No. 759,236. PATENTED MAY 10, 1904.

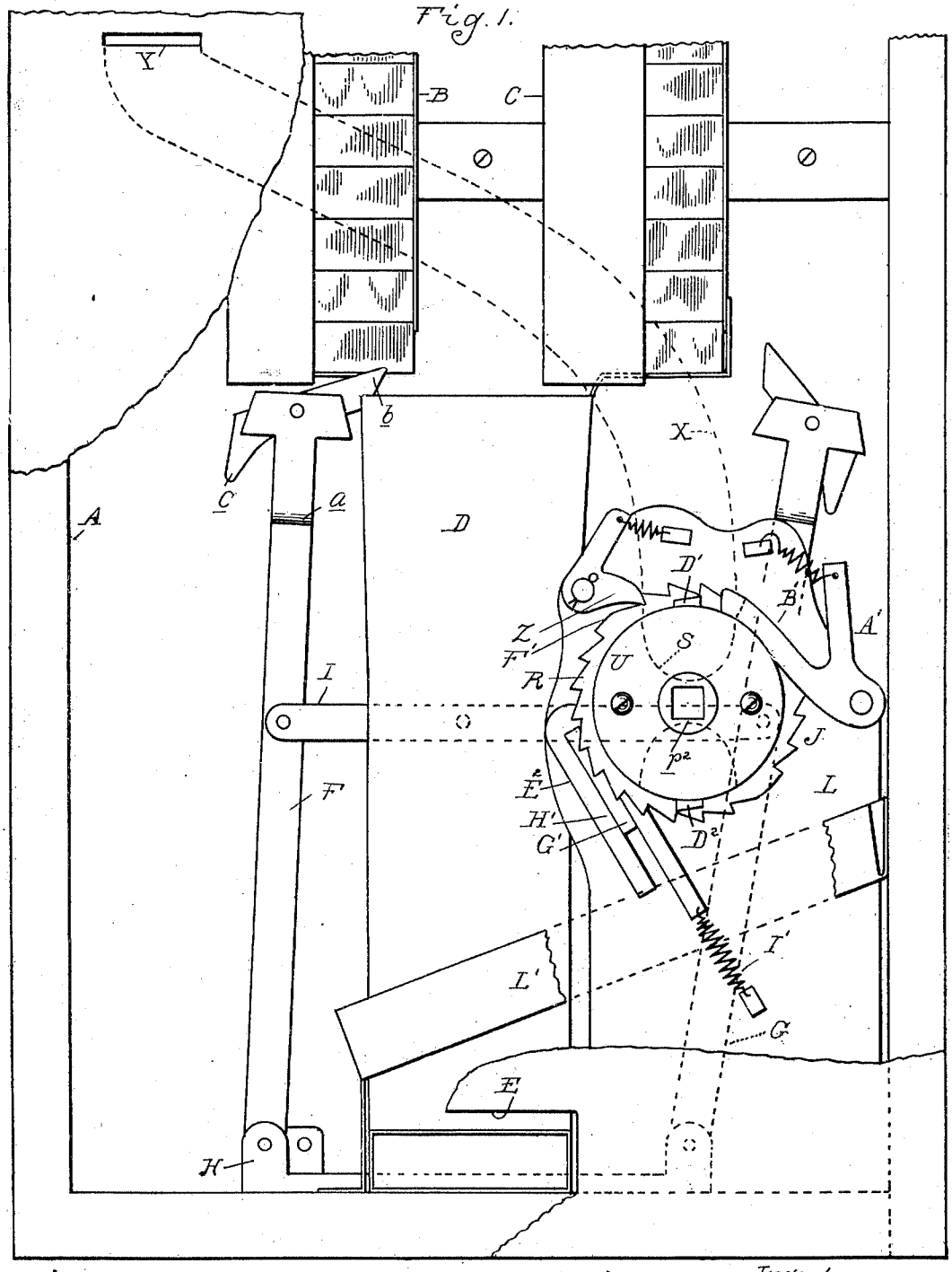
E. S. BRYANT.

COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED JAN. 27, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



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COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED JAN. 27, 1902.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

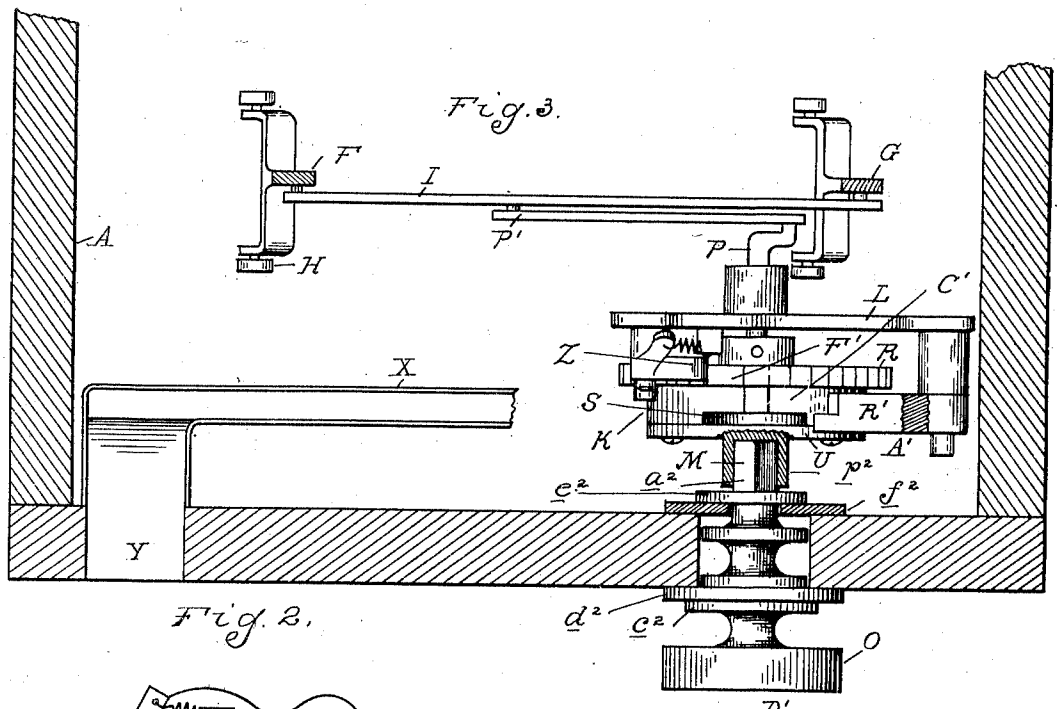


Fig. 2.

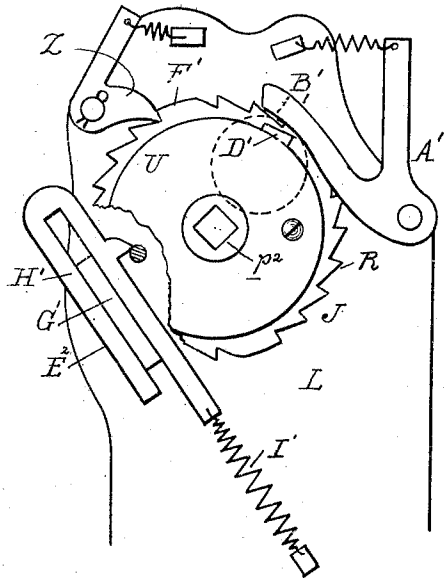


Fig. 4.

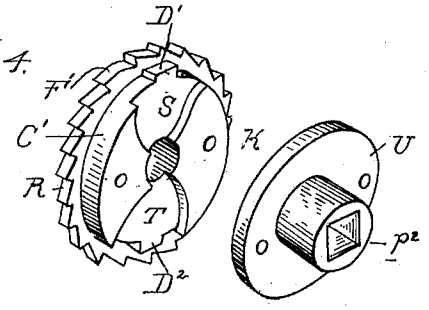


Fig. 5.

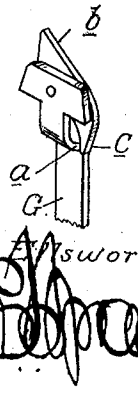
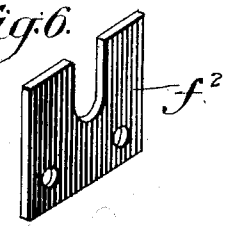


Fig. 6.



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No. 759,236. Patented May 10, 1904.

UNITED STATES PATENT OFFICE.

ELLSWORTH S. BRYANT, OF DETROIT, MICHIGAN.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 759,236, dated May 10, 1904.

Application filed January 27, 1902. Serial No. 91,453. (No model.)

To all whom it may concern:

Be it known that I, ELLSWORTH S. BRYANT, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates generally to coin-controlled vending-machines, and has particular reference to a machine of this type adapted to be used for vending packages of merchandise.

The invention consists in the novel construction of the vending-machine and in the peculiar arrangement and combination of its parts, as will be more fully hereinafter described, and shown in the drawings, in which—

Figure 1 is a view in elevation of the machine with the front cover of the casing removed to show the arrangement of the operating parts. Fig. 2 is an elevation of the rotary coin-holder and the locking mechanism therefor. Fig. 3 is a plan view of the parts illustrated in Fig. 2. Fig. 4 is a perspective view of the coin-holder, the parts being detached. Fig. 5 is a perspective view of the upper portion of one of the cut-offs, and Fig. 6 is a perspective view of the securing-bar for the operating-shaft.

In the drawings thus briefly described the reference-letter A designates a suitable casing, upon the interior of which is arranged, preferably, two vertically-extending merchandise-holders B and C. The holders, as shown, are in the form of package-chutes, each being cut away in the manner indicated to permit of the bottom package in each series being cut off from the series and discharged from the holder by cut-off mechanism hereinafter described.

D represents the package-chute leading from the two merchandise-holders to the discharge-opening E in the casing.

The cut-offs referred to are preferably in the form of rock-arms F and G, pivoted at their lower ends in suitable bearings H upon the casing-bottom and extending upwardly in operative relation to the package-holders. At their upper ends each rock-arm is provided with an offset *a* and at its extremity carries a member *b*, pivoted to the rock-arm in such manner as to hang normally in an upwardly-tilted position, as indicated. The lower portion *c* of each pivoted member is adapted to strike against the offset of the arm, as shown. The rock-arms described are connected by a cross-bar I, and J designates actuating means having a crank connection with the cross-bar and adapted upon operation to impart a reciprocating movement to the cut-offs for the purpose of discharging packages of merchandise alternatively from the holders. In construction the actuating mechanism referred to consists, essentially, of a rotary coin-holder K, journaled for rotary movement in suitable bearings in the framework L, secured to the casing, and an operating-shaft M, fixedly secured to the coin-holder and extending without the casing, carrying at its outer end a hand-wheel O.

P designates a crank which is fixedly secured to the coin-holder, in this case being preferably an extension of the shaft M, and P′ designates a link one end of which is pivoted to the cross-bar I and the opposite end to the crank.

The rotatable coin-holder described is composed of a ratchet-wheel R, having diametrically-opposed recesses formed therein, and a disk U, which is adapted to be screwed or clamped to the ratchet-wheel and forms in connection with the latter two oppositely-extending coin-pockets S and T.

From the construction as set forth it will be obvious that upon rotating the coin holder or carrier through the agency of its shaft and hand-wheel a reciprocating movement will be imparted to the cut-offs and packages of merchandise will be discharged alternately from the holders into the package-chute D. To prevent the operation of the machine except upon the insertion of the coin, mechanism as hereinafter described is employed.

In the normal arrangement of the parts the coin-holder is retained in a position as indicated in Fig. 1, with one of the pockets, as S, in registration with the discharge end of the coin-chute X, leading from a coin-slot Y, formed in the casing-front. Backward movement of the coin-holder is prevented by the

spring-actuated pawl Z upon the framework, which engages the ratchet, and its forward movement is controlled by a lock A′, adapted to be released by the movement of the coin carried by the holder. In construction the lock referred to comprises a spring-actuated stop-arm B′, pivoted to the framework, which bears normally against the hub C′ of the ratchet, and lugs or projections D′ and D^2 upon the ratchet, one for each pocket, as shown. These lugs are arranged at the periphery of the holder and substantially centrally of the pockets therein, so that the coin upon the operation of the holder will strike the stop-arm first and raise the arm for the lug to pass under. It will be obvious from this arrangement of the lugs D′ and D^2 that when the coin-pocket adjacent to the lock is empty the lock will necessarily permit of a slight advance movement of the holder at all times, which, if effected, would throw the pocket adjacent to the chute out of registration with the latter. I have therefore provided a return mechanism E^2 for automatically returning the holder after this partial rotation to its initial position and also employ a separable connection between the return mechanism and holder, so that the latter will be automatically disengaged from the return mechanism to allow of the operation of the holder when carrying the coin. A blank space F′ is also formed upon the ratchet to the rear of each pocket, upon which the pawl Z is adapted to bear during the partial rotation of the ratchet, and thus allow of the return of the holder. The return mechanism referred to comprises a guide member G′, secured to the framework, a yoke-shaped member H′, engaging the guide, and the spring I′, connected to the casing and yoke member, as shown. The yoke described is provided upon the side adjacent to the ratchet with a lug or shoulder I^2, which is adapted to engage a stud or pin J′ adjacent to each pocket. The parts are so arranged and proportioned that the stud will remain in contact with the shoulder while the stop-lug on the pocket adjacent to the lock travels to and strikes the stop-arm and will pass from beneath the shoulder upon the further rotation of the coin-holder. Thus the coin-pocket is normally maintained in alinement with the coin-chute.

In the operation of the machine a coin is inserted within the coin-slot and is deposited within the coin-pocket adjacent to the lock. Upon the rotation of the holder the lock is released, allowing the lug at the pocket to pass beneath the arm, and the holder is turned until the lug at the opposite pocket comes in contact with the stop-arm. During this rotation of the holder the cut-offs are partially reciprocated, a package being discharged from one merchandise-holder and the cut-off at the opposite holder being in position to cut off a package from the series therein. The coin within the pocket upon the half-revolution of the holder falls within the chute L′, where it is conveyed to the bottom of the casing. The pocket T is then in alinement with the coin-chute and the machine is in readiness for the next operation, a package of merchandise being discharged from the machine upon each half-revolution of the coin-holder.

The operating-shaft M for the holder is preferably detachable from the latter and carried by the plate of the casing, through which it extends, so as to permit of the ready removal of that plate when it is desired to obtain access to the interior of the machine. As shown in Fig. 3, the shaft is provided with a squared inner end a^2, adapted to engage within a socket p^2 upon the coin-holder, and is swiveled within the casing-plate. A boss e^2 upon the operating-wheel O, bearing against an annular wear-plate d^2, prevents inward movement of the shaft, while any outward movement is checked by a collar e^2 and a yoke-shaped bar f^2, inserted between the collar and the inner face of the front casing-plate. By detaching the shaft from the holder and swiveling the former in the casing-plate it will be obvious that the latter may be readily removed from the casing without the necessity of unscrewing any of the parts of the mechanism.

What I claim as my invention is—

In a coin-controlled vending-machine, the combination with a casing having a detachable front plate, of a rotatable coin-holder within the casing opposite the plate, said holder being provided with an engaging portion, an operating-shaft extending through said plate and engaging with the engaging portion of the holder, a handhold at the free end of the shaft, means engaging the front plate of the casing for preventing excessive inward insertion of the shaft, a stop thereon in rear of the inner surface of said plate, and a detachable member interposed between the inner surface of the plate and the stop and engaging said inner surface to prevent withdrawal of the shaft; substantially as described.

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

ELLSWORTH S. BRYANT.

Witnesses:

L. J. WHITTEMORE,

H. C. SMITH.