(No Model.)

J. A. WILLIAMS.

VENDING APPARATUS.

No. 440,984. Patented Nov. 18, 1890

Fig. 1

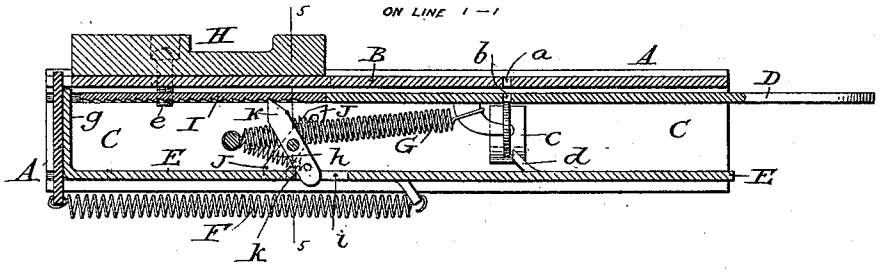


Fig. 2.

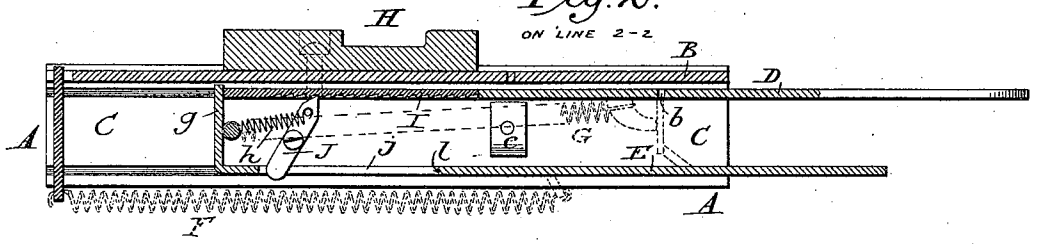


Fig. 3.

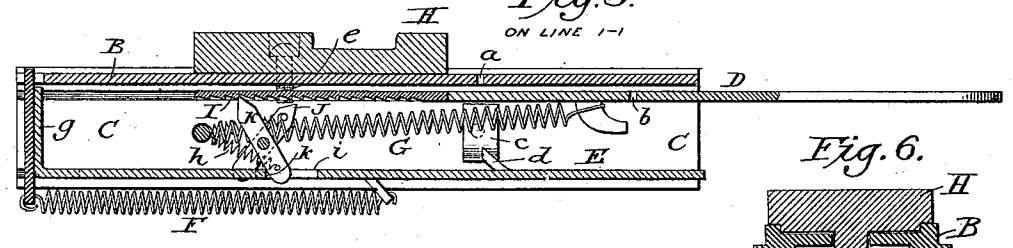


Fig. 6.

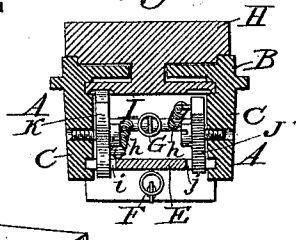


Fig. 4.

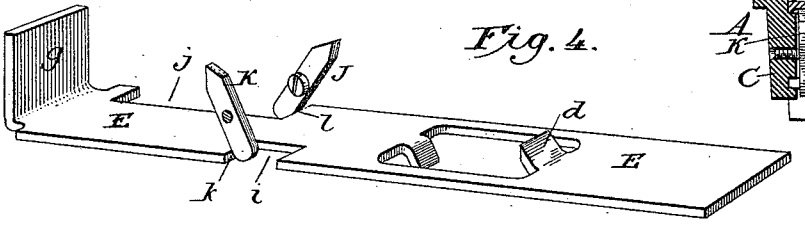
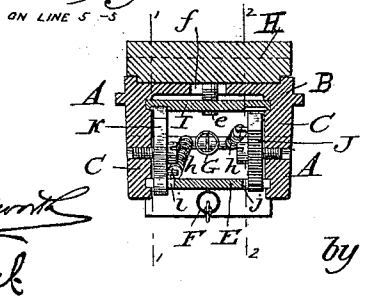


Fig. 5.



Attest.

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VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 440,984, dated November 18, 1890.

Application filed May 23, 1890. Serial No. 352,883. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WILLIAMS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Vending Apparatus, of which the following is a specification.

My invention relates to vending-machines; and it consists in various features and details, hereinafter set forth and claimed.

In the drawings, Figure 1 is a longitudinal sectional view on the line 1 1 of Fig. 5 of my improved machine, with the parts in their normal positions; Fig. 2, a similar view on the line 2 2 of Fig. 5, but with the parts shown in their extended positions; Fig. 3, a similar view on the line 1 1 of Fig. 5, showing the delivery-slide in its normal position and the actuating-slide in the act of returning; Fig. 4, a perspective view of the delivery-slide and pawls; Fig. 5, a vertical transverse sectional view on the line 5 5 of Fig. 1, and Fig. 6 a similar view showing a slight modification.

A indicates a main supporting-frame, comprising a top plate B and depending parallel guides or walls C C, grooved on their opposing faces to receive the actuating-slide D and the delivery-slide E. The plate B is provided with a coin-slot *a*, and the actuating-slide is provided with a similar slot *b*, so that a coin inserted into the slots *a b* will fall onto the coin-supporting blocks *c* into position to engage a lug *d* on the delivery-slide, substantially as in my patent, No. 414,787.

A coiled spring F, connected with the delivery-slide, and a coiled spring G, connected with the actuating-slide, tend to hold these slides normally within the casing.

H indicates a sliding package-drawer substantially like that shown in patent to Leavitt, No. 397,297, February 5, 1889, adapted to slide back and forth upon the upper face of the top plate B, and I indicates a plate secured to the under side of the block or drawer and moving therewith and forming in effect a part of the drawer. The plate is serrated or toothed on its under face, and is connected with the block by means of a screw *e*, the top plate being slotted, as at *f*, to receive the screw.

It will be readily understood that the drawer may extend down through the top of the plate B, as shown in Fig. 6, and thus render the use of a separate plate I unnecessary; but I prefer to use the plate, for the reason that I am thereby enabled to guide the drawer in its movements back and forth, the plate fitting into the grooved walls C C, and being thereby maintained in line with the actuating-slide.

Upon reference to Figs. 1, 2, and 3 it will be observed that the inner end *g* of the delivery-slide is bent upward, so that when the said slide is drawn forward its upturned end will engage the plate I and carry the same forward. When the parts are in their normal position, (shown in Fig. 1,) there will be a little space between the rear end of plate I and the upturned end *g* of slide E, so as to permit a slight movement of the latter without affecting the plate I, for a purpose hereinafter set forth.

J indicates a pawl or dog pivoted to or journaled upon the inner face of one of the walls C, and K indicates a similar pawl or dog journaled upon the inner face of the opposite wall. The pawl J inclines forwardly at its upper end, while the pawl K inclines rearwardly at its upper end, and each of the pawls is provided with a spring *h*, which tends to throw its upper pointed end into engagement with the serrated plate I. The delivery-slide is provided on one edge with a short recess *i*, into which the lower end of the pawl K projects, while on the opposite edge the slide is provided with an elongated recess *j*, into which the lower end of the pawl J rests.

When a coin is inserted, the two slides D and E will be locked together by the coin, and on pulling the actuating-slide outward the delivery-slide will also be moved outward correspondingly. This initial movement of the delivery-slide brings its end *g* into contact with the drawer H (or its plate I) and throws the pawl K out of engagement with the serrated plate I. In other words, just as soon as the slide E is drawn forward the slightest amount the rear wall *k* of recess *i*, striking the lower end of the pawl K, rocks the latter, so as to disengage its pointed end from the serrated plate I and cause its tail to rest upon the solid portion of the slide and to re-

main out of action during the continuance of the outward movement of the slide. As the slides (locked together by the coin) continue their outward movement, the drawer H will be carried forward by the upturned end of the delivery-slide, as shown in Fig. 2, the serrations on the under side of the plate I riding freely over the forwardly-inclined pawl-dog J, whose tail extends downward into the slot or recess *j*. When the slides have been carried forward far enough to eject the drawer the desired distance, the coin will be detached and the two slides D E disconnected, and as soon as this takes place the springs F G tend to return the slides to their normal position within the casing. So far as the actuating-slide D is concerned, this cannot as yet take place, as the plate I, which is behind the slide, is held in its extended position by means of the pawl J, as shown in Fig. 2; but with regard to the slide E there is nothing to prevent its return by its spring F. Just before the slide E reaches the limit of its inward movement the front wall *l* of the elongated recess *j* strikes the lower end of the pawl J and rocks or tips the pawl, so as to throw its upper end out of engagement with the plate I, and the instant that the plate is thus released the spring G, acting upon the slide D, draws the latter (and the drawer H and plate I) inward.

Upon reference to Fig. 2 it will be seen that the teeth or serrations with which the pawl J engages have abrupt rear faces, while the teeth engaged by the pawl K have abrupt front faces, as shown in Figs. 1 and 3.

I use the terms "actuating-slide" and "delivery-slide" merely for the purpose of distinguishing the two slides one from the other, and not for the purpose of restricting the scope of the invention.

Having thus described my invention, what I claim is—

1. In a vending-machine, the combination, with an actuating-slide and a delivery-slide, of a package-drawer and two independent pawls or dogs adapted to engage the drawer, all substantially as shown.

2. In a vending-machine, the combination, with an actuating-slide and a delivery-slide, of a package-drawer and independent alternately-acting pawls to engage the drawer, substantially as shown.

3. In a vending-machine, the combination, with an actuating-slide and a delivery-slide, of a package-drawer and two reversely-inclined pawls adapted to engage the drawer, substantially as shown.

4. In combination with an actuating-slide and a delivery-slide, a package-drawer and two pawls adapted to engage the drawer and to be released by the delivery-slide.

5. In combination with an actuating-slide, a delivery-slide provided with recesses *i* and *j*, a serrated drawer H, and pawls J K, adapted to engage the drawer and working in the recesses.

6. In combination with an actuating-slide, a drawer H, a pawl J, adapted to hold the drawer in its extended position, a pawl K, adapted to hold the drawer in its normal position, and a delivery-slide, arranged substantially as shown, whereby when the said slide is first pulled outward it will operate the pawl K and release the drawer so that it may be moved outward, and when the slide returns it will operate the pawl J and permit the drawer to return.

7. In combination with drawer H, having serrated plate I, an actuating-slide D, a delivery-slide E, provided with an upturned end *g* to engage the plate I, and provided also with recesses *i* and *j*, and pawls J K, adapted to engage the plate I, all substantially as shown.

8. In combination with an actuating-slide and a drawer, a delivery-slide provided with short recess *i* and long recess *j*, and pawls K J, working, respectively, in the recesses, all substantially as shown.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOHN A. WILLIAMS.

Witnesses:
GEO. W. SHERMAN,
WILLIAM F. BUTLER.