap T may be connected with either of said rods in order to properly adjust the place of attachment of the strap with the drum in assembling the members of the machine. Furthermore, the end of the strap may turn on the cross-rod, so as to deflect said end to form a stop for the beginning of the row of objects placed on the drum and to set-out the strap to allow the row of objects to be placed thereunder, as most plainly shown in Fig. 1.

Keyed or otherwise secured to the shaft R is the pinion or lantern wheel U, with which gears the spur-wheel V, whose shaft V' has connected with it a coil-spring W, one end of which is secured to the bracket X, which latter is connected with the adjacent portion of the frame A.



Connected with a cross-bar at the upper end of the frame A are the spring-fingers Y, which project freely from the periphery of the drum C and above the same for temporarily holding the objects at about the end of the row of the same after they are relieved of the strap T, as most clearly shown in Fig. 1.

Rising from the base of the casing of the machine is the guide Z, whose upper portion extends close to the periphery of the drum C at what may be termed the "discharge side" of the machine. For purposes of clearness the casing of the machine has been removed. The chute P is somewhat twisted in its nature and has its front opened, its back closed, and the side flanged and made of such dimensions that a coin of proper denomination when introduced into the inlet end of the chute will be retained in its downward motion within the chute by said flanged sides and caused to descend to full extent, when it will be imposed or impacted upon or against the foot of the verge-arm L, as has been stated. Should, however, a coin of smaller size be introduced into said chute, it will not be engaged by the flanged sides, but owing to the open front of the chute it will drop therefrom into the bottom of the casing of the machine without reaching the foot M and weighting and operating the same.

The operation is as follows: The pieces, cakes, or other objects to be vended are placed on the periphery of the drum between the same and the strap T, said drum being rotated by hand as the pieces are fed into position. During the rotation of the drum the pawl D rides freely over the ratchet E, the latter remaining at rest. The objects are now subjected to the pressure of said strap, whereby they are retained on the drum as a circular row. (See Fig. 1.) The strap pays out as the rotating drum draws it along, and the roller S is thereby rotated and with it the shaft R. This rotates the pinion U and wheel V and causes the coiling or winding of the spring W, whose tendency, when the drum is subsequently released, is to cause the reverse rotation of the drum, which, however, is intermittently controlled by the engagement of the verge K with the escapement J, the latter being geared over to the drum through the intermediate parts, as has been stated, and the verge-arm L bearing against the bottom of the chute P as a stop. As the drum has been supplied with objects, the machine is in condition for use. A coin of proper denomination is now inserted into the chute P, when it descends the same and imposes its weight on the foot M, thus moving the arm L from the abutment Q of the chute, in the present case to the right, thus opening the bottom of the chute, when the coin drops therefrom and rolls down the foot M into a place of deposit or collection. The motion of the arm L now causes the verge to trip one tooth of the es-

capement, allowing the latter to rotate the distance of one tooth, when as the escapement is geared with the drum and the latter and the escapement are now subjected to the power of the spring W as a motor therefor said drum rotates and advances the objects on the drum to the left, when, as in Fig. 1, the objects pass out from under the strap T and ride under the spring-fingers Y, and then the advanced object that clears the latter slides down the drum and reaches the guide Z, whereby its upper end, which is close to the periphery of the drum, diverts the object from said periphery and its outer side assists in directing it to the exit-opening in the casing of the machine, from whence it may be removed. As the verge engages with the next advancing tooth of the escapement, the latter is again locked or controlled and rotation of the drum ceases, the remaining objects being controlled on the drum until another coin is introduced into the chute P, when the arm L is again actuated, the verge and escapement being operated as before, and the drum is again advanced, limited by the intermittent motion of the escapement, and so the next object on the left removed from under the spring-finger Y is released and permitted to drop from the drum, it then reaching the exit-opening, as in the previous case, and thus the operations continue.

It will be noticed that one limb of the verge has a rounded or beveled face K', over which the advancing tooth of the escapement is adapted to ride and press against, thus lowering said limb and forcing the arm L toward the chute. Then said tooth abuts against the shoulder K<sup>2</sup> on the other limb and in a manner interlocks therewith, thus assuring the location of the foot M against the face Q of the chute.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

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

1. In a vending-machine, a rotary drum having cross-rods on the periphery thereof, in combination with an object-holding strap on said periphery, the same being movably connected at one end with one of said cross-rods and set out therefrom.

2. In a vending-machine, a rotary drum having cross-rods on the periphery thereof, a band on portions of the lengths of said rods, an object-holding strap connected at one end with one of said rods and being set out from the same, and a spring-controlled reel to which the other end of the strap is attached.

3. In a vending-machine, a rotary drum having cross-rods on the periphery thereof, a band on portions of the lengths of said rods,



an object-holding strap connected at one end with one of said rods and being set out from the same, a spring-controlled reel to which the other end of said strap is attached, and a device for detaining said drum at intervals.

4. In a vending-machine, a rotary drum, an object-holding strap thereon, a reel, means for winding said strap on said reel, and a resilient brake extending over the periphery of said drum in advance of said strap.

5. In a vending-machine, a drum having cross-rods at the peripheral portion thereof,

and an object-support sustained on said rods, in combination with an encircling object-retainer connected with one of said rods. 15

6. In a vending-machine, an object-holding drum, an object-retaining device over the periphery of said drum, and a brake over said drum in advance of the terminal of the retaining action of said device.

ROBB BRITTON.

Witnesses:

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