F. R. CHASE.

COIN ACTUATED WEIGHING AND VENDING MACHINE.

APPLICATION FILED MAR. 11, 1909.

923,245. Patented June 1, 1909.

2 SHEETS—SHEET 1.

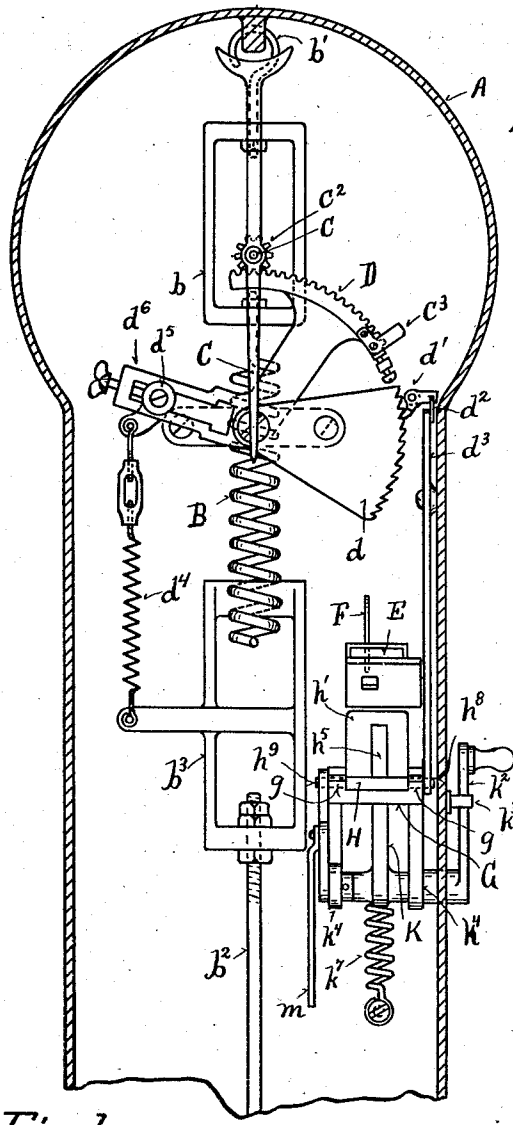


Fig. 1.

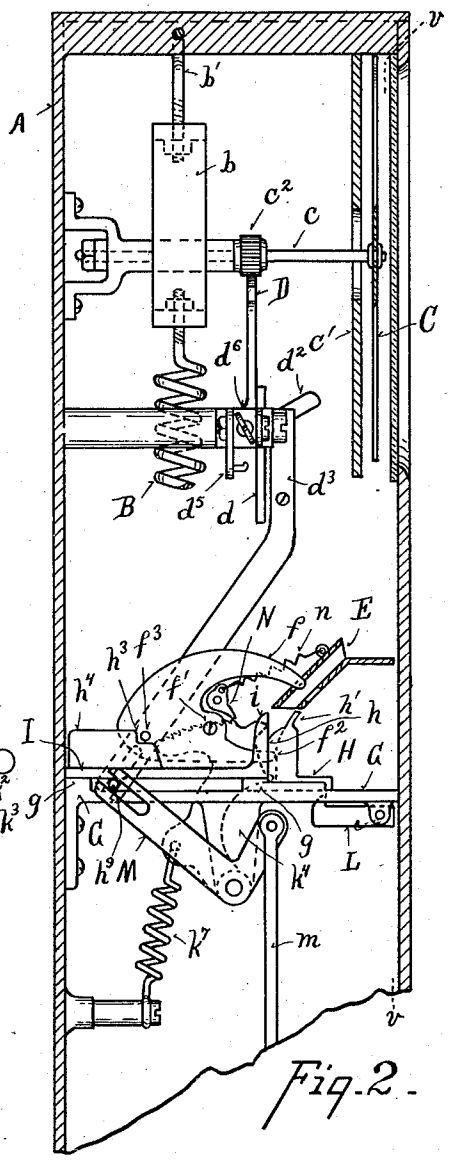


Fig. 2.

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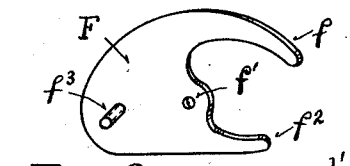


Fig. 3.

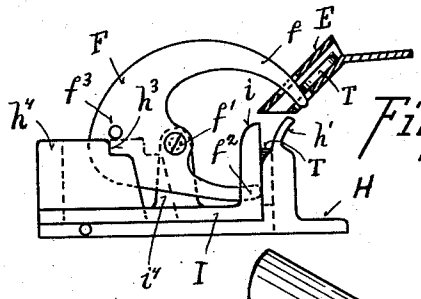


Fig. 4.

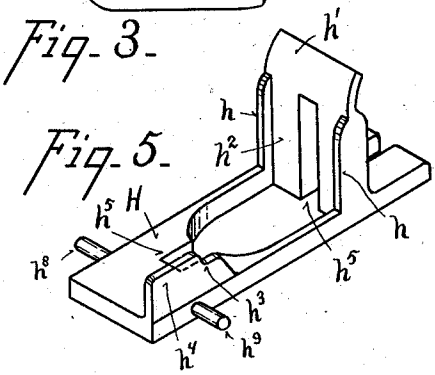


Fig. 5.

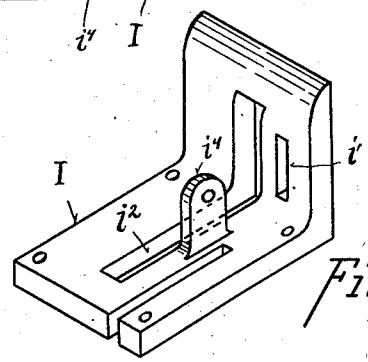


Fig. 6.

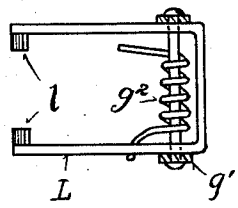


Fig. 7.

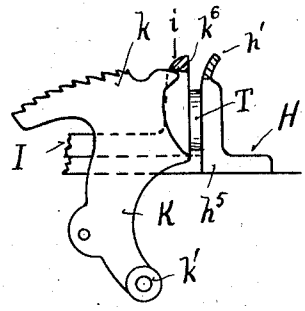


Fig. 8.

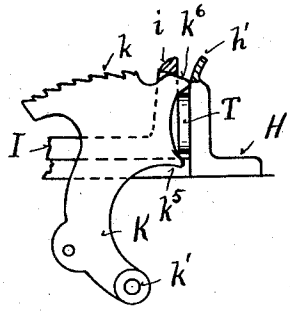


Fig. 9.

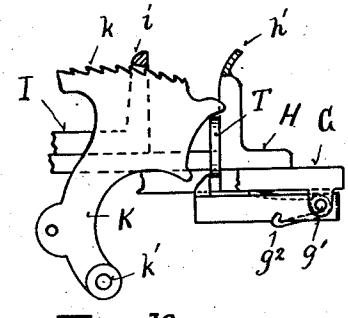


Fig. 10.

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UNITED STATES PATENT OFFICE.

FRANK R. CHASE, OF CINCINNATI, OHIO.

COIN-ACTUATED WEIGHING AND VENDING MACHINE.

No. 923,245. Specification of Letters Patent. Patented June 1, 1909.

Application filed March 11, 1909. Serial No. 483,636.

To all whom it may concern:

Be it known that I, FRANK R. CHASE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Coin-Actuated Weighing or Vending Machines, of which the following is a specification.

My invention relates to improvements in coin operated weighing or vending machines.

One of its objects is to provide improved mechanism whereby the coins are admitted one at a time.

Another object is to provide improved mechanism whereby the mechanism is locked and only released by the introduction of a coin.

Another object is to provide mechanism which will not be actuated by a piece of metal of less thickness or greater thickness than the designated coin.

Another object is to provide improved coin ejecting mechanism.

Another object is to provide mechanism to lock the indicating pointer against more than one movement for each coin inserted, or before the coin has been registered.

It further consists in certain details of form, combination and arrangement, all of which will be more fully set forth in the description of the accompanying drawings in which:

Figure 1 is a front elevation of my improved mechanism, showing the case in section on line *v v* of Fig. 2. Fig. 2 is a sectional view through the casing showing the mechanism in side elevation with parts broken away. Fig. 3 is a perspective view of the coin admitting and mechanism locking member. Fig. 4 is a detail view of the coin actuated mechanism charged with two coins. Fig. 5 is a perspective view of the sliding coin receiver. Fig. 6 is a perspective view of the stationary coin receiver. Fig. 7 is a detail top plan of the coin ejector. Figs. 8, 9, and 10 are detail views of the several progressive positions of the coin.

My improved mechanism is adapted to be employed as a coin operated weighing machine, as a vending machine, or as a combined weighing and vending machine.

In the accompanying drawings A represents the casing.

B represents a spring supported by a yoke *b* and hook *b'* from the top of the casing, and adapted to be strained by weight applied to an ordinary scale platform, not shown, to the levers of which spring B is connected by a rod b^2 and yoke b^3.

C represents a pointer pivoted upon a shaft *c* and adapted to indicate upon a scale *c'* the weight on the scale platform. The pointer C is actuated by a pivoted segment D meshing with a pinion c^2 on shaft *c*. A stop c^3 prevents the segment turning too far. The segment D can only turn when the ratchet toothed segment *d* is freed by the pawl *d'*, which is effected by an incline d^2 carried by pivoted lever d^3 lifting pawl *d'* out of engagement with segment *d*. The segment D is actuated by means of a spring d^4 attached at one end to an arm of yoke b^3 to which the lower end of spring B is attached, and at the opposite end to an adjustable member d^5 adapted to move along arm d^6 to and from the center on which segment D is pivoted. The adjustment of member d^5 enables the movements of the pointer to be proportioned to the dimensions of the scale in order to indicate the correct weight upon the scale.

The coin T to actuate the mechanism after first passing through a channel where washers, disks of less diameter than the coin etc. are separated, reaches the channel E through which it passes to the coin actuating mechanism unless there is already a coin therein, in which case the coin is held in the channel E by finger *f* until after the preceding coin has been ejected. The coin actuating mechanism comprises a frame G secured to the casing A and provided with horizontal ways to guide the sliding plate H. A stationary plate I secured at its corners to studs *g* projecting up from frame G holds the sliding plate H in place. The forward end of plate I forms a vertical stationary plate or jaw *i* against which normally rests the ribs *h* of a vertically projecting plate or jaw *h'* carried by the movable plate H. The channel h^2 between the jaws *h' i* is slightly tapered and of just sufficient width to catch a coin, but adapted to permit the free passage of a disk of the same diameter but a slight fraction thinner than the coin, while a disk of greater thickness would not pass the initial slot in the casing A.

The member F is loosely pivoted at *f'* to an ear i^4 projecting from the plate I and its rear or left hand portion is heavier than its forward portion causing it to normally stand in the position shown in Fig. 2 with the finger f^2 projecting through slot *i'* and spanning

the channel h^2 with its end resting against jaw h'. In this position a stud f^3 engages an offset h^3 of a cam plate h^4 carried by member H to lock member H against forward movement. As soon as a coin enters between the jaws i h' it strikes the finger f^2 and tilts member F, disengaging stud f^3, from the offset h^3 and causing finger f to project into channel E to prevent the passage of another coin. As the plate H moves forward the cam plate h^4 passing beneath stud f^3 locks member F in the position indicated in Fig. 4. Members H I have central longitudinal slots h^5 i^2 to receive the free end k of a crank arm K which is rigidly mounted on a shaft k' adapted to be turned by the operator by means of a crank k^2 on the outside of the casing, said crank k^2 being limited in movement by a stop pin k^3. Shaft k' is journaled in brackets k^4 depending from frame G.

The crank arm K has ears k^5 k^6 which in the position Fig 9 engage above and below the coin to hold it in place and press it against jaw h' and thereby force the plate H forward. As the crank arm K moves forward it successively assumes the positions Figs. 8, 9, and 10 in the final position forcing the coin downward by means of ear k^6 until at the limit of forward movement of arm K the coin is grasped by the upwardly turned end l of the ejector L, which is pivotally supported by ears g' from frame G and is held in position to engage the coin by a spring g^2. As the crank arm K moves backward the coin and plate H are held by ejector L until the crank arm K strikes the rear end of slot h^5 in the plate H when the coin and plate H are thereby released from the ejector and the coin tips over and drops through into a coin receiver, while plate H is returned to position to receive another coin. The arm K is returned to original position by spring k^7. The ejector serves to prevent the coin and plate H returning with arm K in such relation as not to drop the coin. A pawl N is adapted to engage a series of ratchet teeth on the crank arm K to insure the arm K making a full forward movement to bring the coin into engagement with the ejector. As soon as the last ratchet tooth of crank arm K is passed the crank arm is free to return by tipping pawl N backward until it has been passed by all of said teeth. When the pawl N reaches the depression in rear of projection k^6 it resets itself ready for the next forward movement of the crank arm. A spring n serves to hold the pawl N in position to effect said movements. Plate H carries a stud h^8 which engages a slot in the lower end of arm d^3 to retract the pawl d^2. A stud h^9 at the opposite side of plate H may be employed to reciprocate a crank arm M loosely journaled on shaft k', and to which crank arm is attached a link or connecting rod m by means of which a coin actuated vending mechanism, not shown, may be actuated.

The mechanism herein illustrated and described is capable of considerable modification without departing from the principle of my invention.

Having described my invention, what I claim is:

1. In a mechanism of the character indicated, a coin chute, a stationary receiving jaw, a movable receiving jaw, said jaws being positioned with an intervening space to receive a coin, a cam plate movable in unison with said movable jaw, and a pivotally supported member having one finger to enter the space between the receiving jaws, and another finger to enter and close the passage of the coin chute, said member carrying a stud to engage said cam plate.

2. In a mechanism of the character indicated, a coin chute a stationary receiving jaw, a movable receiving jaw, said jaws meeting so as to form a coin receiving passage of a width to catch and hold a coin, and to permit the passage of an object of less thickness than a coin, slots through the center of said jaws, and a reciprocating member traveling in said slots and adapted by engaging a coin to move said movable jaw away from said stationary jaw, and then to release the coin.

3. In a mechanism of the character indicated, a coin chute, a stationary receiving jaw, a movable receiving jaw, a channel between said jaws to receive a coin, central slots through said jaws, and a crank arm traveling in said slots and having projections above and below the coin to engage a coin in said channel and to convey said coin to a different position and to force the coin downward, and a spring actuated coin ejector adapted to grasp and hold the coin until tripped, and then to eject the coin.

4. In a mechanism of the character indicated, a coin chute, a stationary receiving jaw, a movable receiving jaw, a channel between said jaws to receive a coin, central slots through said jaws, a crank arm adapted to travel in said slots and provided with a projection above the coin adapted to progressively force the coin downwardly as said crank arm advances, and means to actuate said crank arm.

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

FRANK R. CHASE.

Witnesses:
C. W. MILES,
A. MCCORMACK.