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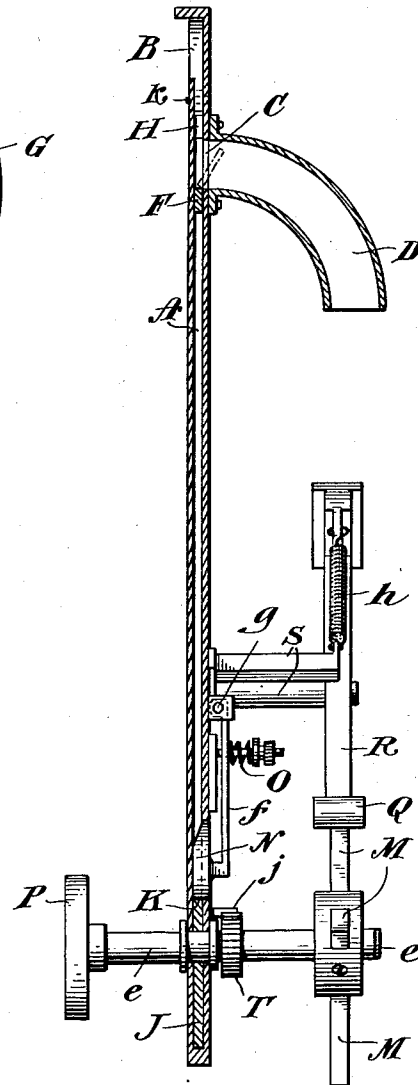
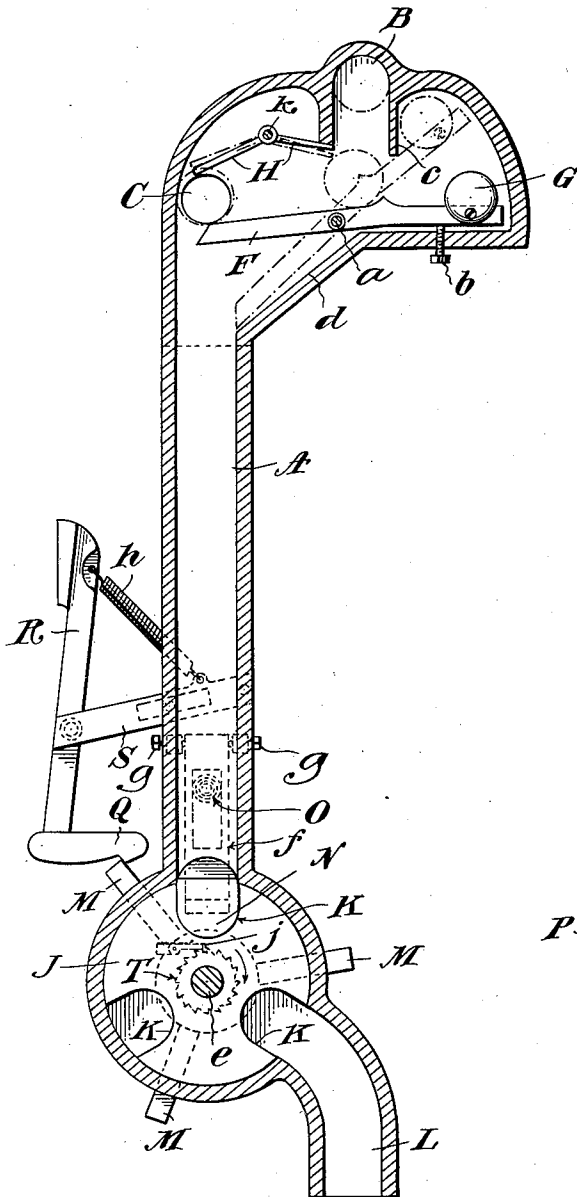
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COIN RECEIVING MECHANISM FOR VENDING MACHINES

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Fig. 1.

Fig. 2.



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COIN-RECEIVING MECHANISM FOR VENDING MACHINES.

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Our invention relates to that type of vending machines in which articles of merchandise are released for delivery when suitable coins are inserted in said machines.

5 Under this reorganized system a single competent person can keep a large number of vending machines supplied with the selected articles or parcels of merchandise and thus take the place of several salesmen. The
10 intending purchaser will do his own selecting and by the designated use of the proper coins release the delivery mechanism to obtain the selected purchases.

As a preliminary to this broad system of
15 selling merchandise we have found it necessary to devise a new coin receiving and parcel delivery mechanism.

To this end the object of our present invention is to provide a coin receiving mechanism for vending machines which shall be
20 simple, strong in construction; positive in action; unusually effective in rejecting slugs, light weight coins, and all other coins except those for which said mechanism is adjusted.

25 One part of our invention is so constructing the coin receiving tube that the receipt of a proper sized coin automatically closes said tube against all other coins until the received coin is disposed of.

30 Another part of said invention is so constructing said tube that coins of smaller size or of lighter weight will be automatically rejected.

35 A third part of our invention is so constructing said tube that a counterfeit coin of the standard size chokes the tube and prevents its functioning until said coin is removed.

40 A further part of our invention is causing the accepted coin to unlock a normally locked delivery control device thus enabling the intending purchaser to operate the same and secure his purchases.

45 Another part of our invention is so constructing the release mechanism that the coin prevents the re-locking thereof as long as the coin remains in the releasing mechanism. The releasing mechanism automatically locks upon the discharge of said coin
50 therefrom.

The many advantages and uses of our improved coin receiving mechanism will, we think, be readily understood from the following description of the preferred embodi-

ment of our invention which is shown in the 55 accompanying drawings in which:

Fig. 1 is a vertical section.

Fig. 2 is a transverse section of Fig. 1.

Same letters indicate similar parts in the 60 different figures.

It is to be understood that the mechanism 65 shown in the drawings consists only of the parts necessary to the performance of functions and purposes hereinabove set forth and that such mechanism is to be inserted in and protected by such type of stand, cabinet, case, or other vending machine or containing structure as may be best suited to the location of the vending system and the character of the merchandise to be sold. 70

A is the coin receiving tube provided with a mouth B and a side outlet C provided with a rejecting spout D. It is desirable that the mouth B should be adjusted to the dimensions of the coin, both as to thickness 75 and diameter, which is intended to be received and retained by the vending machine of which this apparatus is to form a part. In this way too large coins will not be admitted but smaller coins and counterfeit 80 coins or slugs of the adjusted size will be freely admitted to the receiving tube. The exit opening C is preferably made slightly smaller in diameter than the receiving mouth and thru this exit hole coins smaller than standard are ejected laterally and falling through the rejection tube D are thrown to the floor, basket or other place of discard. 85

F is a testing lever fulcrumed as at *a* 90 and provided with a counterbalance G with an adjusting stop *b* and limited in its upward throw by the stop *c*. Upon this testing lever every coin entering by the mouth B, lands in an upright position and owing 95 to the slight incline at which said lever is placed, rolls toward the vertical part, or chute, of the receiving tube, the upper end of which is partly closed by said lever. To 100 go any further into the apparatus the coin must be of sufficient weight to overbalance the weight G and tip the lever down against the incline *d* of the receiving tube. When that happens the coin falls down the chute and is received in a pocket of the lock releasing device as hereinafter explained. 105

To be of this necessary weight this coin must be of the adjusted diameter of the

mouth B and in such case as it rolls toward the chute and tips the testing lever, it contacts with and tilts the closure fork H which, as shown in Fig. 1, is so hung that its inner 5 tine must be tilted upward by the entering coin which causes the outer tine to tilt downward behind the entering coin and prevent the entrance of any other coins. This fork is so balanced as to turn automatically to its normal position as soon as the entering 10 coin drops away.

Should the entering coin be too small or too light to tip the testing lever, it finds itself unsupported at the hole C in such a 15 condition of unstable equilibrium that it falls through said hole into the rejecting tube by force of its inertia of motion derived during its roll along the testing lever. Obviously, if desired, the upper surface of 20 the lever may be slightly inclined toward the exit hole to aid the force of ejection.

Should the entering coin be of the full adjusted size but not of proper weight, it will tip the tilting closure, H as before described 25 to close the receiving tube but not tilt the testing lever. It will therefore block the device from functioning until said lightweight, counterfeit coin is removed. In this way we have found that while many unac- 30 ceptable coins may be passed, one at a time, into the mouth B, all will be rejected and prevented from entering the chute and thus reaching the releasing device except coins of the correct size and weight.

35 The merchandise releasing device, as shown in the drawings, consists primarily of a normally locked disc J provided with a number of pockets K, adjusted to the size of the acceptable coin; a discharge tube L 40 and a number of releasing arms M. This disc and releasing arms are mounted upon the shaft *e* suitably mounted in bearings not shown. The normal locking of this releasing device is preferably accomplished by a 45 locking pad N, adjusted to the size of one of the pockets K and mounted upon an arm *f* pivoted at *g* to the chute of the receiving tube A and normally held in the pocket by a spring O the tension of which is so ad- 50 justed that the pad will be pushed out of engagement with the pocket by the force of the coin falling through the chute and entering the receiving pocket but will automatically turn to the next pocket presented to it by the rotation of the disc.

It is to be understood that when the accepted coin has entered the pocket which is awaiting it at the bottom of the chute and has displaced the locking pad, the disc 60 becomes rotatable. The necessary partial rotation is produced by the intending purchaser by means of the handle or wheel T and, as shown in the drawings, one-third of a revolution, or 120°. is required to bring 65 the coin-holding pocket round to the dis-

charge tube L, through which, by gravity, the coin falls into a receiving box, not shown. Simultaneously with the dropping of this coin out of the pocket into the tube the corresponding arm M displaces the de- 70 tent Q on the lever R which is preferably pivotally mounted on an arm S secured to the tube A and held under the tension of the spring *h*. Against this lever R rests one 75 of the articles or parcels of merchandise which the apparatus is designed to deliver. As soon as the detent is displaced and the lever released the tension of the spring *h* pushes said parcel through the desired open- 80 ing, not shown, into a position where it can be taken by the intending purchaser. The article or parcel thus delivered is replaced automatically by the next parcel and the lever R is thus pushed back again into such position that the detent Q is caught 85 by the next succeeding arm M and thus the apparatus is again restored to the position in Fig. 1.

To prevent the releasing disc from being turned back by an unscrupulous purchaser 90 in an attempt to secure a second article for the same coin we provide a ratchet T on the shaft *e* and hold it in the usual manner by a suitable pawl or dog *j*.

It is thought that the operation of our 95 improved coin receiving mechanism will be readily understood without further description.

It is to be understood that while we have only shown our invention as constructed for 100 the receipt of a single coin at a time the principle and operation involved are readily adaptable to the successive receipt or the simultaneous receipt of the designated number or value of coins necessary for the re- 105 lease of a single selected article or parcel of merchandise.

We claim:

1. A coin receiving mechanism for vend- 110 ing machines which comprises a coin receiving tube provided with a weight-testing lever, a size-testing aperture co-operating with said lever to drop out undersized coins and a tilting lever adapted to close the entrance to said tube under pressure from over-sized 115 coins,—and a normally locked releasing device adapted to be unlocked by coins delivered to it by said receiving tube, after passing said testing levers and aperture.
2. A coin receiving mechanism for vend- 120 ing machines which comprises a coin receiving tube provided with a weight-testing lever, a size-testing aperture adapted to co-operate with said lever to drop out under- 125 sized coins, and a tilting lever adapted to be tilted by over-sized coins and to close the entrance to said tube.

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