

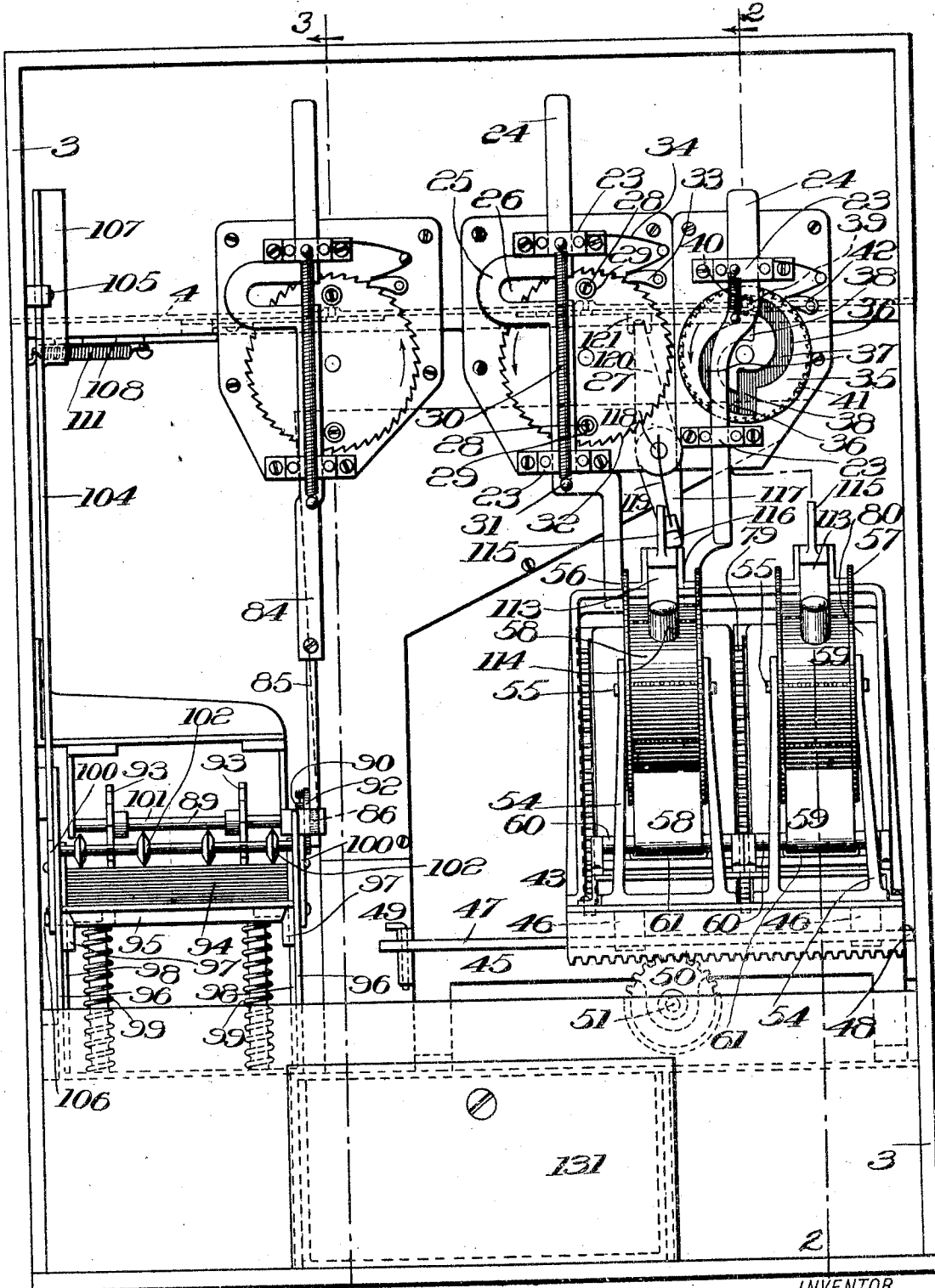
H. H. DANIELS.
VENDING MACHINE.

APPLICATION FILED JAN. 7, 1908.

Patented Mar. 18, 1913.

3 SHEETS—SHEET 1.

1,056,508.



WITNESSES

John S. Sheppard Jr.
Wm. D. Sawyer

Fig. 1. Harry H. Daniels

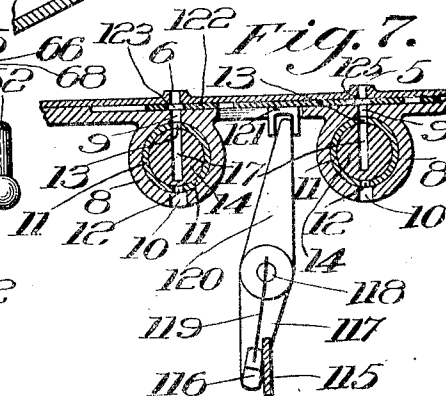
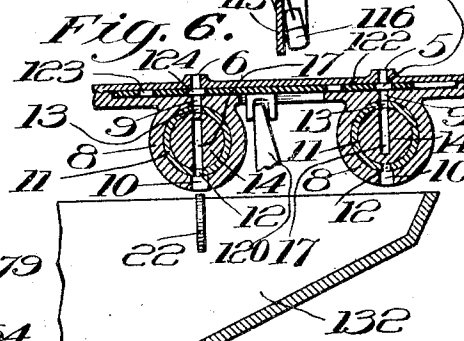
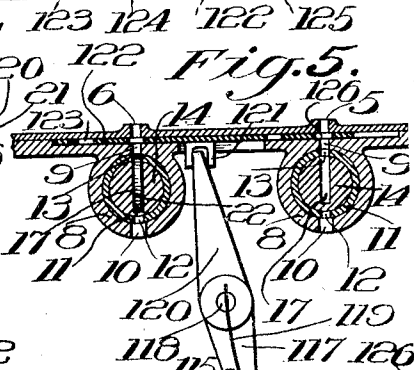
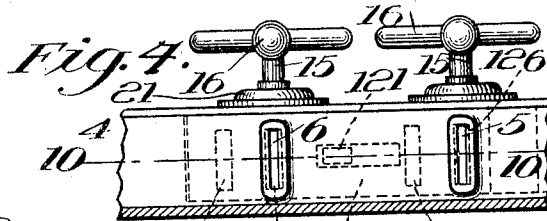
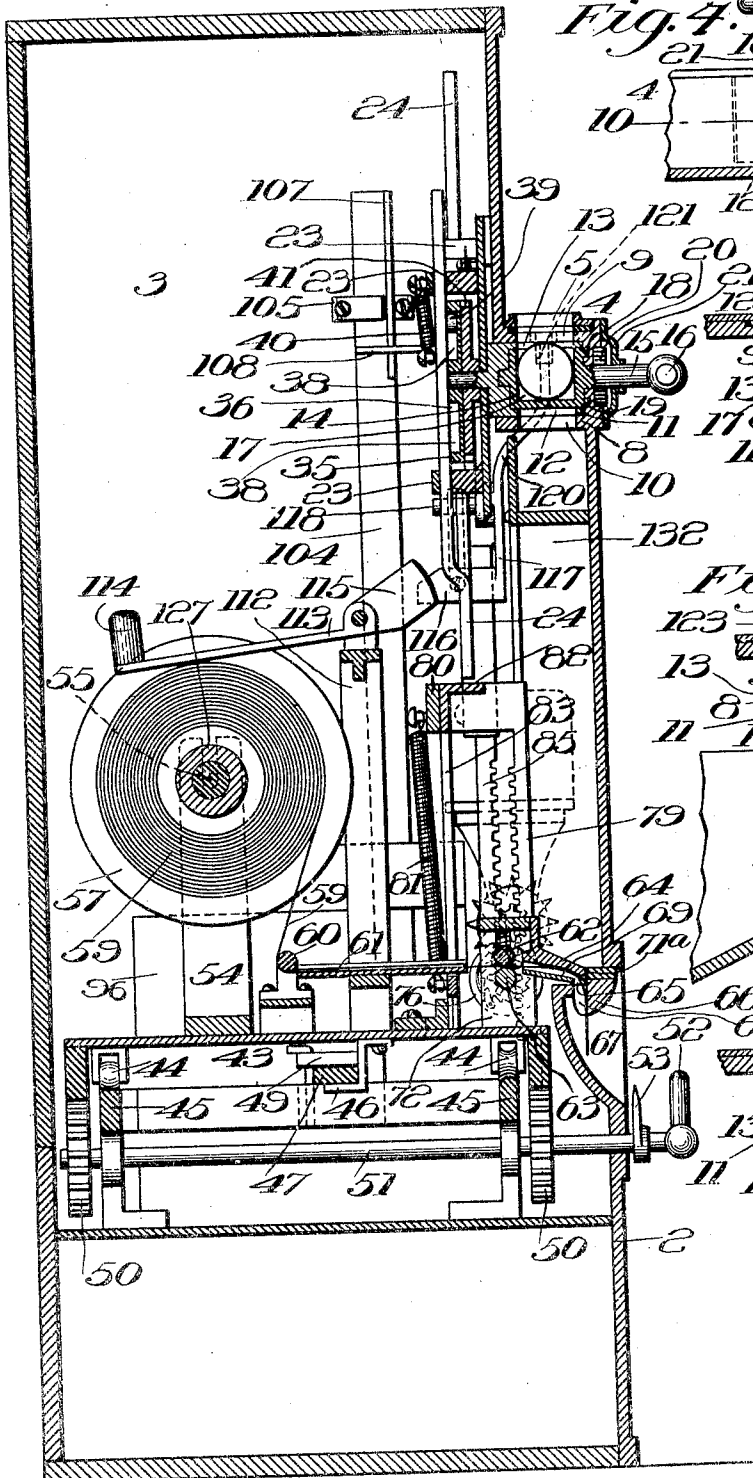
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Patented Mar. 18, 1911

3 SHEETS—SHEET 2.

1,056,508.



WITNESSES
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BY
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1,056,508.

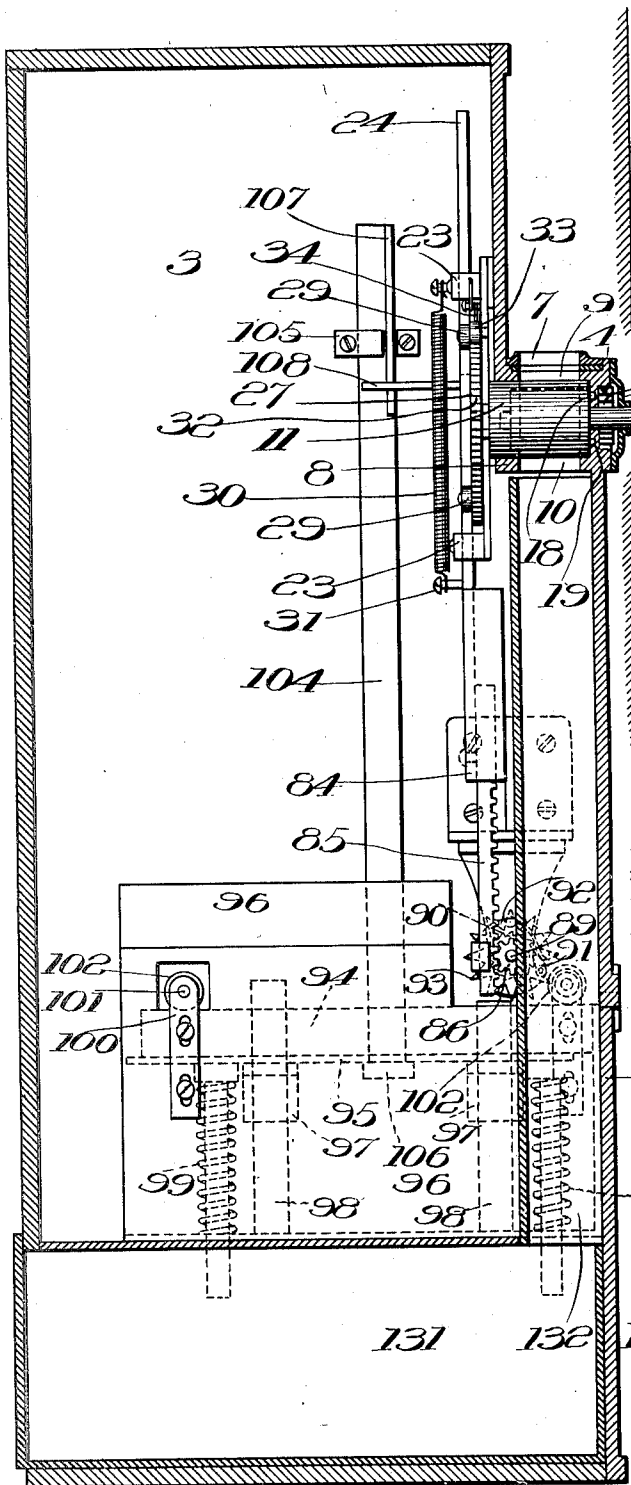


Fig. 3.

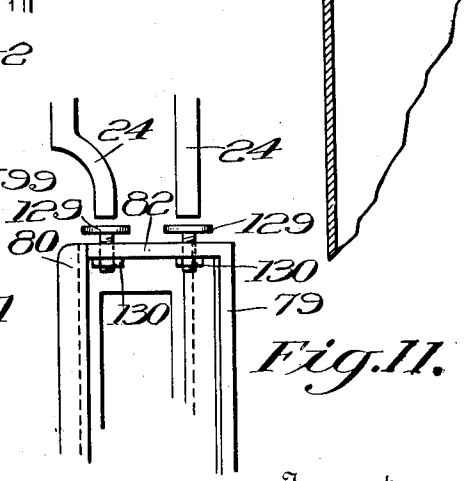
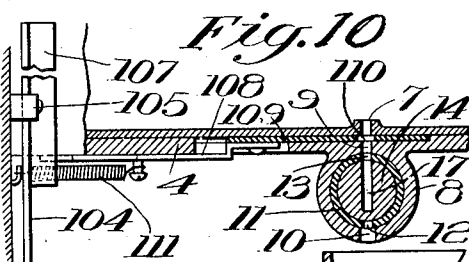
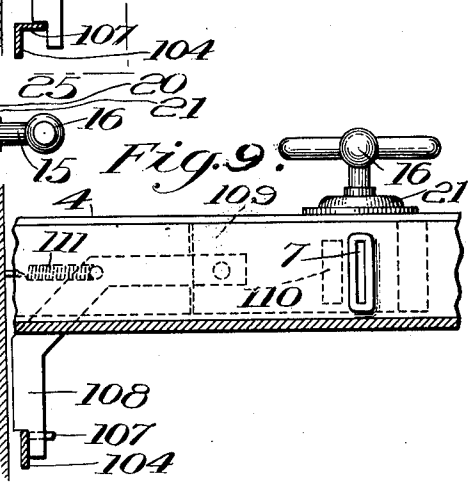
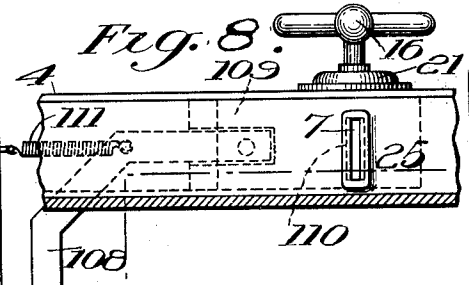


Fig. 11.

Witnesses
John S. Stepper
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UNITED STATES PATENT OFFICE.

HARRY H. DANIELS, OF WINTHROP, MASSACHUSETTS, ASSIGNOR TO JOHN W. CAMPBELL, OF NEW YORK, N. Y.

VENDING-MACHINE.

1,056,508.

Specification of Letters Patent.

Patented Mar. 18, 1913.

Application filed January 7, 1908. Serial No. 409,648

To all whom it may concern:

Be it known that I, HARRY H. DANIELS, a citizen of the United States, residing at Winthrop, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to that class of vending machines wherein articles are delivered from a storage place within the machine to an operator upon the insertion of a coin of selected value.

My invention is shown as applied to a machine for the automatic vending of postage stamps and postal cards, although many features of my invention may be applied to vending machines for the sale of different articles.

One of the purposes of my invention is to provide a device for positively closing the coin-receiving aperture or slot when the supply of the goods within the machine is exhausted, or nearly exhausted.

I also provide means for retaining the coin slots closed while a shifting carriage containing articles of different value is not in position to register with the proper outlet and proper operating device for delivering a selected article.

Further details of improvement will be explained in the specification and designated particularly in the claims.

The accompanying drawings illustrate a machine embodying the invention.

Figure 1 is a rear view of the mechanism, the back of the casing being removed. Fig. 2 is a section on the line 2—2 of Fig. 1 showing operating mechanism for one cent coins and the feeding device for ejecting two cent stamps. Fig. 3 is a sectional view on the line 3—3 of Fig. 1 illustrating the postal card delivery apparatus. Fig. 4 is a plan view of the coin slots for purchasing stamps, the slot-control plate being shown in dotted lines open for the reception of coins for the purchase of one cent stamps. Fig. 5 is a section on the line 5—5 of Fig. 4, a five cent coin being shown in position ready for the operation of delivering five one cent stamps. Fig. 6 is a view similar to Fig. 5, the operating device having been rotated for the delivery of one cent stamps to the value of five cents, a nickel piece being shown as just freed and dropping toward

the coin-drawer. Fig. 7 is a view similar to Fig. 5, the parts being shown with the coin slots ready for the reception of the coins for the delivery of two cent stamps. Fig. 8 is a plan view of the postal card coin slot and adjacent parts, the slot-control plate and its operating device being indicated partly in dotted lines, the coin slot being open. Fig. 9 is a similar view, the postal card coin slot being closed. Fig. 10 is a sectional view on line 10—10 of Fig. 8. Fig. 11 is a front detail view showing the adjustable studs on the plates over the racks operating the stamp-feeding rollers.

Referring to the drawings, the casing for the device has a front 2 and sides 3. In the front is an upper ledge 4, in which are located the apertures or slots 5, 6 and 7, the aperture 5 being adapted to receive one cent coins for the delivery of stamps, the aperture 6 being adapted to the reception of five cent coins for the delivery of stamps, while the aperture 7 is adapted to the reception of one cent coins for the delivery of postal cards. The three coin-receiving devices are all similar and are best illustrated in Figs. 2, 3, 4, 5, 6, 7, and 10. They consist of an outer drum 8, having the upper slot 9 and lower slot 10 both located directly beneath a coin slot in the ledge 4. The outer drum 8 is fixed in position as indicated. Within the outer drum 8 is positioned the inner shell 11 integrally connected at its rear with the disk for driving a plunger (Figs. 3 and 4). The inner shell 11 has oppositely positioned slots 12 and 13. Within the inner shell 11 is the cylinder 14 integrally connected by means of the pin 15 with the operating handle 16 at the front of the machine. The cylinder 14 has a slot-like recess 17 extending almost across its diameter but closed at one end. The rotation of the cylinder 14 is stopped in either direction by the pin 18 (Fig. 2) meeting the ends of the slot 19. When the coin is freed from the device as illustrated in Fig. 6, the inner cylinder 14, pin 15 and handle 16 are returned to their initial position ready for the reception of the next coin by means of the coiled spring 20 (Fig. 2), one end of which is secured to the pin 15 and the other end to the casing. A cap 21 covers spring 20. 22 is the coin employed. Secured to the front casing are the upper and lower brackets 23 having guide apertures in which slides the plunger 24. I will

first describe the device for operating the plunger 24, which relates to the device for receiving a five cent coin or nickel. The construction of the operating device relating to the postal cards is similar, whereas the operating device for delivering stamps upon the insertion of a one cent coin is somewhat varied in construction, as most clearly illustrated in Fig. 1. At about the middle of the plunger 24 is a side extension 25 which provides a groove or slot 26. The disk 27 is integrally connected with the inner shell 11, as best shown in Fig. 2, so that they rotate together. The two pins 28 extending inwardly from the disk 27 carry rollers 29 adapted to engage the slot or groove 26. The spring 30 extending between a pin on upper bracket 23 and a lower pin 31 on plunger 24 tends to hold said plunger in its upper position, illustrated in Fig. 1. The teeth 32 in the circumference of disk 27 are engaged by the pawl 33 provided with the spring 34. The plunger 24, which is operated upon the insertion of a one cent coin for the delivery of stamps, has a somewhat different operating device. The disk 35, also integrally connected to an inner shell 11, is provided with two connecting cam grooves 36, each having a curved portion 37 and a straight portion 38. The pin 39 extending outwardly from plunger 24 has a roller which enters the cam groove 36. The spring 40 extends between a pin on bracket 23 and a lower pin on the plunger 24. The disk 35 is provided with circumferential teeth 41, engaged by the spring-pressed pawl 42.

The carriage 43, provided with rollers 44 is adapted to run on tracks 45. Downwardly projecting hooks 46, affixed to the bottom of carriage 43 are adapted to be engaged by the swinging, locking bar 47 which is pivoted at 48 to an upright and retained removably in position by the fastening device 49. The carriage 43 is adapted to be shifted along its track 45 by the rotation of gear wheels 50 fast upon shaft 51 which terminates in the outer handle 52 and is provided with the pointer 53 to indicate to the operator the position of the carriage and whether or not such position is adapted for the delivery of one or two cent stamps. Appropriate notices (not shown) on the front of the machine will convey this information to the operator. The standards 54 are mounted on the carriage 43. They contain bearings for the shafts 55 of two spools 56 and 57, the spool 56 being engaged to carry a coil of one cent stamps 58, while the spool 57 carries a coil of two cent stamps 59. The strip of two cent stamps 59 which are connected together, end to end and separated by the usual perforations, are led from their spool 57 (Fig. 2) around roller 60, thence for-

ward through the track or guide 61 between the upper feed roller 62 and lower feed roller 63, thence along the bottom of a slightly inclined plate 64 to the aperture 65 which is protected by the hood 66 at the top of the recess 67 in the front of the casing. The side walls of the recess 67 have slots 68 on each side, opening to the interior of the machine, but protected by the hood 66. The bottom of the nose is a plate 69, having teeth adapted to register with and engage the perforations between the stamps. The plate 64 has a downwardly curved front edge 71^a, both of said plates being supported on the carriage 43 so as to form a sort of nose or nozzle for the strip of stamps to be fed through and directed downwardly behind hood 66.

The feed rollers 62 and 63 (Fig. 2) for the two cent stamps have bearings in uprights 72, the bearings for upper feed roller 62 being spring-pressed downwardly. They are geared together so as to rotate in unison, but in opposite directions to feed the stamps forward. Upon the shaft of the lower feed roller 63 is loosely mounted a small gear wheel with the disk 76 affixed thereto. The disk 76 carries a spring-pressed pawl adapted to engage in one direction or ride over in the other direction, the teeth of ratchet wheel which is fast upon the shaft of the lower feed wheel 63. The gear wheel meshes with the teeth of the vertical rack 79, which is guided in upright guides 80. The spring 81 extends between the lower end of the rack-frame and upright guide 80, tending to hold the rack 79 in its upper position. Affixed across the top of rack 79 is the plate 82 having the downwardly extending rack-frame 83, adapted to slide up and down in the guide 80. The feeding devices for the spool 56 of one cent stamps 58 are precisely like those for feeding the two cent stamps with the exception that the diameter of the feed rollers for the one cent stamps corresponding to rollers 62 and 63 is such that the amount of feeding will be precisely twice that of the feed rollers for the two cent stamps for the same number of revolutions. The tracks and feed nozzles for both kinds of stamps and the feed rollers therefor, as well as the racks for driving the feed rollers, are mounted upon the carriage 43, as indicated, so as to move transversely across the machine upon said carriage when its position is shifted.

The operating parts adjacent to the coin-receiving slot for effecting the delivery of postal cards are similar to like parts adjacent to the five-cent coin aperture of the stamp delivery mechanism. The lower end of the plunger 24 is permanently connected with the upper end of the rack 85 which meshes with a gear wheel 86 (Fig. 3) loosely

hung upon the outer end of shaft 89. Fast upon shaft 89 is ratchet wheel 90, engaged in one direction only by the spring-pressed pawl 91, carried upon the disk 92 secured to the gear wheel 86. Affixed to the shaft 89 are the sharp toothed feed wheels 93 adapted to engage the upper surface of the uppermost postal card in the pile 94, which is carried on the platform 95, adapted to move vertically between the side guides 96 extending from the base of the machine. The platform 95 has downwardly extending sleeves 97 engaging upright guides 98 so that the platform 95 is retained even and level during its upward course under the pressure of springs 99 as the supply of post cards is exhausted. The adjustable ears 100 are secured to the stationary side guides 96 and have bearings therein for the shafts 101 carrying the idle rollers 102, against which the uppermost postal card is forced by the upward pressure of springs 94 beneath the pile of postal cards.

The front 2 of the machine is provided with a slot for the ejection of the postal cards. The rod 104 is held upright by guide 105 secured to the side of the machine. Its lower end rests upon the shelf 106 extending from the platform 95 (Figs. 1 and 3). At the upper end of rod 104 is an inwardly extending wing or lip 107, which is normally engaged when the supply of postal cards is ample, by the arm 108 which extends forward and is connected to the outer end of the postal card slot control plate 109, (Fig. 10) having the aperture 110 normally registering with coin slot 7. The spring 111 is secured to the side of the casing and to the coin-control plate 109.

The uprights 112 on carriage 43 have pivoted at their upper ends slightly above and in front of each stamp spool, the levers 113 (Figs. 1 and 2), having weighted inner ends 114 and outer wings 115 which normally extend forward to contact with the projection 116 from the arm 117 pivoted on pin 118 extending from the front of the casing. The arm 117 is normally retained in the perpendicular position by means of a spring. The upper arm 120, curving forward as indicated in Fig. 2, engages a recess in an ear 121 projecting downward from the slot-control plate 122, best illustrated in Figs. 4, 5, 6 and 7. The slot-control plate 122 is provided with the four apertures 123, 124, 125 and 126.

The core 127 of each stamp spool 56 and 57 is provided with a central annular recess adapted to be uncovered when the supply of stamps is withdrawn from the spool so as to permit the weighted arm 114 of lever 113 to drop therein.

To prevent confusion in the drawings, Fig. 11 is the only view showing the adjustable studs 129 which project from the plates

82 over the racks 79 to receive the impact of plungers 24. The studs 129 are screw-threaded so that they may be adjusted vertically on plates 82 and are provided with the locking nuts 130.

131 represents the coin-drawer and 132 the chute through which the coins descend thereto.

The operation of my device is as follows: We will suppose, first, that a customer wishes to purchase a one cent stamp. He will first turn handle 52 to the position where the pointer 53 directs toward a notice (not shown) on the front of the machine indicating the proper position of handle 52 and pointer 53 in order to secure the delivery of one cent stamps. As the shaft 51 is rotated by the turning of handle 52, gear wheels 50, engaging with the downwardly extending teeth on the two parallel transversely extending racks projecting downward from carriage 43, will shift said carriage to the left, or to the extreme right when viewed from the rear (Fig. 1). Assuming that a supply of stamps 58 is coiled upon spool 56 for one cent stamps, the inner weighted end 114 of lever 113 will be upheld by the coil of stamps so that its wing 115 projects sufficiently toward the front of the machine to contact with the projection 116 from the arm 117 (Figs. 1 and 2). As the carriage 43 approaches the limits of its movement toward the right (Figs. 1 and 5), the wing 115 striking projection 116 will shift the lower arm 117 to the right so that, as it moves about the pivot pin 118, the upper arm 120 will move to the left and, by means of its engagement with the recess in an ear 121 projecting downward from stamp slot-control plate 122, will shift said slot-control plate to the left into the position illustrated in Figs. 4, 5 and 6 so that the slots or apertures 124 and 126 in said slot-control plate 122 register with the coin slots 5 and 6 in the ledge 4 exposed to the view of the operator. The coin-slot control plate 122 rests in a long, narrow guideway immediately beneath the ledge 4, as best illustrated in Figs. 2, 4 and 5. Both of the coin slots 5 and 6, relating to the stamp delivery device, are now open. Following our previous assumption, the operator now inserts a one cent coin in the coin slot 5 designed therefor and turns the handle 16 on its stud 15 to the right in the direction of the movement of the hands of a clock and against the tension of spring 21. The one cent coin will have passed at the moment of its insertion through coin slot 5, through the slot 9 in outer drum 8, as best indicated in Fig. 5 (which, however, illustrates the use of a five cent coin) into the slot-like recess 17 in the inner cylinder 14, where it will rest projecting slightly from said recess 17 into the slot 13 in inner shell 11. When,

now, the operator turns handle 16, the stud 15, being connected to inner cylinder 14, will rotate it and, by the engagement of the coin in the recess 17 with the edge of slot 13 in shell 11, simultaneously turn said shell 11 and the disk 35 integrally connected therewith (Fig. 2), so that the curved portion 37 of the cam groove 36 will engage the roller on the pin 39 projecting from plunger 24, which is held perpendicular by its guide-brackets 23 so as to drive downward plunger 24 until, in the rotation of disk 35, the straight portion 38 of cam groove 36 reaches pin 39. At this instant, the plunger 24, under the influence of spring 40, will be suddenly shifted upward the length of the straight portion 38 of the cam groove 36 until it reaches its upper position, ready for a repetition of the operation just described. The pin 18 (Fig. 3), projecting forward from cylinder 14 by meeting the end of the curved slot 19, limits the rotation of cylinder 14 to an arc of one hundred and eighty degrees. When this point is reached, recess 17 is inverted and the coin is permitted to fall downward through slot 13 in shell 11 and slot 10 in the drum 8 and through chute 132 to coin-drawer 131. At the same moment, the pin 39 has been reached by the straight portion 38 of cam groove 36, permitting the plunger 24 to spring upward to its initial position as before explained. The inner shell 11 being integrally connected to disk 35 will now be inverted with slot 12 at the top to admit another coin and engage the protruding edge of the same for a repetition of the operation. The spring 20, the inner end of which is fixed to pin 15, returns handle 16 and cylinder 14 to their initial positions with recess 17 open at the top to receive the next coin. The spring-pressed pawl 42, engaging teeth 41 in the circumference of disk 35, prevents any reverse rotation of handle 16 until the coin 45 has been released.

When the plunger 24 starts downward, it contacts almost immediately with an adjustable stud 129 (Fig. 11) upon the plate 82, to drive the same downward with the rack-frame 83 along the upright guide 80. The rack 79 beneath plate 82 being driven downward thereby, engages the small gear thereto the disk 76 and thus drives the lower feed wheel 63 and simultaneously the upper feed wheel 72 to feed forward and downward the coil of one cent stamps 58. The proper pressure between the feed rollers is maintained by springs. The stamps in their strip are carried along the track 61 past the feed wheels 62 and 63 through the nose whose upper plate 64 is turned downward slightly to guide the stamps downward, while the lower plate 69 is provided with small teeth adapted to engage the perfora-

tions which divide the stamps from each other. The circumference of the feed wheels 62 and 63 is such that the downward movement of the rack 79 is just sufficient to feed the strip of one cent stamps forward a distance equal to the length of one stamp. By adjusting studs 129 the amount of rotation of the feed wheels 62 and 63 for each downward drive of plunger 24 may be changed slightly to accord with variations in the spaces between the lines of stamp perforations should they depart somewhat from the usual standard. The hood 66 at the front of the machine within, and at the top of recess 67, is so arranged as to compel the customer to pull the slightly projecting stamp downward to withdraw the same. The teeth 70 will engage the stamp perforations, insuring a clean tear or severance of the first stamp from the strip behind. When the plunger 24 is released and rises as before explained, the rack 79 is also released and raised to its initial position by spring 81. During the upward movement of rack 79 the pawl 77 rides over the teeth of ratchet wheel 78 so that the feed rollers 62 and 63 remain still.

Assuming that the customer repeats the above operation many times, the stamps will be gradually exhausted until the annular recess in the core 127 of the stamp spool is uncovered, leaving the weighted arm 114 of lever 113 free to drop into said recess 128. This will raise the wing 115 so that it no longer contacts with projection 116 from arm 117. The spring 119 will at once shift the parts 116, 117, 120, 121 and 122 to their central position, so that no slot in coin-control plate 122 registers with the coin slots 5 and 6 in ledge 4. The subsequent movement of the carriage 43 to the left designed to procure a supply of one cent stamps, will be ineffective to open the coin slots. This closing of the coin slots when the one cent stamps are entirely drawn from their spool will leave a supply of four or five one cent stamps still in the machine so that there is no chance of the purchaser failing to secure a one cent stamp after having been allowed to insert a coin therefor.

Suppose, now, the supply of one cent stamps not having been exhausted or nearly exhausted, that the purchaser desires to secure five cents worth of such one cent stamps in return for a five-cent piece or nickel. He will, as before, shift the carriage 43 by means of handle 52 to the position above described, opening both coin slots 5 and 6. He now inserts his nickel piece in coin slot 6 and turns the handle thereunder from right to left as before. The mechanism for the downward drive of the plunger 24 to secure five cents worth of stamps is slightly different from that described above. Upon

the rotation of shell 11, the uppermost pin 28 with its roller 29 will enter the slot or groove 26 and drive downward plunger 24 until the pin 28 escapes therefrom at the bottom, allowing the plunger 24 to be returned by spring 30 to its uppermost position. It will be seen that the downward movement of the plunger 24, which is operated by the five cent coin, is just five times as great as the downward movement of the plunger operated by the one cent coin. This will accomplish a downward movement of the rack 79 five times as great as that above described so that feed rollers 62 and 63 will feed forward five one cent stamps to the customer. If, now, the customer wishes to secure a two cent stamp, paying therefor two one cent coins, he shifts the carriage into proper position by turning handle 52 from left to right. Assuming that there is a supply of two cent stamps 59 upon their spool 57, the projection 116 will be shifted from right to left (Fig. 7) to shift the coin-control plate as indicated so that the slots therein 123 and 125 register with the coin slots 5 and 6, allowing the insertion of coins. The operation thereafter is precisely as heretofore described, except that the carriage having been shifted to position for delivery of two cent stamps, the plates 82 will be likewise shifted, so that the delivery devices for the two cent stamps underlie the plungers 24. The feed rollers 62 and 63 adapted to feed two cent stamps are so sized smaller than the feed rollers for one cent stamps that the rate of feed will be just one-half as great. Therefore, upon operating the machine by the employment of a one cent coin for the delivery of a two cent stamp, the strip will be moved forward and outward only one-half the length of a stamp so that the operator cannot grasp the outer end of the stamp inasmuch as it is protected by a hood 66. A second operation of the machine with the employment of a one cent coin will feed the strip of two cent stamps forward again one-half the length of a stamp so as to permit the operator to withdraw the two cent stamp for which he has paid two one cent coins.

If the operator employs a five cent coin for securing two cent stamps, two will be delivered to him while the third will be ejected only one-half of its length and retained inaccessible behind hood 66, requiring a one cent coin and a repetition of the feeding process to eject the third stamp so that it can be reached and withdrawn by the operator; or a second five cent coin may be employed to secure five two cent stamps altogether.

When the supply of two cent stamps is exhausted, as well as the supply of one cent stamps, both levers 113 will have dropped into annular recesses in their respective

spools so that the arm 117 will be retained by spring 119 in its central position, closing both coin slots relating to stamps. The shifting of the carriage into either position for securing one or two cent stamps, will now be ineffective to open coin slots 5 and 6 inasmuch as the wings 115 will pass by projection 116 without contacting therewith.

The slots or openings 68 in the sides of recess 67 at the front of the machine are protected by the hood 66. When, by reason of the employment of a one or five cent coin for the purchase of two cent stamps, such a stamp projects one-half its delivery distance, the slots 68 will permit the shifting of the carriage without tearing the projecting stamp. The carriage 43 and all parts secured thereon may be removed from the machine by freely locking bar 47 (Figs. 1 and 2) from its fastening device 49 and turning the same outward on its pin 48 so as to free the downwardly projecting hooks 46 from engagement therewith.

The coin and feeding devices for procuring postal cards are similar to those just described for stamps, except that provision is made for the delivery of only one kind of postal cards upon the insertion of one denomination of coins, namely, a one cent piece, and except that the teeth on the rack affixed to the plunger project forwardly. The postal cards are carried on a platform 95, pressed upward between the stationary side guides 96 by springs 99 having inner guide rods as indicated by Figs. 1 and 2. Sleeves 97 secured to the bottom of platform 95 engaging upright guides 98 serve further to retain platform 95 level as it rises as the postal cards are delivered. The sharp-toothed feed wheels 93, when driven, engage the upper surface of the uppermost postal card and drive the same forward through the slot 103 so that the customer may withdraw the same completely.

The idler rollers 102 on their shafts 101 serve to retain the uppermost postal card in proper position for feeding. They are carried on adjustable ears 100 (Fig. 3), so as to be capable of being shifted vertically in case the supply of postal cards varies in thickness from the usual standard.

When the supply of postal cards is nearly exhausted, the coin slot therefor is closed so that the customer cannot insert a coin. This is accomplished as follows: The shelf 106 extends toward the side from beneath the platform 95 and supports the vertical rod 104 which is held upright by guides 105. The wing or lip 107 extends inwardly from the upper end of rod 104, as best illustrated in Figs. 8, 9 and 10, and normally engages, when the supply of postal cards is ample, the arm 108 connected to the end of the coin slot plate 109. The coin-control plate 109 lies in the transversely extending

recess beneath the ledge 4 and below coin slot 7 and is provided with a slot or aperture 110 normally registering with coin slot 7 when the wing or lip 107 retains the coin slot control plate 109 in place. As the supply of postal cards decreases, platform 95 is raised by the springs 99 and, just before the postal cards are exhausted, the wing or lip 107 is raised above arm 108 permitting spring 111 to shift said arm and coin control plate 109 to the left (Fig. 9), shifting the aperture 110 out of registration with coin slot 7 to close the slot and prevent the insertion of coins for the purchase of postal cards. The one cent coins, after having been engaged in the operation of the postal card delivery device, drop downward through chute 132 to coin-drawer 131, illustrated in Fig. 1.

To replenish the supply of postal cards, the operator inserts them in a pile upon platform 95 and beneath the toothed wheels 93 and idle rollers 102 depressing platform 95 for that purpose against its springs 99. The operator at the same time moves arm 108 against the pull of spring 111 until the slot 110 registers with slot 7 when the lip 107 will be free to move past arm 108 so that the rod 104 may rest upon shelf 106 in its lower position.

To replenish the supply of stamps, they are coiled upon the empty spool and led through their proper path and between feed rollers 62 and 63 and adjusted in position so that at the next feeding movement the first stamp will extend the correct distance at the front of the machine.

The coin slots 5, 6 and 7 are so sized as to prevent the introduction of a coin larger than it is intended shall be used. If a coin smaller than that required for the operation of any of the devices is inserted, when the handle 16 is turned the recessed cylinder 14 will be reversed so as to permit the small coin to drop downward through the lower slots in drum 8 and shell 11 and take its course to the coin-drawer without having operated the machine.

It will be understood that the strips of stamps which I employ are specially treated so that the mucilage thereon is protected or prevented from sticking to adjacent stamps.

What I claim as new and desire to secure by Letters Patent is:—

1. In a coin-controlled vending machine having a movable carriage for storing supplies of articles to be vended, means for effecting the delivery of an article upon the insertion of a coin, and automatic means for preventing the insertion of a coin except when the carriage is in proper position to deliver an article to the vendee.

2. In a coin-controlled vending machine having a movable carriage for separate

stores of different articles to be vended, means for effecting the delivery of a selected article upon the insertion of a coin, and automatic means for preventing the insertion of a coin except when the carriage is in proper position to deliver the selected article to the vendee.

3. In a coin-controlled vending machine having a movable carriage for storing articles to be vended, means for automatically preventing the insertion of a coin except when the carriage is in proper position for the delivery of an article to the vendee.

4. In a coin-controlled vending machine, having a movable carriage for separate stores of different articles to be vended, means to shift said carriage into position for the delivery of a selected article, and means to prevent the insertion of a coin unless the carriage is in proper position for the delivery of the selected article and unless the supply of the selected article is adequate.

5. In a coin-controlled vending machine having a movable carriage for separate stores of different articles to be vended, means to shift said carriage into position for the delivery of a selected article, means to prevent the insertion of a coin unless the carriage is in proper position for the delivery of the selected article, and unless the supply of the selected article is adequate, and means to enable the insertion of a coin upon the shifting of the carriage into proper position for the delivery of a different article the supply of which is ample.

6. In a coin-controlled vending machine having a movable carriage for separate stores of different articles to be vended, means to prevent the insertion of a coin unless the carriage is in proper position for the delivery of an article the supply of which is adequate.

7. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, a movable carriage for storing supplies of articles, means to shift said carriage, and means automatically to prevent the insertion of any coin unless the carriage is in proper position for the delivery of an article.

8. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, a movable carriage for storing supplies of different articles, means to shift said carriage, and means automatically to prevent the insertion of any coin unless the carriage is in proper position for the delivery of the selected article.

9. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, a movable carriage for storing supplies of different articles,

means to shift said carriage, and means automatically to prevent the insertion of any coin unless the carriage is in proper position for the delivery of the selected article and unless the supply thereof is adequate.

10. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, a movable carriage for storing supplies of different articles, means to shift said carriage into position for the delivery of a selected article, and means automatically to prevent the insertion of any coin when the carriage is not in position for the delivery of an article the supply of which is ample and to enable the insertion of any coin to which the machine is adapted when the carriage is in position for the delivery of an article the supply of which is adequate.

11. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, each having its respective coin-slot, and means for automatically opening or closing all the coin-slots simultaneously.

12. In a coin-controlled vending machine adapted to be operated by coins of different denominations, a separate coin receptacle for each kind of coins, each having its respective coin-slot, a coin-slot control plate having different sets of a plurality of apertures for each coin-slot and means automatically to shift said coin-slot control plate to open or close all the coin slots simultaneously.

13. In a coin-controlled vending machine adapted to vend articles stored therein in a coil, a spool for said coil, a core therefor having an annular recess, a lever, one arm of which rides on said coil, means engaged by said lever for opening a coin slot, and means whereby said coin slot is closed when at the exhaustion of the coil the arm of the lever enters the annular recess in the core of said spool.

Signed at the city of Boston in the county of Suffolk and State of Massachusetts this 20th day of December A. D. 1907.

HARRY H. DANIELS.

Witnesses:

M. I. NORTON,
W. L. SWINK.