J. H. OSBORNE.

VENDING MACHINE.

APPLICATION FILED JUNE 2, 1911.

1,027,499.

Patented May 28, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

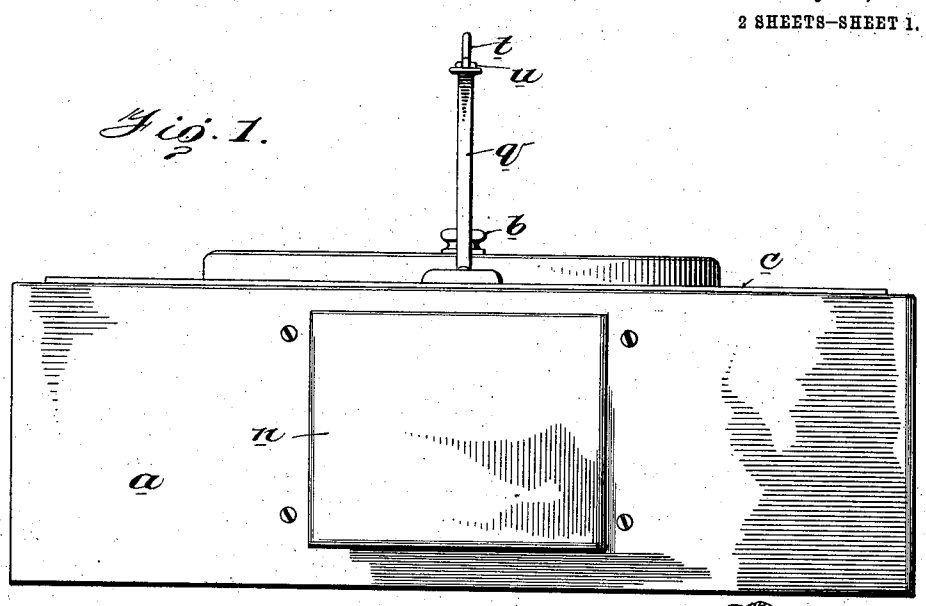

Fig. 6.

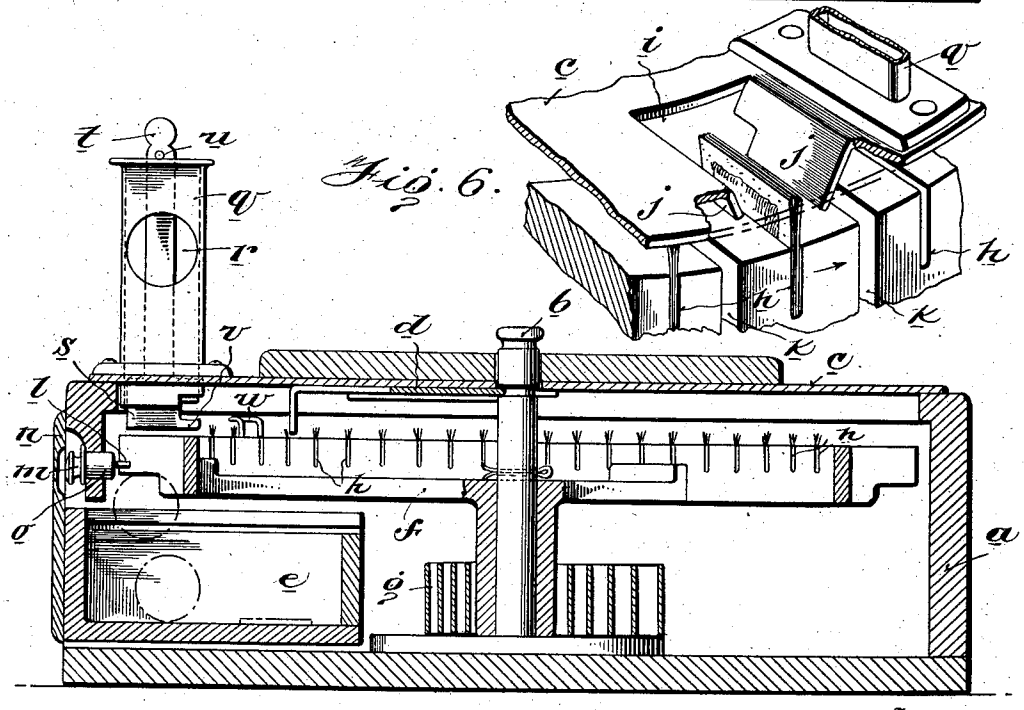

Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

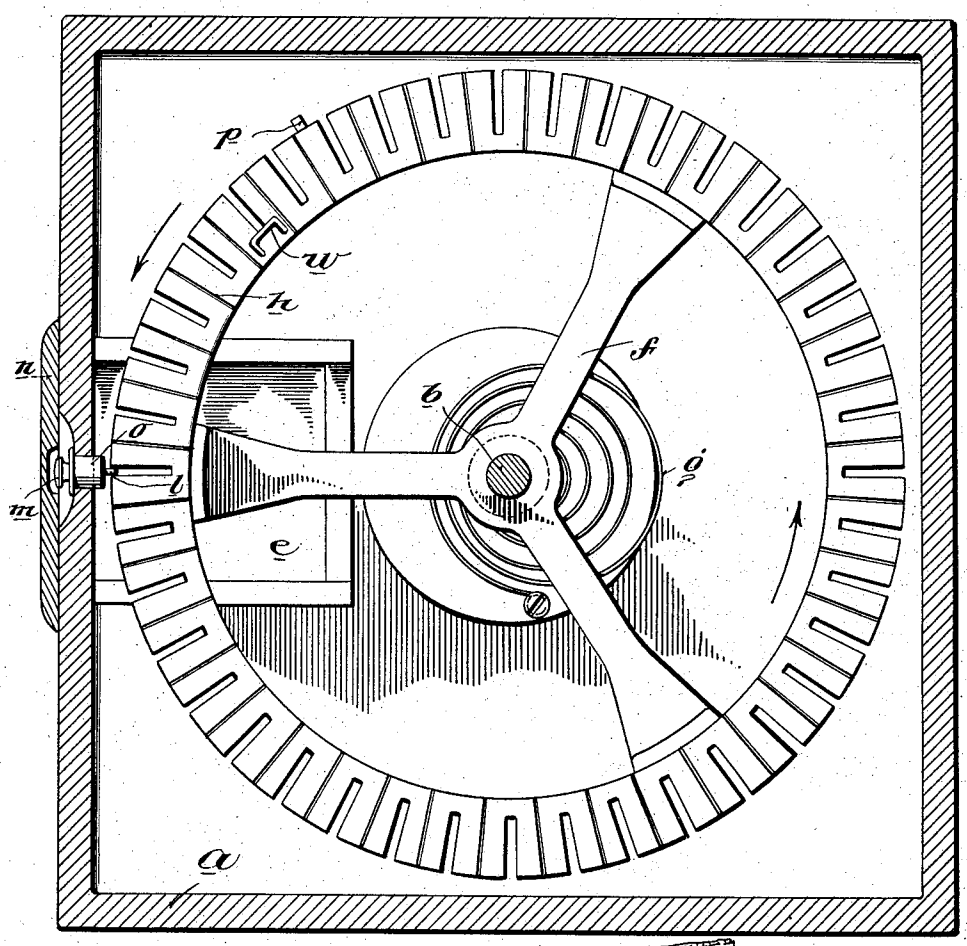


Fig. 4.

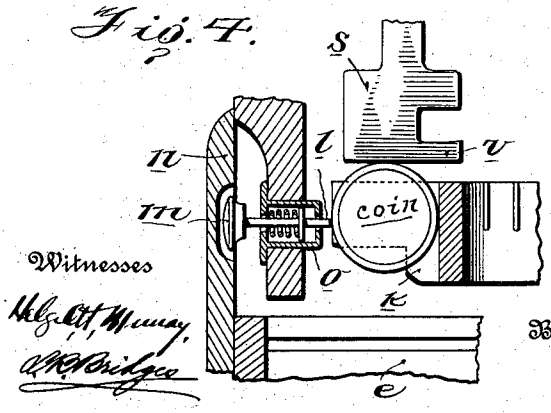
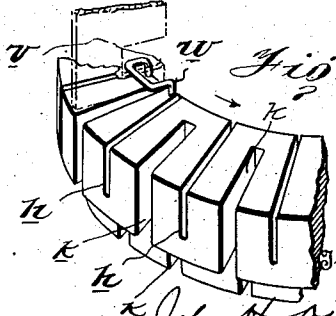


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN H. OSBORNE, OF ANDERSON, INDIANA.

VENDING-MACHINE.

1,027,499. Specification of Letters Patent. Patented May 28, 1912.

Application filed June 2, 1911. Serial No. 630,949.

To all whom it may concern:

Be it known that I, JOHN H. OSBORNE, a citizen of the United States, and a resident of Anderson, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Vending-Machines, of which the following is a full and clear specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved vending machine; Fig. 2 is a vertical sectional view thereof; Fig. 3 is a horizontal sectional view thereof; and Figs. 4, 5 and 6 are detail views hereinafter described.

The object of this invention is to provide a machine which shall be extremely simple in construction and be adapted especially for the sale of postage stamps upon the insertion of a coin, the special feature consisting in means whereby it will be impossible to introduce a coin into the coin-receiving means when the magazine has become exhausted.

In the drawings, *a* designates a suitable casing having mounted centrally within it a vertical post *b*, the casing being provided with a removable top plate *c* having a central hole for the reception of the upper end of said post or shaft *b*, said plate being removably locked in place upon the casing by means of a latching slide *d* slidingly mounted on the under side of the top plate and adapted to engage a groove in the post. This lock slide is accessible only through the opening in which the coin drawer *e* is inserted, so that it cannot be reached except when the coin drawer is removed.

On the post is rotatably mounted a wheel *f* which is normally actuated in one direction by means of a single convolute spring *g*. The rim of this wheel is provided with a series of equidistant radial slits *h* adapted to receive the postage stamps or other articles to be vended, these slits or slots being sufficiently shallow to cause the edges of the stamps to project above the face of the rim sufficiently to be grasped by the fingers. As the wheel revolves by a step-by-step movement the stamps are brought successively under the extracting opening *i* in the top plate, suitable depending flanges *j* being provided to prevent the extraction of any stamps other than those directly under the opening.

Alternating with the stamp-receiving slits is a series of coin-receiving notches *k*, these notches being cut inwardly from the outer edge of the rim. Adapted to enter, in the manner of a pawl, each one of these notches as it passes over the coin-drawer, is a lock-pin *l* mounted in the adjacent wall of the casing and normally forced inwardly by a suitable spring. This pin is provided at its outer end with a knob for manually withdrawing it when the wheel is turned in the reverse direction to wind up the spring, and this knob is positioned in the casing wall just above the coin-drawer, so that the upwardly extending flange thereon will hide it from view and prevent it from being operated when the drawer is closed. A casing *o* surrounds this pin and projects into the casing a short distance so that its inner end will lie in the path of a pin *p* on the rim of the wheel, this pin being so positioned on the wheel that when the last stamp-receiving slit is carried past the extracting opening said pin will strike against said casing *o* and thus stop the wheel from rotating any farther.

The coins are introduced into the machine through a vertical tube *q* fastened to the top plate in vertical alinement with the pin *l*, so that the tube will direct the coin into the slot which is for the time being in engagement with the lock-pin *l*, the distance between the end of the lock-pin and the inner wall of the notch being less than the diameter of the coin, so that the coin will be supported between the end of the pin and the inner wall of the notch. The coin is introduced flatwise through an opening *r* in the coin-tube *q*, and from this opening will fall directly into the coin notch in the rim.

The coins are pushed downwardly past the lock pin by means of a plunger *s* slidably mounted in the coin tube and operated by means of a rod *t* extending down through the coin tube. The upper end of this rod projects above the upper end of the coin tube and is provided with a transverse pin *u* adapted to rest upon the upper end of the coin tube and thus suspend the rod and the plunger loosely in the coin tube, with the lower edge of the plunger in close proximity to the upper face of the magazine rim. Before a coin can be introduced, the rod *t* must be raised sufficiently to bring the plunger to a point above the receiving hole *r;* then after the coin is introduced and drops into the coin notch in the wheel, the plunger is forced downwardly against the upper edge

of the coin, whereupon the rounder edge of the coin will act as a cam to force the pin *l* outwardly far enough to permit the coin to pass down into the coin drawer. When the pin is thus forced outwardly it becomes disengaged from the coin notch, whereupon the spring *g* will cause the wheel to rotate in the direction of the arrows. As the wheel rotates the pin *l* will bear against the periphery of the rim until the wheel moves the distance of one coin slot, whereupon the pin will snap into the next coin slot and thus again lock the wheel against rotation. This rotation of the wheel will bring another batch of stamps under the delivery opening.

At its inner edge the plunger is provided with an inwardly extending lug *v* which when the wheel has made a complete rotation and the last batch of stamps is brought under the delivery opening, will be engaged under a hook *w* carried at the inner edge of the wheel rim, thus locking the plunger against being raised to operative position. When the plunger is thus locked down its operating rod *t* will extend across the coin-receiving opening *r* and thus prevent the introduction of a coin.

It will be obvious that when the plunger is locked down by hook *w* the cover of the casing cannot be removed. To move the wheel far enough to unlock the plunger from the hook it is simply necessary to pull out the lock-pin *l* to release the wheel and permit it to turn by the action of its convolute spring; and to prevent the wheel turning too far under these conditions the pin *p* on the wheel is so positioned as to strike the projecting tube *o* after the wheel is moved a short distance. The pin *p* and projecting part *o* perform another function, namely, to stop the wheel at the proper point for charging and for starting the vending operations after the wheel has been turned back to wind up its actuating spring.

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

1. In a vending machine, the combination of a movable magazine containing article receiving openings and also coin-receiving openings, a lock-pin engaging the coin-receiving opening, a plunger coöperating therewith, and means operated by the magazine for locking the plunger when the magazine has been emptied.

2. In a vending machine, the combination of a casing, a movable magazine therein, coin-operated means for releasing the magazine embodying a coin-receiving tube provided with a hole for the introduction of a coin, a plunger and operating rod working in said tube and normally closing said hole when in its inoperative position, and means operated by the magazine for locking said plunger in its normal inoperative position.

3. In combination, a casing, a wheel therein and means for normally rotating it in one direction, said wheel being provided with a series of alternating article holding slots and coin receiving slots, a lock pin normally entering said coin slots in succession as the wheel rotates, the end of the pin and the walls of the slot it happens to be in for the time being serving to support the coin, and plunger means for forcing the coin through the slot to thereby force the pin out of engagement with the slot and permit the wheel to normally rotate one step.

4. In combination, a casing, a spring-actuated wheel therein provided with coin-receiving slots and article-holding means, coin-controlled means for operating said wheel embodying a plunger having a lock-lug, and a lock-hook on the wheel in position to engage said lock-lug when the magazine is emptied.

5. In combination, a casing, a movable magazine therein, coin-controlled means for actuating the magazine embodying a coin-pushing plunger, a coin-receiving tube provided with a coin-receiving hole, the plunger being gravitatingly mounted in said tube and normally lying at a point below the hole therein, and means for locking the plunger in its lowered or inoperative position when the magazine has been emptied.

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

J. H. OSBORNE.

Witnesses:
R. P. GRIMES,
W. H. HINTON.