

June 10, 1930.

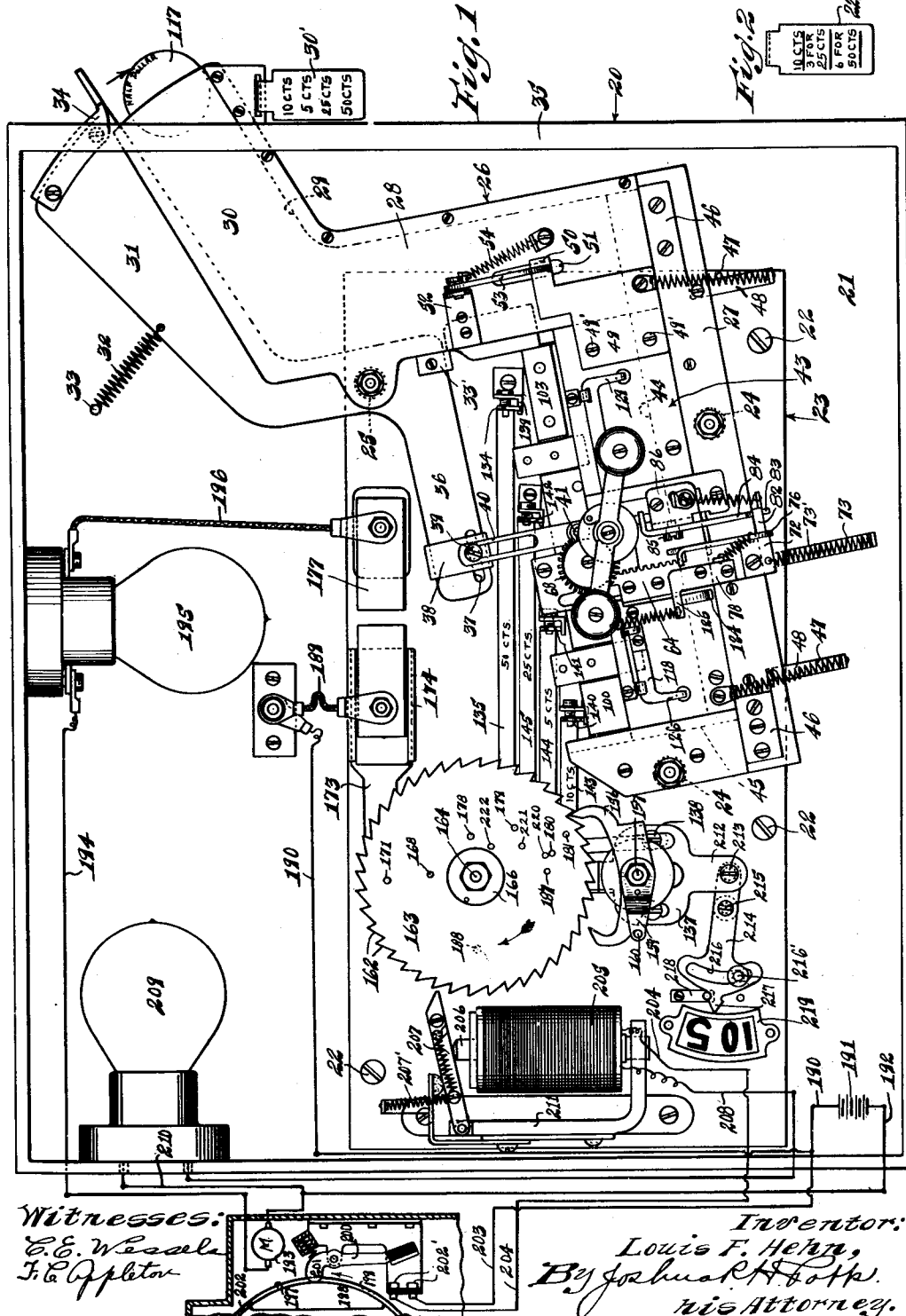
L. F. HEHN

1,763,045

COIN CONTROLLED APPARATUS

Filed May 31, 1927

6 Sheets-Sheet 1



June 10, 1930.

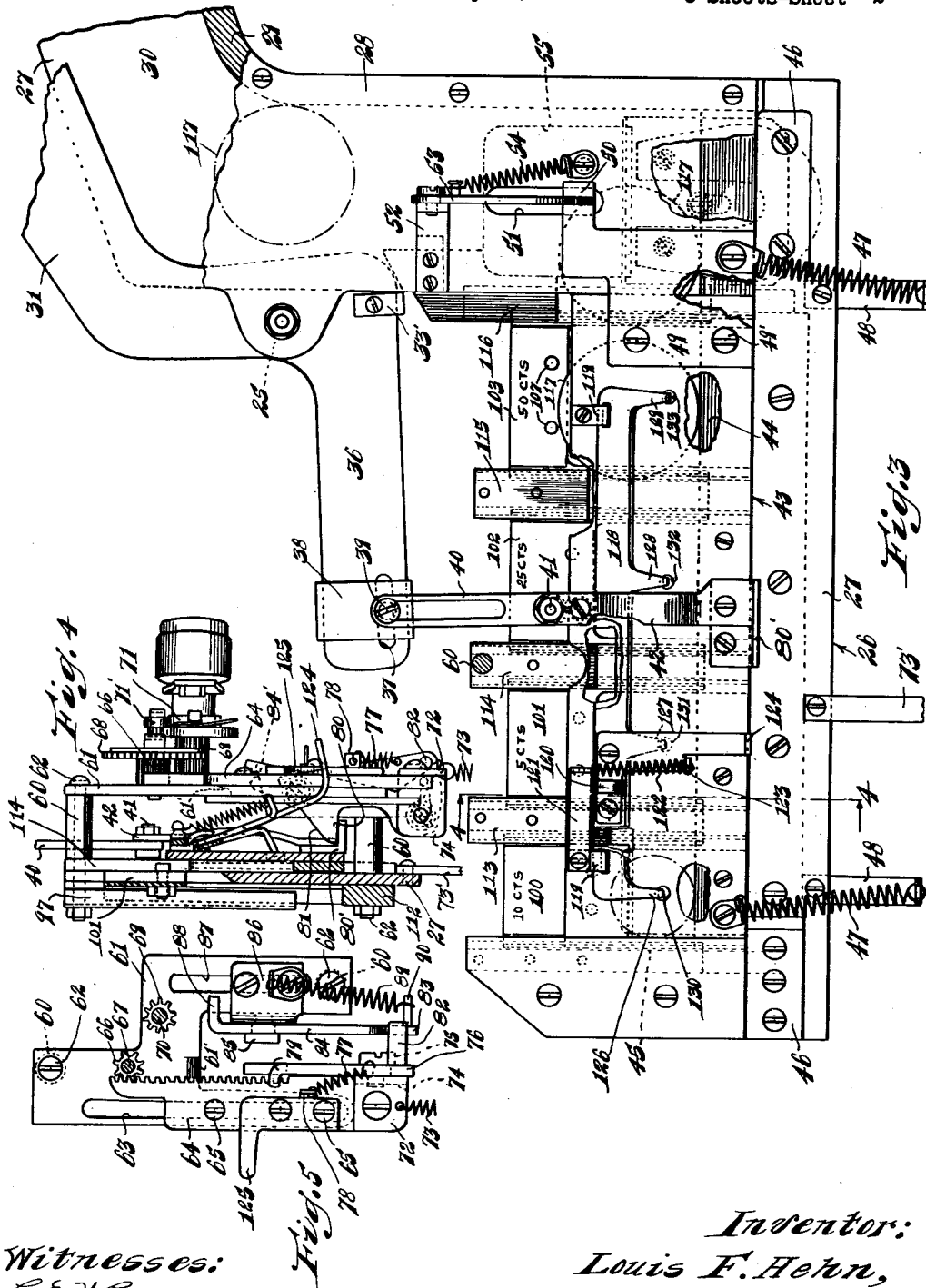
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COIN CONTROLLED APPARATUS

Filed May 31, 1927

6 Sheets-Sheet 2



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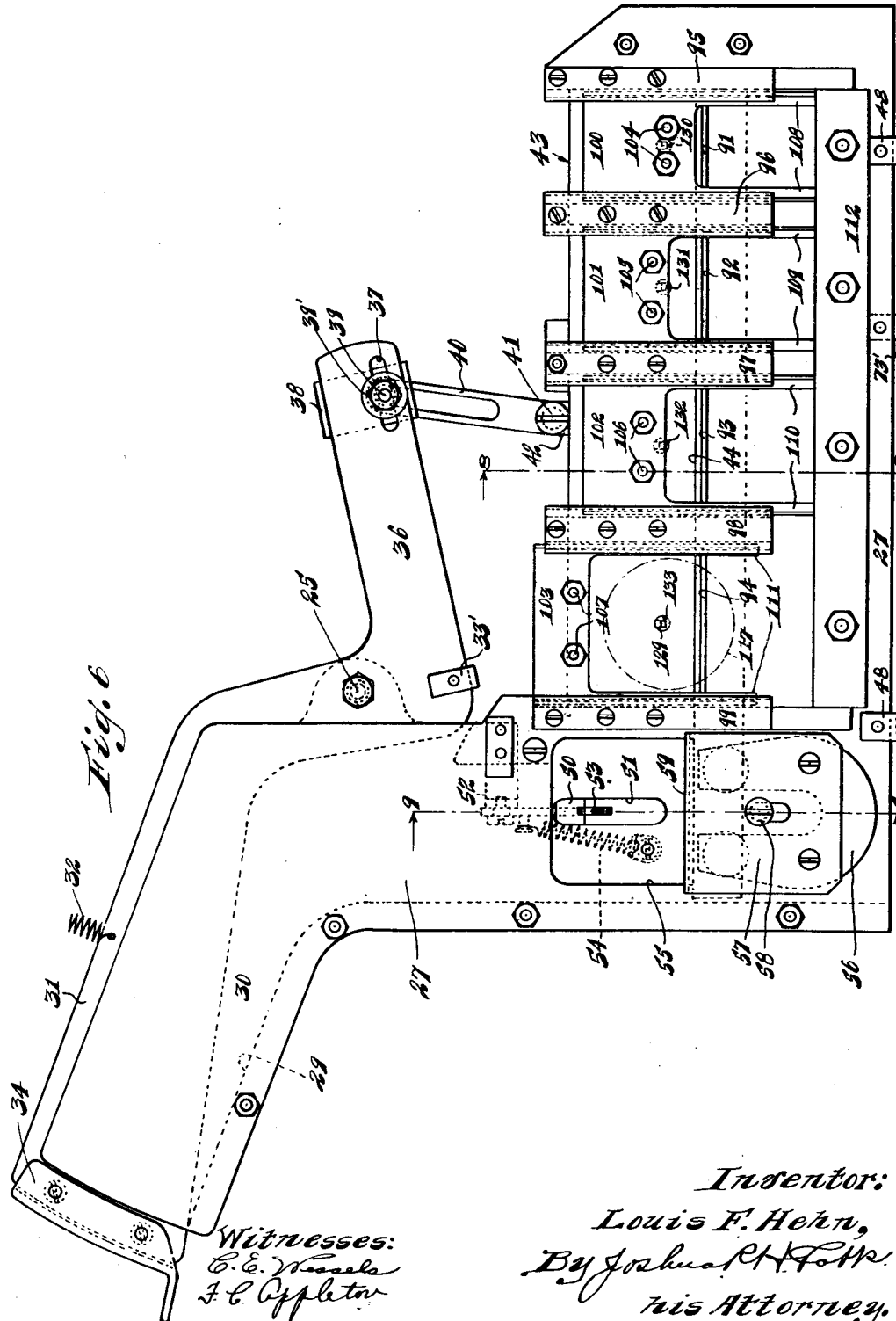
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COIN CONTROLLED APPARATUS

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6 Sheets-Sheet 3



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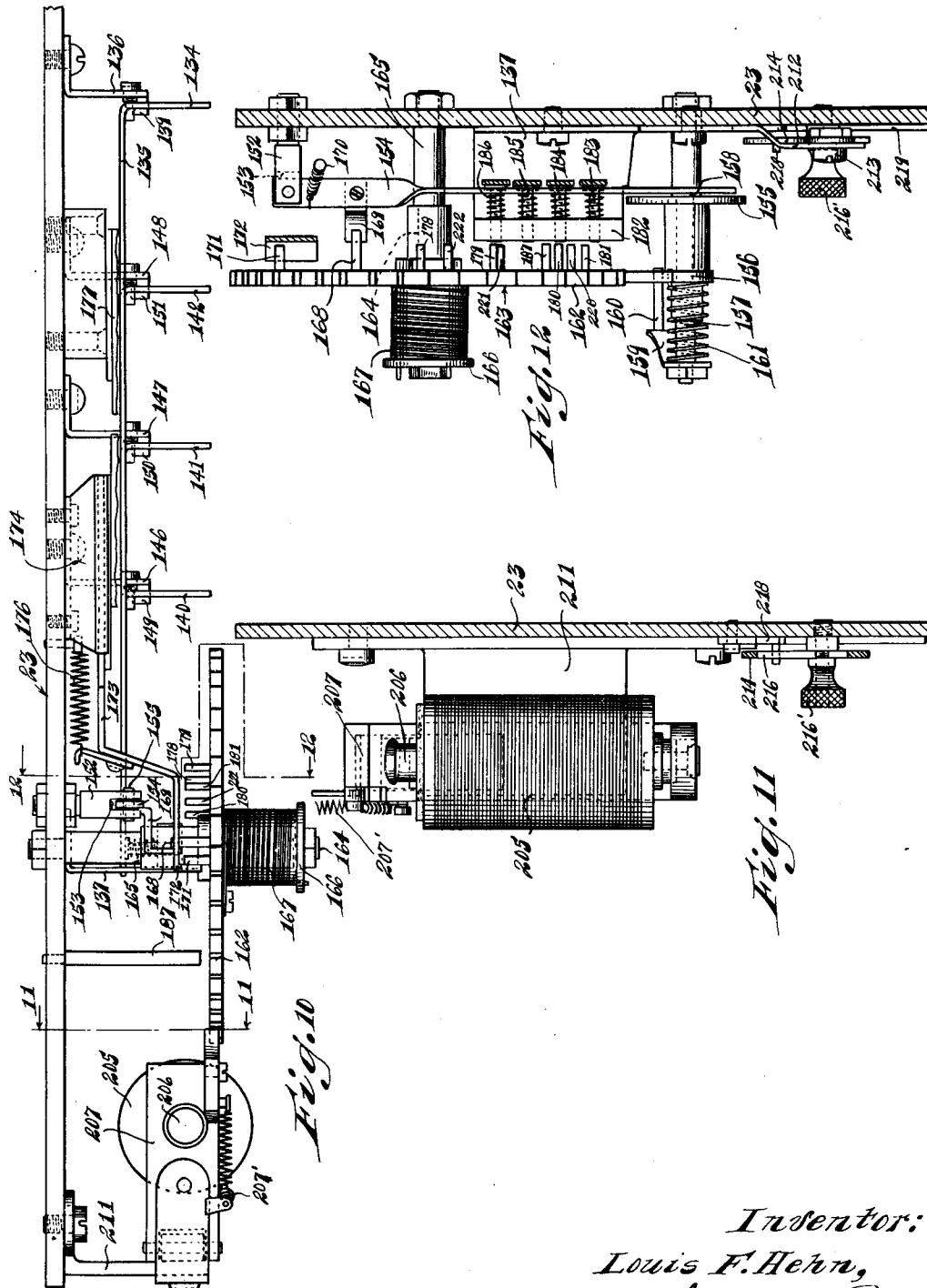
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COIN CONTROLLED APPARATUS

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6 Sheets-Sheet 5



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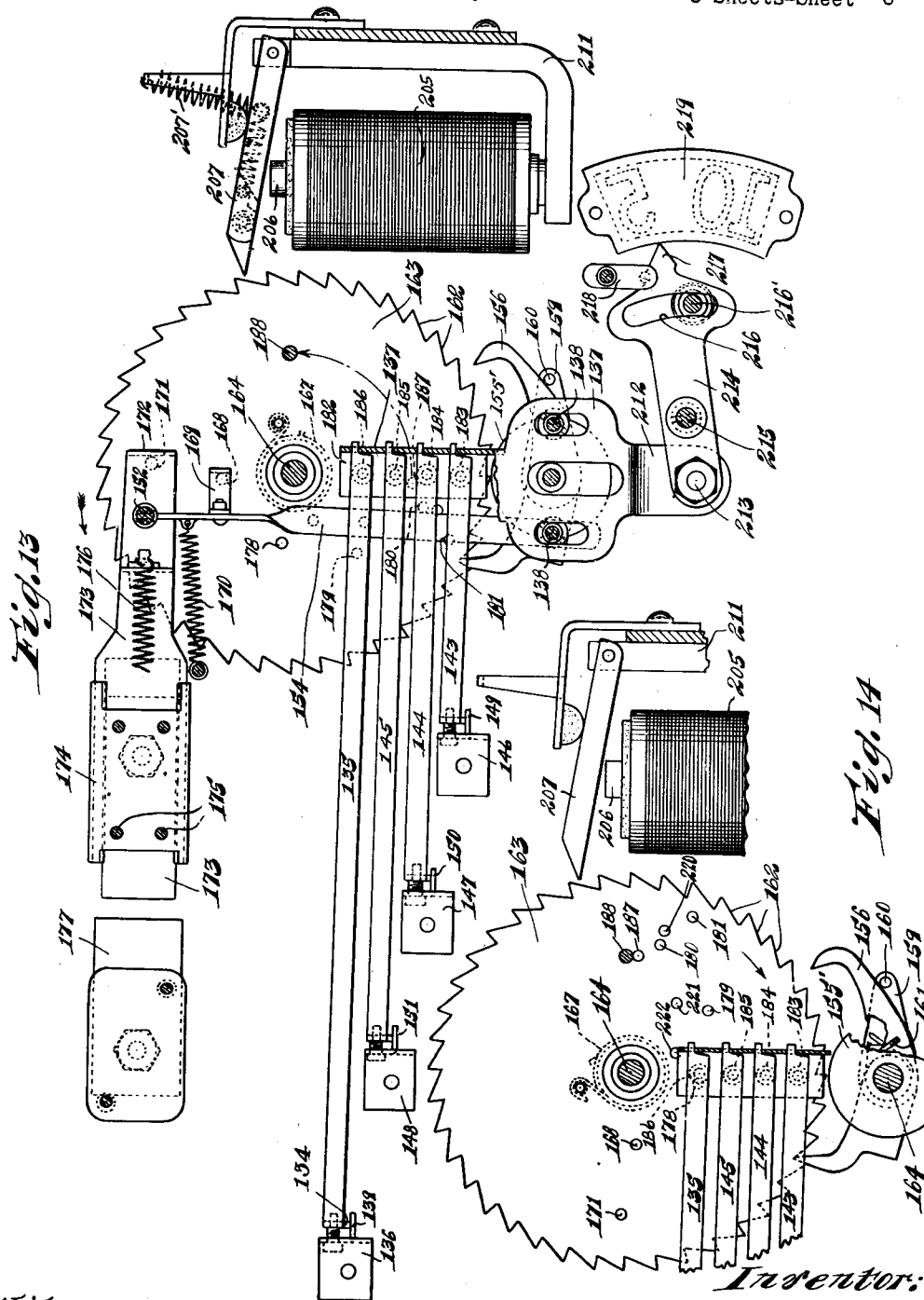
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COIN CONTROLLED APPARATUS

Filed May 31, 1927

6 Sheets-Sheet 6



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UNITED STATES PATENT OFFICE

LOUIS F. HEHN, OF CHICAGO, ILLINOIS

COIN-CONTROLLED APPARATUS

Application filed May 31, 1927. Serial No. 195,294.

My invention relates to a coin controlled apparatus and has for its principal object the providing of a novel device that will widen the field of activity of coin controlled devices.

5 More particularly, my invention has for its object the production of a device of the kind described which will accommodate in one slot coins of various denominations, automatically reject objectionable coins, and automatically give value for money tendered
10 in proportion to the face values of the various coins inserted into the apparatus.

Another object of my invention is to provide special means whereby a coin controlled
15 device can be optionally made to yield different standards of values, or in other words, to deliver two, three, or a variable number of times the usual amount given for a coin put into the apparatus.

20 Another object of my invention is to provide novel means for regulating the speed of operation of the cooperating parts, which are actuated, when a coin is deposited in the slot.

25 Other objects and advantages will appear as set forth more fully in the hereinafter specification when considered in the light of the accompanying drawings, in which,

30 Figure 1 is a front elevation of my device in its normal inclined position as disclosed when one of the front casing walls is removed.

Figure 2 is a detailed view of an indicator tag, bearing an appropriate instruction
35 legend.

Figure 3 is a side view of the coin operating chute and associated mechanism with parts broken away and removed.

40 Figure 4 is a section taken on line 4—4 of Figure 3, showing the normal position of the speed controlling mechanism of the raising carriage before a coin has actuated the device.

45 Figure 5 is a detailed view of the governor controlling mechanism with the balancing weights removed.

50 Figure 6 is a rear view of the Figure 3 with operating lever depressed, indicating that the device has been operated by the insertion of a fifty-cent coin, which is shown in position to be ejected.

Figure 7 is a plan view of the device with operating lever removed.

Figure 8 is a section taken on line 8—8 of Figure 7.

Figure 9 is a section taken on line 9—9 of
55 Figure 7.

Figure 10 is a plan view of the variable time governing mechanism.

Figure 11 is a section taken on line 11—11
60 of Figure 10.

Figure 12 is a section taken on line 12—12
65 of Figure 10.

Figure 13 is a rear view of the mechanism shown in Figure 10, with the rear plate removed, and showing the means by which the
70 ratio of the coin value can be changed.

Figure 14 is a detailed view of the timing escapement in its position after a coin deposited has operated a clutch shifting bar.

Referring more particularly to the drawings in which similar characters of reference refer to corresponding parts in the several views, 20 is a casing having a rear wall 21 on which is mounted by screws 22 a sustaining plate 23, having stationary posts 24 and a
75 pivoting post 25. Mounted on the posts 24 and 25 is a coin operating chute assembly 26, which comprises plate 27 and plate 28, separated by the spacing bar 29, and thereby forming the coin chute 30. To the outside of
80 the chute 30 is fastened an indicator tag 30'. Rockingly mounted on post 25 between the members of the slot 30, is an operating arm 31, held in open position by spring 32, attached to a pin 33 on the rear wall 21 and
85 is limited in its movement by a stop member 33'. On the forward end of the operating arm 31 is a finger operating lug 34 adapted to protrude through the side wall 35 of the casing 20 in position to receive a coin inserted in the coin chute 30, which is also carried to a point outside of the wall 35. The
90 operating arm 31 has an angular projection 36, having a slot 37 adapted to provide adjusting means for a U-shaped member 38, carrying a shoulder pin 39 having a threaded end provided with a nut 39'. Vertically adjustable on the shouldered pin 39 is a link 40 which is pivoted to a pin 41 connected to a
95 bracket 42, screw mounted on a reciprocating 100

carriage 43 provided with a coin sustaining ledge 44, the carriage and ledge being adapted to ride slidably in channel 45 and coin chute 30. The carriage 43 is normally held against stop plates 46 which are secured to a stationary plate 27, which limits its downward motion, by the spring members 47, which are tensioned on brackets 48, mounted on frame member 27. The reciprocating carriage 43 is further provided with a guide plate 49 secured on the reciprocating carriage by screws 49', the guide plate having an L-shaped arm 50 that normally rides over an elongated slot 51 in the member 28. On a bracket 52 attached to member 28 is pivoted a semi-circular thrust dog 53, which is normally held against the arm 50 by a spring 54, mounted on the member 28. The semi-circular thrust dog is adapted to rock inwardly through slot 51 and an opening 55 in the member 27, thereby ejecting any slug that may be held by the magnet 56 which, as shown in Figure 6, is suitably mounted to a bracket 57, having slot and screw adjustment means 58. The magnet is adapted to retain any iron slugs arriving against the shelf 59 of the bracket 57 until ejected by the swing of the thrust dog 53. This occurs through the instrumentality of the operating lever 31, link 40, and the bracket 42 mounted on carriage 43, whenever any inserted iron slugs, having passed through chute 30, arrive at shelf 59 on the bracket 57.

Fixedly mounted on member 27 are two posts 60 on which is positioned a plate 61 by means of screws 62, said plate having slot 63 and reciprocating rack bar 64 slidably mounted in slot 63 by means of guide bolts 65. The rack bar 64 meshes with a pinion 66 mounted on a shaft 67 on plate member 61. The shaft 67 is further provided with a gear 68 which cooperates with pinion 69 on another shaft 70 attached to plate 61. Mounted on shaft 70 is a spring held detent 71' cooperating with a ratchet 71 rigidly attached to a governor link weighted at both ends which is loosely revolvable on shaft 70 thereby permitting free motion of the governor link in a clockwise direction and providing a positive connection by means of the locking of the detent 71' on the axle 70, thus actuating the governor arm in a counter clockwise direction when the rack bar 64 moves in a vertical direction. The lower end of the rack bar 64 is provided with a bracket 72, to which is fastened a coil spring 73 attached to a fixed extension 73' on plate 27. Bracket 72 is further provided with an inwardly projecting arm 74, having a shoulder pin 75 on which is rockingly mounted a dog 76, normally held in position by a spring 77 attached to a lug 78 on rack bar 64. The dog 76 is normally held against inward movement relatively to the rack bar 64 by a projecting prong 79. Dog 76 is further provided with an integral V-shaped tooth 80 which abuts against

angular lug 80' secured to carriage 43. The upper surface of tooth 80 has an angular inclination 81 adapted to impinge against a rounded portion 61' on the plate 61 at a time when the reciprocating carriage is partially raised. An additional pin 82 on dog 76 abuts against a projection 83 or a triangular locking pawl 84 mounted on a stud pin 85 secured to a bracket 86 adjustable in slot 87 in the member 61. Pawl 84 has a prong 88 which is adapted to be held against plate 61 by spring 89 as the carriage is proceeding upwardly. The pin 82 slides on the outward surface of the pawl 84, the inner surface of which abuts against lug 80'. Pawl 84 is adapted to lock the carriage 43 in its raised position until released by pin 83 after which the rack bar 64 descends to normal position.

To operate the device after a coin has been inserted in chute 30, the finger lug 34 is depressed, thereby angling the arm 31 and consequently the integral projection 36 thereon about the pivot post 25, whereby the link 40 connected to the projection 36 by means of pin 39 and U-shaped member 38, will lift the attached carriage 43 together with rack bar 64 and pawl 76 thereon as heretofore described. During this operation, the lug 80' on carriage 43 engages tooth 80 to raise the rack bar, and when the carriage is nearly at the top of its ascent, the angled inclination 81 on tooth 80 of pawl 76 engages the rounded portion 61' on plate 60, thereby releasing the rack from the carriage. The carriage is then locked in elevated position by pawl 84 until the rack descends and pin 82 rides over projection 83, whereupon the carriage is released and returned by springs 47.

The plate 27 as hereinafter described is provided with a series of divided spaces constituting pockets or compartments 91, 92, 93 and 94 to accommodate a dime, nickel, quarter and half dollar, respectively, as shown in Figure 6. The member 27 has mounted thereon stationary channeled guide elements 95, 96, 97, 98 and 99 between which the U-shaped elements 100, 101, 102, 103 having coin positioning pins 104, 105, 106 and 107 reciprocate. The U-shaped elements are provided with legs 108, 109, 110 and 111 resting against the stationary bar 112 mounted on member 27 by means of which the downward movement of the U-shaped elements is limited. As shown in Figure 6 a half dollar has just operated the device and is in position to be ejected.

Compartments 91, 92, 93 and 94 are further provided with coin graduating blocks 113 which allow sufficient space to pass a dime and at the same time provide stopping means for any coin larger than a dime, such as a nickel. Compartment 92 is provided with a block 114 which will permit a dime and nickel to pass while preventing the admission of a coin larger than either. Compartment

93 is provided with block 115 which will permit a nickel, dime and quarter to pass and will stop any coin larger than a quarter. Compartment 94 is provided with a block 116 which will permit a dime, nickel, quarter and half dollar to pass and will stop any coin larger than a half dollar.

As shown in Figures 1, 3 and 6, a half dollar 117 has been deposited and as shown, is illustrated in a series of different positions, resting on plate 44 of carriage 43, as depicted in full line in Figure 3, abutting against the graduating block 115. A bar 118 is rockingly attached to the carriage by lugs 119 and having a movement limiting prong 120 which forms a part of a bracket 121 having an attached spring 122 fastened to a projecting arm 123 on bar 118. The arm 123 is additionally provided with an upwardly projecting element 124 which is in the path of and depressed by arm 125 projecting from member 78 mounted on the reciprocating rack bar 64. Bar 118 is provided with a plurality of thrust shoes 126, 127, 128 and 129 passing through a plurality of perforations 130, 131, 132 and 133 located in the member 43 by means of which various coins are ejected. The bar 118 is normally held in position by spring 122 to maintain the thrust shoes 126, 127, 128 and 129 without the perforations 130, 131, 132 and 133, or in other words out of engagement with any coin which may be positioned on the ledge 44. When the carriage 43 descends in the manner indicated above, the projecting element 124 is engaged by the arm 125 of the member 78 secured to the rack bar 64, consequently causing the angling of the bar 118 and the thrust shoes 126, 127, 128 and 129 which latter are momentarily protruded through the apertures 130, 131, 132 and 133, thereby engaging and thrusting off any coin situated on the ledge 44. The coins so thrust off fall into the bottom of the casing.

Upon the deposit of a coin, a half dollar, for instance, a depression of the operating lever 31 is followed by the raising of the carriage 43 through the intermediary of the bell crank lever bend 36 of the arm 31 pivoting on post 25. The half dollar is sustained on the coin ledge 44 of carriage 43 and positioned between two pins on the floating element 103 which rests on the half dollar. As the latter is thrust upwardly by the ledge 44, the floating element 103 will likewise move upwardly, which will cause the top of the element 103 to strike against and oscillate arm 134 of a lever bar 135 pivoted at one end on a stationary angle bracket 136 and pivoted at the other end to bracket 137 mounted adjustably by means of slots and screws 138 to member 23. Angle bracket 136 is provided with a stop shelf 139 to maintain arm 134 of lever bar 135 in position to be operated.

The other floating elements 100, 101, 102 are also adapted to strike the other members of the series of cooperating arms 140, 141, and 142 which are actuated when 10, 5 and 25 cent coins are inserted in the slot. Arms 140, 141 and 142 are similarly connected to other lever bars of the same type 143, 144 and 145 pivoted to stationary angle brackets 146, 147 and 148 while the other end of the series of cooperating bars 143, 144 and 145 are likewise connected to the adjustable bracket 137. Angle brackets 146, 147 and 148 are provided with stop shelves 149, 150 and 151 which limit the movement of the bars 143, 144 and 145.

On an adjustable post 152 attached to plate 23 and having a slot 153 is a clutch shifting arm 154 loosely mounted in slot 153 by means of pin 155. The clutch shifting arm 154 is adapted to abut the series of bars 143, 144 and 145 and also the 50 cent bar 135 used here for demonstration. The lower end of the shifting arm 154 engages the disc 155' of the double acting escapement pawl 156 slidably mounted on stationary post 157 attached to frame 23 and adapted to abut against the shoulder 158. On the forward end of post 157 is a stationary arm 159 having a pin 160 to limit the movement of the double acting pawl. Between the double acting escapement pawl 156 and the stationary member 158 is a compression coil spring 161, the end of which is securely fastened to the stationary arm 159 and the other end to the double acting escapement pawl 156 thereby providing pressure and counter clockwise torque to the pawl 156. The pawl 156 engages the notches 162 of a revolvable ratchet disc 163 mounted on stationary post 164 having a shoulder 165, the post 164 being mounted on the rear plate 23. The outer end of post 164 is provided with a lock disc 166. Between the lock disc 166 and the ratchet disc 163 is a compression coil spring 167, one end of said spring being secured to the lock disc 166 and the other end to the face of the ratchet disc 163, thereby providing pressure and clockwise torque to the disc 163. The disc 163 is provided with a pin 168 which impinges against a bracket 169 mounted on a shifting lever 154, said shifting lever 154 being provided with a coil spring 170 secured to plate 23 which normally holds the shifting lever 154 out of engagement with disc 155' when the pin 168 and bracket 169 have been disengaged. Disc 163 is further provided with a pin 171 engaging a bracket 172 secured to a reciprocating member 173 riding in guide member 174 secured to member 23, constituting the movable element of a make and break electrical contact system. Reciprocating member 173 is provided with a coil tension spring 176 suitably attached to plate member 23 and adapted to normally close the contact blocks 177, mounted

on stationary plate 23 when the ratchet disc is released by the withdrawal of pawl 156 under the influence of shift bar 154 when the latter is impelled by any one of the lever bars 135, 143, 144 and 145. The stop pin 187 coacting with pin 188 is attached to wall 23 and serves merely to prevent ratchet from turning too far whenever a half dollar is inserted.

The mode of operation of my device will now be understood by reference to the drawing. A coin, a dime for instance, inserted into the coin chute 30, will be conveyed by gravity into the coin receiving compartments and will pass therethrough under the graduating blocks 116, 115, 114 and 113 until arrested by abutting against member 45'. Upon the depression of the arm 31 by means of the finger lug 34, the link 40 attached to the bell crank portion 36 of the lever arm will carry with it the carriage and the reciprocating rack bar 64, and pawl 76, which will rise until the inclined portion 81 on the tooth of the pawl 76 impinges against the inclined wall 61' on plate 60. The subsequent operation of the carriage with the reciprocating members has been described in another part of the specification. Simultaneously with the elevation of the carriage, the coin, in this instance, the dime, raised by ledge 44 will lift the floating U-shaped element 100 to a position where it will strike against arm 140 of the lever bar 143 which in its oscillation thereby will simultaneously press pin 183 into position to engage pin 181 and communicate a transverse movement to shifting bar 154 consequently disengaging the escapement clutch member 156 from the ratchet wheel 163, and thus permitting the ratchet wheel to turn in a clockwise direction under the influence of the coil spring 167 to an extent dictated by the position of the pin 181 which corresponds to a movement of two notches 162 on the ratchet wheel 163, until stopped by a plunger pin 183 mounted in the block 182 on the member 137. The plunger pins 184, 185 and 186 are likewise actuated whenever a nickel, quarter or half dollar corresponding to pins 180, 179 and 178 on the ratchet wheel 163 is inserted in the coin chute 30. Should an attempt be made to operate the device by inserting a coin in the slot other than the nickel, quarter or half dollar indicated, for instance, a cent, when the finger lug is operated, the cent which in the meantime has found its way to the nickel compartment will raise the floating U-shaped element 101 and consequently cause the latter to strike against arm 141 of the lever bar 144, which latter will turn through a portion of an arc but not sufficiently to cause the shifting arm 154 to thrust the ratchet disc 163 clear of the double escapement clutch member or pawl 156, as would occur were a nickel employed,—consequently the device will not

function unless a coin of proper size is used. At the same time that the ratchet wheel is disengaged, the circuit making and breaking member 173 moves into contact with its corresponding member 177, under the influence of the tension spring 176,—the electrical circuit in this manner being completed. When the armature member 207 is energized by a current from a remote source, it will be evident that when a dime has been deposited, two such impulses will be sufficient to bring stop pin 171 into contact with a bent portion of element 173, the last impulse moving one of the contact bars away from its corresponding member 177 and consequently breaking the circuit. The apparatus is now ready to be again energized by the insertion of a suitable coin. Connected to the circuit making and breaking member 173 is a flexible conducting lead 189 attached to wire 190 which is connected to one pole of a source of electrical energy such as a battery 191, the other wire 192 of which is connected to the other side of the battery, which is electrically connected to a motor 193 by means of wire 192 and also to a source of illumination (incandescent lamp) 195 by means of wire 194 and thence to one of the contact blocks by means of 196, thus completing a circuit when the blocks of a circuit making and breaking mechanism are brought into contact by the release of the arm 173 from the top pin by co-operation of any one of the series of pins on the ratchet wheel actuated through means described after a coin is inserted into the slot 30.

In the present embodiment of the machine for the purpose of clear illustration, I have associated my coin controlling apparatus with an automatical, electrically operated piano playing device. In Fig. 1 the paper music roll 197 is shown riding over a fixed block 198 having a slot 199 which latter is adapted to register with a corresponding slot in the paper music roll. A spring pressed cam having a grooved engaging finger 201 is adapted to enter the registering slots, the finger being raised by a stud or solid portion 202 on the block whereby the metal hammer 200 is enabled to contact the posts 202' which have secured thereto the wires 203' and 204, in this manner a circuit being completed through the electro-magnet 205 having a core 206, and a comparatively heavy, pivoted armature 207, held in vertical position by spring 207' mounted on a conventional bracket 211,—the armature 207 cooperating with the notches 162 of the ratchet wheel 163, as heretofore described. After passing through the electrical magnet, the current is led through wire 208 to a source of intermittent illumination 209 and thence by means of wire 210, back to the battery 191.

It is to be understood that the method of actuating the ratchet wheel 163 by the electro-

magnet, as illustrated is shown merely in conventional form in view of the many electrical tripping devices available for this purpose. In practice I have found it desirable to weight the arm 207 sufficiently to cause it, by its own inertia, to carry the ratchet wheel back a full notch at the moment when the contact blocks are being separated by the pin 171 engaging the element 173 and thereby breaking the circuit.

On the rear wall 23 of the casing, a downwardly projecting arm 212 forming a part of the bracket 137, is fastened by a bolt and nut 213. To the bolt 213 a lever arm 214 pivoted on the stud post 215, is attached. The flared end of the lever arm 214 has a slot 216 in which a pin 216' rides, the lever arm being limited in its movement by a stud 218, the purpose of the lever arm 214 being to provide a means for changing the ratio of the values of the coins relatively to the apparatus.

When for example it is desired to have the device yield values in the ratio of, one for ten cents, three for twenty five cents, and six for fifty cents, respectively, it will be observed that lever arm 214 will be swung to a position where the arrow on the flared end of the lever arm will be substantially coincident with the enlarged Fig. 10. When it is desired to have values in the ratio of one for five cents, six for twenty-five cents and twelve for fifty cents, respectively, the lever arm will be swung to the opposite side of the indicator tag 219 coincident with Fig. 5. As shown in Fig. 14, it will be seen that pins 220, 221 and 222 are those which yield the one for ten cents ratio of values, etc., it being observed that these pins cooperate with the spring pressed pins of member 182 in the manner heretofore described. The difference in the relative values yielded by the machine is affected by the distance which the ratchet wheel 163 travels before the circuit making and breaking blocks 177 are separated. An appropriate indicator tag 223 serves to denote the scale of values yielded by my apparatus for the various coins inserted.

In the operation of the electrical features connected with my coin controlled apparatus, it is to be understood that when an electrical circuit is completed through the making and breaking device 173 under the influence of the coin responsive means, recited above, the lamp 195 will be lighted, and the motor 193 energized, the shaft of which is attached to appropriate means (not shown) whereby the music roll 197 revolves in a counter clockwise direction, as indicated by the arrows, causing the finger of the lever arm 200 to ride in the slot 199, until lifted by a solid portion of the music roll 202 thereby completing the circuit to the battery 191 by the pressing down of the contacts of the lever arm 200 upon the dissociated ends of the wires 203, 204. At

this moment the electro-magnet 205 will be energized and the pivotally mounted armature arm 207 will engage the notches 162 of the ratchet wheel 163 causing revolution of the ratchet wheel to the amplitude of one notch which will continue a notch at a time, until the pin 171 engages the member 173 and breaks the circuit. The lamp 195 serves to introduce resistance into the circuit and also to illuminate, as long as the circuit is complete through the contact blocks, the interior of the casing. The lamp 209 will flash intermittently, every time the electrical magnet is energized and thus serve as an indication that the device is functioning properly.

While I have shown and described a preferred construction and arrangement of the various parts, it will be understood that the device is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages thereof, and hence I do not limit myself to the precise details as set forth, but desire to avail myself of such variations and modifications as lie within the scope of the appended claims.

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

1. In a coin controlled apparatus, a plurality of coin receiving compartments each compartment adapted to receive a coin of a definite diameter, a single coin chute communicating with said compartments, means including a slidably mounted member for selectively cooperating with a single coin whereby values for money inserted into said coin controlled apparatus may be obtained in the proportion of the face value ratios of diverse coins inserted into said chute, and means including an escapement device whereby the value purchasing power of various coins inserted into the apparatus may be varied.

2. In a coin controlled apparatus, a single chute formed in said apparatus, said chute being adapted to accommodate a plurality of coins of diverse denominations, means including a slidably mounted member for selectively cooperating with a single coin whereby values for money inserted into said coin controlled apparatus may be obtained in the proportion of the face value ratios of diverse coins inserted into the chute, said means also including other means optionally engageable whereby the value purchasing power of the various coins inserted into the apparatus may be varied, said other means including a lever operated arm, a ratchet wheel cooperating with said arm, a plurality of lever bars for actuating said ratchet wheel, and a plurality of U-shaped elements selectively raised by said coins of different values for oscillating said lever bars.

3. In a coin controlled apparatus, a single

chute formed in said apparatus, said chute being adapted to accommodate a plurality of coins of diverse denominations, a magnet adapted to render spurious coins inoperative, means including a slidably mounted member for selectively cooperating with a single coin whereby values for money inserted into said coin controlled apparatus may be obtained in the proportion of the face value ratios of diverse coins inserted into the chute, said means also including other means optionally engageable whereby the value purchasing power of the various coins inserted into the apparatus may be varied, said other means including a lever operated arm, a ratchet wheel cooperating with said arm, a plurality of lever bars for actuating said ratchet wheel, and a plurality of U-shaped elements selectively raised by said coins of different values for oscillating said lever bars.

4. In a coin controlled apparatus, in combination, a single chute, a plurality of coin receiving compartments communicating with said chute and adapted to receive coins of diverse denominations, means including a plurality of graduated stops for distributing coins into their respective compartments, means including a circuit making and breaking means whereby values may be obtained proportionate to the coins inserted, means connected to said coin controlled apparatus and adapted to coact with a coin to actuate said circuit making and breaking means, means to control within certain limits the operative speed of the coin coacting means, and means to relatively vary the purchasing power of a coin.

5. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, and manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker.

6. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the

face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker, and a speed governing control for said slidably mounted means.

7. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker, a speed governing control for said slidably mounted means, and means to relatively vary the purchasing power of a coin.

8. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means, slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker, and means for disengaging said circuit making and breaking upon the completion of operation through the instrumentality of a deposited coin.

9. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face value of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, said means also includ-

ing a lever operated arm, a ratchet wheel co-operating with said arm and a plurality of lever bars for actuating said ratchet wheel, and manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker.

10 10. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker, 25 means for disengaging said circuit making and breaking upon the completion of operation through the instrumentality of a deposited coin, and a speed governing control for said slidably mounted means.

30 11. In a coin controlled apparatus, a plurality of plates forming a coin chute, a plurality of diverse coin receiving compartments formed of elements connected to said plates, said chute leading to said compartments, selective coin responsive means slidably mounted in the compartments, a timing clutch mechanism, means adapted to give values for coins of diverse denomination inserted in the proportion of the ratios of the face values of said coins and connected to said coin responsive means and said clutch mechanism, a circuit maker and breaker mechanically connected to said means, said means also including a lever operated arm, a ratchet wheel cooperating 45 with said arm and a plurality of lever bars for actuating said ratchet wheel, manually operable means in said chute adapted to cooperate with the coin responsive means upon the insertion of a coin for actuating the circuit maker and breaker, and a speed governing control for said slidably mounted means.

In testimony whereof I have signed my name to this specification.

LOUIS F. HEHN.

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