Dec. 28, 1926. 1,612,040

F. F. MOLLOY

VENDING MACHINE

Filed June 15, 1925

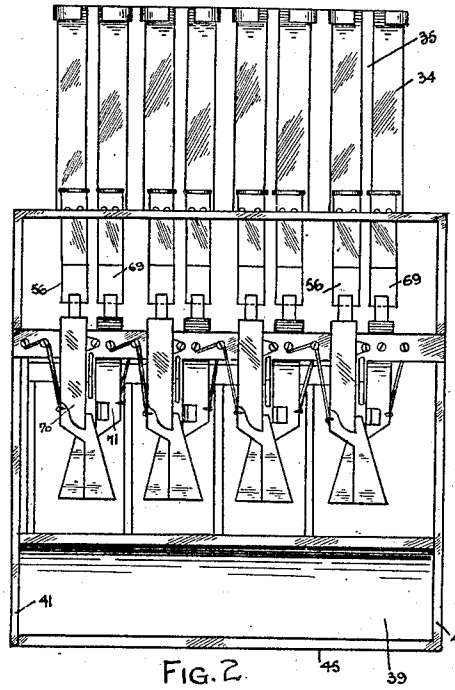


FIG. 2.

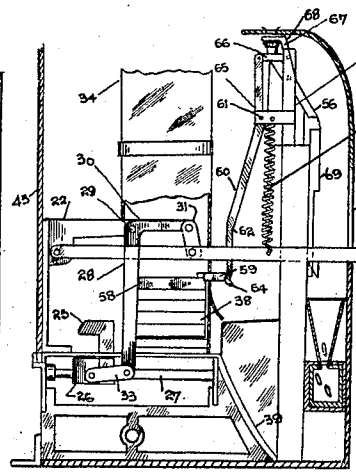


FIG. 5.

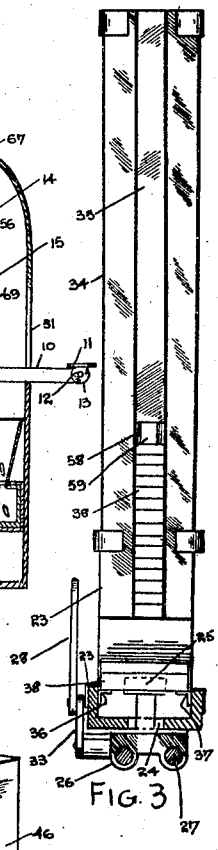


FIG. 3.

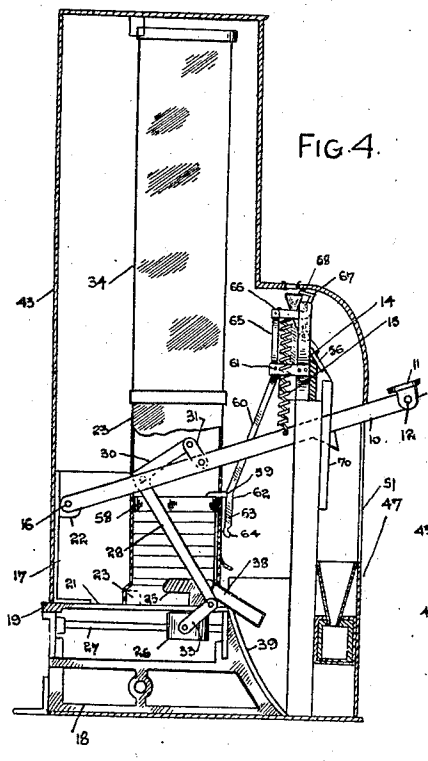


FIG. 4.

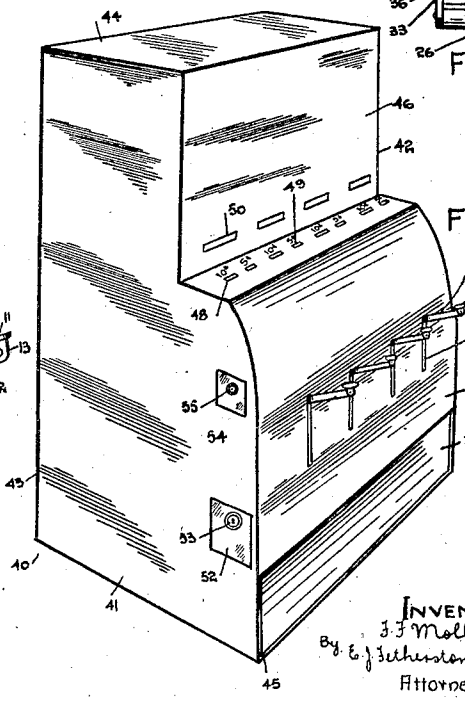


FIG. 1.

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UNITED STATES PATENT OFFICE.

FRANCIS FERDINAND MOLLOY, OF LOWELL, MASSACHUSETTS.

VENDING MACHINE.

Application filed June 15, 1925. Serial No. 37,110.

The invention relates to a vending machine as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel features of construction pointed out broadly and specifically in the claim for novelty following a description in detail of an acceptable form of the invention.

The objects of the invention are to facilitate the operation of slot machines adapted to the delivery of the goods following the actuation of a lever; to avoid delays and losses incident to stoppages through repairs to complicated machinery; to enable the seller to dispose of goods requiring different coins to make up the sale price; to furnish a machine that will have a simple and efficient mechanism; and generally to provide a device that will be cheap to manufacture and durable in construction and use.

In the drawings Figure 1 is a perspective view of the complete machine.

Figure 2 is a front view of the machine with front removed.

Figure 3 is a front elevation of a goods container and goods with slot closure operating weight.

Figure 4 is a vertical sectional view showing operating mechanism at the finish of a stroke.

Figure 5 is a vertical sectional view showing operating mechanism previous to a stroke.

Like numerals of reference indicate corresponding parts in the various figures.

Referring to the drawings the levers 10 have the thumb pieces 11 secured to their outer ends by the screw bolts 12 through the pinch lugs 13 and corresponding slots in the levers and are suspended from the top of the frame 14 by the springs 15. The levers 10 at their inner ends are secured on the pivots 16 mounted in the rear frame 17, which is formed of end pieces 18, cross bars 19 and 20, shelves 21 and the upper sections 22 for said pivots 16, said shelves being formed with upstanding container flanges 23 and plunger slots 24.

The plungers 25 extend upwardly from the plunger carriages 26 which are mounted on the rods 27 and slidably arranged thereon.

The crank levers 28 are pivotally secured at their angles 29 to the upper frame sections 22, at the inner ends of the latter, and the short arms 30 are operatively joined to said levers 10 by the pivotally secured links 31.

The long arms of the crank 28 are operatively joined to the plunger carriage 26 by the pivotally secured links 33, thereby establishing the necessary operative connection from the lever 10 to the plungers 25.

The containers 34 are here shown as of rectangular shape in cross section, having the vertical slot 35, from the top downwardly in the front wall and formed at the bottom to fit over the flanges 23. Each container has the flanges 36 and 37 near to the lower end to support the packages 38, when the plunger 25 is moved to its rear position behind the lowermost package. The package in its frontward movement is pushed through the package opening in the front wall of the container out to the delivery shelf 39 of the machine. The shelf 39 is secured to the front of the rear frame 17 and to the sides of the front frame 14 and slopes downwardly preferably in an easy curve.

The mechanism aforesaid is enclosed in the casing 40 having the side walls 41 and 42, the back 43, the top 44, bottom 45, and the upper front wall 46 meeting the outwardly and downwardly curved lower front wall 47 the latter terminating above the bottom to expose the lower portion of the shelf 39. The coin slots 48 and 49 are made in the lower front wall 47 adjacent to the upper front wall 46 and the label slots 50 are arranged in the latter above the pairs of slots.

The lever slots 51 are made in the lower front wall 47 intermediate of the height thereof and the levers 10 project therethrough.

The cash drawer 52 slides outwardly through the side wall 41 and is provided with a suitable lock 53 and this drawer receives all the coins from the coin tubes legitimately finding their way therethrough. Another coin drawer 54 having a lock 55 is placed in a suitable position to catch the smaller coins that fall therein from the larger coin chutes and therefore miss the tubes therebelow as the coin chutes 56 have wide openings 57 at the back to release the small coins inserted in the chutes intended only for the larger coins. Within each chute 34 a weight 58 is placed on top of the column of packages and these weights carry the lugs 59 projecting through the slots 35. The rocker arms 60 are pivoted in the bearings 61 from the frame 14 and the lower sections

62 extend downwardly towards the goods containers 24 and continue in the parallel lengths 63 terminating in the cam ends 64 which are engaged by the weight lugs 59 when the goods are nearly exhausted.

The sections 65 extend upwardly and are pivotally joined by the links 66 to the pivoted arms 67 pivoted at their lower ends in the frame 14 and secured to or forming part with the closures 68 under the several coin slots, their closures moving to and from the coin slots 48 and 49 accordingly to the movements of the rocker arms controlled by the positions of the weights on the packages in the containers.

The pairs of coin slots 48 and 49 are directly above the coin chutes 56 and 69 leading to the tubular arms 70 and 71 pivoted to the frame 14 and crossed to form lever stops at the crossings. These stops are opened by spreading the arms through the insertion of the coins which drop through the chutes and passages and form rollers to spread the arms and remove the stop as more particularly described in a copending application filed under Serial No. 733,988 on the 25th day of August, 1924.

The release of a lever 10 enables the purchaser to move the lever downwardly against the upward spring pull and the result is the sliding of the plunger carriage and plunger rearwardly from under the column of packages, so that the latter drop to the supporting flanges and the lowermost package is directly in front of the plunger. The lever 10 is then released and the spring pull thereon moves it upwardly to the starting position and through the crank lever and link connections the plunger is sent forwardly to push the package from under the column and deliver it to the open shelf in return for the coins inserted in the slot.

What I claim is:—

In a vending machine, a casing having in its lower portions a plurality of shelves having flanges and vertical slots therein, a plurality of goods containers within the casing and held in position on the flanges of said shelves and having corresponding vertical slots for the vertical slots in said shelves, a plurality of levers intermediate of said containers and pivotally secured therebehind, and a plurality of crank levers pivotally secured to the aforesaid levers and extending downwardly therefrom and having plunger carriages at their lower ends slidably arranged on guide rods secured to the casing walls and passing directly beneath said containers and having the carriages passing through said vertical slots of the shelves and containers, and means for operating said levers.

Signed at San Francisco, Calif., this 29th day of April, 1925.

FRANCIS FERDINAND MOLLOY.