

(No Model.)

2 Sheets—Sheet 1.

W. DIEBEL.  
VENDING DEVICE.

No. 539,121.

Patented May 14, 1895.

FIG. 1.

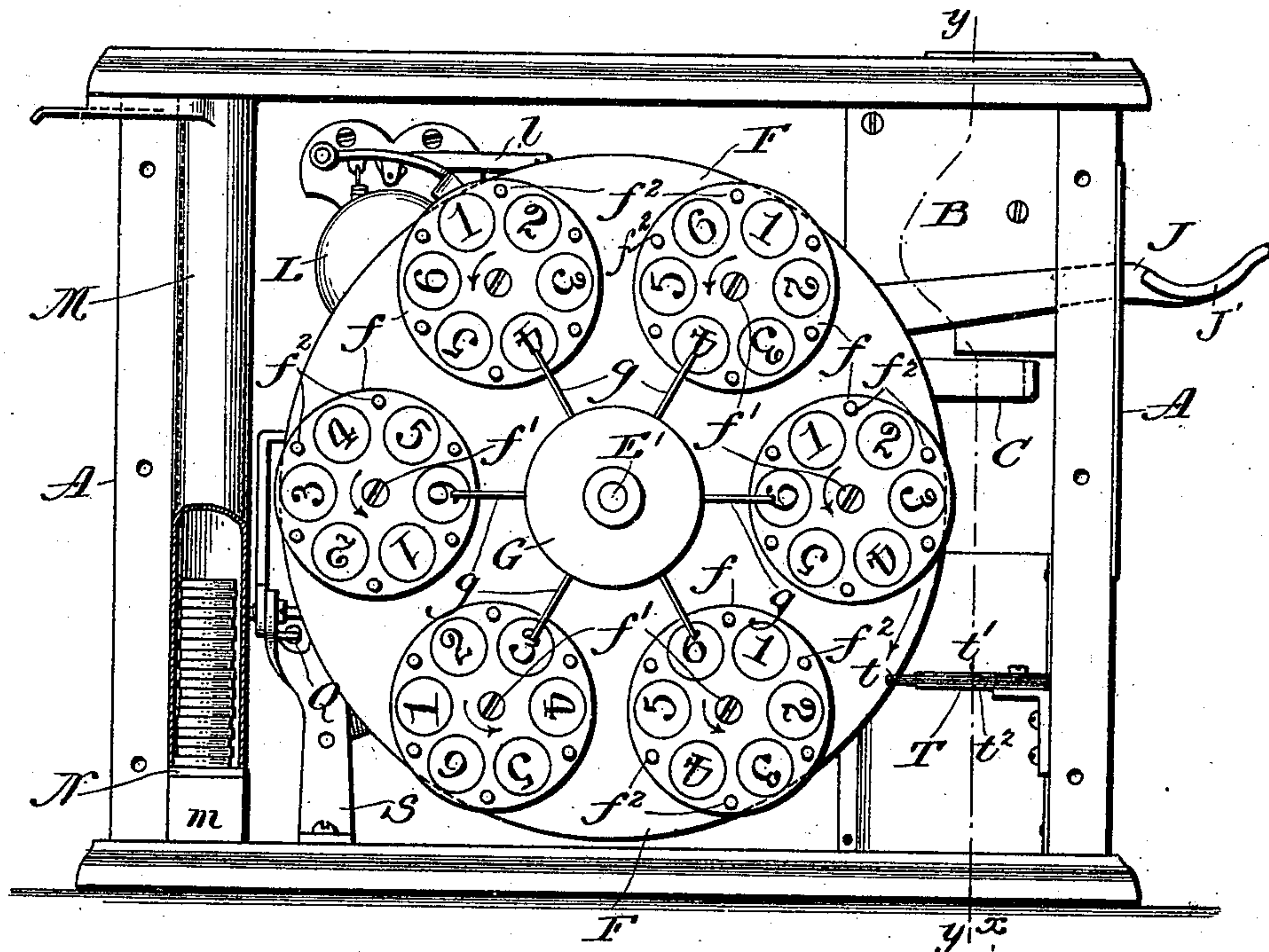
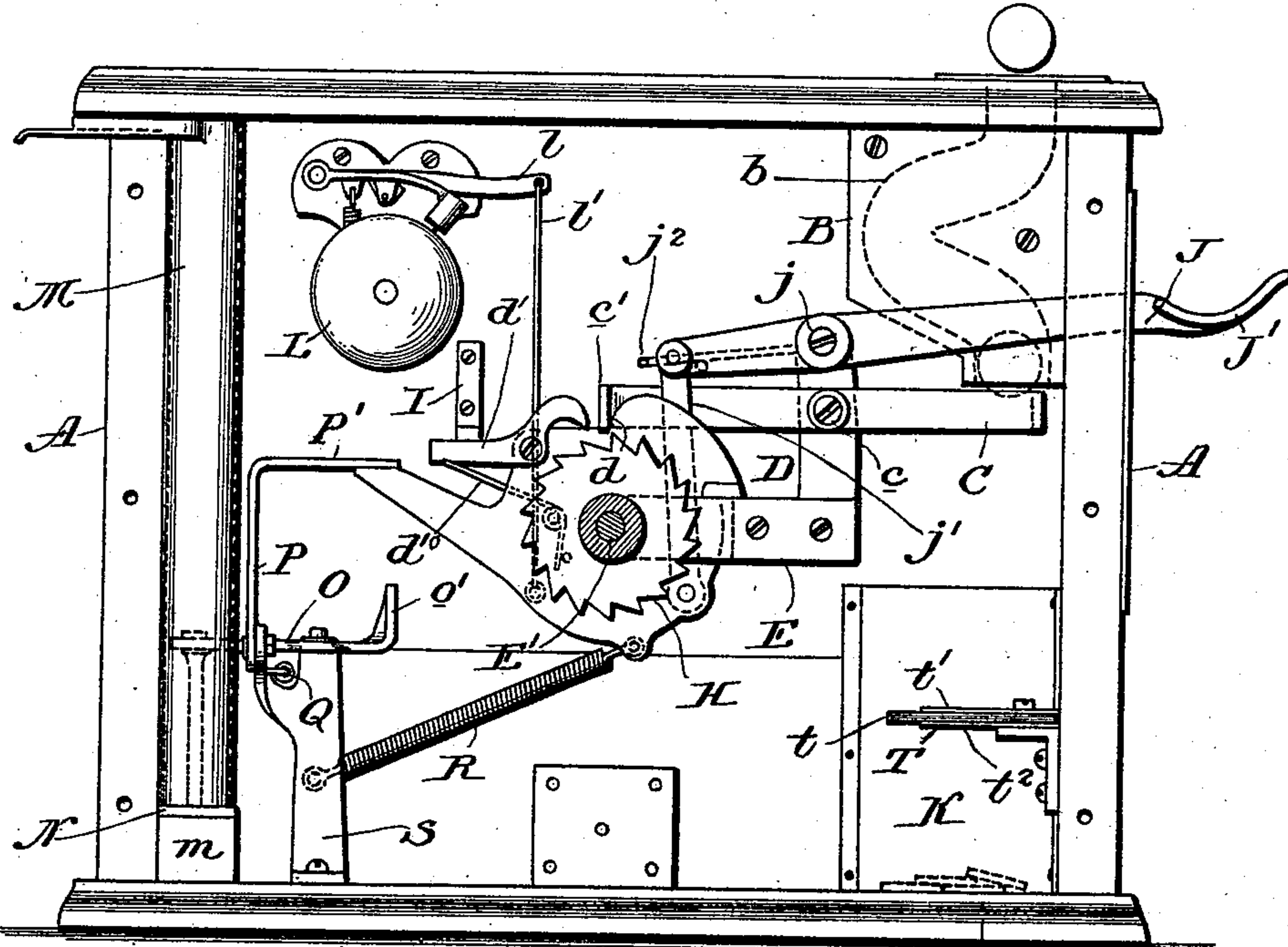


FIG. 2.



WITNESSES:  
Harry M. Hamrick  
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INVENTOR:  
William Diebel  
by his Attorney  
David S. Williams

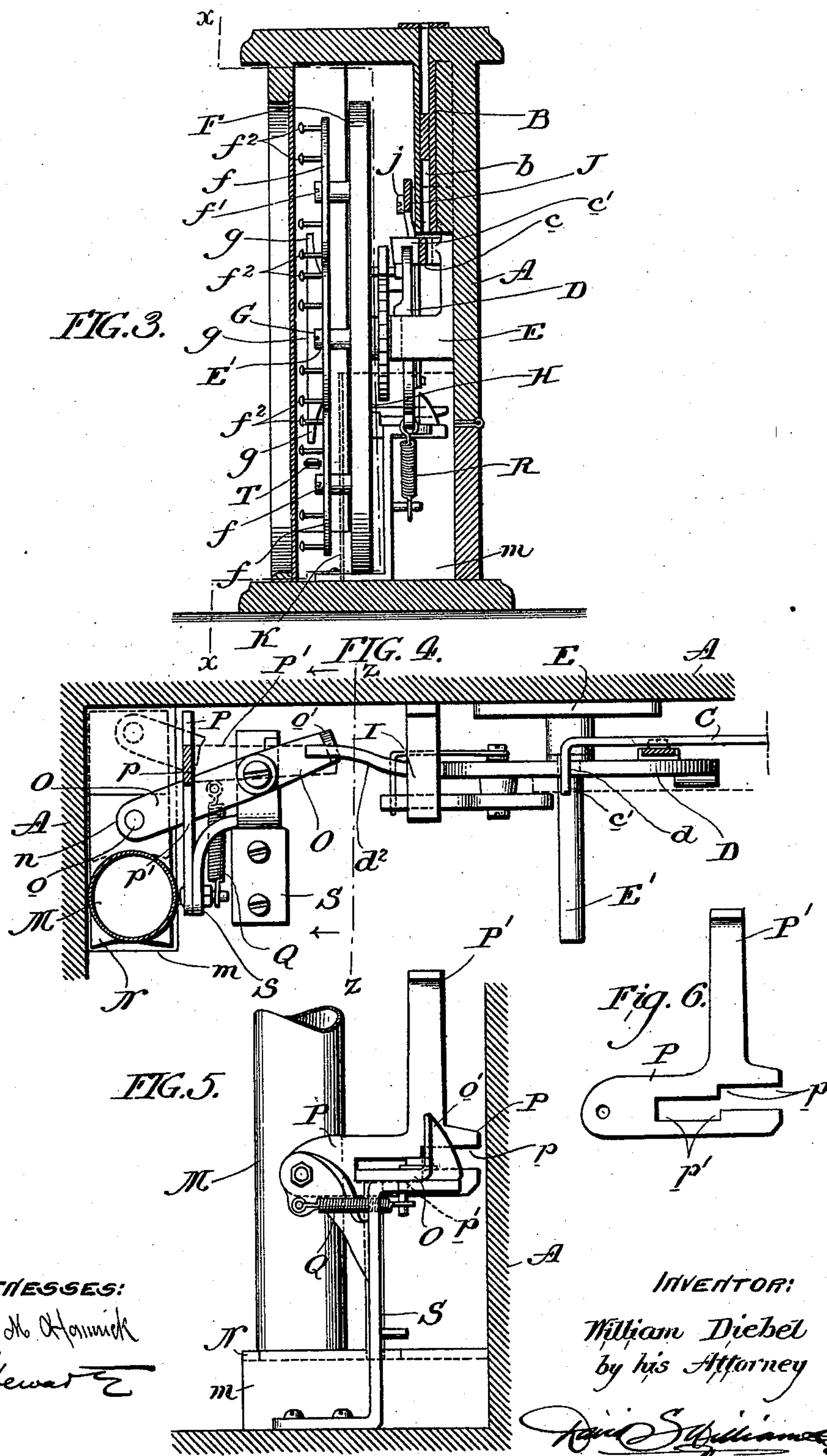
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2 Sheets—Sheet 2.

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Patented May 14, 1895.





# UNITED STATES PATENT OFFICE.

WILLIAM DIEBEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
HIMSELF AND SAMUEL I. SMITH, OF SAME PLACE.

## VENDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 539,121, dated May 14, 1895.

Application filed May 3, 1894. Serial No. 509,886. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM DIEBEL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vending Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists of certain improvements in vending devices, and consists of an apparatus which will deliver automatically, when a coin of the proper value is inserted therein, goods to full value of said coin, or a check, the purchasing value of which is equal to that of the money placed in the apparatus.

Referring to the accompanying drawings, Figure 1 is a front elevation of my device, the front having been removed to better illustrate the mechanism contained within the framework or box. Fig. 2 is a section on the line  $xx$  of Fig. 3. Fig. 3 is a section on the line  $yy$  of Fig. 1. Fig. 4 is a detached plan view, enlarged, of a portion of my apparatus. Fig. 5 is a section on the line  $zz$  of Fig. 4 looking in the direction indicated by arrows, and Fig. 6 is a side elevation of one of the parts hereinafter fully described.

A is a box or casing at one side of which is a metal plate B, having a curved slot  $b$  for the reception of a coin, by which the machine is operated.

C is a lever, one end of which is placed below the coin slot directly in the path of the coin. This lever is pivoted at a point  $c$ , the other end of the lever having a projecting portion  $c'$ , which normally rests in a notch  $d$  in the cam wheel D. The cam wheel D is pivoted to a bracket E by means of a rod  $E'$ . At the outer end of the said rod  $E'$  is placed a circular disk F which has mounted upon its face circular disk  $f$  secured to the disk F by studs  $f'$ . The large disk rotates freely upon the rod  $E'$  and each of the smaller disks have a free independent movement upon their studs  $f'$ .

G is a hub, fixedly secured to the rod  $E'$ , having inserted around its periphery thin blades  $g$ . Upon each of the disks  $f$ , I place a row of pins  $f^2$ . These pins come in contact with the blades  $g$  when rotating, and cause the latter to curve forward in order that the pins may pass. The disks will continue to rotate until their momentum is finally checked by the resistance offered by the blades. The blades serve as index fingers when the disks are at rest, pointing to a number which is written between the pins. The several numbers pointed out by the blades are added together and their sum is compared with figures arranged upon a chart by which the purchaser may be told his fortune. The device, however, may be used for various purposes of amusement as well as the use already referred to.

At the rear of the disk F and connected with it, is a ratchet wheel H, and pivoted to the cam wheel D is a pawl  $d'$ , which is acted upon at one end by a spring  $d^{10}$  secured to the cam wheel. The pawl is normally prevented from engaging with the ratchet by the lug I, which bears against the pawl, when in the position shown in Fig. 2.

J is a lever which is manually operated by pressing down the curved portion  $J'$  of said lever. This lever is pivoted at  $j$  and connected to the cam wheel D by the connecting rod,  $j'$ . To the rear of the lever J, and secured to the hub of said lever is a wire rod  $j^2$ , whose office is to prevent the end of the lever C, which enters the notch in the cam wheel from rising too high and discharging the coin into the box K before the operating lever has been manipulated.

L is a bell operated from the cam wheel D by the lever  $l$  and connecting rod  $l'$ .

M is a tube which contains the articles to be delivered. The latter are placed in said tube at the top, one upon the other until the tube is filled.

N is a delivery slide, which is relatively of the same thickness as each of the articles to be delivered, and  $m$  is a block upon which the delivery slide is mounted. The delivery slide normally occupies the position shown in full lines in Fig. 4, but when acted upon by the finger  $d^2$ , through the medium of the lever



O, it assumes the position shown by the dotted lines in Fig. 4. While the delivery slide is in this position one of the articles to be delivered drops into the path of said slide and is ejected by the forward motion of said delivery slide. The delivery slide has a slot *n* to receive the rod *o*, projecting from the lever O, and motion is imparted to the lever O and delivery slide N by the finger *d*<sup>2</sup> which is formed on the cam wheel D.

When the cam wheel D is operated by pressing down the lever J, it turns on its fulcrum, and brings the finger *d*<sup>2</sup> into contact with the inclined surface of the projection *o'* on lever O and a further movement presses the lever outward and draws the delivery slide in, allowing the articles to drop into the path of said slide. At this point the lever reaches a detent *p* in the lever P, and as the said lever P drops by gravity, the lever O is locked by the lower edge of said lever, and remains in this position until the finger returns to the position shown in Fig. 2, where it strikes and raises the trigger P', which releases the lever O, allowing it to return to its normal position under the influence of the spring Q, in which position it is locked in the detent *p'* in the lever P, which prevents the delivery from being operated until the finger *d*<sup>2</sup> on the cam wheel D, has been again caused to operate.

The cam wheel D is brought to the position shown in Fig. 2 by means of a spring R, one end of which is secured to the lower part of the cam wheel D, while the other is secured to the bracket S, which supports the levers O and P.

Motion is imparted to the disks *f* by the flexible finger T, which consists of a strip of rubber or other flexible material *t* placed between steel springs *t'* and *t*<sup>2</sup>. When the disk F is rotated, the disks *f* are brought into contact with the flexible finger T, which imparts to each of the latter a rotary motion as they are carried around by the disk F.

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

1. In a vending device, in combination with a channel, adapted to contain the articles to be delivered, a spring controlled lever, a delivery slide carried thereby, a lever having a detent adapted to engage said spring controlled lever, a trigger connected with the detent lever, and a wheel having a finger adapted to engage said trigger and said spring controlled lever, substantially as described.

2. In a vending device, the combination with a channel adapted to contain the articles to be delivered, a spring controlled lever, a delivery slide engaging therewith, a lever having detents adapted to engage said spring controlled lever, a trigger connected with the detent lever, of a spring controlled wheel having a projecting finger normally upholding said trigger, and means to revolve said wheel in opposition to said spring to release said

trigger, and bring said finger in engagement with said spring controlled lever, substantially as described.

3. In a vending device, in combination with a spring controlled lever, a slide carried thereby, a wheel having a finger adapted to engage said lever, means to rotate said wheel, to bring said finger into engagement with said lever and force it from its normal position, a locking device to lock said lever in the latter position, said finger being in line of travel of said locking device so that when the wheel is returned to its normal position, the finger will withdraw said locking device from the lever and permit the latter to return to its normal position, substantially as described.

4. In a vending device, in combination with a spring controlled wheel, means for manually rotating said wheel in opposition to said spring, an independently mounted ratchet wheel, a pawl carried by said spring controlled wheel adapted to be brought into engagement with said ratchet wheel when said spring controlled wheel is manually operated, a main disk carried by said ratchet wheel, secondary disks loosely mounted upon said main disk near the periphery thereof and means to automatically rotate the secondary disks upon the rotation of the primary disk, substantially as described.

5. In a vending device, in combination with a main disk, adapted to be rotated, secondary disks loosely mounted upon said main disk near the periphery thereof, a flexible projection in line of travel with said secondary disks, whereby, when said main disk is rotated, the secondary disks will be independently rotated, substantially as described.

6. In a vending device, in combination with a channel adapted to contain the articles to be delivered, a spring controlled lever, a delivery slide carried thereby, a lever having detents adapted to engage said spring controlled lever, a trigger connected with the detent lever, a spring controlled wheel, having a projecting finger normally upholding said trigger, means to rotate said wheel in opposition to said spring to release said trigger and bring said finger into engagement with said spring controlled lever, an independently mounted ratchet wheel, a pawl carried by said spring controlled wheel adapted to be brought into engagement with said ratchet wheel, when said spring controlled wheel is operated, a main disk carried by said ratchet wheel, secondary disks loosely mounted upon said main disk near the periphery thereof, and means to automatically rotate the secondary disks upon the rotation of the primary disk, substantially as described.

7. In a vending device, in combination with a cam wheel, a centrally pivoted lever, one end of which has a projection adapted to engage said cam wheel, a coin slot terminating near the other end, of said lever, a centrally pivoted operating lever, one end of which is connected with said cam wheel, a spring con-



5 nected with the cam wheel, a channel adapted  
to contain the articles to be delivered, a  
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ried thereby, a lever having detents adapted  
to engage said spring controlled lever, a trig-  
ger connected with the detent lever, a finger  
projecting from the cam wheel adapted to  
engage the trigger and the spring controlled  
lever, an independently mounted ratchet  
10 wheel, a pawl carried by said cam wheel  
adapted to be brought into engagement with  
said ratchet, a main disk carried by said

ratchet wheel, secondary disks loosely mount-  
ed upon said main disk near the periphery  
thereof, and a flexible connection in line of 15  
travel of said secondary disks, substantially  
as described.

In testimony whereof I affix my signature  
in presence of two witnesses.

WM. DIEBEL.

Witnesses:

SAMUEL I. SMITH,  
J. E. CARPENTER.