

W. MILLARD.
 COIN CONTROLLED MECHANISM.
 APPLICATION FILED JUNE 12, 1917.

1,344,769.

Patented June 29, 1920.

3 SHEETS—SHEET 1.

Fig. 2

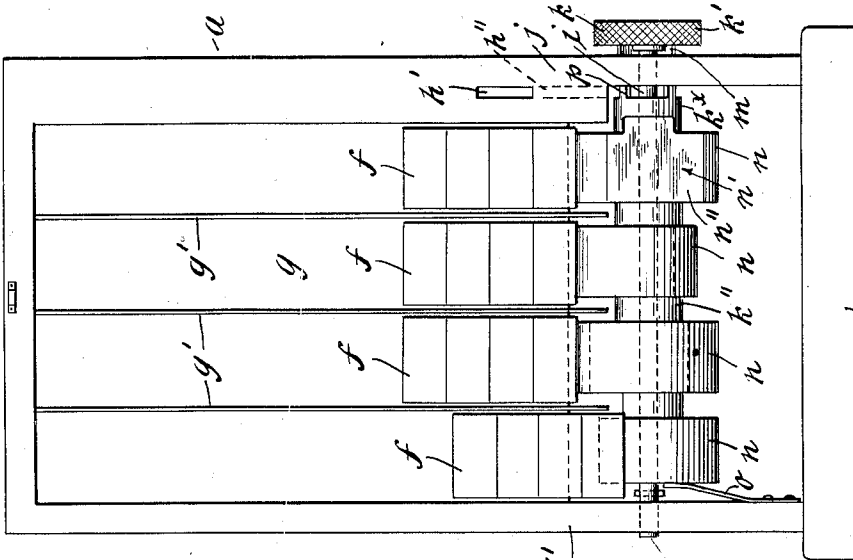
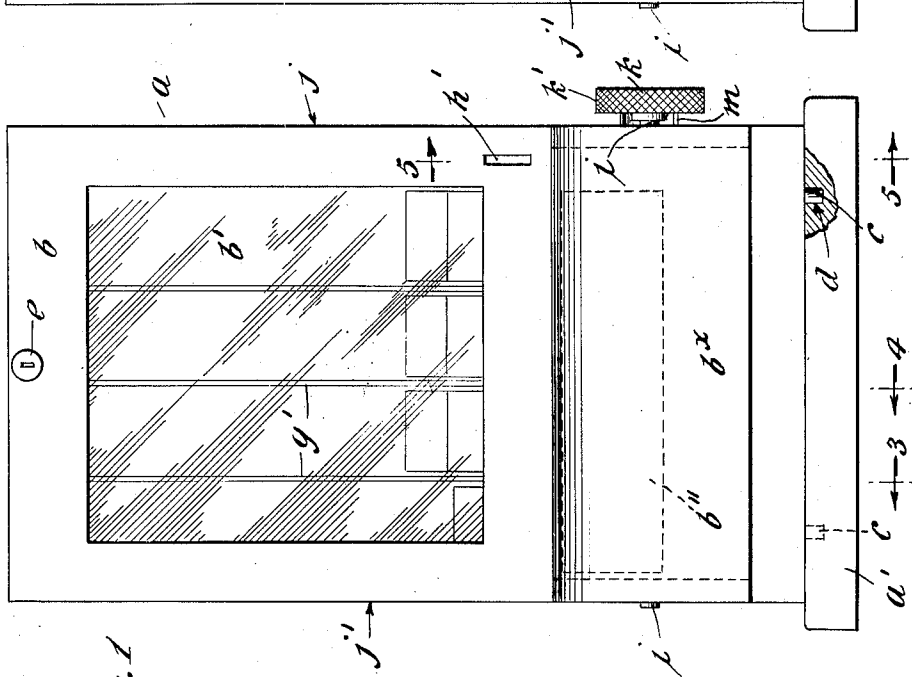


Fig. 1



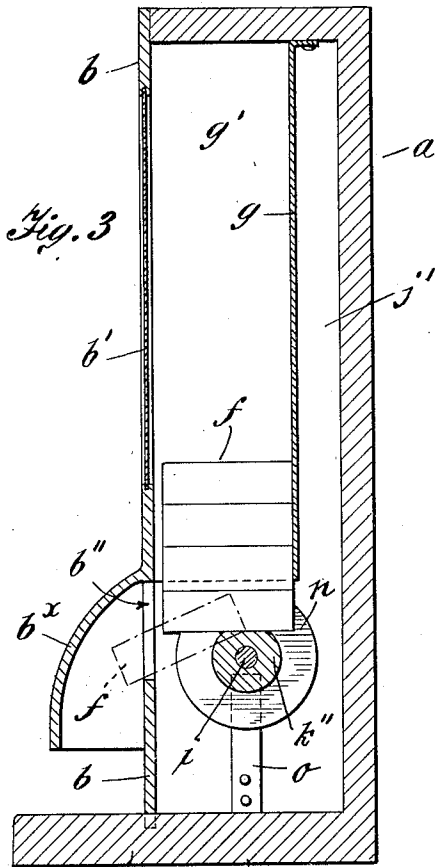
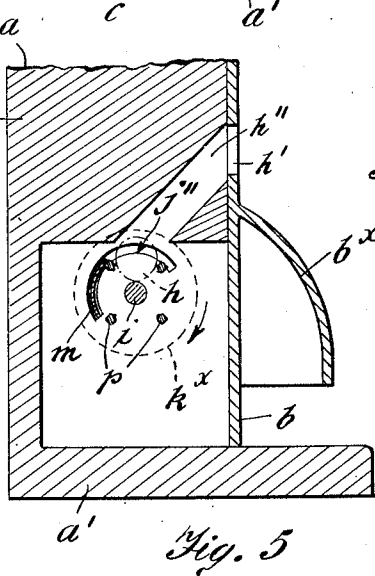
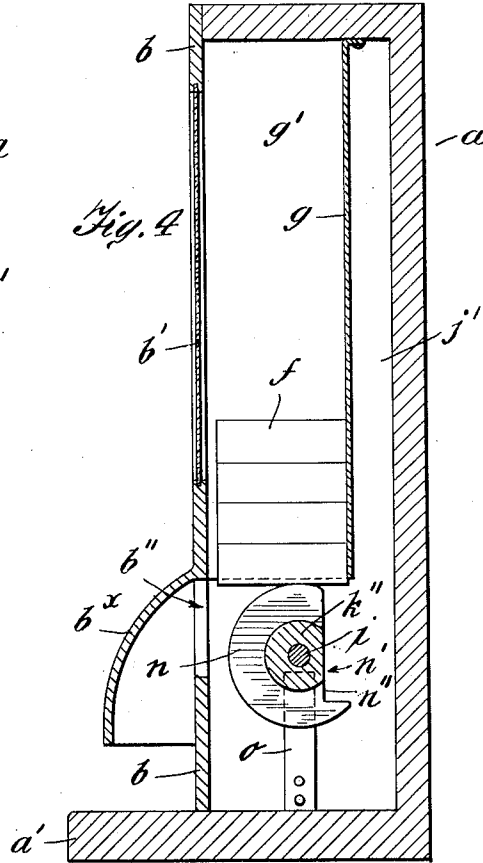
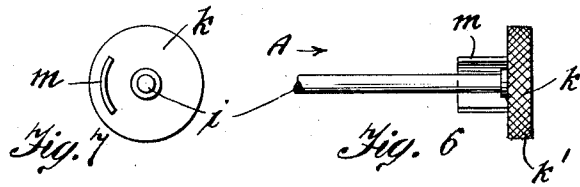
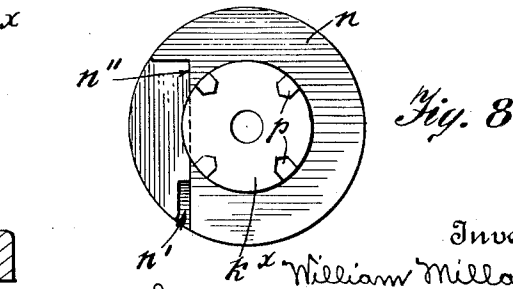
Inventor
 William Millard
 By his Attorney
 James Hamilton

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3 SHEETS—SHEET 3.

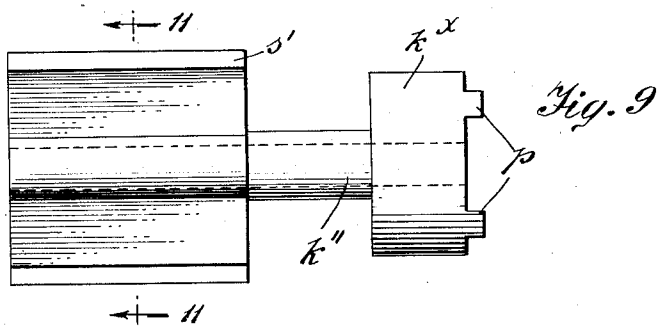
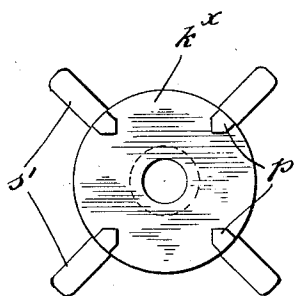


Fig. 10

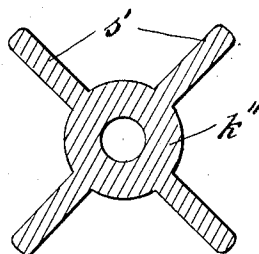


Fig. 11

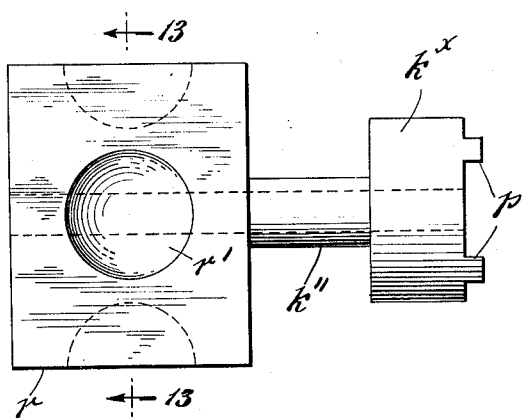


Fig. 12

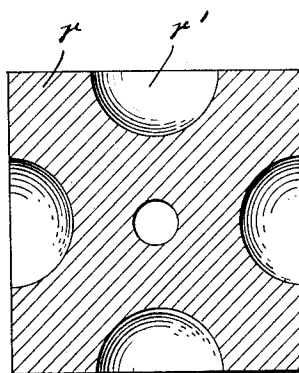


Fig. 13

William Millard Inventor
By his Attorney
James Hamilton

UNITED STATES PATENT OFFICE.

WILLIAM MILLARD, OF NEW YORK, N. Y., ASSIGNOR TO MILLARD'S GUM VENDING CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

COIN-CONTROLLED MECHANISM.

1,344,769.

Specification of Letters Patent. Patented June 29, 1920.

Application filed June 12, 1917. Serial No. 174,179.

To all whom it may concern:

Be it known that I, WILLIAM MILLARD, a subject of the King of Great Britain, residing at the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Coin-Controlled Mechanisms, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in coin-controlled mechanism and particularly to improvements in that type of coin-controlled mechanism in which the coin performs the functions of a connecting element between the power or driving shaft and the feed-shaft commonly found in coin-controlled vending-machines; and an object of this invention is to provide a coin-controlled mechanism of the character just referred to which will prove simple in construction, comparatively cheap in manufacture and efficient and susceptible of ready repair in operation and use.

In the drawings illustrating the principle of this invention and the best mode now known to me of applying that principle, Figure 1 is a front elevation of a coin-controlled vending-machine embodying this invention in its construction; Fig. 2 is a like view in which the front casing-plate has been removed in order to illustrate the interior mechanism; Figs. 3, 4 and 5 are sections on the lines 3—3, 4—4 and 5—5, respectively, of Fig. 1; Fig. 6 is a detail illustrating the power shaft; Fig. 7 is a view looking in the direction of the arrow A of Fig. 6; Fig. 8 is an end view of the feed-shaft; Fig. 9 is a front elevation, and Fig. 10 is an end elevation, of a modified form of feed-shaft; Fig. 11 is a section on the line 11—11 of Fig. 9; Fig. 12 is a front elevation of a second modified form of feed-shaft; and Fig. 13 is a section on the line 13—13, of Fig. 12.

The casing *a* is of the usual form common in coin-controlled vending-machines and is closed by a front casing-plate or cover-plate *b* the lower edge of which is formed with a pair of downwardly-projecting studs *c* that fit into holes or sockets *d*

formed in the upper face of the bottom *a'* of the casing *a* (Figs. 1 to 4, inclusive). By means of a lock *e* provided near the center of its top, the cover-plate *b* is held locked in place. Nearly all the upper half of the cover-plate *b* consists of a window *b'* through which the packaged goods *f* may be viewed. Below the window *b'*, the cover-plate *b* is formed with a guard-flange or shield *b** that curves downwardly and outwardly and shields from view the discharge opening *b''* through which fall the goods *f*, when the machine is operated (Figs. 3 and 4). The goods *f* are arranged vertically in columns separated by the partition-walls *g'* that project forwardly from the back-plate *g*. The cover-plate *b* is formed with a coin-slot *h'* that admits the coin *h* to a downwardly-inclined coin-chute *h''* (Figs. 1, 2 and 5) formed in the side *j* of the casing *b*.

The operating or driving-shaft *i* extends from side to side of the casing *b* at about the height of the discharge-opening *b''* and its ends are journaled in the sides *j*, *j'* of the casing *b*. This driving-shaft or power-shaft *i* is a rock-shaft and, in the form herein shown, is provided at one end with a wheel *k* the cylindrical face *k'* of which is milled to enable it to be grasped firmly by the operator, in order that he may turn the operating-shaft *i* with ease; but I desire it to be understood that I do not intend to limit this invention to a manually-operated driving-shaft *i*. From the wheel *k*, there projects inwardly, through a semi-circular slot *j''* formed in the side *j* of the casing *b*, a curved flange *m* that extends through an arc of about ninety degrees (Figs. 5, 6 and 7). The swing, back and forth, of the operating-shaft *i* is determined by the limits of travel of the arcuate flange *m* in the curved slot *j''* and, in the form illustrated, is about ninety degrees.

The feed-shaft *k''* is loosely mounted on the power-shaft *i* and is formed with four collars or feed-rolls *n* upon each of which rests a column of the packaged goods *f* and which, in the form shown in Figs. 2, 3, 4 and 8, are cam-shaped and are formed, in their cam-faces, with recesses *n'* having

plane bottoms n'' . Against one end of the feed-shaft k'' presses the free upper end of a leaf-spring o the base of which is fastened to the side-wall j' of the casing b (Figs. 2, 3 and 4); and, from the other end k^* of the feed-shaft k'' , there project lengthwise of the same, and toward the opposite side-wall j , four lugs or fingers p which are spaced equidistantly around the feed-shaft k'' and a pair of which lie, in the working position of the latter, directly below the lower end of the coin-chute h'' (Figs. 2, 5 and 8).

The operation of the coin-controlled mechanism may be briefly described, as follows: A coin h allowed to drop through the coin-slot h' and coin-chute h'' falls between a pair of the coin-lugs or coin-fingers p between which the coin h fits somewhat snugly with its lower half resting on the operating shaft i (Fig. 5). If the milled wheel k be now turned in the direction of the arrow in Fig. 5, the arcuate flange m is brought into engagement with the coin h and continued turning of the wheel k in the same direction results in the simultaneous turning of the feed-shaft k'' . The turning of the latter turns with it the feed-rolls n ; and that feed-roll in the recess n' of which there has fallen one of the packages f will discharge the package (Fig. 3) and another of the feed-rolls n will be brought into position to receive a package f , which will be discharged when the machine is next operated.

By merely varying the form of the feeding collars, the machine may be adapted to vend commodities of different kinds. Thus, in Figs. 12 and 13, the feeding collar r is rectangular in shape and, in each of its faces, except the two end faces, there is formed a hemispherical recess r' shaped to receive a gum-ball or like round article. In the form illustrated in Figs. 9 to 11, inclusive, the discharging shaft k'' is formed with wings or vanes s' and is adapted to feed peanuts or the like.

As will be readily understood by all skilled in the art, it is utterly immaterial to the invention described hereinbefore whether the operating shaft i be rocked intermittently by hand or continuously by mechanical power.

I am aware of the United States Patent, No. 924928, granted Henry Pein on the 15th June, 1909. But, in the mechanism hereinbefore described, the arcuate slot j'' permits the purchaser to look inside the machine and, should the flange m have been left by the previous user thereof at the end of its forward travel, even a purchaser of immature age, such as a young child, will quickly learn to throw the feed-shaft back and allow the coin to fall into place for

engagement by the flange m . Pein's spring 23 may therefore be dispensed with. By mounting the feed-shaft k'' on the operating-shaft i , the two shafts are automatically maintained in alinement with each other and the proper operation of the machine is insured.

I claim:

1. In a coin controlled mechanism, a casing, an operating shaft extending through the casing, said casing having a curved slot partly surrounding the shaft, a wheel secured to one end of the operating shaft and having an arcuate flange extending inwardly through the curved slot to project into the casing, a tubular feed-shaft loosely mounted upon the operating shaft and provided with article feeding members, an extension secured to one end of the tubular feed-shaft and provided with spaced lugs which slidably contact with the casing, a coin chute carried by the casing to deliver a coin between the lugs, the coin held between the lugs being arranged in the path of travel of said flange, and a spring slidably engaging one feed member of the tubular feed shaft and serving to shift the same longitudinally toward the exposed end of the operating shaft.

2. A coin-controlled mechanism of the type wherein there are provided a casing; a feed-shaft and an operating-shaft mounted therein and normally free to be rotated independently of each other, said operating-shaft being accessible to the purchaser; coin-intercepting means mounted on said feed-shaft; a coin-chute for guiding the coin to said means; and an interlocking device mounted on said operating shaft and arranged to engage the coin held by said means and thereby to interlock the shafts; characterized in that the casing is formed with an arcuate slot through which the purchaser may see the coin held by said means and within which said interlocking device travels and the ends of which limit the travel of the latter and the throw of the shaft upon which the same is mounted.

3. A coin-controlled mechanism of the type wherein there are provided a casing; a feed-shaft and an operating-shaft mounted therein and normally free to be rotated independently of each other, said operating-shaft being accessible to the purchaser; coin-intercepting means mounted on said feed-shaft; a coin-chute for guiding the coin to said means; and an interlocking device mounted on said operating shaft and arranged to engage the coin held by said means and thereby to interlock the shafts; the casing being formed with an arcuate slot through which the purchaser may see the coin held by said means and within which said interlocking device travels and the ends

of which limit the travel of the latter and the
throw of the shaft upon which the same
is mounted; characterized in that the feed-
shaft is hollow and is loosely mounted on
5 and automatically kept in alinement with
the operating-shaft.

Signed at the borough of Manhattan,

city, county and State of New York this
eleventh day of June, 1917, in the presence
of the two undersigned witnesses.

WILLIAM MILLARD.

Witnesses:

GEORGE E. BROWN,

JAMES HAMILTON.