

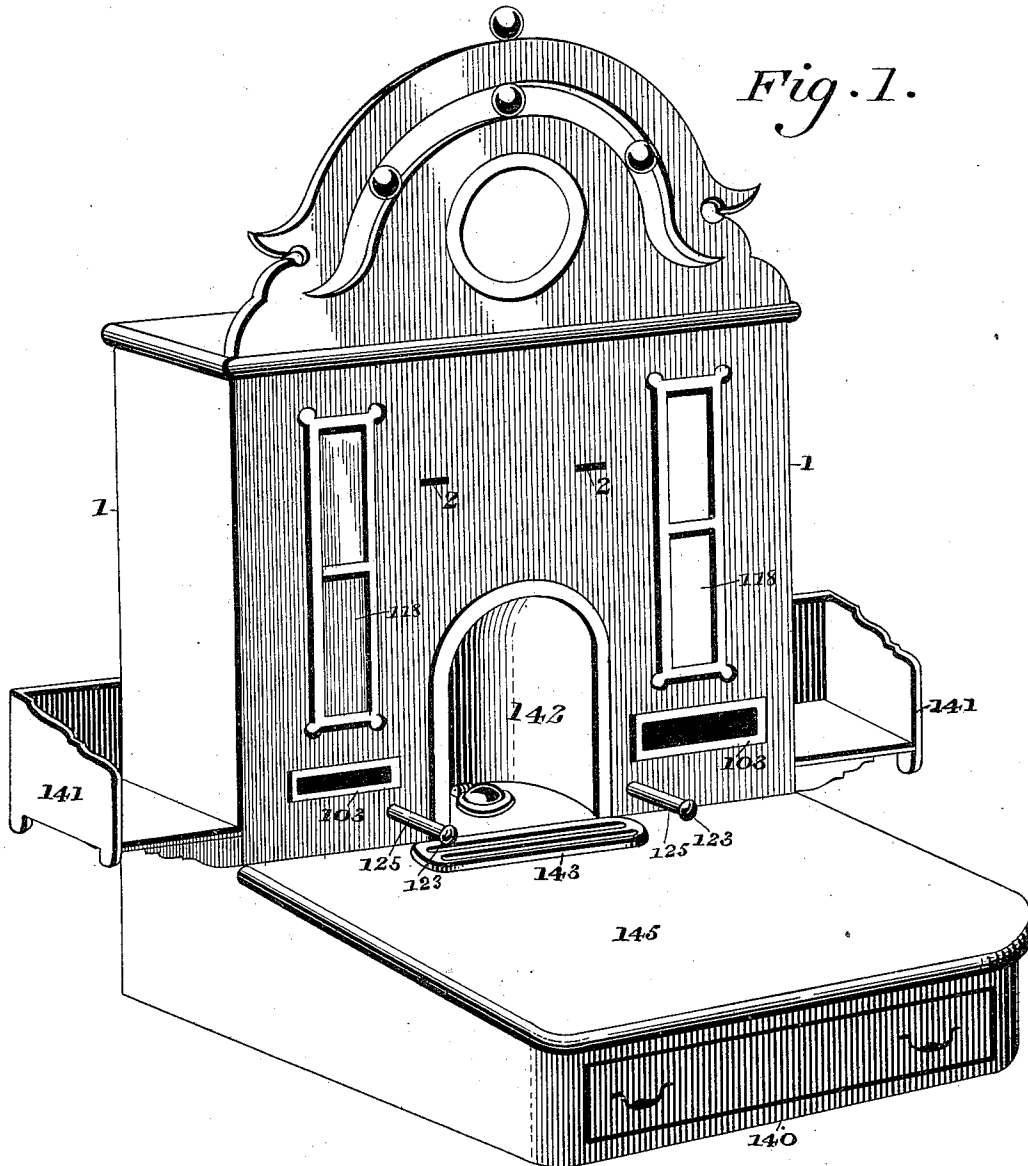
(No Model.)

7 Sheets—Sheet 1.

M. E. FAGAN.
COIN CONTROLLED VENDING APPARATUS.

No. 566,390.

Patented Aug. 25, 1896.



Witnesses
P. H. Bagley,
L. Douville.

Inventor
Maurice E. Fagan.
By John D. Dierckheim
Attorney

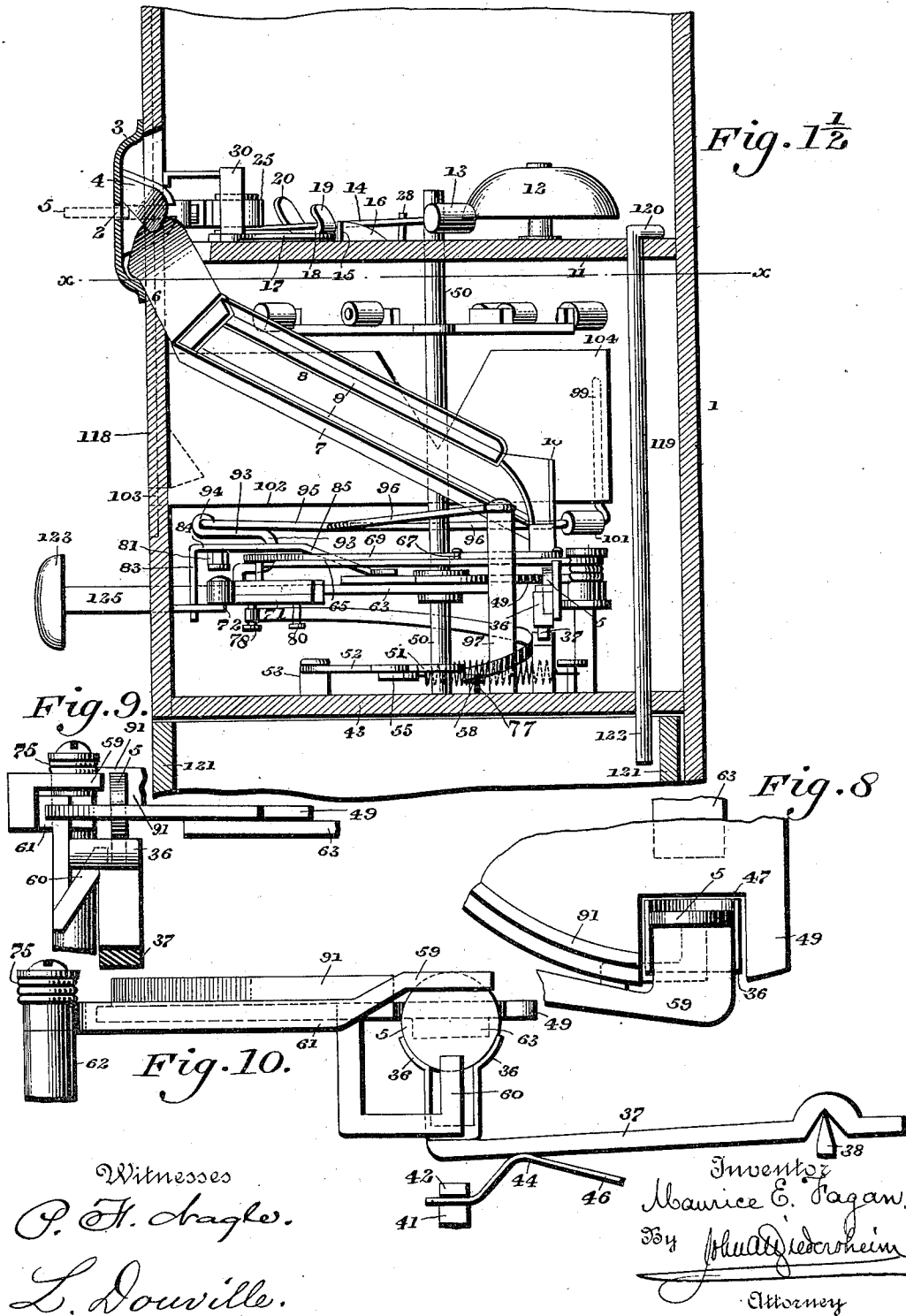
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Fig. 2.

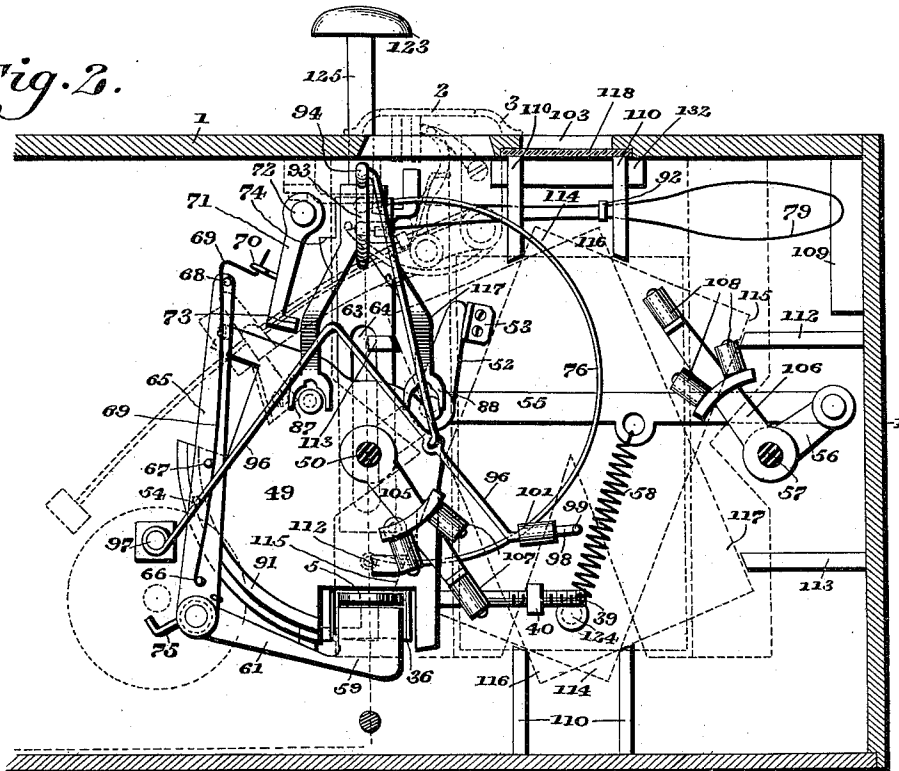
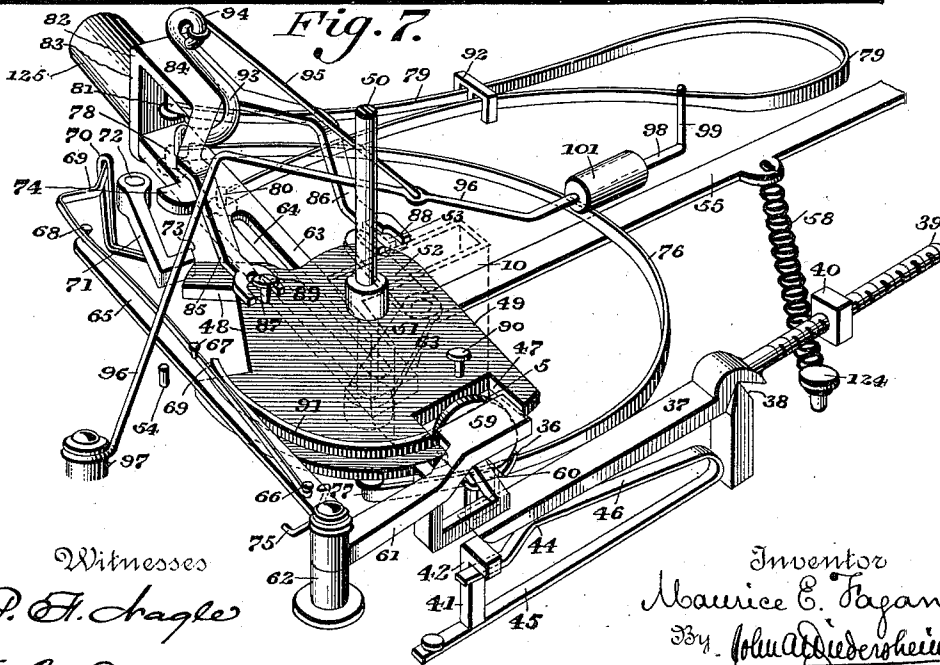


Fig. 7.



Witnesses
P. F. Hagler
L. Douville,

Inventor
Maurice E. Fagan.
By *John A. Diederichsen*
Attorney

(No Model.)

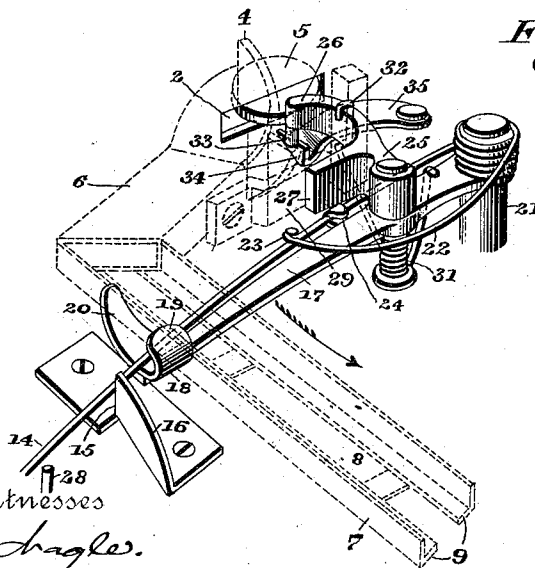
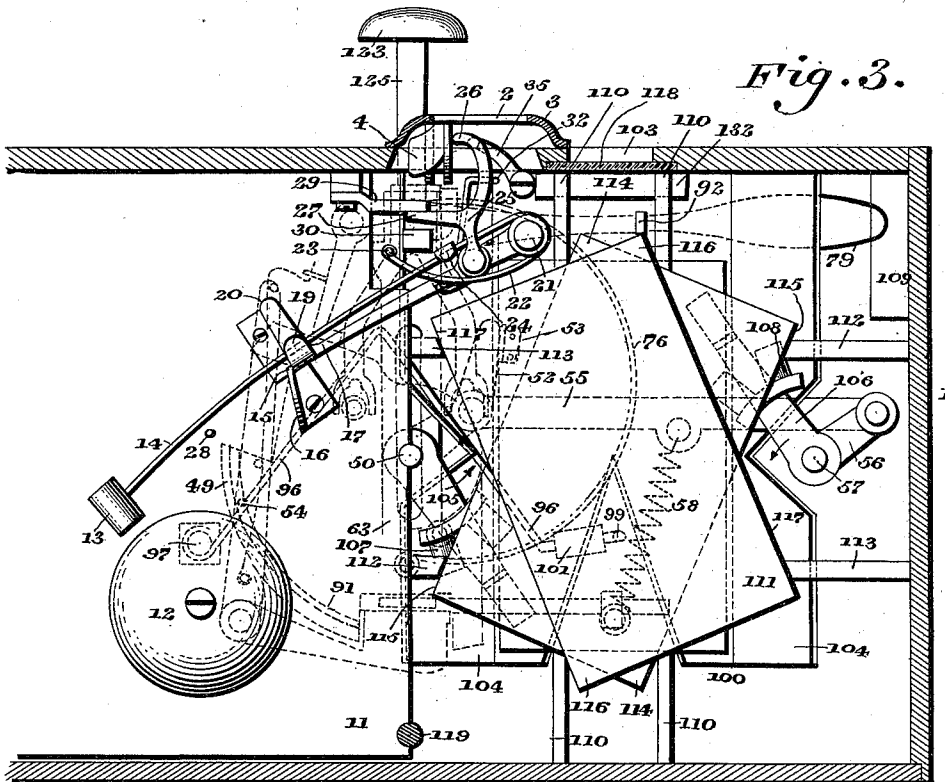
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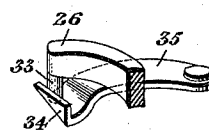
Witnesses

P. H. Hagle.

L. Douville.

Fig. 4.

Fig. 4^{1/2}



Inventor
Maurice E. Tagan,
By Paul Wiedersheim
Attorney

(No Model.)

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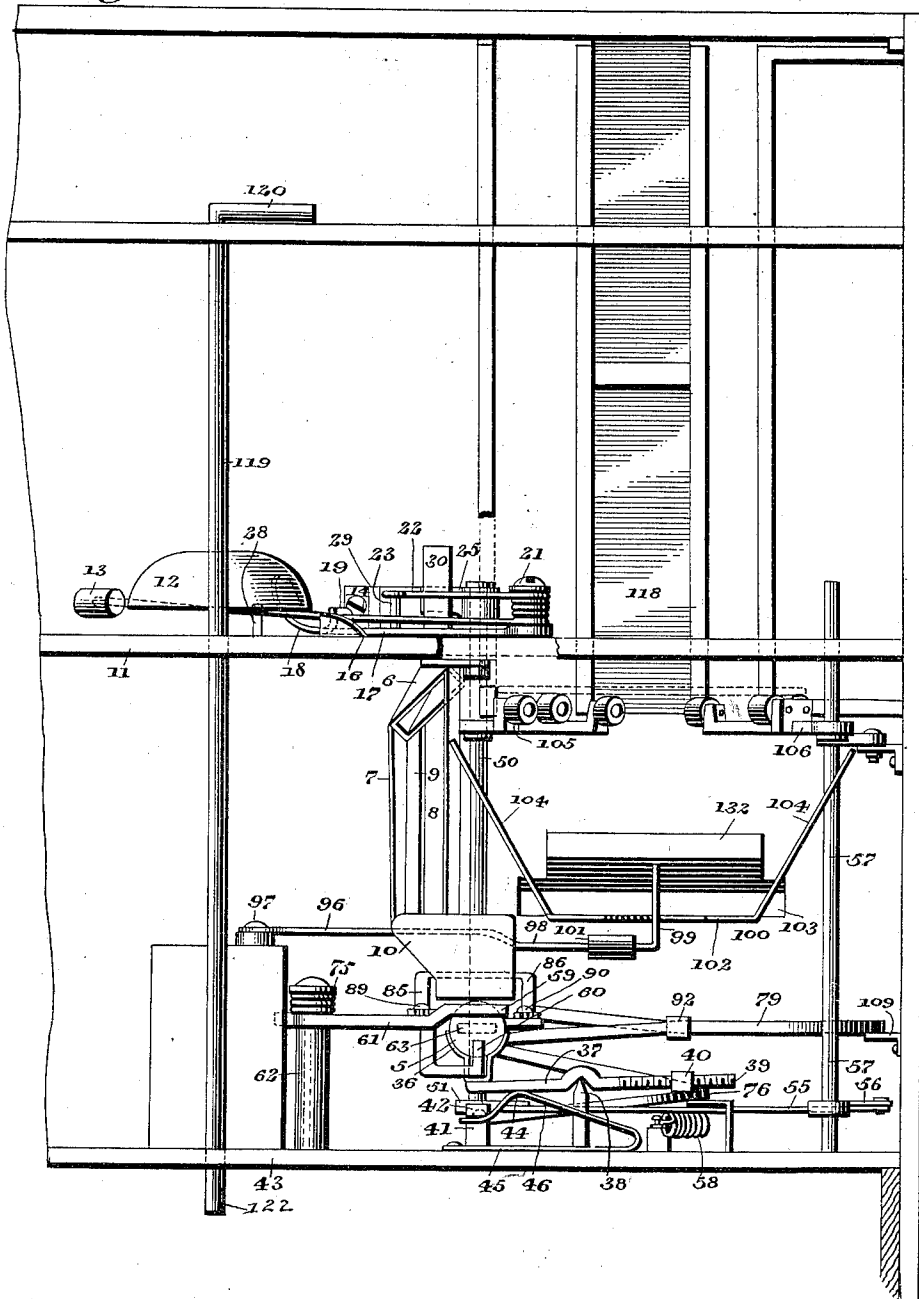
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Patented Aug. 25, 1896.

Fig. 5.



Witnesses

P. H. Bagley.

L. Douville.

Inventor
Maurice E. Fagan.
By *John J. J. J. J.*
Attorney

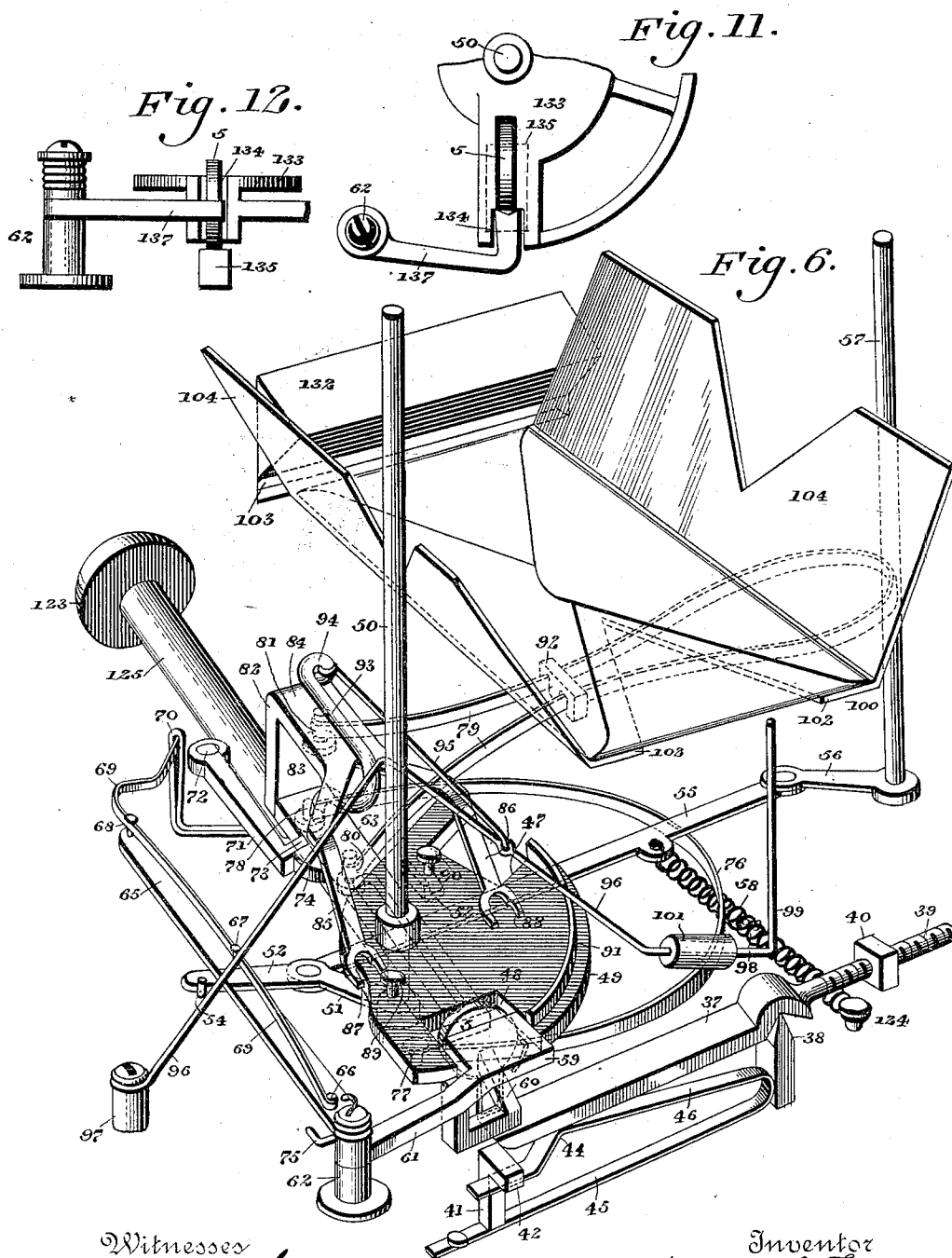
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7 Sheets—Sheet 6.

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Patented Aug. 25, 1896.



Witnesses
P. F. Hagle
L. Douville.

Inventor
Maurice E. Fagan
By *John A. Peters*
Attorney

(No Model.)

7 Sheets—Sheet 7.

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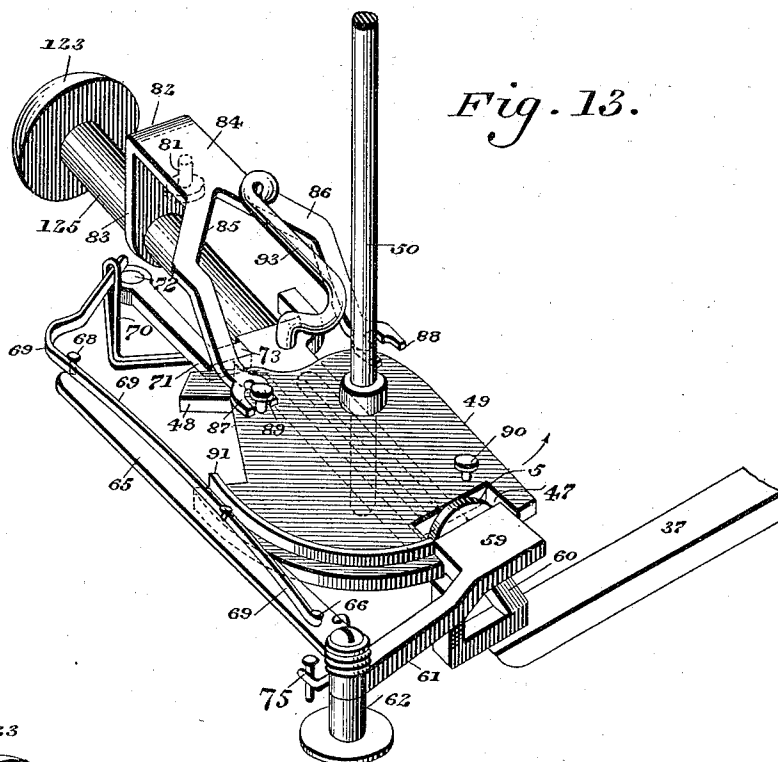


Fig. 13.

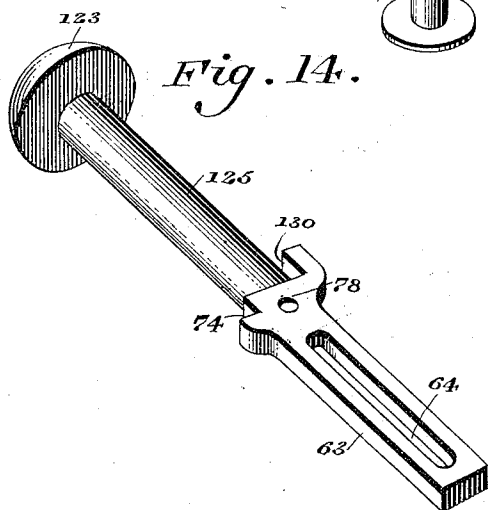


Fig. 14.

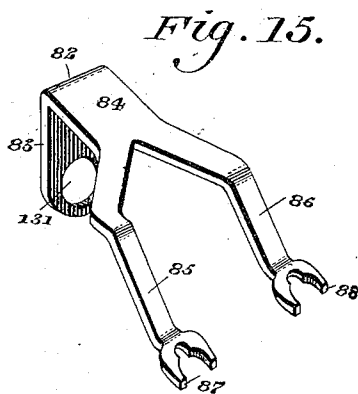


Fig. 15.

Witnesses

P. H. Taylor.
L. Douville.

Inventor
Maurice E. Fagan.
By *John A. Frederickson*
Attorney

UNITED STATES PATENT OFFICE.

MAURICE E. FAGAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
THOMAS J. MARTIN, JR., OF SAME PLACE.

COIN-CONTROLLED VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 566,390, dated August 25, 1896.

Application filed December 29, 1894. Serial No. 533,283. (No model.)

To all whom it may concern:

Be it known that I, MAURICE E. FAGAN, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Coin-Controlled Vending Apparatus, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a novel construction of coin-controlled vending apparatus, which is especially adapted for the reception and delivery of envelopes, sheets of paper, postal cards, and similar articles, provision being made for the detection of spurious coin, the latter being tested as to diameter and weight, and eventually discharged from a suitable portion of the apparatus without enabling the same to be operated if the said coin fails to come up to the standard.

It further consists of a novel construction of weighing apparatus and its adjuncts which receive and sustain the coin which makes the machine operative.

It also consists of novel safeguards which prevent improper manipulation of or tampering with the apparatus.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a perspective front view of a casing or desk inclosing the operative parts of a coin-controlled vending apparatus embodying my invention. Fig. 1½ represents a vertical sectional view of said coin-controlled vending apparatus. Fig. 2 represents a transverse section of the same on line *x x*, Fig. 1½, the coin-carrying frame being removed for clearness of illustration. Fig. 3 represents a plan view of Fig. 1½, the casing being shown in section. Fig. 4 represents on an enlarged scale a perspective view of a portion of the device shown in Fig. 1½, showing especially the alarm-sounding device and the mechanism for receiving and conveying the coin downwardly. Fig. 4½ represents a detail view of portion of Fig. 4, showing certain of the parts in a different position. Fig. 5 represents on an enlarged scale a rear elevation of the apparatus. Fig. 6 represents a perspective view of another portion of the device, showing especially the plunger-act-

ated mechanism and the tray which receives the articles to be vended prior to their delivery from the apparatus. Fig. 7 represents a perspective view similar to Fig. 6, but showing certain of the parts in a different position. Figs. 8, 9, and 10 represent on an enlarged scale detached plan, side, and front elevations, respectively, of the weighing device for detecting spurious coin. Figs. 11 and 12 represent plan and side elevations of portions of a modified form of disk for receiving the coin prior to the contact of the latter with the plunger. Fig. 13 represents a detail view showing in perspective the position of the plunger and its adjuncts during the initial movement of the former. Fig. 14 represents a perspective view of the plunger detached. Fig. 15 represents a perspective view of a frame provided with recesses for engagement with stops or pins on an oscillatable disk, to be hereinafter referred to.

Similar numerals of reference indicate corresponding parts in the several figures.

Referring to the drawings, 1 designates a suitable casing, within which are contained the operative parts of the device.

2 designates a slot in a suitable boss 3, attached to the front of the casing, in which slot a coin 5 may be inserted when it is desired to make the machine operative.

4 designates a curved guiding-piece adjacent to said slot, which serves to direct the coin into the chute 6, wherefrom said coin is discharged into the inclined tilted frame or track 7, which has the longitudinally-extending opening 8 throughout its length and is provided with the ledges 9 on each side of said opening, which in conjunction with the sides of the frame support the coin as it rolls down into the hopper 10, as is best seen in Figs. 1½ and 5. The longitudinal opening 8 of the said frame 7 is to be of such width that a coin of less than the standard diameter for which the machine is adapted will fall through the opening 8 to the bottom of said machine, and so will not reach the hopper 10. When a coin is inserted into the slot 2, this fact is announced by the ringing of a suitable alarm, the mechanism for sounding which being best seen in Figs. 1½, 3, and 4.

11 designates a shelf secured in the upper

portion of the casing to which a gong 12 is attached. 13 designates a hammer for sounding said gong, said hammer being mounted on a wire 14 or similar vibrating support.

5 15 designates the upright portion of a stop, against which the wire 14 normally contacts, the top 16 of said stop curving from the edge 15 down to its point of attachment to the shelf 11.

10 17 designates a lever which has secured to one end thereof the curved strip 18, each end of which is bent in directions nearly parallel to each other, as best seen in Figs. 1 $\frac{1}{2}$ and 4, the end 20 being bent gradually, while the end 19 is bent up, so as to overhang and partially inclose the wire 14, the latter being returned to its normal position by its engagement with said bent-up end 19, as will be evident. The other end of said lever 17 is pivotally mounted on the post 21, around which an end of the wire 14 is coiled, thus forming a spring, the other end 22 of said spring being brought around from said post and attached to a suitable fixed point 23.

25 24 designates a hook attached to the lever 17 at a point about midway its length, in which the wire 14 rests, the movement of the latter in either direction thus being limited by said hook 24 and the bent portion 19 of the strip 18.

28 designates a pin for preventing the hammer 13 from normally resting on the gong 12.

25 25 designates a bell-crank having an extension which is pivotally attached to the lever 17 near the pivotal point 21 of the latter, said bell-crank having the arms 26 and 27, the former arm being slightly curved, while the latter is substantially straight.

40 29 and 30 designate stops which limit the movement of the arm 27 in either direction.

31 designates a spring which is coiled about a stud projecting from the under side of the lever 17, at or about the junction of the latter with the bell-crank 25, one end of said spring being secured to a suitable portion of said lever 17, while the other end 32 is attached to the arm 26 of said bell-crank, as is best seen in Fig. 4. 33 designates a pin which depends from said arm 26 and contacts with the upturned face of the lip or flange 34 of the flat spring 35, whose other end is suitably attached to the shelf 11.

It will thus be seen that when a coin is inserted in the slot 2, as seen in Figs. 1 $\frac{1}{2}$ and 4, the arm 26 of the bell-crank will be pushed inwardly by the contact of the coin therewith before the latter can enter the chute 6, the said bell-crank being capable of a slight rotary movement relative to the lever 17 by reason of its pivotal connection with the latter. This inward movement of said bell-crank will impart a movement to the lever 17 in the direction of the arrow in Fig. 4, and the curved end 20 of the strip 18 will raise the wire 14 up over the upright edge 15, thus allowing said wire to forcibly contact with the pin 28, thereby causing the hammer 13 to

vibrate and strike the gong 12, the pin 33 riding around the upturned end face 34 of the spring 35, and then back of said face, as seen in Fig. 4 $\frac{1}{2}$, and then being forced by reason of the inclination near the end of said spring 35, in conjunction with the upward resiliency of the latter, toward the front of the machine, the parts finally assuming the position seen in Fig. 4 and ready to be operated again. The coin 5 after leaving the hopper 10 falls upon the scale-pan 36 of the weighing device, which is seen on an enlarged scale in Figs. 8, 9, and 10. The said scale-pan 36 is attached to the beam 37, which is fulcrumed to the knife-edge 38, beyond which the beam 37 has a threaded extension or stem 39, on which is screwed a nut 40, which latter serves as a weight, the position of said nut being readily adjusted with respect to the fulcrum 38, as is evident.

41 designates an angle-shaped piece which has a foot attached to the base 43 of the casing and an overhanging portion 42, against which abuts the free end of one limb, 46, of a spring which has an upward curvature 44 therein, upon which latter the aforesaid scale-beam 37 rests, the other limb, 45, of said spring resting on the base 43.

Before the coin 5 reaches the scale-pan 36 it passes partially through either of the recesses 47 or 48 in the disk 49, which latter in the present instance conforms to substantially the shape of a quadrant, the recesses being located therein at substantially an obtuse angle to each other, as is best seen in Figs. 6 and 7, in which the said disk is shown in the two different extreme positions it may assume. The said disk is attached to the upright oscillating rod 50, which is mounted in suitable journals and has secured to its lower extremity the arm 51, which has a projecting portion 52, which is adapted to contact in its extreme positions with either the stop 53 or 54. 55 designates a connecting-rod which has one end pivotally attached to a suitable portion of the arm 51, while its other end is pivoted to the arm 56, the latter being secured to the oscillating stem 57, which is mounted in suitable journals.

58 designates a spring having one end attached to the connecting-rod 55, at or about its middle point, while its other end is secured to a fixed point 124, the function of said spring being to accelerate the movement of the connecting-rod in either direction after the latter leaves its dead-center or middle position, and to thus render positive the movement of the disk 49, the arms 51 and 56, and the rod 50 and stem 57, to which said arms are attached.

As the coin rests in the scale-pan 36 it is prevented from being dislodged therefrom by its contact with the walls of the recess 47 or 48 in the disk 49, as the case may be, and also by its contact with the head 59 and the end of the arm 60, which are attached to the lever 61, which latter is pivotally mounted at

62, whereby said head can be readily moved toward or away from the recesses 47 or 48 at the proper intervals. The said head projects normally over whichever recess of the disk 49 may be adjacent to it, and is substantially in contact with the upper portion of the coin 5, while the end of the arm 60 contacts with the lower portion of the coin, as is best seen in the enlarged views in Figs. 8, 9, and 10.

63 designates the flat portion of the plunger 125, which has a knob 123 thereon, said flat portion being provided with a longitudinally-extending slot 64 therein, through which passes the lower end of the upright rod 50, the latter thus serving as a guide for said plunger, which is suitably supported at such a height that its inner end will be on a level with the central portion of the coin, if the same is up to the standard, as is best seen in Figs. 5, 9, and 10. The flat portion 63 is joined to the cylindrical portion 125 of the plunger in any suitable manner, a shoulder 130 being provided near their junction, Fig. 14. If the coin should be too light, *i. e.*, lighter than the scales have been adjusted for, the scale-pan 36 will rise and will carry the bottom of the coin above the top of the arm 60, so that when the plunger contacts with the coin the latter will be pushed out of the scale-pan without moving the lever 61. If the coin 5 should prove to be too heavy, the scale-pan 36 will be depressed to such an extent that the top of the coin will be below the head 59, whereupon the contact of the end of the plunger 63 with said coin will, as before, push the latter out of the scale-pan without moving the lever 61. It will thus be seen that by the employment of the track or frame 7 and the weighing mechanism and its adjuncts, assembled as described, a spurious coin of less than the standard diameter or a disk above or below the standard weight will either fall through the opening 8 or will be pushed out of the scale-pan 36 without operating the machine, as will be hereinafter explained.

65 designates a bar which is attached to the lever 61 at substantially a right angle, said bar having on one of its faces the pins 66, 67, and 68, which hold in position the sensitive spring 69, the latter contacting with opposite sides of the said pins successively, as is best seen in Figs. 2, 6, and 7, one end of said spring being attached to the pin 66, while the other end thereof after leaving the pin 68 is bent so as to engage a loop 70, which latter is attached to a suitable portion of the latch 71, which is pivotally attached at 72 and has the nose 73, which is adapted to engage the catch 74 on the plunger 63 at certain intervals, as will be explained.

75 designates a suitable spring which engages the end of the lever 61 at its junction with the bar 65, in such a manner that its tendency is to overcome the movement given to the head 59 when the latter is moved outwardly by the contact of the plunger with the

coin when the same rests in the scale-pan, and thus cause said head to return toward the recess 47 or 48, as the case may be, when the plunger is returned to its first position.

76 designates a spring which has one end, 77, attached to an immovable point, in the present instance underneath the disk 49, while its other end, 78, is secured to the under side of the plunger 63.

79 designates another spring having a portion supported by a bracket 109, said spring having one end, 80, attached to the under side of the flat portion 63 of the plunger 125, while its other end, 81, is secured to a suitable portion of the frame 82, Fig. 15, which latter consists of the upright part 83, through the hole 131 in the lower portion of which passes the plunger 125, and the laterally-projecting portion 84, which is bifurcated, thus forming the two arms 85 and 86, which are inclined downwardly and have their ends bent laterally and forwardly, forming feet which are nearly in contact with the top of the disk 49 when in position. The foot of each of the said arms 85 and 86 has recesses 87 and 88, respectively, therein, which engage alternately the headed pins 89 and 90, which are attached to the disk 49 at such a point that when the latter is in either of its extreme positions the pin 89 will be in front of the recess 87 in the arm 85, in readiness to be engaged thereby, or the pin 90 will be in front of and in proximity to the recess 88 of the arm 86 when the frame 82 is in its normal position. 91 designates a curved flange which is attached to the disk 49 and extends between the recesses 47 and 48 and is adapted to be in contact with the head 59 when the disk 49 moves, as will be evident from Fig. 10.

92 designates a bar having notches therein, which engage adjacent portions of the spring 79, said bar being adjustable along said spring, so as to vary the tension of the same.

93 designates a gooseneck which has its lower extremity attached to the plunger 63, while its upper portion curves upwardly above the lateral portion 84 of the frame 82. The upper extremity 94 of said gooseneck has one end of the forwardly-extending wire 95 attached thereto, the other extremity of said latter wire being suitably secured to the wire 96, which is bent into substantially the form of a right angle, one end of said wire being attached to the post 97, while the other or free end is first bent laterally at 98, thence upwardly at 99, thus forming a finger whose function is to propel the articles vended toward the delivery-opening, as will be explained, said finger terminating a short distance above the bottom of the tray 100.

101 designates a suitable weight carried by the portion 98 of said wire 96 for the purpose of giving momentum to the finger 99, and it will of course be understood that the said finger may be supported in any suitable manner. The said tray 100 consists of the base portion 102, which is on substantially the same

or a higher level than the delivery-opening 103, and of the side portions 104, which slope upwardly and outwardly and are provided with holes or notches for the upright rods 50 and 57 to pass through, the said tray being supported in any suitable manner.

105 and 106 designate arms which are mounted on the rod and stem 50 and 57 at a short distance above the tops of the sides 104, said arms being parallel to each other and pointing in opposite directions, as is best seen in Figs. 2 and 3, and having the sets of rollers 107 and 108, respectively, suitably mounted on said arms.

110 designates a series of upright vertical strips which are arranged in pairs on the opposite sides of the casing and have their inner longitudinal edges chamfered in opposite directions, as is best seen in Figs. 2 and 3.

112 and 113 designate other vertical strips which are arranged in pairs at right angles to said strips 110 and have their edges chamfered, as is best seen in Fig. 3.

111 designates the articles to be vended, which may be envelops, sheets of paper, postal cards, &c., the same being superimposed upon each other, their corners being out of alinement, as seen in Figs. 2 and 3, the bottom envelop resting upon the rollers 107 and 108 and its diagonal corners 114 being located between the opposite strips 110, while its long sides 115 will rest against the strips 112. In like manner the diagonal corners 116 of the next envelop will be located between the opposite strips 110, while its long sides 117 will contact with the strips 113.

118 designates a pane of glass located above the delivery-opening 103, so that the number of envelops in the apparatus can be at all times readily ascertained.

119 designates a locking device for the drawer 121, the same consisting of a rod passing through the partitions 11 and 43, and having one end, 120, bent at an angle, so as to rest on the top of the said partition or shelf 11, while the other end, 122, projects into said drawer, as seen in Fig. 1, so that the latter cannot be opened, as is evident.

132 designates a beveled block having inclined faces, as best seen in Fig. 6, said block being located above the delivery-opening and serving to facilitate the delivery of the envelops through the slot 103 and to prevent the envelops from sticking in case a corner is turned up, &c.

In Figs. 11 and 12 a different construction of disk and lever supporting the coin is shown, which may be substituted for the disk 49 and the lever 61, having the head 59, hereinbefore described.

133 designates the disk, which is mounted on the rotatable rod 50, as before, said disk having slots 134 at right angles to each other, in which the coin 5 is received from the hopper 10, said coin falling on a suitable support 135.

137 designates the lever, pivotally mounted

at 62 and having the spring 75, said lever having the head 138 at right angles to it and entering said slot 134, so as to contact with the coin 5 when the same is resting therein.

The operation is as follows: Referring first to Figs. 1½ and 4, the coin 5 is first inserted in the slot 2 and pushed against the arm 26 until it is finally within the machine, the pin 33 in the meanwhile riding around the upturned face 34 of the spring 35 from the position seen in Fig. 4 to the back of said face 34 into the position seen in Fig. 4½, and then into the position seen in Fig. 4 again, as has already been explained, the coin having passed nearly into the space between the arms 26 and 27 and being now propelled into the chute 6 by reason of the attachment of the end of the spring 32 to the arm 26, the gong 12 having been rung in the meanwhile by means of the movement of the lever 17, as has been explained. The coin passes from the chute 6 on into the inclined frame 7, and if it proves to be of less than the required diameter it will fall through the opening 8 therein, but if it is of the requisite diameter it will roll along into the hopper 10, where it will be tested as to weight, as has also been explained. If the weight is correct, the said coin will rest in the scale-pan 36, so that the end of the plunger 63 will contact therewith at about its center, as seen in Figs. 5 and 10, the coin being held in position by the head 59 of the lever 61 and the walls of the adjacent slot in the disk 49. If now we suppose the knob 123 of the plunger 125 to be pushed inwardly from the position seen in Fig. 7, the parts will assume the position seen in Fig. 13, it being seen that the plunger 125 has moved through the hole 131 in the frame 82, so that the end of the flat portion 63 is nearly in contact with the coin 5, the gooseneck 93 having also been moved forward, carrying with it the wires 95 96 and the finger 99, Figs. 6 and 7. The frame 82 has remained stationary, being prevented from forward movement by the contact of the recessed foot 87 with the pin 89 in the disk 49, Fig. 13. A further movement of the plunger brings the end of the latter into contact with the coin 5, which latter moves outwardly against the head 59 of the arm 61, and at substantially this instant the nose 73 of the latch 71 is caused to engage the catch 74 on the side of the plunger by reason of the movement imparted to the bar 65, the spring 69, and the loop 70, and thence to said latch, so that the return of the plunger will be prevented by the latch, as is evident. A continued forward movement of the plunger pushes the head 59 of the lever 61 out of engagement with the end of the flange or strip 91, reference being still had to Figs. 7 and 13, and at this instant the spring 79, which is now considerably expanded between the end which is attached to the plunger at 80 and the other end, which is attached to the frame 82 at 81, (said spring being omitted from Fig. 13 for clearness of illustration,)

will cause the frame 82 to move or jump forward, a slight circular movement being imparted to said frame, and the recessed foot 87 will engage the pin 89 on the disk 49, and the latter will be moved in the direction of the arrow, Fig. 13, into the position seen in Fig. 6, by reason of the energy stored up in said spring 79. The spring 58 accelerates the movement of the disk 49 in either direction beyond the dead-center of the connecting-rod 55, as will be evident, and renders the movement positive by reason of the pivotal attachment of said rod to the arms 51 and 56, said arm 51 having an extension 52, which is adapted to contact in its extreme positions with the stops 53 54, which thus positively limit the movement of the disk 49, as well as of the upright rod and stem 50 and 57. The head 59 of the lever 61 rides against the flange 91 as the disk moves into its extreme positions. The nose 73 of the latch 71 is held in engagement with the catch 74 by reason of the backward pressure exerted by the spring 79 upon the plunger; but when the continued forward movement of the plunger has pushed the coin against the head 59 of the lever 61, so as to impart the proper extent of movement to the bar 65, the catch 74 has moved slightly away from the latch 71, and at this period the sensitive spring 69 throws the latch out of engagement with said catch and the plunger is returned to its initial position by the action of the spring 76, which has one end attached to a fixed point and the other to the plunger 78, the shoulder 130 of said plunger engaging the vertical portion 83 of the frame 82, so that said plunger-frame 82 and gooseneck 93 all move back outwardly, or toward the operator, and simultaneously with the back movement or jump of the said gooseneck the finger 99 is brought into contact with the edge of the envelop lying in the bottom of the tray 100, Fig. 6, the said finger acquiring considerable momentum in its back movement by reason of the weight 101, and the envelop will thus be propelled toward the delivery-opening 103, the beveled faces of the block 132 preventing the envelop or other article from sticking or getting caught in any way in its passage to said slot 103. On the return movement of the frame 82 the heels of the recessed feet of the arms 85 86 ride freely back over the pin 89 or 90, as the case may be, the heads of said pin being slightly beveled, as are also said heels.

The manner in which the envelops are caused to drop into the tray 100 will now be described, reference being had to Fig. 5.

The envelops are superimposed upon each other, with their corners out of alinement, as has already been described, and it will be seen that the bottom envelop has its corners supported on the rollers on the arms 105 and 106. When now the disk 49 has been caused to rotate, as has already been described, the rod 50 and the stem 57 will also be rotated and the arm 105 will move toward the front

of the apparatus while the arm 106 will revolve toward the rear, as is indicated by the arrows, until they are parallel with the long sides of the bottom envelop, and the said envelop, being unsupported, will fall into the tray, the inclined sides of the latter and the block 132 serving to guide the envelop into the position seen in Fig. 6. On the next movement of the disk 49 the arms 105 and 106 will again assume the position seen in Figs. 2 and 3 and the envelop having the corners and sides 116 and 117, respectively, being unsupported, will fall into the tray 100, as is evident. It will thus be seen that the disk 49 alternately assumes the position seen in Figs. 6 or 7 when a coin has been placed in position and the plunger pushed in, and that on each movement of the said disk an envelop is caused to drop into the tray and is propelled through the delivery-opening by the finger 99, the latter moving toward the envelop after the same has reached the tray.

The operation of the disk 133, Figs. 11 and 12, is the same as has been described with reference to the disk 49.

In the practical embodiment of my invention I arrange a pair of the above-described coin-controlled mechanisms side by side within the upper portion 1 of the desk 140, which latter serves as a base or support for said mechanisms, the general arrangement of the above being shown in Fig. 1, in which the slots 2 for the insertion of the coin and the delivery-slots 103, the operating-knobs 123, and the glass windows 118 are clearly seen, it being understood that envelops may be delivered from one side of the apparatus and sheets of paper from the other, or postal cards or similar articles, or vice versa.

141 designates suitable brackets or shelves which are arranged at the sides of said desk, whose central portion is shown, in the present instance, as having a recess 142, in which may be secured an ink-well, a pen-rack 143 being adjacent thereto. The said desk may be provided with a clock, and upon the lid or portion 145 may be placed advertisements, &c., and said desk may be further provided with drawers and slides, serving as arm-rests, if desired, and it may also be placed upon a counter or provided with legs, as is evident.

It will be understood that various changes may be made in the arrangement of the springs and other details by those skilled in the art which will come within the scope of my invention, and I do not therefore desire to be restricted to the exact constructions I have herein shown and described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a coin-controlled vending apparatus, a casing having a slot for the insertion of a coin, a chute leading therefrom, and a bell-crank arranged adjacent thereto, an arm of the latter having a pin depending therefrom, said pin being engaged by a lip or flange of a

spring suitably secured, and another spring engaging an arm of said bell-crank, substantially as described.

2. In a coin-controlled vending apparatus, 5 a casing having a slot for the insertion of a coin, a bell-crank adjacent thereto, springs for actuating the same, a lever 17 to which said bell-crank is pivotally attached, said lever carrying a curved strip 18, a stop having 10 upright and curved edges 15 and 16, a wire 14 carrying a hammer and actuated by said lever, and a gong, substantially as described.

3. In a coin-controlled vending apparatus, a casing having a slot, a bell-crank adjacent 15 thereto, springs for actuating the same, a lever 17 to which said bell-crank is pivotally attached, said lever carrying a hook 24, and a strip 18 having the bent portions 19 and 20, the wire 14 held in position by the hook 24 20 and strip 18, and having a portion bent to form a spring, the stop consisting of the upright and curved edges 15 and 16, the pin 28, hammer 13 and gong 12, substantially as described.

4. In a coin-controlled vending apparatus, 25 the slotted frame 7, the scale-pan 36, beam 37, suitably fulcrumed the threaded stem 39 attached thereto, the nut 40, spring 46 having the bent portion 44 and the angle-shaped 30 piece 41 suitably secured to the bottom of the apparatus, substantially as described.

5. In a coin-controlled vending apparatus, the slotted oscillating disk 49 having pins 35 therein adapted to be engaged by the feet of the forked frame 82, a plunger having a catch thereon, a latch 71, and means for actuating the same, a lever 61 having a head between which and said plunger a coin is to be interposed, a suitable support for said coin, and 40 the springs 76 and 79 attached and supported, substantially as described.

6. In a coin-controlled vending apparatus, a delivery-slot for the articles to be vended, a 45 tray adjacent to said slot having inclined sides and a recessed bottom, a beveled block above said slot said block serving to direct said articles into said tray as they fall, a vibratile finger adjacent to said tray, and means for actuating the same.

7. In a coin-controlled vending apparatus, 50 the upright oscillating rod and stem 50 and 57, means for actuating the same, the laterally-extending arms 105 and 106 attached to said rod and stem respectively, and adapted 55 to be parallel to each other and to the sides of the articles to be delivered, substantially as described.

8. In a coin-controlled vending apparatus, 60 the upright oscillating rod and stem 50 and 57, having the laterally-extending arms 105 and 106 attached thereto, means for actuating the same said arms being provided with rollers the upright strips 110, 112 and 113, the tray 100, a casing with the delivery-opening 103, the finger 99, and means for actuat- 65 ing the same, substantially as described.

9. In a coin-controlled vending apparatus,

the envelop-supporting arms 105 and 106, the 70 rod and stem 50 and 57 on which said arms are secured so as to be substantially parallel with each other in either of their extreme positions, arms 51 and 56 attached to the 75 lower portion thereof, the connecting-rod 55 pivotally attached to said arms, the spring 58 attached to said rod, the stops 53 and 54 adapted to contact with an extension of one of said arms, a disk connected to said rod 50, and means for actuating the same, substantially as described.

10. In a coin-controlled vending apparatus, 80 the plunger 125 having the flat slotted portion 63 and the catch 74, and passing through the forked frame 82 constructed as shown, the gooseneck 93 attached to said plunger, 85 the finger 99 actuated by connections therefrom to said gooseneck, the latch 71 pivotally mounted adjacent said plunger, means for moving the same into and out of engagement with said catch, the disk having recesses and pins, the spring 79 attached to said 90 plunger and frame respectively, means for adjusting the tension of said spring, the spring 76 attached to said plunger and to a fixed point, the lever 61 having its head in contact at intervals with the flange 91, a stop for limiting 95 the movement of said disk, and means for accelerating the movement of the latter in either direction, substantially as described.

11. In a coin-controlled vending apparatus, 100 the plunger 125 having a catch 74 thereon, and a slot near its extremity, the rotatable disk 49 having the recesses and pins, and flange thereon, the forked frame 82, through which said plunger moves, the lever 61 having the 105 arm 60, the bar 65 attached to said lever, the spring 69 contacting with the pins 66, 67 and 68, as shown, and having its free end engaging the loop 70 attached to the latch 71, whose nose 73 engages the catch 74, the rod 50 on which said disk is mounted, the stem 57 hav- 110 ing pivotal connections to said rod 50, the spring 58, the envelop-supporting arms 105 and 106, the tray 100, the finger 99, means for actuating the latter, and the springs 76 and 79, substantially as described. 115

12. In a coin-controlled vending apparatus, an oscillating disk, recesses therein adapted 120 to receive a coin, a supporting device for the latter, a suitable conduit for said coin, a plunger, supporting devices for stationery, a tray for receiving the latter prior to its delivery from the apparatus, and means for propelling the same therefrom, substantially as described.

13. In a coin-controlled vending apparatus, 125 a casing having a slot therein, a chute and a frame leading from said slot, an oscillating disk with openings therein at the foot of said frame, a scale-pan below said disk, a head, and an arm for holding a coin while in said 130 disk, and a plunger adapted to abut against the said coin, said parts being combined substantially as described.

14. In a coin-controlled vending apparatus,

a casing having a slot, an oscillating disk with openings therein, a hopper to receive said coin, a scale-pan under said hopper, the lever 61 with head 59 adapted to bear against said coin, the plunger 125, the frame 82 with the opening 131 therein, the gooseneck 93 with the connected wires 95 and 96, and the finger 99, the tray 100 with an opening in its base for said finger, the oscillating rod and stem 50 and 57 with arms 105 and 106 thereon, and the beveled block 132 having inclined faces, said casing having the opening 103 on the level of said tray, said parts being combined substantially as described.

15 15. In a coin-controlled vending apparatus, a casing with a delivery-opening therein, a tray with an opening in its base, an oscillating finger passing through said opening, oscillating rods with arms mounted thereon, 20 rollers mounted on said arms, the vertical strips 110 arranged in pairs on opposite sides of the casing, and the vertical strips 112 and 113 arranged in pairs at right angles to the strips 110, said strips 110, 112 and 113 being 25 chamfered as shown, said parts being combined substantially as described.

16. In a coin-controlled vending apparatus, a tray, an oscillating finger adapted to contact with an article on said tray, oscillating 30 rods with arms secured thereto and having rollers thereon, a casing with the strips 110, 112 and 113 arranged in pairs and having chamfered edges, said parts being combined substantially as described.

35 17. In a coin-controlled vending apparatus, a scale-pan with a weighted beam, a spring provided with a limb 46, having an upward curvature 44 supporting the scale-pan end of the beam, and an angle-piece with an over- 40 hanging portion 42, said parts being combined substantially as described.

18. In a coin-controlled vending apparatus, an oscillating disk having the recesses 47 and 48 therein, the pivoted lever 61 with head 59 45 and arm 60, the bar 65 attached to said lever and having the pins 66, 67 and 68, the plunger 125 with projection 74 the spring 69 with a bent end, the latch 71 having the nose 73 and the loop 70 attached to said catch, said parts 50 being combined substantially as described.

19. In a coin-controlled vending apparatus, an oscillating disk with the recesses 47 and 48 therein, the pivoted lever 61 with the head 59 and the arm 60, the pins 89 and 90 on said 55 disk, the plunger 125 the frame 82 with the opening 131 in its upright portion, and provided with the feet 85 and 86, each having a recess therein, and the rim 91 on said disk, said parts being combined substantially as 60 described.

20. In a coin-controlled vending apparatus, an oscillating disk with the recesses 47 and 48 therein, and the pins 89 and 90 therein, the pivoted lever 61 having the head 59, the 65 plunger 125 with the projections 74 thereon, the pivoted latch 71 a spring secured to pins on the bar 65, the latter being connected with

said lever 61, the frame 82 having the opening 131 in which said plunger moves, feet on said frame having recesses to receive said 70 stops on said disk, and the spring 76 having its ends connected with said disk and plunger respectively, said parts being combined substantially as described.

21. In a coin-controlled vending apparatus, 75 an oscillating disk having the recesses 47 and 48 therein, and the stops 89 and 90 therein, the pivoted lever 61 with the head 59 the plunger 125, the frame 82 with the opening 131 and the feet 85 and 86 with the recesses 80 87 and 88, the gooseneck 93 secured to said plunger, the wires 95 and 96 with finger 99, the spring 76 secured to said plunger and a fixed point, and the spring 79 secured to said plunger and frame, said parts being combined 85 substantially as described.

22. In a coin-controlled vending apparatus, an upright oscillating rod, a disk connected therewith having recesses in its sides, a piv- 90 oted lever with a head entering said recesses, a plunger with a slot in its stem through which said oscillating rod passes, an upright oscillating stem, an arm connected with said rod, a link connecting said arm with said 95 stem, and a coil or other spring connected with said arm and a fixed point, said parts being combined substantially as described.

23. A coin-controlled vending apparatus having a casing with a slot therein, a chute, alarm mechanism operated by a bell-crank 100 lever intermediate of said slot and chute, a frame leading from said chute, an oscillating disk with coin-openings therein at the foot of said frame, and means for actuating said disk, said parts being combined substantially as 105 described.

24. A coin-controlled vending apparatus having a casing with a slot therein, a chute leading from said slot, a frame leading from 110 said chute, an oscillating disk at the foot of said frame having openings therein, a scale-pan below said disk, and a head and arm for holding a coin in said scale-pan, said parts being combined substantially as described.

25. In a coin-controlled vending apparatus, 115 a casing having a slot therein, an oscillating recessed disk, a conduit for a coin intermediate said slot and disk, supporting devices for said coin, laterally-extending arms adapted to support stationery, means for keeping 120 the edges of the latter out of alinement, a tray for receiving each piece of stationery successively from said arms, means for discharging the same from the apparatus, and mechanism for actuating said disk, whereby 125 the latter and the stationery supporting and discharging devices are operated in unison, substantially as described.

26. In a coin-controlled vending apparatus, laterally-extending arms adapted to sustain 130 stationery, upright oscillating supports for said arms, upright strips 110, 112 and 113, oppositely arranged as described, and adapted to hold each piece of stationery out of aline-

ment with an adjacent piece, said arms in either of their extreme positions being parallel to each other and to the opposite edges of a piece of stationery, and means for actuating said arms in unison, substantially as described.

27. In a coin-controlled vending apparatus, laterally-extending arms for supporting stationery, said arms being mounted on upright oscillating supports, stops for limiting the movements of the latter, said arms being adapted to be parallel when in either of their extreme positions, and means for actuating said arms in unison, substantially as described.

28. In a coin-controlled vending apparatus, a casing having a slot therein for the insertion of a coin, a chute leading from said slot, an inclined, tilted, slotted, frame into which said

chute discharges, and a spring-actuated bell-crank or elbow lever arranged adjacent said slot having one member adapted to propel a coin into said chute, while the other member of said lever is adapted to contact with suitable stops, substantially as described.

29. A casing having a slot therein, a chute adjacent said slot, a hopper, a straight, inclined, tilted, longitudinally-slotted, frame, intermediate said chute and hopper, a scale-pan below the latter, and a slotted rotatable disk adjacent the same adapted to support a coin in conjunction with said scale-pan, substantially as described.

MAURICE E. FAGAN.

Witnesses:

JOHN A. WIEDERSHEIM,
E. H. FAIRBANKS.