Aug. 4, 1936. E. L. CRABB 2,050,161

VENDING MACHINE

Filed March 7, 1935 5 Sheets-Sheet 1

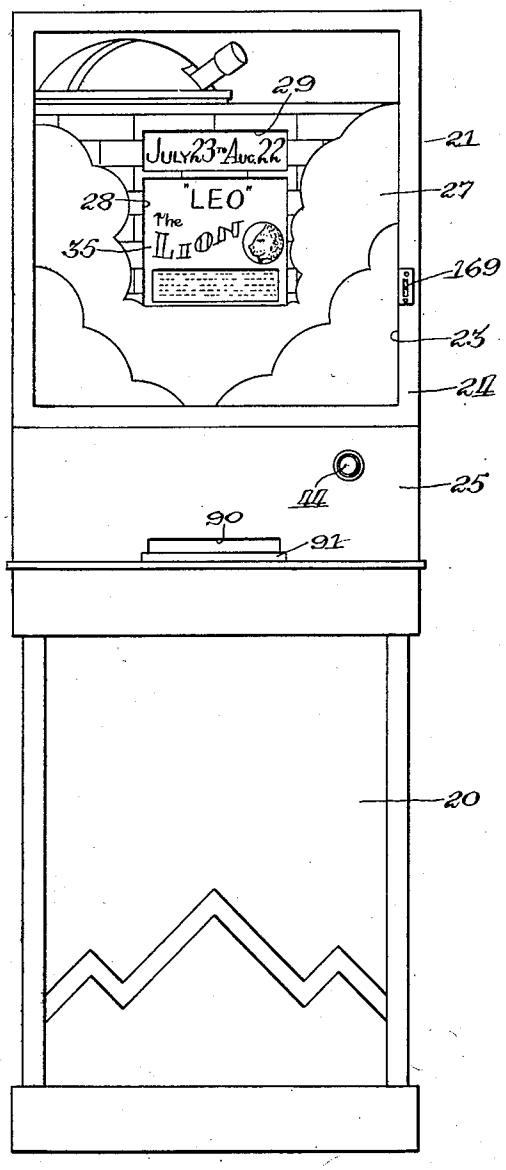


Fig. 1.

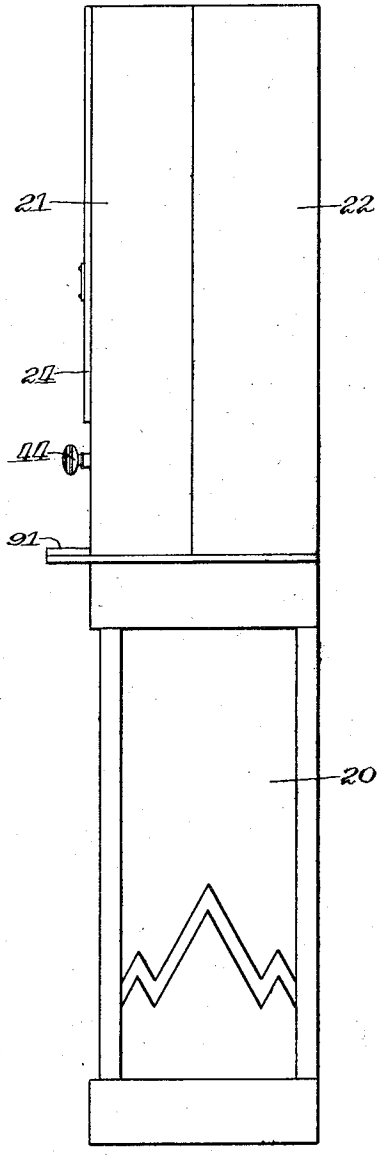


Fig. 2.

Inventor
Earl L. Crabb
By Paul O. Pippel
Atty.

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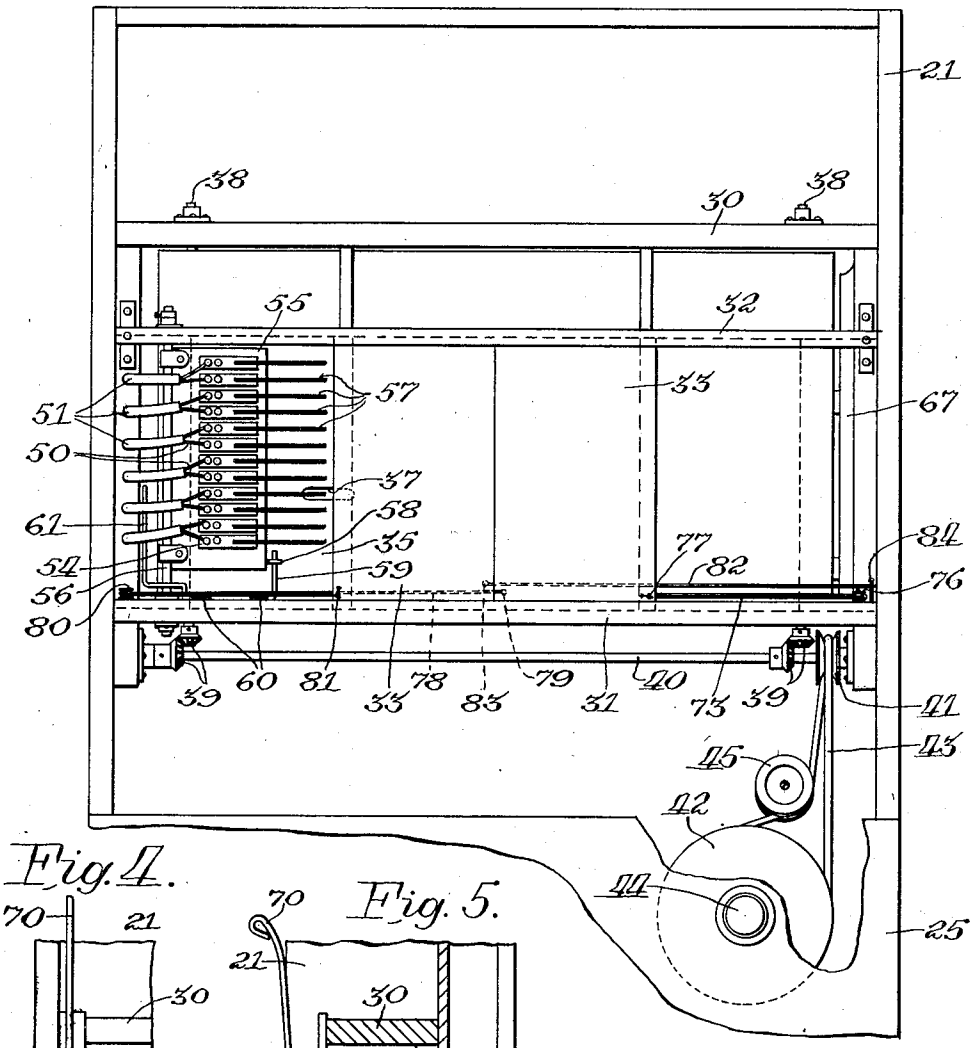


Fig. 3.

Fig. 4.

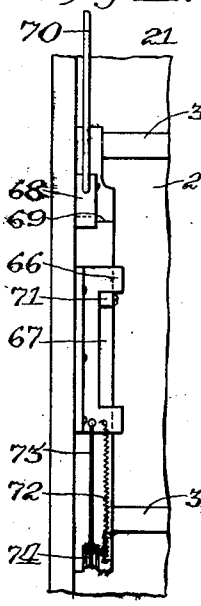
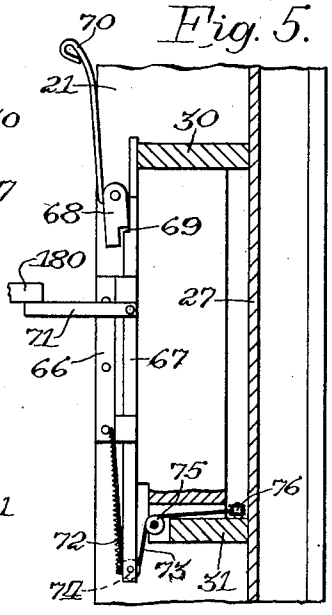


Fig. 5.



Inventor
Earl L. Crabb
By Howe O. Pippel
Atty.

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Fig. 6.

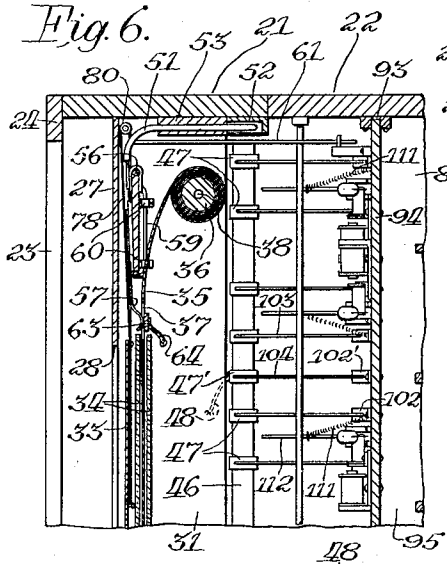


Fig. 9.

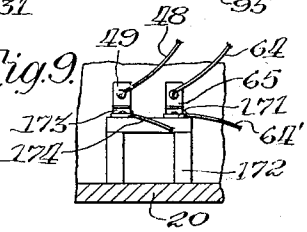


Fig. 8.

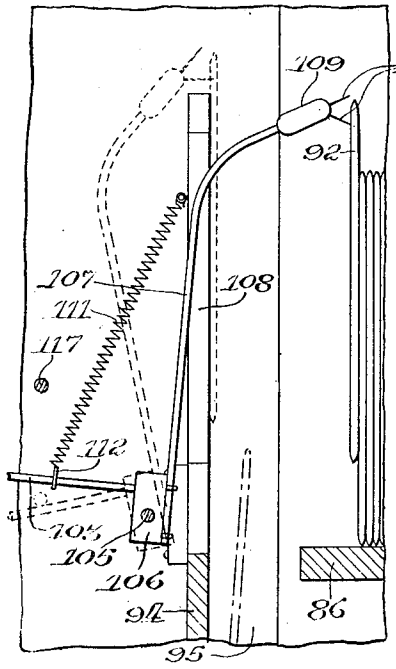
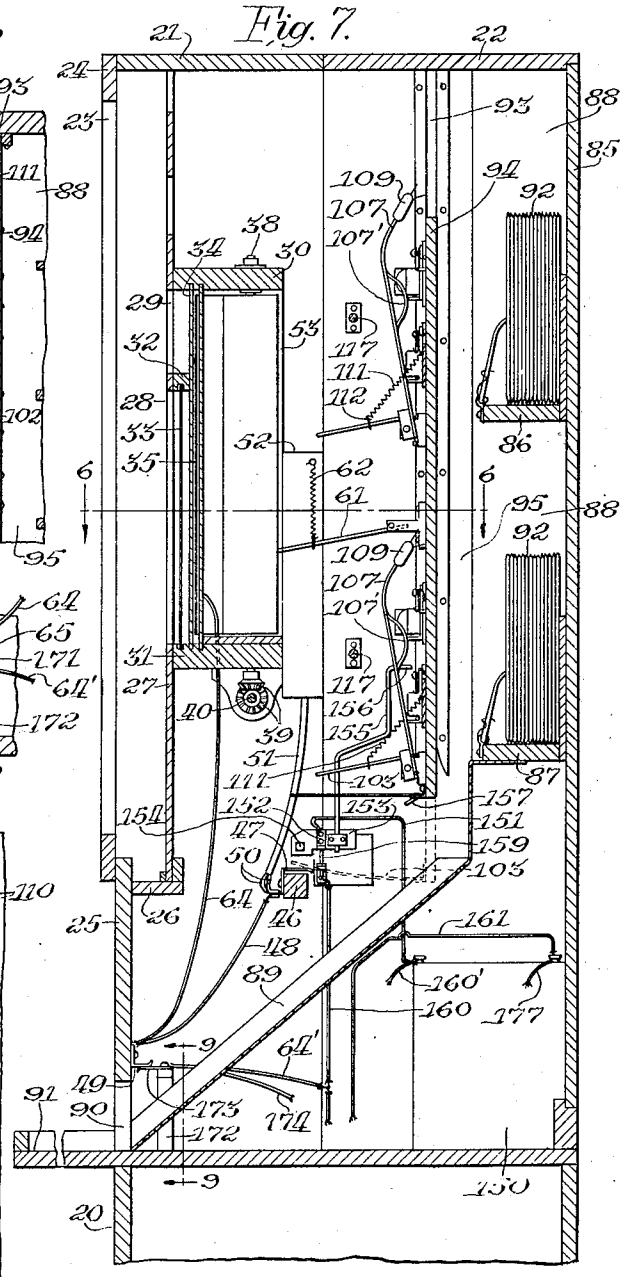


Fig. 7.



Inventor
Earl L. Crabb
By Paul O. Pippel
Atty.

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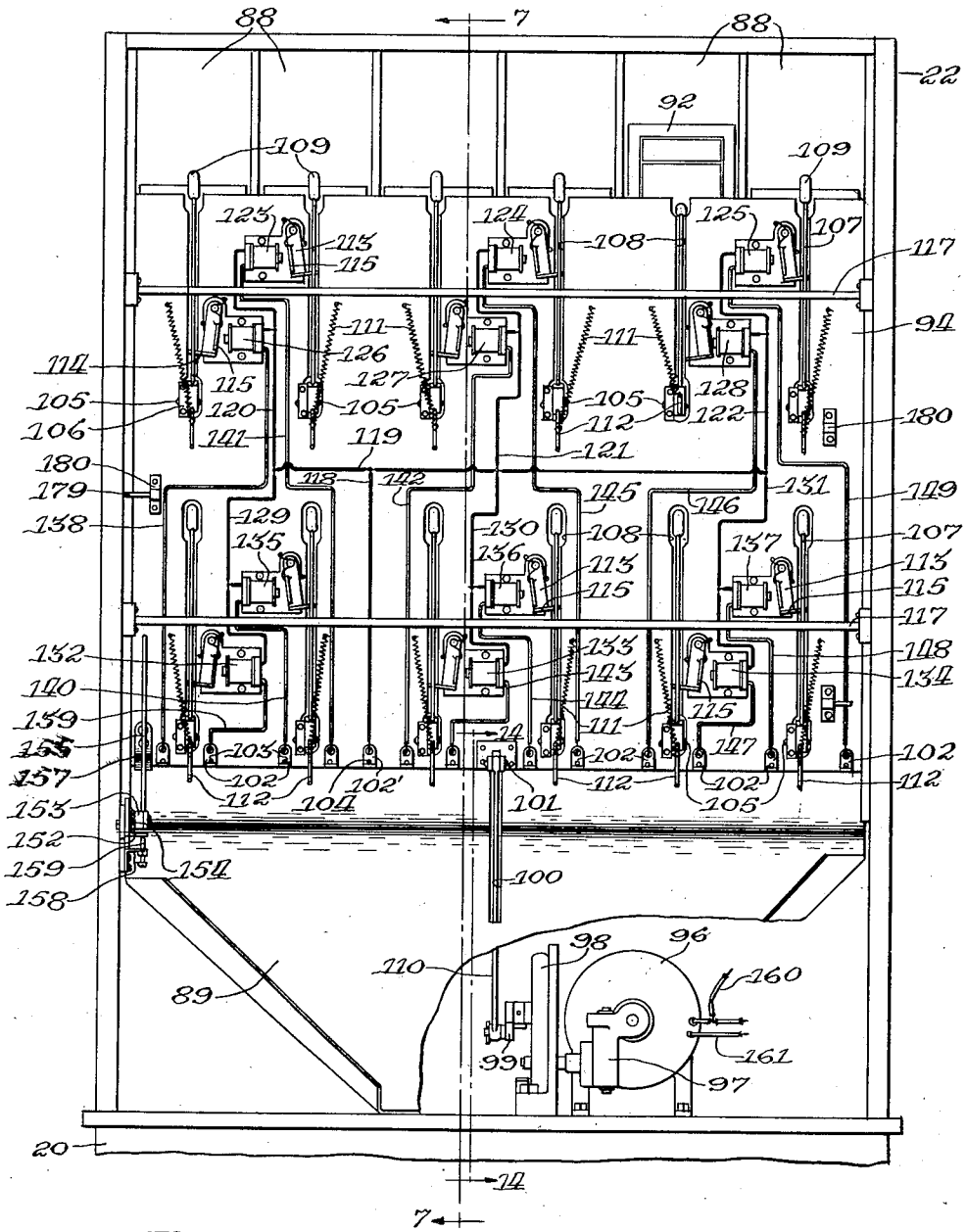


Fig. 10.

Inventor
Earl L. Crabb
By Paul O. Pippel
Atty.

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Fig. 12.

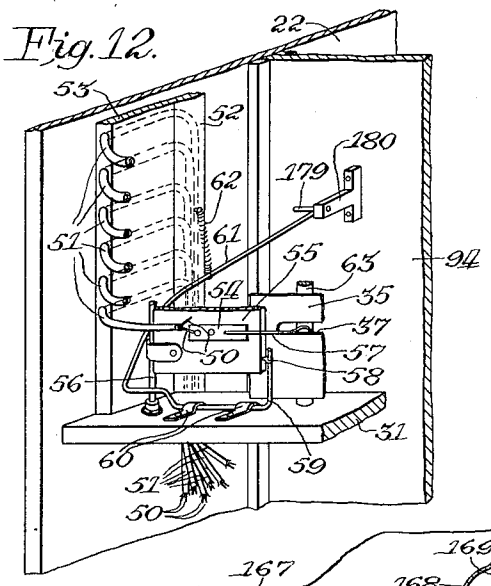


Fig. 11.

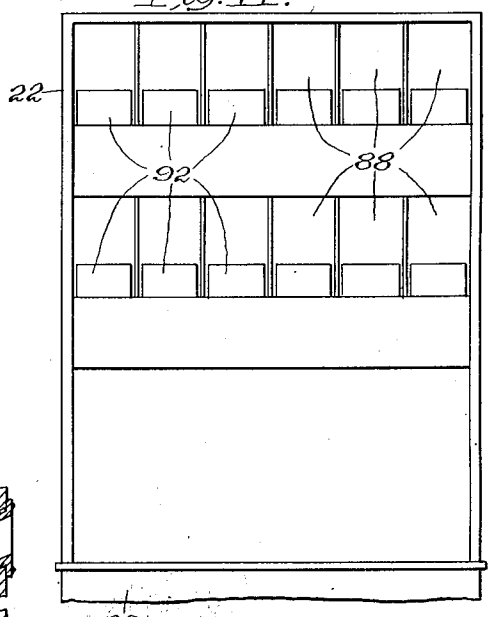


Fig. 13

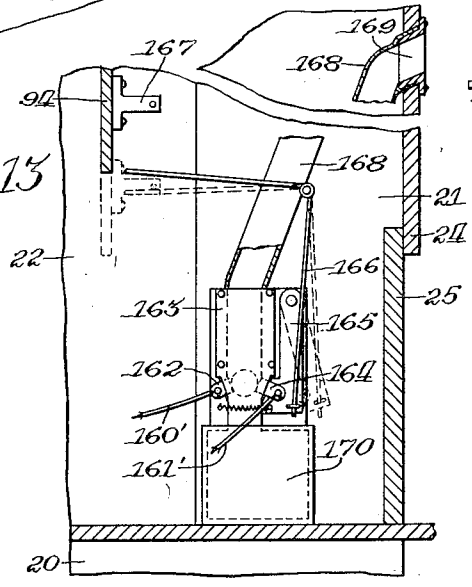


Fig. 14.

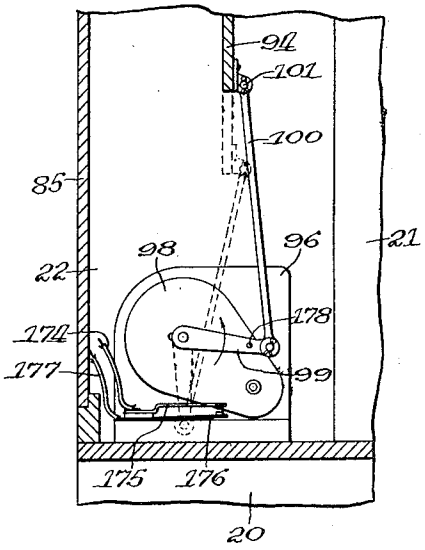
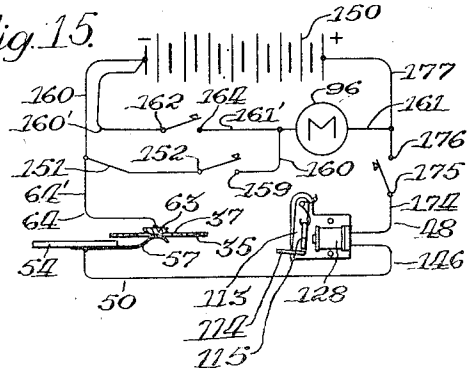


Fig. 15.



Inventor
Earl L. Crabb
By Pauo Pippel
Atty.

Patented Aug. 4, 1936 2,050,161

UNITED STATES PATENT OFFICE

2,050,161

VENDING MACHINE

Earl L. Crabb, Chicago, Ill., assignor to Planetellus Manufacturing Corporation, Chicago, Ill., a corporation of Illinois

Application March 7, 1935, Serial No. 9,797

22 Claims. (Cl. 312—52)

The invention relates generally to a machine for vending cards, pictures, and packets or the like, said articles being stored in segregated groups whereby the operator of the machine may set the mechanism to cause automatic selection and vending of one of the articles.

More particularly, however, the invention relates to an astrological machine, which is manually set in accordance with a zodiacal period within which falls a person's birth date, and coin released to cause automatic operation of selector mechanism that selects an envelope containing the appropriate printed horoscope from one of twelve packs of such envelopes, there being twelve such packs provided to correspond with the twelve signs and periods of the zodiac. After selection of an envelope from the proper pack has been effected, the envelope is automatically vended to a point, where it is accessible to the operator of the machine.

The main object of the invention is to provide an improved vending machine of the kind stated.

Another object is top rovide an improved arrangement, in separate groups, of the matter to be vended.

Still another object is to provide in a machine of the class described a coin released, automatically acting, selector and vending mechanism.

It is also an object of the invention to provide an improved changeable exhibitor to be associated with the vendor for causing display of the sign of the zodiac corresponding with the period embodying a person's birth date for which the machine has been set.

Also it is an object generally to provide an astrological machine that will constitute an improvement over applicant's prior Patent No. 1,956,059 granted April 24, 1934.

Other important objects, of course, will later appear to those skilled in this art as the disclosure is more fully made.

These objects may be achieved in the particular embodiment of the machine herein chosen for purposes of the disclosure and as illustrated in the accompanying drawings. As thus shown, the machine may comprise an appropriate cabinet suitably embellished with astronomical ornamentation or otherwise, to attract the maximum of public attention and arouse curiosity to encourage an individual's desire to have his horoscope vended. These horoscopes are printed in accordance with predictions and so forth, well understood and established in the science of astrology. The printed sheet is placed in an envelope which may be sealed if desired. Twelve compartments are provided in the cabinet for storing these envelopes in separate groups, the twelve compartments, of course, corresponding to the twelve signs and periods of the zodiac. The operator who may be the person desiring his horoscope, sets an indicator manually to display the period on the calender or zodiacal period within which is included his birth date. Thereupon, the proper coin is inserted into a coin slot to release the mechanism which is electrically operated to cause operation of a selector, which takes an envelope from the proper compartment or pack and vends it to the operator. At the same time, doors open to display the sign of the zodiac appropriate to the horoscope vended. So much will suffice in presenting a general survey of the improved machine, which is illustrated in detail in the accompanying sheets of drawings, wherein:

Figure 1 is a front elevational view of the machine;

Figure 2 is an end elevational view thereof;

Figure 3 is a front elevational view of the changeable sign of the zodiac exhibitor and contact mechanism associated therewith for establishing circuits to operate the selector and vending mechanism, the view being of these parts with the front panel removed;

Figure 4 is a detail view in rear elevation of a trip structure that controls operation of doors that are associated with the changeable exhibitor;

Figure 5 is an end elevational view, partly in section, of the structure shown in Figure 4;

Figure 6 is a fragmentary, horizontal, sectional view through the changeable exhibitor and the selector and vending mechanism, taken along the line 6—6 of Figure 7, looking in the direction of the arrows;

Figure 7 is a vertical, end sectional view through the entire upper part of the machine, taken along the line 7—7 of Figure 10, looking in the direction of the arrows;

Figure 8 is an enlarged detail end view of one of the selector arms, illustrating how it works in relation to the associated pack of envelopes;

Figure 9 is a detail, rear elevational, view of a switch structure as seen along the line 9—9 of Figure 7, looking in the indicated direction;

Figure 10 is an enlarged front elevational view of the selector and vending mechanism as viewed when the front changeable exhibitor unit is removed;

Figure 11 is a rear elevational view of the

pocketed shelf structure carrying the twelve packs of envelopes as seen when the rear panel is removed;

Figure 12 is a detail perspective view, showing the structure for establishing an electrical circuit through the changeable exhibitor web to one of the selectors;

Figure 13 is an end vertical sectional view, showing the coin operated means for establishing a motor circuit;

Figure 14 is an end vertical view, partly in section, through the cabinet and taken along the line 14—14 of Figure 10 to show the motor drive and an associated switch mechanism; and,

Figure 15 is an electrical diagram, showing the electrical hook-up from the source of electrical energy to the motor and selector operating mechanism.

The machine embodies a three part cabinet having a base unit 20 as shown in Figures 1 and 2 and an upper part supported thereon and comprising a front exhibitor unit 21 and a rear dispensing unit 22. The cabinet is constructed this way for convenience in manufacture and assembly, and to enable easy shipping thereof in compact knock down form. These three units of the cabinet are secured together when the machine is completely assembled, in any appropriate manner, by means not shown. There is no operative mechanism in the base unit 20; all the mechanism being arranged in the front unit 21 and the rear unit 22.

The exhibitor unit 21 has an opening 23 set off by a frame 24 carried on the front wall 25 of the unit as best shown in Figures 1 and 7. The back side of said wall 25 carries a horizontal, transverse sill 26 on which is supported a vertical panel 27 that is inset as shown for ornamental affect and embellished as indicated in Figure 1. This panel has substantially centrally formed therein a rectangular window, or display opening 28 and thereabove another display opening 29, the latter being relatively narrow, as shown.

Looking to Figures 3 and 7 it will be seen that the end walls of this display unit 21 carry an upper horizontal transverse plate 30 and a lower parallel plate 31, these two plates being spaced apart in a manner to locate the two display openings mentioned therebetween. Between these display openings is a small intermediate cross plate 32, the under edge of said plate 32 and the upper edge of the lower plate 31 being formed with grooved tracks for carrying a pair of sliding doors 33 shown in abutting end to end relation in Figure 3 which constitutes the closed position of these doors behind the display opening 28.

Arranged behind the two display openings and behind the doors 33 the plates 30, 31 carry a pair of slightly spaced vertical glass panels 34 between which runs a display web 35, the web running horizontally and having its ends attached to a pair of vertical reels 36 respectively carried at the opposite ends of the plates 30, 31. (See Figures 3 and 6.) This web is preferably made of paper and, as will later appear, forms a commutator stencil sheet having twelve slits or openings therein arranged in proper offset, spaced relationship, one of said slits being shown at 37.

Each reel 36 is turnable with a shaft 38 appropriately journaled as shown in Figure 3 in the plates 30, 31, the lower end of each shaft being operably connected by bevel gears 39 to a transverse drive shaft 40 journaled in the end walls of the unit 21. At one end the shaft 40 carries a pulley wheel 41 fast thereon and driven from a lower pulley wheel 42 by means of a belt 43. The pulley 42 is carried on a shaft including a knob 44 projecting through the front wall 25 of the unit 21. The belt is properly guided by a suitably located idler pulley wheel 45 also carried by said wall 25.

Obviously, by turning the knob 44 by hand the web 35 can be moved back and forth behind the display openings 28, 29. The upper portion of the web carries dates such as "July 23 to Aug. 22" corresponding to one of the zodiacal periods, there being twelve such periods designated in proper order on the web. These periods are to be shown behind the display opening 29, which by the way, is never covered as the doors 33 only cooperate with the lower or large display opening 28. The lower portion of the web carries illustrations of the signs of the zodiac corresponding with the various calender periods. For example, as shown in Figure 1, for the period designated, there is shown the corresponding zodiac sign of "Leo". It will be understood that this web 35 carries twelve groups of date periods and twelve corresponding signs; as in astrology, there are twelve signs of the zodiac.

As best shown in Figures 6 and 7 the end walls of the unit 21 carry a wooden cross bar 46 near the lower end of said unit. On said bar 46 at suitably spaced intervals, are mounted thirteen spring contact pieces 47, one of which marked 47' has a wire 48 leading therefrom to a contact clip 49 (see also Figure 9) fastened to the inside of wall 25.

Leading from each contact clip 47 is a wire 50, the wires being arranged two each in six cables 51, said cables being all directed to the left hand end of the unit 21 to be passed upwardly through a wooden plate 52 secured to the end wall of the unit as shown in Figures 6 and 12. These cables 51 are then passed through six bores formed in another plate 53 secured to the adjacent end wall and carried on the plate 31. These cables are lead forwardly through the plate 53 so that the twelve wires therein may be brought into position to be respectively connected with twelve contact strips 54 (see also Figure 3) carried in vertically spaced relation on an insulator panel 55.

Said panel 55 is hingedly connected for swinging movement on a vertical shaft 56 mounted on the plate 31, as shown. Each of the contact strips 54 carries a transversely extending contact finger 57 extending laterally of the panel 55 as shown in Figures 3 and 12 to line up respectively with the twelve slits 37 formed in the commutator and display web 35. The panel 55 carries an eye 58 to receive the end of a crank 59 journaled by bearings 60 on the plate 31 and including an upwardly and rearwardly extending trip arm 61 normally pulled upwardly by a spring 62 anchored to the plate 52 to rock the crank forwardly to hold the hinged panel 55 forward to keep the fingers 57 out of the position where they could engage the web 35 or enter the slits 37.

When a finger 57 is pressed through a slit 37 it contacts an upright metal conductor bar 63 carried on the plate 31, said bar 63 being in circuit with a wire 64 passed downwardly through the plate 31 to be connected with a contact clip 65 on the front wall 25 adjacent to the clip 49 heretofore described, as shown also in Figure 9.

At the right hand end of the unit 21, as viewed in Figure 3, is fixed to the adjacent end wall, a guide block 66 in which is mounted for up and

down sliding movement a control bar 67 for operating the doors 33 for exposing the signs of the zodiac on the web 35 at the desired time. This bar 67 moves between the guide block 66 and the rear edges of the plates 30, 31, as best shown in Figures 4 and 5.

As shown in these figures of the drawings, the adjacent end wall of the unit 21 carries a pivoted pawl 68 adapted to cooperate with a notch 69 formed near the upper end of said bar 67. This pawl carries an upstanding weighted arm 70 curved rearwardly to hold the pawl 68 in the position shown in Figure 5. Extending rearwardly from the bar 67 is a trip arm 71 for a purpose later to appear. Connected between the lower end of the bar 67 and the stationary block 66 is a spring 72.

Dead-ended to the lower end of the bar 67 is a cord 73 trained around a pulley 74 carried at the lower end of the bar 67, said cord being further guided around a second pulley 75 mounted on the plate 31 and still another pulley 76 carried on top of the plate 31 at its front edge. From the last mentioned pulley the cord 73 as shown in Figure 3 is lead transversely over the plate 31 and is dead ended at its other end to the right hand door 33 at a point designated 77.

Another cord 78 is dead ended at 79 to the same right hand door 33 as viewed in Figure 3, said cord 78 being run transversely over the plate 31 in a left hand direction to be passed around a pulley 80 and then trained transversely back with its other end dead ended at 81 to the left hand door 33. See also Figure 6. A rubber band 82, or the like, shown in Figure 3, is connected at 83 to the left hand door near its lower edge, said band 82 having its other end connected to a pin 84 carried on the plate 31 adjacent the right hand end of the plate 31. This completes the description of the unit 21 and its associated parts. Obviously this entire unit may be bodily removed from the base 20 and the rear unit 22, said unit 21 being open at its back side as shown in Figure 7 to facilitate assembly and servicing of the mechanism contained therein.

The rear wall 85 of the unit 22 is made quickly removable to render accessible the rear portion of said unit 22 which contains the twelve horoscope compartments and the vending mechanism. The end walls of this unit carry an upper shelf 86 and a lower shelf 87 divided as shown in Figure 11 into twelve compartments or pockets 88, each carrying a pack of envelopes containing printed horoscopes for the respective twelve zodiacal periods. These envelopes as shown in Figure 7, are arranged vertically on the shelves 86, 87 and if desired they may be appropriately held in such position by any suitable spring clips, as shown. The lower shelf 87 has connected to it a chute or trough pan 89 which as shown in Figures 7 and 10 is inclined forwardly and downwardly to a discharge opening 90 formed in the front wall 25 of the front unit 21. A tray 91 is provided to receive the vended envelopes to make them accessible, outside the cabinet, to the purchaser. The envelopes are shown at 92 in the pockets 88.

The end walls of the unit 22 carry spaced vertical strips to form a guide channel 93 for slidably carrying a panel 94 which controls the selection and vending of the envelopes, said panel being spaced forwardly of the front edges of the shelves 86, 87 to provide a vertical space 95 down which a selected envelope drops by gravity for delivery onto the chute 89. See Figures 6 and 7.

This panel 94 is reciprocated up and down in its guide channels 93 by motor driven connections shown in Figures 10 and 14, where it will be seen that the top portion of the base unit 20 has secured to it an electric motor 96, which drives appropriate reduction gearing contained in a housing 97 and a supplementary housing 98 to rotate a shaft carrying a crank arm 99. Pivotally connected to the free end of the crank 99 is a pitman link 100 in turn pivotally connected at 101 to the lower end of the panel 94. This link 100 reciprocates through an appropriate slot formed in the chute 89 as shown in Figure 10.

This panel 94 at its lower front edge carries a series of thirteen spaced contact clips 102 (see Figures 7 and 10), said clips being spaced in the same manner as the clips 47 on the bar 46, there being one clip numbered 102' to be associated with the clip 47', heretofore described. Each clip 102 carries a forwardly extending spring contact finger 103, while the clip 102' carries a similar finger 104. When the panel 94 is in its lowered position, as shown in dotted lines in Figure 7, these fingers 103, respectively connect electrically the clips 102 and 47, while the finger 104 connects the clips 103' and 47'. The front side of the unit 22 is open to permit this connection of the contact clips in the two units 21 and 22.

The front side of the panel 94 has arranged thereon in transverse alinement an upper row, and a lower row of spaced clips carrying hinge pins 105 as shown in Figures 7, 8 and 10, each pin 105 carrying a pivot block 106, and each block having secured thereto an upstanding picker arm 107. Each arm is curved upwardly and rearwardly at its upper end, as shown, said arms being individually adapted to swing rearwardly through alined vertical slots 108 formed in the panel 94. It can now be seen that there are in all, twelve picker arms 107, the same being arranged in two rows of six each, and each arm being positioned to cooperate with one of the envelope containing pockets 88.

The upper end of each arm 107 carries a head 109 which preferably is made of yielding material, such as rubber, if desired, and each head 109 may carry a pair of angularly spaced, sharp, picker pins 110 adapted to impale the envelopes 92, as will later appear. Or, as an obvious alternative, the pins may be eliminated and the rubber head itself may be made directly to engage the envelopes frictionally to move them to discharge position. Each arm 107 as appears in Figure 6 is pressed with its upper end in the direction of the panel 94 by a spring 111 connected between the front side of the panel 94 and a forwardly extending arm 112 secured to each pivot block 106. A spring pressed pivoted detent 113 is carried on the panel 94 adjacent each arm 107 as shown in Figure 10, each detent including a lateral stop 114, which normally extends across the adjacent slot 108 to prevent the arms 107 from being swung through the slots 108. Each detent includes an armature portion 115 for a purpose later to appear.

Certain of these stops 114 are engaged by the upper end of certain of the arms 107 while other stops 114 are engaged by the lower portions of the arms 107. Those arms 107 which have their upper portions abut the stops 114 are provided with a bowed portion 107' as appears in Figure 7, these bows serving properly to line up these arms with those which cooperate with the stops engaging the lower portions of the straight

arms 107. This arrangement is provided for the sake of compactness, as it enables use of a smaller panel 94 and more compact disposition of the stop detents 113. Above each row of arms 112 the end walls of the unit 22 carry a cross rod 117 for a purpose later to be made known. (See Figures 7 and 8.)

Looking at Figure 10, it will be seen that a trunk wire 118 is carried on the board 94, said wire being electrically connected with the clip 102'. Said wire 118 includes a cross branch line 119 in turn having three spaced upwardly extending branch lines 120, 121 and 122 respectively connected with three electro-magnets 123, 124 and 125 mounted on the panel 94 and associated with the three respective detent stop members 113 and in line to attract their armatures 115 when energized to pivot said members 113 away from between the picker arms 107 and slots 108 in an obvious manner. Short leads extend from each branch line 120, 121 and 122 respectively to three more electro-magnets 126, 127 and 128 for similar operation of the other three arms 107 in the upper row of six arms 107.

Further the line 119 has three downwardly extending branch lines 129, 130 and 131 respectively connected to three electro-magnets 132, 133 and 134 for operating the detents 113 for three of the lower series of arms 107. Also from these latter three lines are short leads to the three magnets 135, 136 and 137 carried on the panel 94 for the other three detents 113 and arms 107. There is thus far described one side of a trunk line circuit for energizing twelve electro-magnets, there being one magnet associated with a detent 113 for each envelope picker arm 107.

To complete the circuits for individual energization of these twelve electro-magnets, wires are lead from each of the twelve contact clips 102 to the respective magnets. Thus, there is a wire 138 from the first clip 102 (reading from left to right in Figure 10) to the magnet 126; a wire 139 from the second clip 102 to the magnet 132; a wire 140 from the third clip 102 to the magnet 135; a wire 141 from the fourth clip 102 to the magnet 123; a wire 142 from the sixth clip 102 to the magnet 127; a wire 143 from the next clip 102 to the magnet 133; a wire 144 from the next clip 102 to the magnet 136; a wire 145 from the next clip 102 to the magnet 124; a wire 146 from the next clip 102 to the magnet 128; a wire 147 from the next clip 102 in order to the magnet 134; a wire 148 from the next clip 102 to the magnet 137; and, lastly a wire 149 from the right hand end clip 102 to the magnet 125.

Obviously, now the electro-magnets just described can be placed individually in circuit with the main trunk wire 118 to energize any one of these twelve magnets to cause it magnetically to move a detent stop 113 out of the way to permit one of the picker arms 107 to be moved to pick up an envelope from one of the pockets 88.

A source of electric energy, which may be a battery is shown at 150 resting on the top of the base unit 20. A wire 151, shown in Figures 7 and 15 is in circuit with the negative post of battery 150 and leads to a contact member 152 mounted on a lever 153 pivoted on a pin 154 mounted on the left hand wall of the unit 21 just above the cross bar 46. (See also Figure 10.) This lever 153 carries an upwardly and rearwardly bent arm 155 having a trip extension 156 at its upper end lying in the path of movement of a trip 157 secured to the lower edge of the panel 94. Carried on the adjacent wall below the lever 153 is a bracket 158 carrying an adjustable contact 159 having electrical connection with a wire 160 that leads to the electric motor 96. Thus, the contacts 152, 159 comprise a switch in a shunt circuit 151, 160 for the motor 96, as shown in Figure 15. A wire 161 is connected with the motor and leads to the positive post of the battery 150.

A main motor circuit comprises a wire 160' from the minus side of battery 150; and a wire 161' through motor 96 and wire 161 to the plus side of the battery. Looking to Figure 13 it will be seen that wire 160' has a fixed contact 162 carried in a switch box 163, said box also carrying a second contact 164 connected to the wire 161' and mounted on a spring pulled swingable lever 165, which lever has connected to it a pivoted bell crank trip 166 having a leg thereof disposed in the path of movement of a trip 167 carried on the panel 94. A coin chute 168 leads into the switch box, the frame 24 of the front unit 21 having a coin slot 169 for passing coins into the chute 168. Below the switch box is a coin receptacle 170.

As shown in Figures 7, 9 and 15 the circuit 151, 160 is tapped by a wire 64' connected to a contact spring 171 supported on a standard 172 and cooperable with the contact 65 to establish connection with the wire 64, contact bar 63, one of the spring contacts 57 and associated wire 58. This wire 58 leads down to a clip 47 on the bar 46 to be contacted with one of the spring rods 103 mounted on a clip 102 on the panel 94. As shown in Figure 10, a wire 146 leads to a magnet 128, back through wire 122, wire 119 and into trunk 118 connected to clip 102', finger rod 104 connecting to clip 47', and thence to wire 48. Wire 48 leads to contact 49 (Figures 9 and 7) engaging a complementary contact 173 on the standard 172. From contact 173 is lead a wire 174 terminating in a switch contact 175 associated with a second contact 176 both mounted adjacent the housing 98. A wire 177 leads from the contact 176 back to the plus side of the battery 150. This spring switch is normally open but closed at times momentarily when a pin 178 on the rotating crank 99 engages the same.

In connection with the magnet circuit just established the trip rod 61 is operated by a pin 179 on a bracket 180 on the panel 94, said rod 61 when engaged by the pin 179, serving to close the contact parts 63 and 57 through a slit 37 in the web 35 as shown in Figure 12.

The panel 94 carries a trip 180 for a purpose later to appear.

In operating this improved machine for vending an envelope or the like, the operator first operates the knob 44 to move the web 35 for the purpose of bringing into view behind the display opening 29 the zodiacal period within which falls the birth date of the person desiring to have the horoscope. This operation also sets the web to position the corresponding sign of the zodiac behind the normally closed doors 33. In the starting position the panel 94 is held in its uppermost position by the crank 99 and pitman 100. The machine is now ready to receive a coin, such as a dime or ten cent piece, which is inserted through the slot 169. This coin drops by gravity down the chute 168, where it is received and held between the switch contacts 162, 164, thus closing the main motor circuit 160', 161' to cause operation of the motor 96.

The crank 99 in turning counterclockwise as viewed in Figure 14 from its top most position

pulls the pitman link 100 down and with it the panel 94. As the panel moves down the trip 180 strikes the member 71 to lower with the panel 94, the control bar 67 and by the cable and pulley system described open the doors 33 to cause display of the selected sign of the zodiac. When the web 35 was set by turning of the knob 44 one of the twelve slits 37 in the web was brought into position to register with one of the contact fingers 57.

As the panel 94 continues to descend the pin 179 of the block 180 engages the arm 61 of the crank 59 to hinge the board 55 rearwardly. This causes electrical contact of the contacts 57 and 63. The switch 152, 159 was open in the top position of the panel 94 because the trip 157 held the trip 156 in a manner to pivot the lever 151 up about its pivot 154. Now, however, with the panel 94 descending the member 155 is free and acts as a weight (or it may be spring pulled) to drop the lever 153 to a position closing the switch contacts 152, 159. Thus, this switch is always closed when the panel 94 is below its topmost position to keep the motor in operation.

As the panel 94 descends, however, the switch 162, 164 is opened because the trip device 167 hits the bell crank 166 to swing the lever 165 to move the contact 164 away from the complementary contact 162. This frees the coin (see Figure 13) to cause it to drop into the coin box 170. The motor circuit is not broken because of the switch 152, 159 and it is at this moment in the cycle of operation that the doors 33 slide open to expose the sign of the zodiac on the web 35 behind the display opening 28.

The panel 94 is now at the bottom position of its travel which means, of course, that the wire fingers 103 are contacting the contact clips 47 on the bar 46, as shown in the dotted lines in Figure 7. Also the trunk line finger 104 contacts the clip 47' as shown in Figure 6. By this time the pin 178 on the crank 99 closes the switch 175, 176 to complete the circuit from the battery 150 through wires 160, 64, 64', contacts 63, 57, a wire 50 and thence to the selected circuit 146 to the magnet 128, wire 48, 174 and back to the battery by wire 177.

The selected magnet determined by the slit in the web 35 now is energized to draw the armature of the adjacent detent lever 113. Said lever 113 now pivots to permit a spring 111 to pull the associated picker arm 107 to swing rearwardly through the adjacent slot 108 in the panel 94 as shown in the full lines in Figure 8. All of the other eleven arms 107 are held back by their detents 113 because their magnets have not been energized, as will be readily understood.

The parts 99, 100 now drive the panel 94 upwardly, the spring contacts 175, 176 opening as soon as the pin 178 is disengaged therefrom. As the panel moves up, the arm 107 described is in position with one of its two pins 110 to impale and pick up an envelope 92 from the pocket 88 adjacent the arm 107 being described.

As the panel 94 rises the arm 107 carries the selected envelope with it. Eventually the fingers 112 strike the cross rods 117, thus pulling the acting operating arm 107 forwardly with its envelope. The envelope strikes the back side of the panel 94 as the arm 107 passes forwardly through its slot 108, causing the envelope to be doffed from the pin 110, said envelope now dropping down the space 95 onto the chute 89 to be delivered into the tray 91. As the panel 94 reaches its top position the trip 157 engages the trip arm 155, 156 to break or open the switch 152, 159, thereby stopping the motor. The spring pressed detent 113 for the arm 107 that was in action is now pulled back to normal position restraining the said arm 107 from moving through its slot 108 in the panel 94. The spring 72 and rubber band 82 are also operative now to pull the doors 33 to closed position.

In the manner described setting of the web 35 makes it possible to present any one of its twelve slits 37 to a position with respect to the contact fingers 57 to permit energization of any one of the twelve electro-magnets to set any one of the twelve picker arms 107 in envelope picking position. The purpose of providing two angularly related pins 110 on each arm 107 is to compensate for the changed position of the pins relative to the arc of travel thereof as any one envelope pack gets smaller. In this way it is assured that one or the other of the two pins 110 on each arm 107 will impale an envelope either when the pack in each pocket 88 is full or nearly empty. The supply of envelopes in each pocket 88 can be easily replenished upon removal of the back board 85.

From this disclosure it must now be apparent that an improved selective vending machine has been provided especially adapted for vending horoscopes in the manner stated. Obviously, this improved structure achieves all of the desirable objects heretofore recited.

It is the intention to cover herein all changes and modifications of the illustrative example disclosed which do not depart from the spirit and scope of the invention as defined in the appended claims.

What is claimed is:

1. In a vending machine, a cabinet having a storage member comprising a plurality of pockets containing the articles to be vended, a vertically reciprocable control bodily movable relative to the pockets and carrying a plurality of operable vending devices for taking articles from the pockets, motor driven means to lower and raise the control panel with said devices relative to the pockets, a vending chute, means for automatically causing individual operation of one of the vending devices for taking an article from one of the pockets and causing delivery thereof to said chute as the panel returns to its raised position, and means to stop the motor and further movement of the panel when the article has been vended.

2. In a vending machine, a cabinet having a storage member comprising a plurality of pockets containing the articles to be vended, a substantially vertically slidably mounted control panel carrying a plurality of vending devices each of which is movable independently of the others relative to said control panel for taking articles from the pockets, means to drive the control panel from a raised position downwardly and then back again, and means controlled by the movement of said control member to cause actuation of one of the vender devices to take an article from one of the pockets and deliver it to a point of discharge and to stop further movement of the panel when the article has been vended.

3. In a vending machine, a cabinet having a storage member comprising a plurality of pockets containing the articles to be vended, a control panel mounted in the cabinet for substantially up and down vertical sliding movement, said panel carrying a plurality of pivotally mounted vender devices independently movable away from the panel through slots formed in the panel to

engage an article in the pockets of the storage member, and means controlled by the movement of the control panel to cause operation of one of said vending devices to cause an article to be vended.

4. In a vending machine, an upright compartmented member carrying separate groups of articles to be vended, a control panel mounted for parallel up and down movement with respect to the compartmented member and carrying a plurality of relatively movable pivoted vender devices movable through slots formed in the panel to cooperate individually with the separate groups of articles to vend the same, means for selecting one of the vender devices to be operated, and means controlled by the movement of said control panel to cause operation of the selected vender device.

5. In a vending machine, a compartmented member carrying separate groups of articles to be vended, a panel included in the machine and carried, for reciprocatory movement in a path substantially parallel to the member, a motor, means operatively connecting a moving part of the motor to the panel for moving the panel to and fro in relation to the member, said panel carrying a plurality of movable vender devices operable through slots formed in the panel from an inoperative to an operative position to cooperate with the separate groups of articles to engage and vend the same, means whereby one of the devices may be selected for operation, and means controlled by the movement of the control member to cause operation of the selected vender device and to stop the motor after the article has been vended.

6. In a vending machine, a cabinet having a storage chamber comprising a plurality of separate groups of articles to be vended, a reciprocable control member carrying a plurality of operable vender devices for taking articles from the groups mentioned, an electric motor, means operatively connecting a moving part of the motor to the control member to reciprocate same, a source of electric energy, a manually set commutator means including circuits for selecting one of the vender devices for operation, and means controlled by movement of the control member to cause operation of the selected vender device.

7. In a vending machine, a cabinet having a storage chamber comprising a plurality of separate groups of articles to be vended, a slidably mounted control member carrying a plurality of vending devices each of which is movable independently of the others relative to said control member for taking articles from the groups mentioned, an electric motor, means operatively connecting a moving part of the motor to the control member to slide the control member, a source of electric energy, circuits for the vender devices including means for selecting one of the vender devices to operate, and means controlled by the movement of the control member to cause operation of the selected vender device.

8. In a vending machine, a cabinet having a storage member comprising a plurality of pockets containing the articles to be vended, a control panel mounted in the cabinet for substantially vertical sliding movement, said panel carrying a plurality of pivotally mounted vender devices independently movable through the panel to engage an article in the pockets of the storage member, an electric motor including a source of energy and connections for operating the control panel, detents to prevent pivotal movement of the vender devices, circuits including electro-magnets for moving the detents to permit operation of the vender devices when the magnets are energized, means for selecting the particular device desired to be operated, and means controlled by the movement of the control board to energize one of the circuits and its electro-magnet.

9. In a vending machine, a compartmented member carrying separate groups of articles to be vended, a panel mounted for substantially vertical sliding movement, said panel carrying a plurality of relatively movable vender devices to cooperate with the separate groups of articles to vend the same, means for enabling one of said vender devices to be selected for operation, an electric motor having connections to drive the panel, a source of electric energy, means to start the motor, and means controlled by the movement of the panel to cause operation of the selected vender device and cutting off of the motor after the article has been vended.

10. In a vending machine, a base, a pair of detachably mounted complementary units on the base, one of said units including pockets for carrying separate groups of articles to be vended, said unit also carrying a movable member including vender devices for taking the articles from the pockets to move same to a vending position, the other unit including an exhibitor and selecting means for causing selection of the vender device desired to be operated, means for moving the movable member, and means controlled by the movement of said movable member to cause operation of the selected vender device.

11. In a vending machine, a cabinet including pockets to store separate groups of articles to be vended, a control member mounted for movement relative to said groups of articles including a plurality of vender devices for taking the articles to vend same, a changeable exhibitor in the cabinet including means for selecting one of the vender devices for operation, an electric motor having connections for operating the control member, and circuits established by movement of the control member to cause individual operation of the selected vender device.

12. A vender including a cabinet having separate groups of articles to be vended, a movable member including a plurality of vender devices individually operable to vend from the respective groups, electrically driven means for moving the member, and a reel and web means adapted to be manually set for establishing circuits to select any one of the vender devices for operation, and means controlled by the movable member to set the selected vender device in operation.

13. The combination of a vending machine having separate groups of articles to be vended and a like number of operative vender devices respectively cooperable therewith, electrical means for causing operation of the vender devices, a reel and web exhibitor means for enabling selection of one of the vender devices for operation, and movable control means to establish circuits for causing operation of the vender devices.

14. In a vending machine, an upright cabinet having a storage member comprising a plurality of upright pockets each having a substantially horizontal floor to support within the pockets loose packs of envelopes or the like arranged on end, a control panel mounted in the cabinet for up and down sliding movement in substantial parallelism with the envelopes in the pockets, a motor, means operatively connecting a moving

part of the motor to the panel for reciprocating the panel, a number of envelope engaging devices carried on the panel for bodily movement therewith and for independent movement individually away from the panel in a direction toward the respective envelope packs, said devices being equal in number to the pockets and each having operatively associated therewith means to releasably lock the devices against such relative movement, means to set the motor in operation to drive the panel downwardly from a normal raised position and then upwardly, means controlled by the panel in its down position to release one of the devices for movement to engage a preselected pack as the panel again moves upwardly to engage an envelope from the said pack to vend the same, means to stop the motor when the envelope has been vended, and means to return the vending device that operated to inactive position.

15. In a vending machine, an upright cabinet having a storage member comprising a plurality of upright pockets each having a substantially horizontal floor to support within the pockets loose packs of envelopes or the like arranged on end, a control panel mounted in the cabinet for up and down sliding movement in substantial parallelism with the envelopes in the pockets, a motor, means operatively connecting a moving part of the motor to the panel for reciprocating the panel, a number of pivotally mounted envelope engaging devices carried on the side of the panel remote from the pockets, said devices being bodily movable with the panel and also having independent swinging movement through slots formed in the panel in the direction of the pockets, said devices being equal in number to the pockets and each having operatively associated therewith detents for releasably locking the devices against swinging movement, means to start the motor to drive the panel downwardly from a normal raised position and then upwardly again, means controlled by the panel in its movement to release one of the devices for movement to engage a preselected pack as the panel moves up again to remove an envelope from said pack to vend same, means controlled by the panel to stop the motor when the envelope has been vended, and means to return the device that performed the vending operation to its normal inactive position.

16. In a vending machine, a cabinet having a storage part comprising a number of pockets containing packs of envelopes or the like to be vended, a control panel mounted in the cabinet for substantially vertical reciprocating movement from a starting position and back again, said panel carrying a number of movably mounted vender devices individually movable relative to the panel in a direction toward the packs of envelopes to engage the same, a motor, means operatively connecting a moving part of the motor to the panel for reciprocating the panel, releasable locks for normally preventing such individual movement of the vender devices, means for selecting the particular vender device desired to be moved toward a pack, and means controlled by the movement of the panel to cause release of the lock for the selected vender to cause it to move to envelope engaging position relative to the adjacent pack, an envelope being vended therefrom by said device as the panel reciprocates back to its starting position.

17. In a vending machine, a cabinet having a storage member comprising a plurality of pockets containing the articles to be vended, a control panel mounted in the cabinet for substantially vertical sliding movement, said panel carrying a plurality of movably mounted article engaging devices individually movable away from the panel toward the pockets, an electric motor including a source of energy, means operatively connecting a moving part of the motor to the panel for sliding the panel from a starting position and back again, releasable locks for the respective devices normally to prevent their movement, circuits including electro-magnetic instrumentalities for the respective locks for releasing the locks to permit movement of the devices when the instrumentalities are energized, means for selecting the particular device desired to vend, and means controlled by the movement of the control panel to energize one of the circuits and associated instrumentality to release the associated lock and permit the selected device to move to article engaging position, the article being withdrawn from the pocket and vended as the panel moves back to its starting position.

18. In a vending machine, a cabinet including compartments for carrying separate groups of articles to be vended, a bodily movable member mounted in the cabinet including individually and relatively movable article engaging devices for taking articles from a selected compartment to vend same, a changeable exhibitor carried by the cabinet including selecting means for causing selection of the vender device desired to be operated, means for driving the movable member past the compartments, and means to cause relative movement of the selected vender device toward a compartment as the member moves to vend an article therefrom.

19. In a vending machine, a cabinet including compartments for carrying separate groups of articles to be vended, a bodily movable member mounted in the cabinet including individually and relatively movable article engaging devices for taking articles from a selected compartment to vend same, an electric motor, means operatively connecting a moving part of the motor to the movable member to drive the movable member past the compartments, locks for the movable devices to hold them in an inactive position, electromagnetic devices arranged in circuits, said electro-magnetic devices when energized serving to release the locks to permit movement of the movable vender devices to article engaging positions, a changeable double reel and web exhibitor having slots, means to move the web to set a selected slot for building up a circuit to one of the electromagnetic devices, and means controlled by movement of the movable member to complete the circuit to energize the associated electro-magnetic device to cause release of a lock and movement of the associated vender device to article engaging position, said vender device vending the article engaged as the movable member moves.

20. In a vending machine, a cabinet including compartments for carrying separate groups of articles to be vended, a bodily movable member mounted in the cabinet including individually and relatively movable article engaging devices for taking articles from a selected compartment to vend same, a changeable exhibitor including selecting means for causing selection of the vender device desired to be operated, said exhibitor being movable past a display opening formed in the cabinet, a normally closed movably mounted door carried by the cabinet to obscure the opening and exhibitor, means for moving the movable member, and means controlled by the movement

of said movable member to cause operation of the selected vender device and opening of the door to display the exhibitor.

21. In an envelope, or the like, vending machine, a cabinet having a storage member formed with a number of pockets in which pockets flat packs of the envelopes to be vended are stored, a reciprocably mounted control panel in the cabinet bodily movable substantially parallel with and past and in close proximity to the storage member, said panel carrying a plurality of operable vending devices for taking articles from the pockets, motor driven means to move the panel to and fro past the pockets to locate the vender devices respectively relative to the pockets, and means controlled by the movement of said control member to cause actuation of one of the vender devices to slip an envelope from a pack in one of the pockets, delivery means to receive such envelope and vend it to a point of discharge, and means to stop further movement of the panel when the envelope has been vended.

22. In a vending machine, a compartmented member carrying separate packs of flat envelopes or the like to be vended, a support mounted adjacent said member, a number of envelope engaging devices movably mounted on the support, resilient means for each device individually urging it toward a corresponding pack to engage an envelope, individual means releasably locking the devices in an inoperative position away from the packs against the force of the resilient means, an electric motor including connections driven from a moving part of the motor to cause relative movement between the compartmented member and support for relatively positioning the separate packs of envelopes and the envelope engaging devices, means to cause release of a preselected device for operatively positioning it to engage an envelope whereby as the member and support continue their relative movement the operatively positioned device will engage and slip an envelope off the corresponding pack, means to receive the discharged envelope and for directing it to a vended position, a trip controlled by the relative movement of the member and support to stop the motor, and the resilient means serving to retract the vender device which operated to its inoperative position.

EARL L. CRABB.