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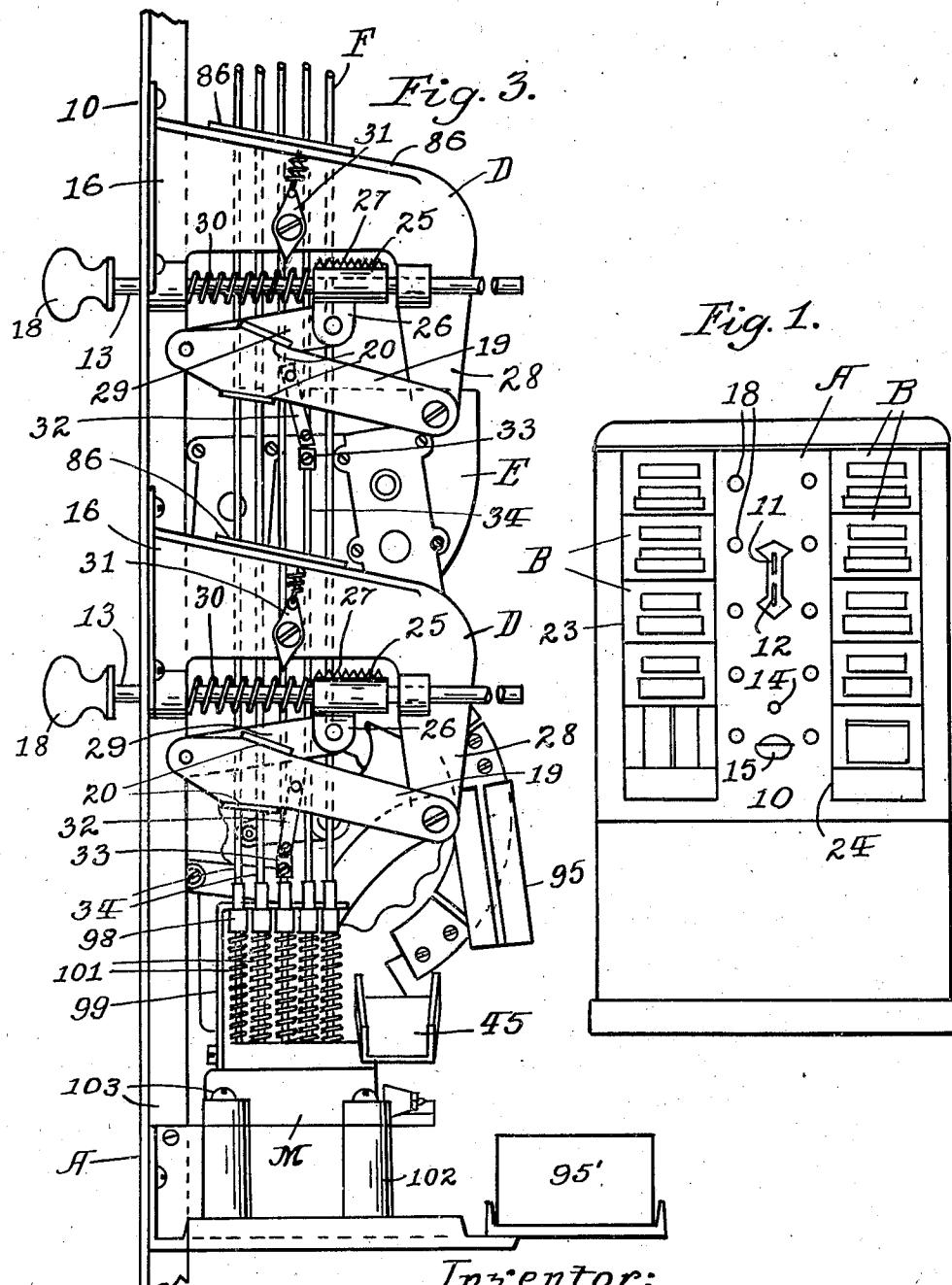
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2,425,487

DISPENSING APPARATUS

Filed Jan. 8, 1945

6 Sheets-Sheet 1



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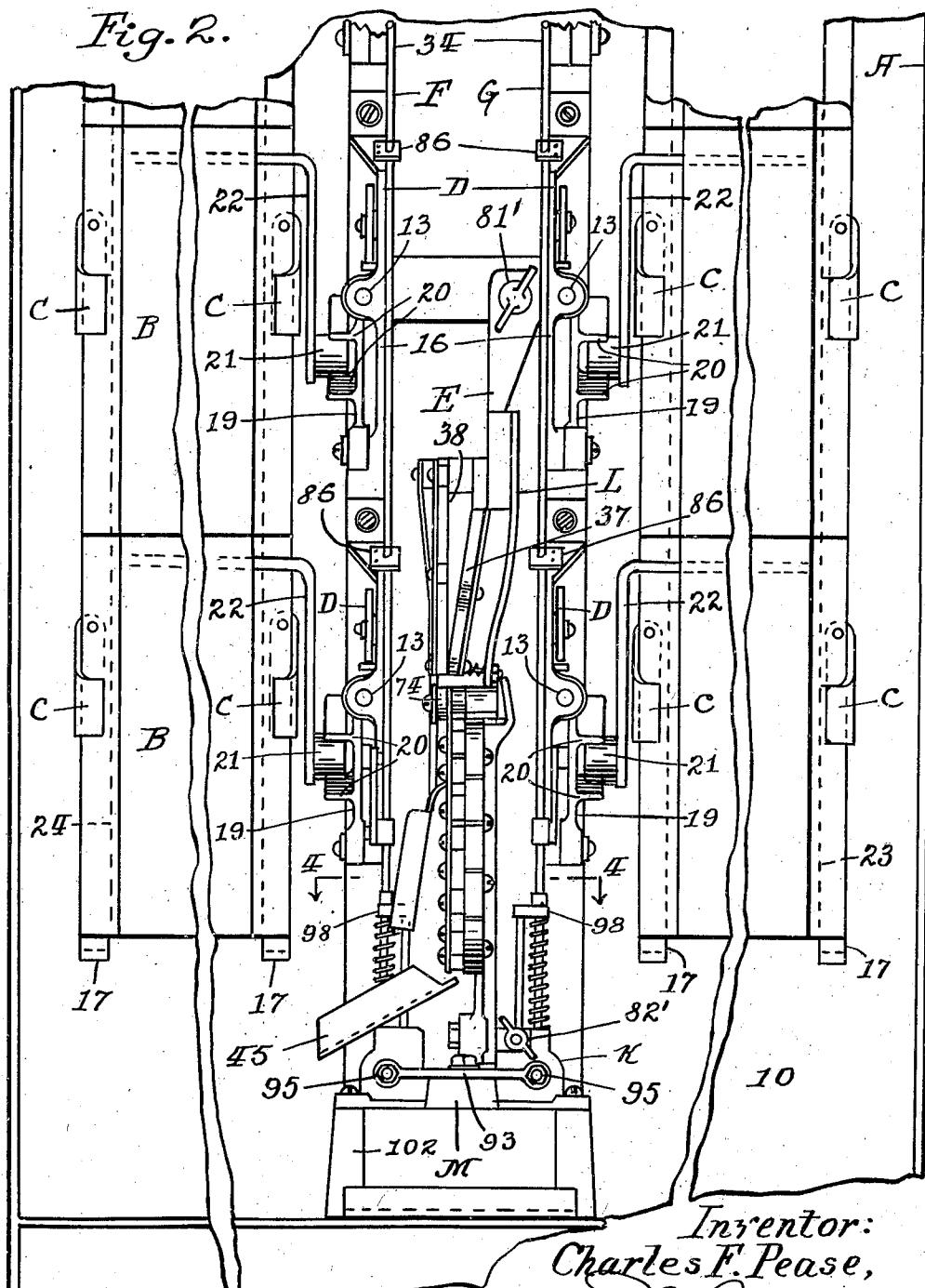
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DISPENSING APPARATUS

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6 Sheets-Sheet 2

Fig. 2.



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Fig. 4.

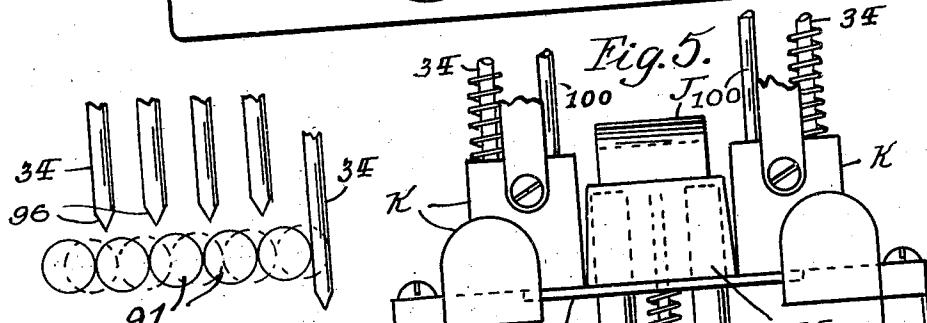
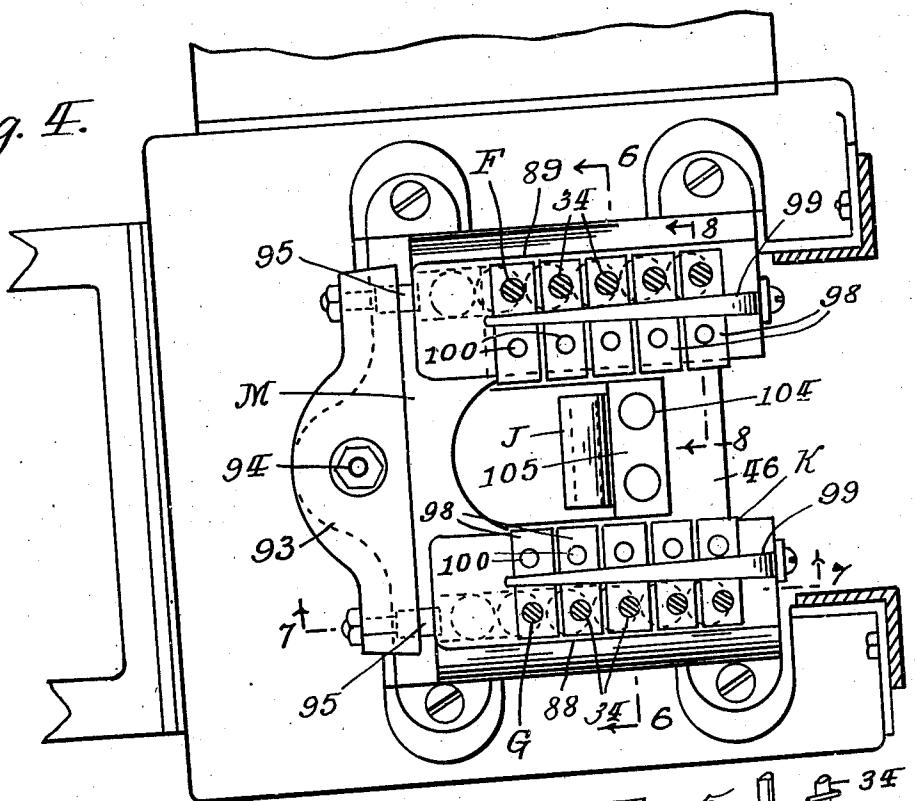
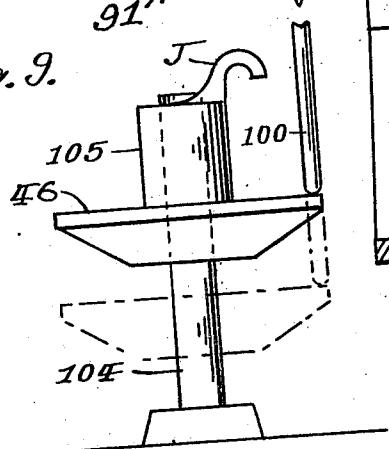


Fig. 9.



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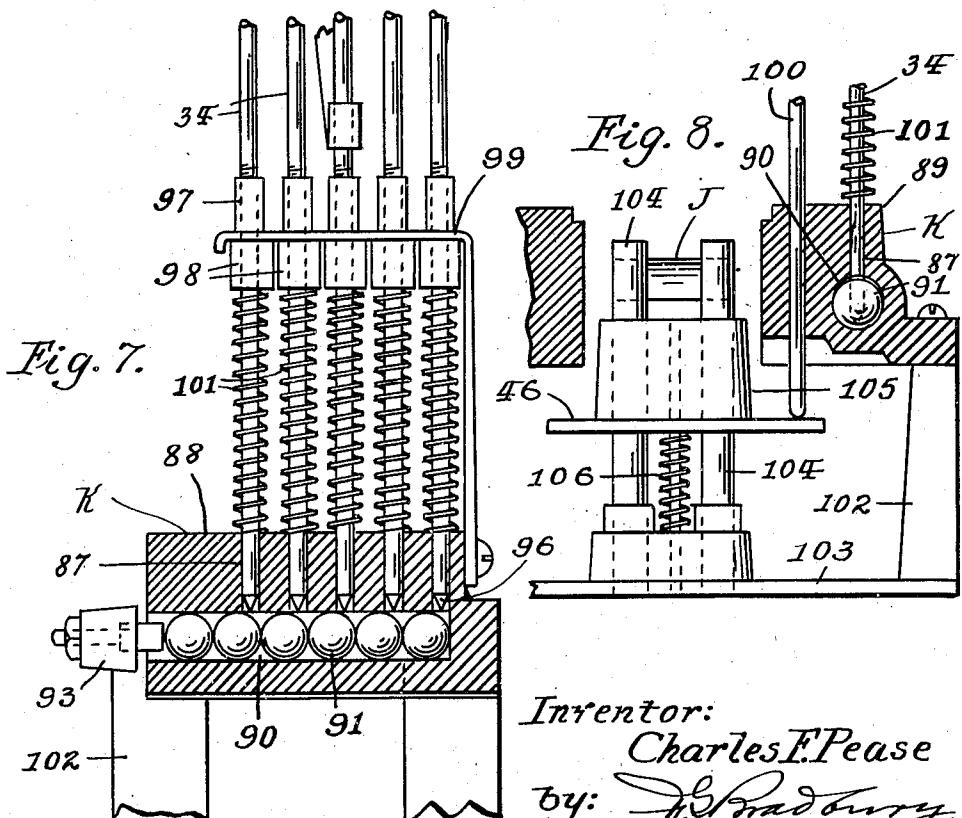
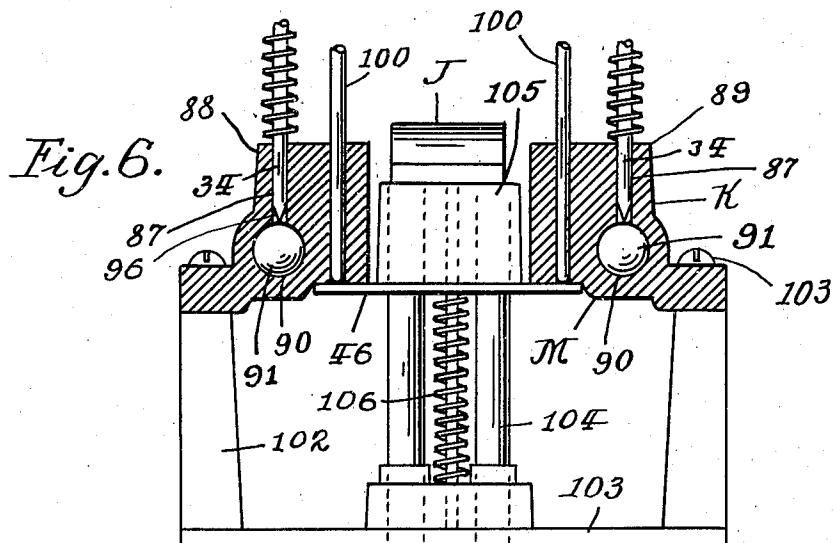
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DISPENSING APPARATUS

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6 Sheets-Sheet 4



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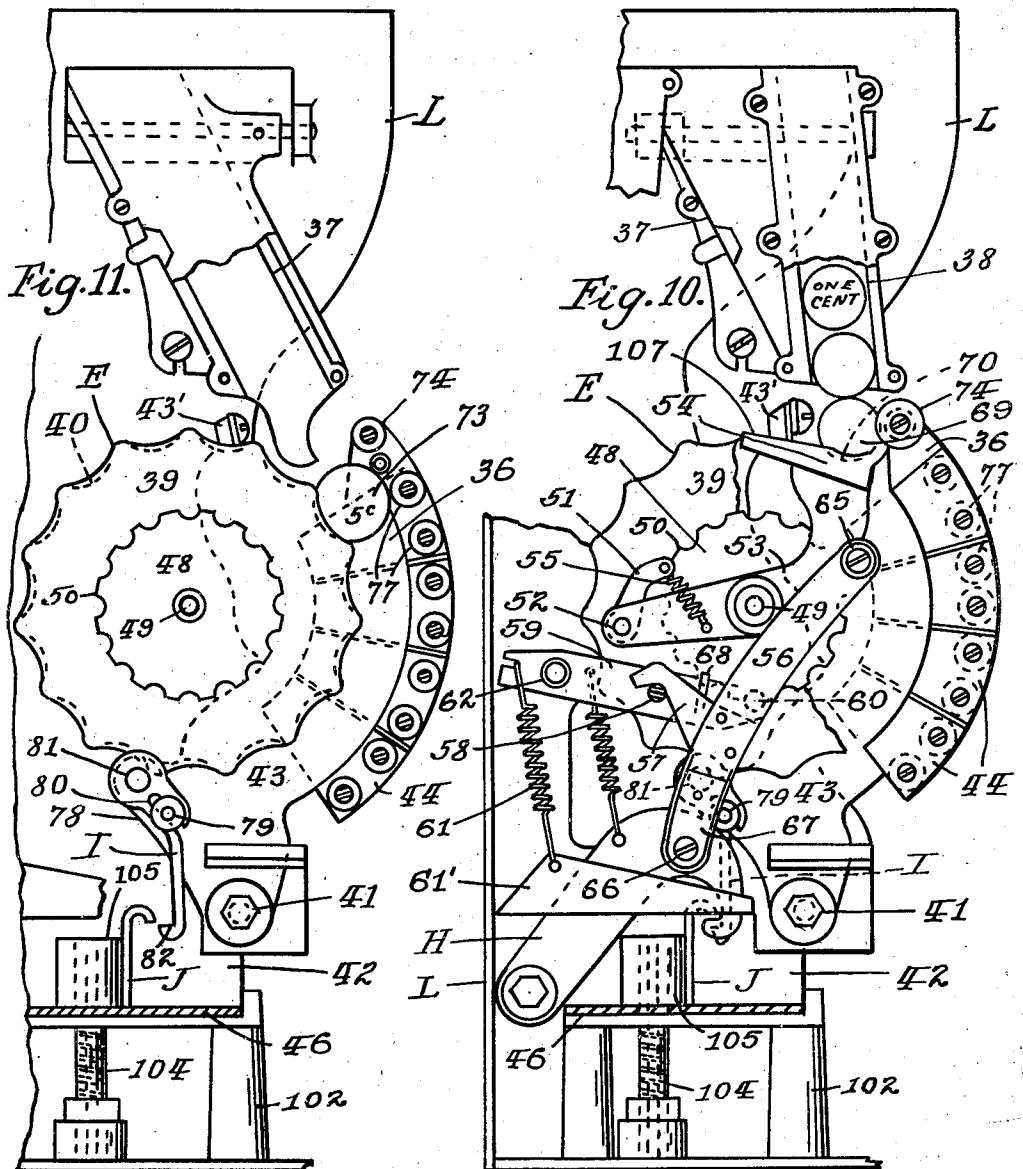
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6 Sheets-Sheet 5



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DISPENSING APPARATUS

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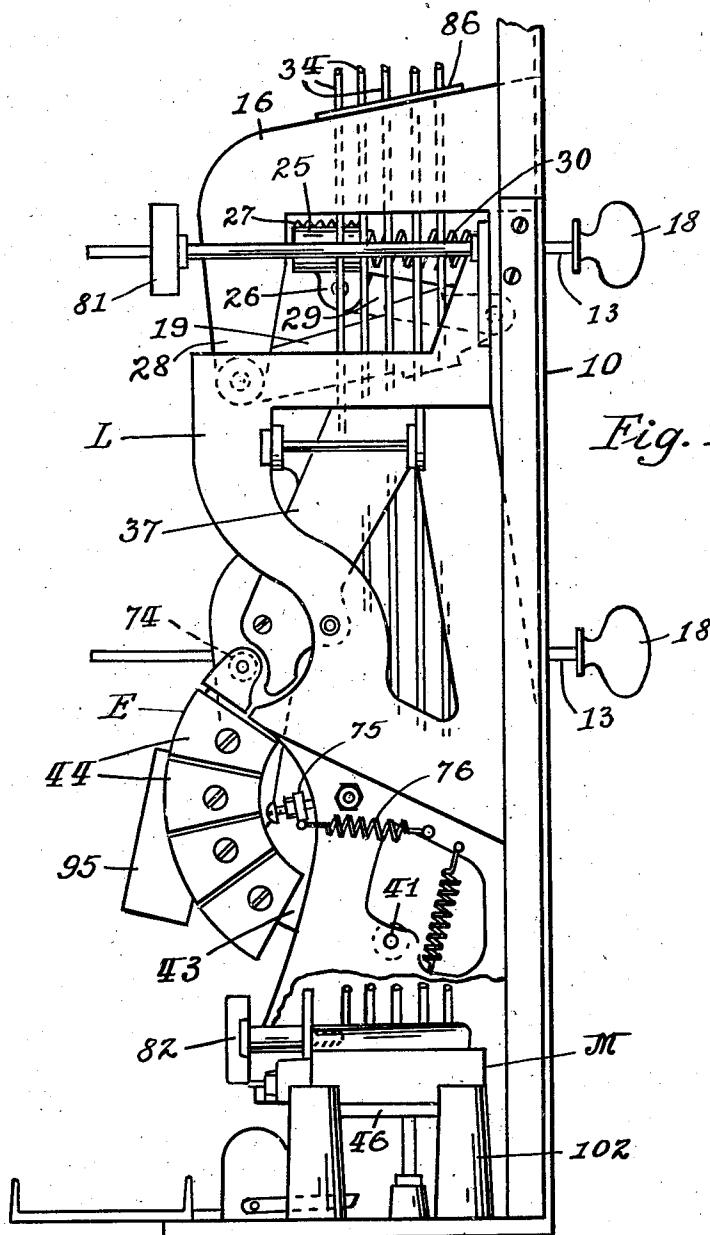


Fig. 12.

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UNITED STATES PATENT OFFICE

2,425,487

DISPENSING APPARATUS

Charles F. Pease, Los Angeles, Calif.

Application January 8, 1945, Serial No. 571,866

4 Claims. (Cl. 312—35)

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My invention relates to improvements in dispensing apparatus of the general character described in my copending applications, Serial No. 465,775, filed November 16, 1942, which matured into Letters Patent No. 2,370,684, March 6, 1945, and Serial No. 488,131, filed May 24, 1943, which has become Patent No. 2,410,231, of which the present application is a continuation in part. My invention employs a plurality of dispensing units and operating mechanism therefor which is controlled by a suitable coin control, such as is disclosed in my companion application 465,775, or any other type which might be used for controlling the operation of a plurality of dispensing units.

An object of this invention is the production of a multiple connecting structure between a coin control and a plurality of dispensing units by which only a single unit at a time can be operated and whereby more than one coin of different denominations can be employed for operating any selected group of different units.

A further object is to provide improved actuating means which functions through the operation of coin controlled dispensing units and which positively block the operation of all but one of the dispensing units at a time. A further object is to provide actuating means of a character which permits the assemblage of a maximum number of dispensing units in a single compact structure and which permits the ready removal and changing of any of the dispensing units without disturbing the actuating means.

Among still further objects are maximum simplicity of construction and effectiveness in use.

In the accompanying drawings forming part of this specification, Fig. 1 is a front elevation of one of my improved vending machines which is provided with an assemblage of dispensing units which are arranged in two vertical rows; Fig. 2 is a rear elevation on an enlarged scale looking at the inner front side of a portion of the cabinet and showing my improved coin control and a portion of the operating mechanism for controlling the dispensing units by the coin control; Fig. 3 is a side elevation showing my improved coin control, such as disclosed in my companion application Serial No. 465,775, combined with my improved dispensing unit operating mechanism, two only of the dispensing unit actuating devices being shown; Fig. 4 is a section on an enlarged scale, taken approximately on the line 4—4 of Fig. 2; Fig. 5 is a front elevation of a portion of the apparatus shown in Fig. 4; Fig. 6 is a section taken approximately on the line 6—6 of Fig.

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4; Fig. 7 is a section of a detail taken approximately on the line 7—7 of Fig. 4; Fig. 8 is a section of a detail taken approximately on the line 8—8 of Fig. 4, showing the controlling catch in lowered position; Fig. 9 is a diagrammatic view illustrating the action of the catch; Fig. 10 is a side elevation of part of the coin control, when the parts shown are in normal position and illustrating only the penny chute for greater clearness and a penny in position therein when about to be released through the action of the operating catch J after one of the dispensing unit actuating members 13 has been pulled out in the act of operating, a portion of the coin disc being broken away; Fig. 11 is a side elevation somewhat similar to Fig. 10, showing only the five cent coin chute and an appropriate coin in position, the latch H being removed and the lock pawl swung from locking position to permit the lowering of the catch F; and Fig. 12 is a side elevation of a portion of the coin control combined with a portion of the multiple dispensing unit control, a portion of the face frame of the cabinet and two of the hand operable actuators being shown.

In Fig. 1 a type of vending machine is shown having a suitable housing or cabinet A, containing two upright series of dispensing units B of any suitable type, which are represented in part diagrammatically in Fig. 2. These units are detachably secured in openings 23 and 24 in the face panel 10 and are contained in the cabinet A by the rails 17 and clasps C (Fig. 2), in the manner described in detail in my companion application Serial No. 488,131, to which reference is made. These units may be of similar or different types but are of substantially corresponding size and shape, some of which are illustrated in my companion applications, Serial No. 464,452, filed November 4, 1942, which has matured into Patent No. 2,388,497, and Serial No. 464,838, filed November 7, 1942, which has matured into Patent No. 2,382,576. These units are adapted to be operated through the use of coin control means, one type E being described in detail in my companion application Serial No. 465,775. Suitable coin receiving slots 11 and 12 are provided in the face 10 of the cabinet through which coins of selected denomination, such as pennies and nickels may be deposited for controlling the operation of the various dispensing units. Suitable hand operable pull rods such as 13 (Fig. 3) are provided in the face panel for the operation of any selected dispensing unit. A coin return push plunger 14, accompanied by a coin

return receptacle 15 is also provided in the face panel 10. The coin return mechanism is omitted from the present application.

Each dispensing unit has associated with it an actuator D, in which the hand operable pull rod 13 is reciprocable, said device having a suitable rigid frame member 16 secured to the face panel in the cabinet. Each pull rod has a hand piece 18 exposed on the front of the cabinet which enables one to operate one of the dispensing units. Each actuator is fixed permanently in the cabinet in position corresponding with a dispensing unit to be operated and is provided with a swinging lever arm 19 which is tilted when the rod 13 is reciprocated. This arm has a pair of wings or flanges 20, which are spaced apart on its free end to freely engage pin 21 and thus provide an operating connection with dispensing unit operating thrust member 22 (see Fig. 2), when the companion dispensing unit is secured in one of the dispenser receiving openings 23 or 24 in the face of the cabinet. The actuator as shown is of that type disclosed in detail in my companion application Serial No. 464,838, filed November 7, 1942. The pull rod 13 fixedly supports a collet block 25 on the lower side of which is a boss 26 and on the upper side a longitudinal series of ratchet teeth 27. The actuator has a rigid depending member 28 on the lower end of which the arm 19 is pivoted and to the free end of said arm the boss 26 is connected by a link 29, so that when the pull rod is reciprocated by hand the drive lever is swung up or down. An expansion spring 30 is threaded over the shank of the pull rod 13 between the forward portion of member 16 and the collet block. This spring permits the pull rod 13 to be drawn outwardly and swing the drive arm down or cause the return of the drive arm into raised position. A complete forward and return stroke during each operation of the machine is assured by a spring controlled pawl 31 which sweeps over the ratchet teeth 27 on the collet block 25.

In mounting the parts on the cabinet the actuator D for each dispensing unit is positioned so that the shoulders 20 engage and cooperate freely with the pin 21, thus causing the functioning of the dispensing units in the manner stated. It should be noted that the drive lever arm 19 is connected by a link 32 and pivoted clamp block 33 to one of a group of vertically disposed control rods 34 by which the operation of the dispensing unit actuators D are permitted to function under the control of a suitable coin control unit. Also that two groups F and G of control rods 34 are provided, one group for each vertical series of dispensing units. These groups are brought into cooperative relation by certain operating means which coactively forms part of the subject matter of the present application and has been divided from my parent application Serial No. 465,775.

The dispensing units B are readily removable and replaceable by releasing or closing the clasps C and removing or applying said units with the pins 21 on their operating thrust arms 22, freely adjusted in relation to the wings or flanges 20 on arm 19 of the actuator D.

The coin control E as shown resembles in part the corresponding apparatus disclosed in my companion application Serial No. 465,775, and is adapted to control the operating latch H, lock stop pawl I, and catch J (see Figs. 10 and 11), through the functioning of a multiple control lock K, for normally blocking the operation of all but

one of the dispensing unit control rods 34 at a time.

The coin control E provides a suitable coin pathway 36 (Figs. 10 and 11), leading from suitable chutes 37 and 38 for coins of different denomination, said chutes being movably mounted on a coin control unit frame L and connected with the coin receiving slots 11 and 12 in the manner disclosed in my companion application Serial No. 465,775, the chute 37 being of suitable size to accommodate five cent coins and the chute 38 of suitable size to accommodate one cent coins. These chutes are suitably mounted to move into registration with the coin pathway under the functioning of the device as set forth in the aforesaid applications. The coin pathway is defined by the rotatable escapement stepping disk 39 which is designed as shown to cooperate with coins of different denomination as desired. This disc is provided with a circumferential series of coin holding shallow cups 40 in its perimeter for holding the coins and is revolved step by step forwardly as each coin from one of the chutes is received into the cups by suitable ratchet mechanism to be hereinafter referred to. Arranged in an arc about the perimeter of the coin disc and tiltingly mounted to rock by its lower end on a stud bolt 41, which is secured to a suitable body frame 42 is a coin stepping rocker arm 43. The outer circular margin of the rocker arm 43 is provided with a circular series of coin escapement segments 44. These segments, in cooperation with the escapement disc 39 and the operating arm 43 provide the circular coin channel or path 36 downwardly through which the coins are caused to pass step by step through the series of segments and to be ejected downwardly into a delivery chute 45 leading outwardly.

Normally the lock pawl I prevents the operation of a reciprocable push pin key plate 46 and its catch J sufficiently to permit the latch H to function. This latch when engaged and operated each time by the catch J, actuates suitable ratchet mechanism on the coin control, which in turn rotates the coin disc 39 a step forwardly. The ratchet mechanism consists of the ratchet disc 48 which is rotatably mounted upon the stub shaft 49 and rigidly attached to and carries the coin disc, said shaft being mounted upon the coin control unit frame L. The ratchet disc has a series of teeth 50 in its periphery with which the ratchet pawl 51 engages. The body of this pawl is pivoted at 52 upon one end of the coin ejector rocker arm 53, the median portion of which is tiltingly mounted upon shaft 49. The opposite free end of arm 53 has an upwardly extending shoe 54 which is reciprocated in an arc each time the rocker arm 53 is reciprocated by the ratchet mechanism. The spring 55 releasably presses the pawl into engagement with the teeth of the ratchet wheel. The end of the rocker arm which carries the shoe is operatively connected with the latch H by the link 56. This link carries a spring ratchet lock release arm 57 which normally engages a beveled catch 58 on the side of a pivoted spring pressed ratchet lock arm 59, to withdraw its lock pin 60 from locking engagement with the teeth of the ratchet wheel 48 each time the coin release means functions. A retractile spring 61 which is connected with one end of arm 59 and a rigid portion of the frame structure L serves to automatically tilt the arm on its pivot support 62 and cause its pin 60 to engage the teeth of the ratchet wheel and normally block the latter from movement.

The screw connections 65 and 66 at the upper

and lower ends of link 56 are loose and the lower end of said link has a leaf spring 67 on its side below the lower connecting screw element. These loose connections permit the lower end of link 56 to tilt laterally so as to permit disengagement of the ratchet lock release arm 57 from the beveled catch 58 on said lock arm. The leaf spring 67 tends to hold member 57 in engagement with said beveled catch 58 but permits member 57 to slide over the end of and reengage catch 58 as the lock release arm 59 swings on its pivot support and returns to normal engaging position. The tilting of link 56 laterally to discharge the ratchet lock release arm 57 from catch 58 is caused by a beveled shoulder 68 on the side of member 59. The ratchet mechanism thus provided cooperates with latch H, whereby as the link 56 is drawn down by the operation of latch H, the ratchet pawl 51 revolves the coin escapement disk 39 a step forwardly a distance corresponding with one coin release segment 44 during each operation. In this manner, when a five cent coin 73 is used and one cent articles or packages are dispensed, five operations of one or different dispensing units are provided automatically by my improved coin control.

The one cent coin control which is operated each time a one cent coin enters chute 38, in conjunction with part of the five cent coin control apparatus above described by the pull element 13 of any one of the dispensing units B, consists in part as follows: The shoe 54 on rocker arm 53 has a shallow coin receiving socket 70 which normally registers with the lower end of the one cent coin chute 38 so that each one cent coin, such as 69, when dropped through chute 38 is retained by the shoe while lodged against the antifriction guide roller stop 74. When a dispensing unit is operated by member 13, the coin is shifted forwardly by the shoe in cooperation with the push element 43' on the upper end of the stepping arm 43 and is thus pressed against guide roller 74 so as to swing the escapement rocker arm 43 outwardly sufficiently to in turn swing the lock pawl I away from a position blocking the downward thrust of the operating catch J. Forward movement of the upper forward end of the operating arm 53 and its shoe discharges the coin directly into the delivery chute 95 (Fig. 3), which is supported by the escapement rocker arm 43, said chute 95 being omitted from Fig. 10. The delivery chute 95 serves to deposit the coin in a suitable receptacle (not shown). The throw of the upper end of the coin operating rocker arm 53 forwardly by the operation of a dispensing unit is produced by the ratchet mechanism above described and in the same manner and through substantially the same distance as when the apparatus is operated by the use of either a one or five cent coin. When the shoe 54 returns to normal position any immediately subsequent coin in either of the chutes 37 or 38 will drop into the coin socket in said shoe. Due to the superimposed positioning of the outlets from chutes 37 and 38 and to the superimposed positioning of the stop roller 74 above the coin channel, the one and five cent coins are projected forwardly by the operation of the shoe into their respective paths.

The upper end of the coin escapement rocker arm 43 is swung inwardly and normally held adjustably depressed against an edge of the body frame below an adjustable stop 75 (Fig. 12), by a retractile spring 76 so as to define the width of the channel or pathway between the cups in

the coin disc and rollers 74 and 77, whereby five cent coins entering the upper end of the pathway are permitted to escape downwardly step by step by the segments 44, while the coin escapement rocker arm 43 is reciprocated successively and while the coin disc is correspondingly stepped forwardly by its ratchet drive. The stop 75, it will be noted is mounted upon the upwardly swinging end of the rocker arm 43. A projecting portion 78 of the lower end portion of the rocker escapement arm 43 carries an actuating pin 79 which slidingly engages in a guide slot 80 through an offset portion of the lock pawl I. Said lock pawl is hung freely by a pivot support 81 on one side of a lower portion of the body frame L. The lower end of the lock pawl I has a shoulder 82 which is held in the normal position of the coin escapement rocker arm 43, below and in the path of the catch J on the key element, to normally block the operation of the ratchet mechanism and all of the dispensing units under the influence of either a one or five cent coin and through the subsequent action imparted by the actuating stud 79.

The coin control unit E which controls the operation of all of the dispensing units contained in the cabinet A is removably secured in the latter in the manner set forth in my companion application Serial No. 488,131, the frame L being separably fastened to the back of the face panel 16 by the hand operable bolts 81' and 82' while the latch H and lock pawl I are juxtaposed in functioning position in relation to the catch J, to assist in controlling the operation of the dispensing units when either a five or one cent coin is deposited in the coin chutes.

In the manner above described and as more particularly set forth in my companion application Serial No. 465,775, if a one cent coin is dropped in chute 38 and is released by a single pull of any one of the hand propelled actuating elements 13, it immediately drops into the delivery chute 95 or if a five cent coin is deposited in chute 37 it is caused to travel through the coin path and step by step mechanism by reciprocating any one of the actuating elements 13, thus successively operating any one or several of the operating rods 34, one at a time, until the coin is released from the lower end of the escapement rocker arm 43 into the coin delivery chute 45. The invention is thus applicable for controlling any desired number of dispensing units and is incorporated into a unit structure from which any one or more of the dispensing and coin controlled units can be easily and quickly detached and reassembled, thus enabling any desired combination of units to be assembled in the machine. To control the operation of a large number of dispensing units in a single machine, I provide two groups F and G of dispensing unit control rods 34. The upper portions of these rods are vertically reciprocable and guided freely through the guides 86 on the supporting arms D of the vertically arranged series of actuators. The lower ends of these rods are vertically reciprocable in suitable guide openings in the horizontal arms 88 and 89 of the yoke frame M of a multiple control lock base as illustrated in Figs. 4 to 8 inclusive. Each of the horizontal arms of the lock base is equipped with a set of control rods 34 and the capacity of the apparatus which is controlled by a single coin control unit thus increased. Each of said arms of the lock base has a longitudinal cylindrical socket 90 which contains a series of tumbler balls 91 of corre-

sponding size. The lower end of each control rod normally registers with a tumbler ball of the series in the socket. The vertical guide openings 87 in each of said arms 88 and 89 of the lock base provides suitable bearings for normally holding the lower ends of the control rods evenly spaced horizontally apart with one end of each rod above one side of one of the balls. Only sufficient free space longitudinally in the sockets is provided to permit one control rod at a time descending between and below the tumbler balls as shown diagrammatically in Fig. 9. The remaining tumbler balls are retained in blocking position to prevent the remaining operating rods 34 and their coupled dispensing units from being operated. In this manner, an automatic single operating rod multiple control gate is provided for controlling the operation of the control rods so as to permit the operation of only one corresponding dispensing unit at a time.

The two sockets 90 and series of tumbler balls 91 in each are provided with a connecting walking beam 93 which is pivoted by the bolt 94 on the lock supporting yoke frame M below the yoke to permit free horizontal movement (Figs. 4, 5 and 8). The opposite ends of the walking beam 93 carry adjustable stops 95, which enter the open ends of the sockets 90 near the ends of the two series of tumbler balls therein to transmit motion from one section of the tumbler balls to the other. In this manner the two series are connected and function as one. The adjustments shown provide for the close regulation of the free space in the sockets so that only one operating rod and its companion dispensing unit at a time can be operated. It will be noted that the lower end of each operating rod 34 is tapered downwardly at 96 (Fig. 9), to provide a guide against the side of the corresponding ball in registration therewith in the socket below, whereby the rod 34 which is operated by a selected dispensing unit acts as a key by plunging downwardly between and separating the tumbler balls sufficiently to permit a full stroke while the remaining balls of the complete chain block the remaining control or key rods and their connected dispensing units from operating.

Each key control rod 34 is divided into upper and lower sections which are adjustably secured longitudinally by threaded engagement with a coupling 97, to provide longitudinal adjustment. Each coupling has a laterally extending coupling block 98 (Figs. 2, 4 and 7), the several blocks being urged upwardly against the rigidly supported angle stop arm 99, which is supported by the companion arm of the yoke M or base. A downwardly extending push pin 100 is secured rigidly to each coupling block 98, said pin being omitted from Fig. 7 for greater clearness in showing the complete set of key operating rods 34. The lower end of this push pin reciprocates freely through and is adjusted to project below members 88 and 89 of the lock base yoke M when urged downwardly by the companion operating rod 34. Each key operating rod 34 is provided with an expandable helical spring 101 between the block 98 thereon and the surface of the arm K below of the yoke frame M, to hold the control rods 34 in normally raised position with their lower ends substantially out of contact with the tumbler balls as shown in Fig. 7 and with the companion push pin 100 raised upwardly into the corresponding arm K of the yoke M as shown in Fig. 6. The yoke frame M which is supported by the cabinet frame

structure is rigidly mounted by the upstanding posts 102 of the supporting cabinet frame by the screw and frame connections 103. This supporting frame has a pair of upstanding stationary guide pins 104 for a carriage 105 which is vertically reciprocable and carries on its lower end the integral key plate 46. This key plate registers upwardly against the lower ends of all of the push pins 100 and is urged into superior position by the expandable helical spring 106. The key plate 46 can thus be pressed down into lowermost position as shown in Fig. 8, by the downward thrust movement of any one of the push pins 100 which is permitted by the chain of tumbler balls 91, in either one of the yoke arms of the gate. The carriage 105 supports the upwardly extending catch J with which the operating latch H and releasable lock pawl I of the coin control are positioned so as to cooperate and cause the operation of any one of the dispensing units through the operation of the coin control and the selecting mechanism which is governed automatically by the locking mechanism thus described.

Operation

It is noted that all of the thrust operating rods 34 are normally retained in raised position as shown in Fig. 7, above the members of the chain of tumbler balls 91 and that the push pin operated key plate 46 is retained under the influence of the expansion spring 106 in elevated locked position as shown in Fig. 6, by the lock pawl I which engages below the catch J as shown in Fig. 10. In this condition and in the absence of a suitable coin being deposited in the machine all of the hand operable pull elements 13 are prevented from being operated to actuate any of the dispensing units, due to the locking key plate 46 being held immovable in the position shown in Fig. 6 by the lock pawl. Also the operating latch H rests in a position below to be engaged by the catch J when the key plate is pressed downwardly by any one of the push pins 100 during the operation of any one of the dispensing units. During the rest period of the dispensing units the chain of balls 91 remains inactive while the push pins 30 are held above them by the springs 101 and the springs 30 on the operating pull rods 13.

When a suitable coin is deposited in either of the coin slots 11 and 12, and enters the shoe 54 against the guide rollers 74 and the operating pull rod 13 of any one of the dispensing unit actuating devices D is pulled outwardly by the corresponding hand piece 18, the coin is projected forwardly by the coin ejector 43 against the guide roller 74 and released by the swinging movement of the rocker arm 43. The motion of the rocker arm also releases the lock pawl I by the pin 79 through the swinging movement of said arm and permits said arm which is connected by link 32 with arm 19 of one of the actuating units to depress the push pin key plate 46 and swing the latch H down. The stroke of latch H is transmitted to rocker arm 43 and the ratchet mechanism to operate the latter. This operation is controlled by the chain of tumbler balls which permits only one dispensing unit at a time to function, the remaining operating rods and their companion dispensing units and actuators being locked against functioning while only one selected dispensing unit is being operated. A complete forward and return stroke during each operation is required by the pawl 31 on the actuator. At the end of each complete operation the rod 34 which functions is returned automatically to ele-

vated position by its spring above the tumbler balls, leaving the machine in readiness for either another dispensing unit to be operated by depositing a suitable coin in the machine, or for the dispensing unit which has been operated to be successively operated, provided a suitable coin has been deposited in the machine to permit successive operation. In the latter case assuming that a five cent coin has been deposited in the machine the coin is released through the coin path 10 step by step by the coin release segments 44 and each time the chain of balls permits any one of the dispensing units in the machine to function one at a time while the remaining units are blocked from operating.

The tumbler balls being assembled in two groups which are connected by the yoke 93 permits the operation of two groups of dispensing units in a single machine by a single coin control E, thus economizing space and reducing the amount of mechanism and corresponding reduction in expense in production. They also permit the operation of any single dispensing unit of the entire group and permit the operation of a single dispensing unit a number of times by the use of a single coin or a number of different units by a single coin. In the latter case one of the dispensing units can be used to dispense coins to make change, a coin dispensing unit of this character forming the subject matter of an application for patent about to be filed by applicant. For instance if a five cent coin is deposited in the machine and only two one penny units are operated, three pennies can be dispensed as change by the coin dispensing unit.

The above apparatus is susceptible by slight modification of being operated by a coin of five, ten or larger denomination, to dispense articles through a selected number of operations of the dispensing units. Also the parts may be made to dispense two articles by a single coin, in which event only two segments instead of five are employed. After operating a dispensing unit twice or after two operations of different units the coin of required denomination may be discharged.

In accordance with the patent statutes, I have described the principles of operation of my invention, together with the apparatus which I now consider to represent the best embodiment thereof, but I desire to have it understood that the construction shown is only illustrative and that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claims.

I claim:

1. In a dispensing machine, a plurality of groups of vertically disposed manually movable actuators, a movable locking plate having a catch normally preventing members of said groups of actuators from functioning, a latch adapted to be actuated by the movement of said locking plate, a lock pawl normally preventing the actuation of said locking plate and movable through the operation of the dispensing machine to release said plate, groups of spring retracted control elements corresponding with the groups

of said actuators, a plurality of series of tumblers below and corresponding with the groups of control elements, and means connecting the groups of tumblers to permit only one control element and a corresponding dispensing unit functioning at a single operation of all of the groups of control elements.

2. In a dispensing machine, a plurality of groups of manually movable actuators, a reciprocable locking element having catch means normally preventing members of said groups of actuators from functioning, latch means adapted to be actuated by the reciprocation of said locking element, lock pawl means normally preventing the actuating movement of said locking element and movable by the operation of the dispensing machine to release said locking element, companion groups of spring retracted control elements corresponding with said actuators, a chain of tumblers below and corresponding with each group of control elements, reciprocable means connecting the chains of tumblers to permit only one control element and a corresponding dispensing unit functioning at a single operation of all of the groups of control elements.

3. In a dispensing machine, a plurality of groups of manually movable actuators, a reciprocable locking element having catch means normally preventing members of said groups of actuators from functioning, latch means adapted to be actuated by the reciprocation of said locking element, lock pawl means normally preventing the actuation of said locking element and movable by the operation of the dispensing machine to release said locking element, a yoke frame between the arms of which said locking element is retained and through which said actuators are reciprocable in cooperation with said locking element, a chain of tumblers movably disposed in each of the arms of said yoke frame, companion groups of spring retracted control elements corresponding with each chain of tumblers in each arm of said yoke frame, and walking beam means reciprocably mounted on said yoke frame and connecting the chains of tumblers to permit only one control element and a corresponding dispensing unit in both of said groups functioning at a single operation of one of the control elements of both of said groups.

4. In a structure as defined in claim 1, the connecting means between the groups of tumblers comprising a walking beam having its ends abutting the ends of the series of tumblers of said groups to transmit operating motion from one group of tumblers to another.

CHARLES F. PEASE.

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