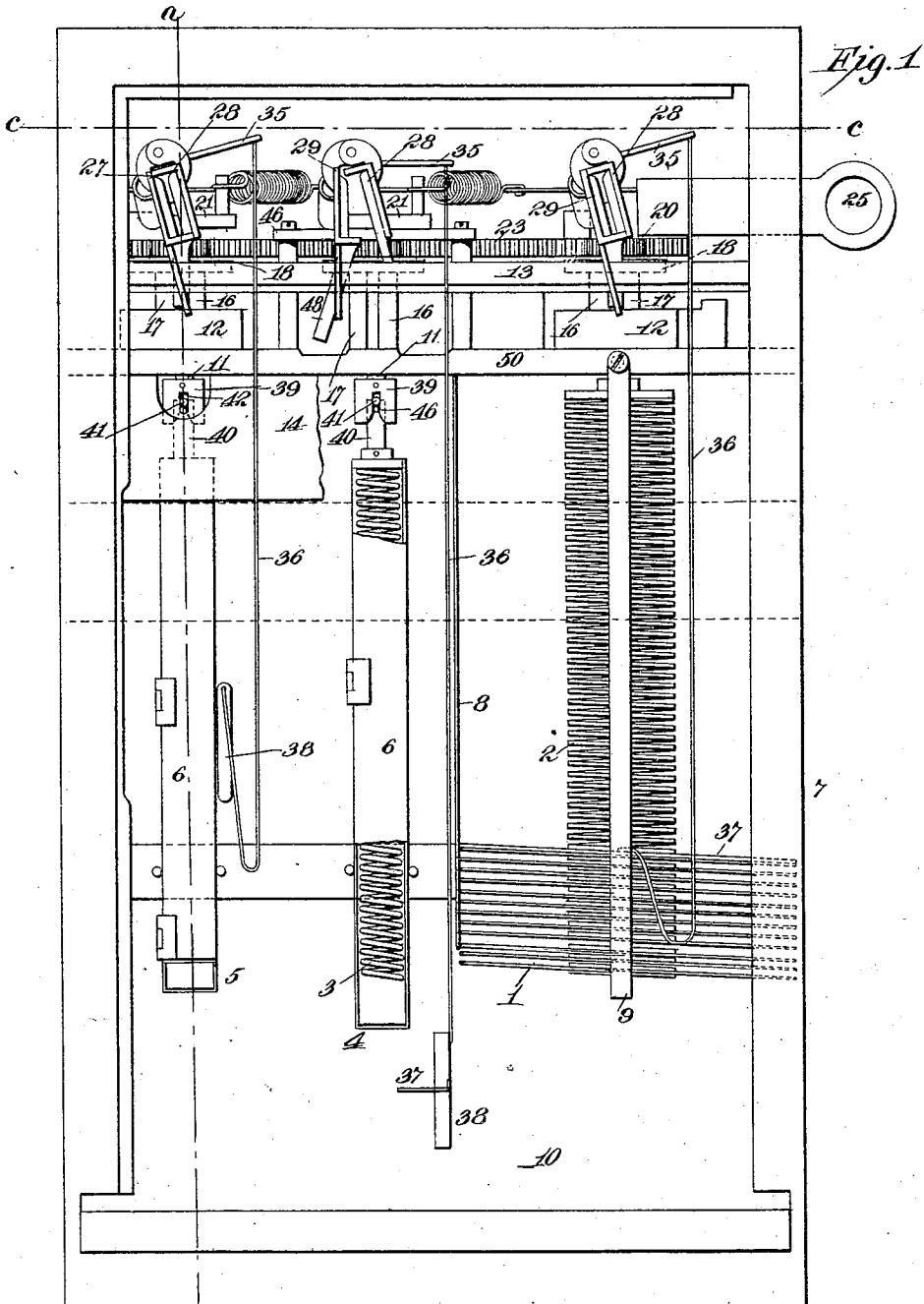


C. PERDRISAT.
 COIN OPERATED APPARATUS.
 APPLICATION FILED DEC. 29, 1906.

968,075.

Patented Aug. 23, 1910.

3 SHEETS—SHEET 1.



Witnesses: a

Geo. F. Coleman
 John F. Fobch.

Inventor

Charles Perdrisat,
 By *[Signature]*
 Attorneys.

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3 SHEETS—SHEET 2

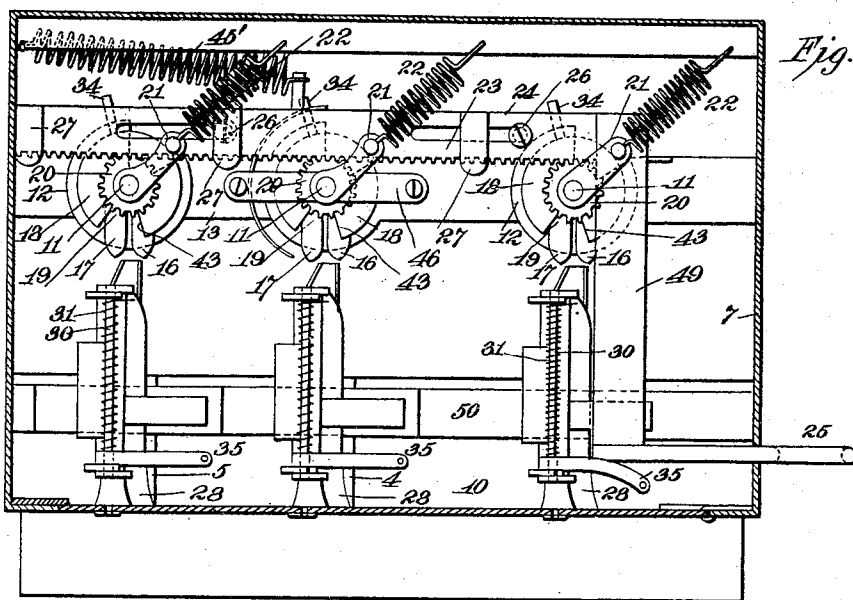


Fig. 2

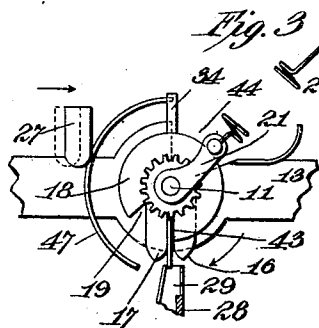


Fig. 3

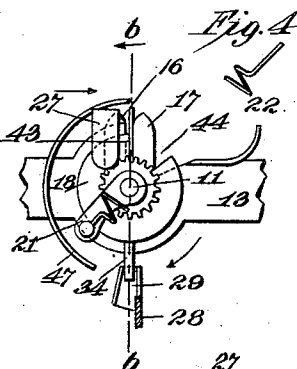


Fig. 4

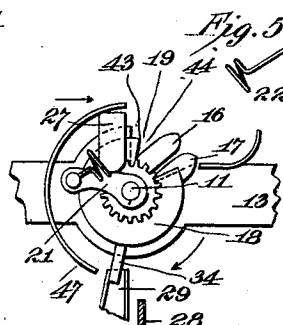


Fig. 5

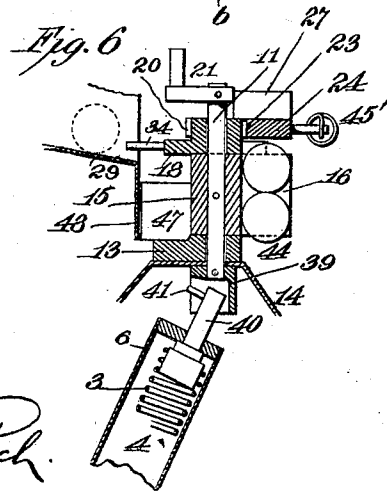


Fig. 6

Witnesses:

Geo. F. Coleman
John H. Hock

Inventor
Charles Perdrisat
By *[Signature]*
Attorneys.

968,075.

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3 SHEETS—SHEET 3.

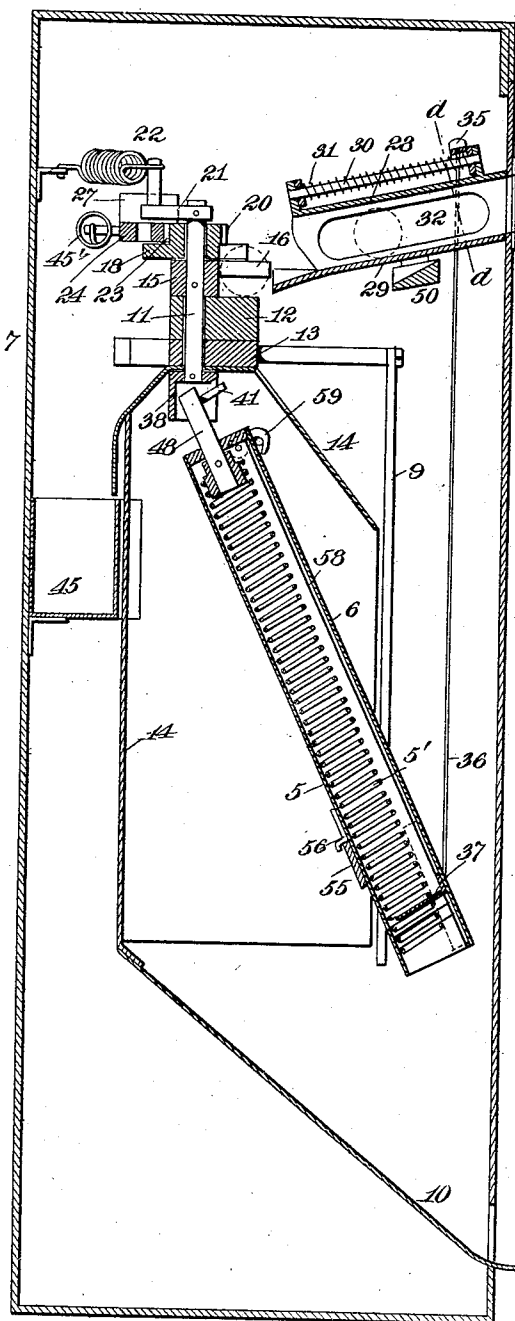


Fig. 7

Fig. 10

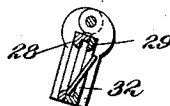


Fig. 8

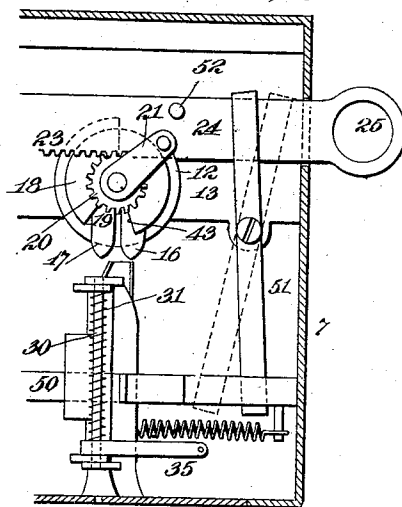
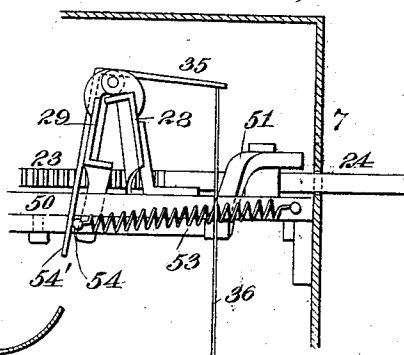


Fig. 9



Witnesses:

Jas. F. Coleman
John F. Fitch

Inventor

Charles Perdrisat
By *[Signature]*
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES PERDRISAT, OF TERRITET, SWITZERLAND, ASSIGNOR TO JULES JACCARD, OF
NEW YORK, N. Y.

COIN-OPERATED APPARATUS.

968,075.

Specification of Letters Patent.

Patented Aug. 23, 1910.

Application filed December 29, 1906. Serial No. 349,933.

To all whom it may concern:

Be it known that I, CHARLES PERDRISAT, a citizen of the Republic of Switzerland, residing in Territet, Canton of Vaud, in the said Republic of Switzerland, have invented a certain new and Improved Coin-Operated Apparatus, of which the following is a specification.

The object of this invention is the production of a device for automatically delivering articles in exchange for a coin, such device having advantages over those heretofore suggested.

The particular objects of this invention are the production of a device for vending or delivering postage stamps, postal-cards, railway tickets and articles of a similar nature which must be arranged within the convolutions of a spring or spring-like body which is rotated in order to successively deliver the articles.

The invention also has for its object means for returning the coin to its owner in the event that the supply of articles is exhausted.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view of an apparatus embodying my invention, Fig. 2 is a section on the line *c—c*, Fig. 1, Figs. 3, 4 and 5 are details of the coin-holding and spring-rotated apparatus, Fig. 6 is a section on the line *b—b*, of Fig. 4, Fig. 7 is a section on the line *a—a*, Fig. 1, Fig. 8 is a detail plan view of a modification, Fig. 9 is a detail front view of the same, and Fig. 10 is a section on the line *d—d*, Fig. 7.

In all of the views, like parts are designated by the same reference characters.

The articles to be vended, such as the postal-card 1, are supported in the convolutions of the spring or spring-like body 2 in the manner disclosed in my patent 690,179, dated December 31, 1901. Three of these springs are shown in this embodiment of my invention, the spring 3 being for the purpose of holding two-cent stamps. This spring rotates within a box or frame 4 which is opened at its lower end. A corresponding box or frame 5 carries a spring 5', Fig. 7) for supporting one-cent stamps. The boxes are in cross-section of the same size and shape as the stamp, so that the lat-

ter cannot rotate as the spring is turned, 55 but must be fed toward the outlet of the box. Each box is provided with a hinged cover 6. In connection with the spring 2 and in lieu of the box 4 or 5, one wall of the casing 7 will constitute one side of the box, 60 the back of the casing will constitute another side, the partition 8 will constitute the third side, and a hinged flap or bar 9 will constitute the fourth side of the box in order to hold the postal-cards 1 in proper alignment. Each of the springs or spring-like 65 bodies is adapted to be given a complete rotation when a coin or coins is or are introduced by the proper mechanism so that the card, stamp or other article between the convolutions of the spring will be ejected. 70 When ejected, they will fall upon the inclined trough 10 which extends out through a slot in the front of the casing 7, as shown in Fig. 7, so that the purchaser can remove 75 them.

Rotating mechanism.—The mechanism for rotating the several springs each comprises a shaft 11, which is mounted in a bearing in a block or table 12, in connection with devices which employ but one coin. When it is modified for a plurality of coins, the bearing will be different, as hereinafter explained. This block or table is supported upon a transverse bar 13 which extends 85 across the casing 7 from side to side thereof. This transverse bar or table 12 also serves as a support for the bar 9 and a casing 14 which incloses the upper part of the boxes 4 and 5 and spring 2. It also supports the partition 90 8. Around the shaft 11, and resting upon the table 12 is a collar 15 having jaws 16, 17 thereon. These jaws are separated by a slot which is slightly wider than the thickness of the coin which is to be used for actuating that particular piece of mechanism. 95 The collar 15 is secured to the shaft 11 so as to rotate therewith. The collar will also support the shaft and prevent it dropping through its bearing which is in the table 12. 100 Upon the shaft 11 and above the collar 15 is a plate 18 which is free to turn around the shaft and is not secured thereto. This plate is somewhat larger than the collar 15 but is of less diameter than the length of the jaws 105 16 and 17. It is provided with a slot 19 which is considerably wider than the slot between the jaws 16 and 17. A pinion 20 is

connected to or formed integral with the plate 18 so as to rotate the latter. Above the pinion 20 is a lever 21 which is pinned or otherwise secured to the shaft 11 so as to rotate therewith. On the free end of the lever is a spring 22 which is secured to a fixed anchorage, that shown being attached to the back of the casing 7. The pin 20 is rotated by means of a rack 23 which is carried by a bar 24. This bar 24 extends across nearly the entire width of the casing 7 and is provided with an operating handle 25 which extends out through an opening in the casing in such a position that it can be grasped by the operator. The bar 24 is secured in position so that it can be freely moved in a longitudinal direction by means of headed bolts 26 which pass through slots in the bar and are carried by the table 12. A stop or stud is carried upon the bar 24 in such a position that it may be engaged by the crank 21. This mechanism is substantially duplicated for each of the three springs or spring-like bodies.

The coin chutes.—In the front of the slots formed between the jaws 16 and 17 is a chute or slide which is inclined as shown in Fig. 7 and extends from a slot in the front of the casing 7 to a point immediately in front of the jaws 16 and 17. The chute is provided with a slot for the passage of the coin. The chute is inclined, as shown to the right of Fig. 1, both toward the jaws and toward one side (see Fig. 10). The chute is made of two parts, one fixed and one movable. The fixed part 28 is so formed as to make one side and the top of the slot. To it is pivoted or hinged the moving part 29. The two parts are kept in engagement by means of the spiral spring 31 coiled around the hinge 30. The hinged part 29 is formed with the base of the slot. The side of the hinged part 29 is cut away (see Figs. 7 and 10) so as to form an opening 32 of slightly less depth than the diameter of the particular coin which is necessary to be used in that chute. The inner end of the moving member 29 of the chute extends downward so as to be engaged by a pin 34 carried by the plate 18 when the plate is rotated. An arm 35 projects from the moving part 29. A spring, chain, cord or wire 36 is secured thereto, the other end of which is connected to a plate 37. In connection with the boxes 4 and 5 the plates 37 are supplemented by weights 38. These weights and cords, in conjunction with the two-part pivoted chute are for the purpose of returning a coin to the purchaser should the supply of vendable articles in that spring, which is in connection with that particular chute, be exhausted.

The lower end of the shaft 11 is provided with a chuck 39 which engages with a shaft 40 which is attached to the upper end of the spring or spring-like body, a pin 41 causing

the turning of the shaft 40 with the chuck. This pin engages within a slot 42 formed in the chuck so that a sort of universal joint is provided which is possible owing to the rather loose fit of the shaft 40 within the chuck. The universal joint effect is necessary in order to allow the center of the shaft and spring to be arranged at an angle to one another. The edges of the slot 42 are rounded to facilitate the placing of the pin and shaft 40 within the chuck.

The operation of so much of the invention described is as follows:—The coin is introduced into the slot in the front of the casing and passes down the chute 27. If the coin is of greater size than that which should be used, it cannot be introduced within the slot; if the coin is too small, for instance it is a ten-cent piece instead of a cent, it will enter the chute but will escape through the opening 33 and will drop down into the trough 10 and be recovered by the purchaser. Assuming a coin of the proper denomination to be introduced, it will pass down the chute 27 and enter between the jaws 16 and 17 and rest upon the table 12. The purchaser will then move the handle 25 to the right and with it the bar 24. The engagement of the rack 23 with the pinion 20 will rotate the plate 18. This will cause the edge 43 of the slot 19 to engage with the coin and force it against the side of the jaw 17. The continued rotation of the plate 18 will turn the collar 15 with its jaws 16 and 17. The coin will be supported all the time upon the table 12. The positions of the parts as the coin first enters between the jaws 16 and 17 and is engaged with the wall 43 are shown in Fig. 3. The collar 15 turns against the tension of the spring 22 so that the coin is tightly clamped between the walls of the jaws 17 and the wall 43; as the plate 18 continues to be rotated by means of the pinion 20 and rack 23, the coin will be carried around to the position shown in Fig. 4 in the direction of the arrow, rotating the jaws, and with them the spring or spring-like body. At this point, the table 12 is cut away at 44, so that the coin is no longer supported upon it. At the same time the crank 21 has turned so that it is in line with the pull of the spring 22 and the latter is stretched to the utmost. The projection or stop 27 is so located upon the bar 24 that it will now be in the position shown in Fig. 4. A slight further movement of the bar results in moving the crank 21 off center so that the pull of the spring will rotate it until it comes into engagement with the stop 27. This will cause a corresponding rotation of the collar 15 with the jaws 16 and 17. Their position is shown in Fig. 5. As the plate 18 is positively rotated by the engagement of the pinion and rack, it will be turned but slightly, but the

collar 15 will be turned a considerable distance. This will free the coin from engagement with the edge 43 and, being above the cut-away portion 44 of the table 12, it will be free to drop. If there be any tendency of the coin to stick within the slot between the jaws 16 and 17 it will be dislodged by the jar caused by the blow of the crank 21 against the stop 27. The coin will then drop into a cash box 45 which should extend across the back of the casing 7 and be provided with a suitable lock and key. The purchaser must now release the handle and the spring 45' will draw the bar 24 to the left, which will move the stop 27 away from contact with the crank, and will then permit the spring 22 to turn the crank to its original position, placing the jaws 16 and 17 in their original position, and completing the rotation of the spring or spring-like body, which will eject the vended article into the trough 10. The pinion will also be rotated, carrying the slot 19 back to its original position, placing the parts in position for a fresh operation.

The action of the mechanism, as described, occurs in connection with the devices shown at the right and left of Fig. 1. The device in the center, which is for use in connection with two-cent stamps, is somewhat different. In this structure, which is particularly shown in Figs. 3, 4, 5 and 6, the collar 15 is sufficiently deep to support two coins, one above another with their edges in contact. With the deeper collar 15 and table 12 of less depth, in order to support the shaft 11, an additional frame 46 is provided for the upper end of the shaft 11. A guard 47 is provided to hold the lower coin within the slot between the jaws 16 and 17 and prevent the coin from flying out by centrifugal force as the jaws are turned. This guard 47 is curved as shown in Figs. 2, 3, 4 and 5, and extends from the chute around to the back of the table 12 coincident with the cut-away portion 43. The moving portion 29 of the chute also carries a projection 48 which extends down in front of the opening between the jaws 16 and 17, which projection is for the purpose of preventing the lower coin rebounding when it slides down the chute and enters the slot between the jaws 16 and 17.

The operation of the central device shown in Figs. 3, 4, 5 and 6 is like that already described. The purchaser successively introduces two coins of the same denomination, the uppermost coin being nipped between the jaws 17 and wall 43, and the lowermost coin is carried around with it, it being directly supported upon the table 12; and kept from rolling outward by the guard 47. During the movement of one of the devices by the bar 24, all of the pinions will be rotated; consequently all of the pins 34 will be

caused to engage with the inner projecting ends of the movable chute members 29. This will open all of the chutes, and in the event of any one of them being clogged by a mutilated coin or some other obstruction, the latter will be free to drop down so that the chute will be ready for delivering a coin to the releasing mechanism.

In Fig. 2, the connection between the handle 25 and the bar 24 is effected by a transverse member 49. This is of advantage as it places the handle nearer the front of the casing. A support or bridge 50 supports the chutes 27 independently of the front of the casing 7 which latter may be hinged so that it may be opened to disclose the interior mechanism.

In the modification shown in Figs. 8 and 9, the handle 25 is directly connected to the bar 24. The opening of the chutes is made by means of a pivoted lever 51 which is engaged by a pin 52 carried by the bar 24. Its other extremity engages with a bar 53 which extends under the chutes and has a series of projections 54 which engage with a depending part 54' of the chute member 29, so that as the handle is pulled out the lever 51 will be moved moving the slide 53, simultaneously opening all of the chutes. The bar 53, lever 51 and rack bar 24 will be returned to their normal positions by means of the spring 53' when the operator releases the handle 25. The plates 37 being inserted in the same convolution of the spring or spring-like body as the uppermost article to be delivered, will be discharged at the same time the weight of the plate or of the plate and the supplemental weight 38 is sufficient, through the agency of the cord, chain or wire 36, to turn the moving element of the chute upon its axis and open the chute. The position the parts then assume is shown in the middle of Fig. 1. If, now, a coin be introduced into the chute, it will drop down into the trough 10, and be returned to the operator.

It will be seen in Fig. 1, that the slot between the jaws 16 and 17 is vertical, but is coincident with the bottom of the slot in the chute only when the latter is closed. When the chute is open the bottom of the slot is moved to one side of the space between the jaws, consequently if a coin should, in being introduced in one of the open slots, run down the chute and come in contact with the jaws 16 and 17, the bottom of the slot at that time would be to one side of the opening between the jaws, consequently the coin would not be delivered thereto but would drop down into the trough 10. The ends of the jaws 16 and 17 are beveled as shown, so as to make this operation more certain. The space between the jaws 16 and 17 is sufficient to allow of a coin to freely slide therein, although it is

delivered thereto in an inclined position owing to the inclination of the slot in the chute.

The boxes 4 and 5 are normally supported upon a horizontal support 55, which is mounted within the casing 7 and is also secured to the vertical partition 8. The boxes have hooks 56 which engage with the support and hold them in proper position so as to engage the shafts 40 within the chucks 39. The boxes are properly alined by means of pins 57, 57 on each side thereof.

The covers 6, 6 of the boxes are hinged at one side, the other side of the boxes being of less depth forming a slit 58 which extends the entire length of the box, and is open at the bottom. The covers are kept closed by means of catches 59 at their upper ends, so as not to obstruct the slit 58. This slit 58 is for the purpose of allowing connection between the plate 37 and the weight 38, permitting the plate to descend as the spring is turned and to be ejected with the last stamp.

The object of the removable construction of the boxes 4 and 5 is to permit them to be more easily filled with postage stamps. They may be first filled, and then introduced within the casing, coupling the shaft 40 to the chuck 39.

The object of the flexible cord 36 is to allow the plate 37 to be introduced into the box before the latter is closed and inserted in place within the casing.

The flap or bar 9 which constitutes the fourth side of the box for holding the postal cards is hinged so that it can be swung to one side and beyond the partition 8 for the purpose of permitting the ready introduction of the postal cards to the convolutions of the spring 2.

It is to be understood that the invention comprehends the use of tokens as well as coins, and that the arrangement may be varied from that illustrated and described; for instance there is no limit to the number of coins which may be introduced at one time to each spring actuating mechanism provided that the mechanism be properly made for that purpose. It is also to be understood that the device may be used for vending any article in addition to stamps, cards, tickets described; for instance tablets, chewing gum, chocolate and boxes of bonbons.

In accordance with the provisions of the patent statutes, I have described the principle of my invention, together with the apparatus which I now consider to represent the best embodiment thereof; but I desire to have it understood that the apparatus shown is merely illustrative and that the invention can be carried out in other ways.

Having now described my invention and the manner in which the same is to be per-

formed, what I claim and desire to secure by Letters Patent is:—

1. A coin-operated apparatus having a two-part chute so arranged that it may be opened to prevent the passage of a coin, a spring-like device carrying the articles to be vended in its convolutions, a plate carried in a convolution of the spring, a removable box inclosing the spring, and a cord or other flexible connector connected to the plate and the chute.

2. A coin-operated apparatus having a two-part chute so arranged that it may be opened to prevent the passage of a coin, a spring-like device between the convolutions of which the articles to be vended are carried, a plate carried between the convolutions of which the articles to be vended are carried, a cord or other flexible connector connected to the plate and the chute, and a removable box inclosing the spring, the said box having a longitudinal slit through which the cord passes.

3. A coin-operated apparatus having a two-part chute so arranged that it may be opened to prevent the passage of a coin, a spring-like device between the convolutions of which the articles to be vended are carried, a plate carried between the convolutions of the spring, and a cord or other flexible connector connected to the plate and the chute, and a removable box inclosing the spring, the said box having a longitudinal slit and a weight outside of the slit connected to the plate.

4. A coin-operated apparatus having a two-part chute for introducing the coin into the actuating mechanism, and actuating mechanism controlled by the introduction of a coin, a rotary spring-like device between the convolutions of which the articles to be vended are carried, separable connections between the spring-like device and the rotating mechanism, a removable box inclosing the spring-like device, the said box having a cover and a longitudinal slit, a plate within the box engaging with the convolutions of the spring-like device, a weight outside of the box communicating through the longitudinal slit in the plate and a flexible cord connecting the weight and the chute.

5. A coin-operated apparatus having a spring-like device carrying the articles to be vended in its convolutions, a shaft for rotating the spring-like device, a table, the said table having a cut-away portion, a collar having jaws rotating with the shaft, a lever engaged by a spring and rotated with the shaft, a plate having a slot turning loosely upon the shaft, means for rotating the plate and means for introducing a coin upon the table between the jaws of the collar and within the slot in the plate.

6. A coin-operated apparatus having a rotary spring-like device for ejecting the

articles to be vended, a pair of jaws turning with the spring-like device, a lever rotated in time with the spring-like device, and a second spring connected to the lever, a freely turning member carrying a notch, means for turning the member and means for introducing a coin within the notch and between the jaws.

7. A coin-operated apparatus, consisting of a rotary spring-like device for ejecting the articles to be vended, means for rotating the spring-like device, the said means including a member having jaws between which the coin may be carried and which rotates the spring-like device, a member having a notch which engages with the coin and forces it against the jaws, a lever moving in time with the spring-like device, and a second spring connected to the lever.

8. A coin-operated apparatus having a rotary spring-like device for ejecting the articles to be vended and means for rotating the spring-like device which comprises a member having jaws and rotating the spring-like device, a second member having a notch and rotated by manually-operated means, a lever moving in time with the jaw-carrying member, a stop on the means for moving the notch-carrying member, the said stop being adapted to be engaged by the lever and a spring connected to the lever.

9. A coin-operated apparatus having in combination the following elements: a spring-like device between the convolutions of which the articles to be vended are placed, the said spring-like device being inclosed in a removable box, the said box having a longitudinal slit therein, a plate inclosed within

the convolution of the spring-like device and having a weight outside of the box, communication between the weight and plate being through the slot, a two-part chute inclined to one side, and having an opening in the inclined side for the escape of a coin smaller in size than that intended for the chute and means for keeping the two parts of the chute together, a flexible cord connecting the weight and the moving member of the chute so that as the plate is ejected by the spring-like device, the chute will be opened, a shaft having a chuck connected to a shaft connected in turn with the spring-like device, and means for rotating the shaft, the said means comprising a table with a cut-away portion, a collar secured to and rotating with the shaft, the said collar having jaws, the said jaws normally being adjacent to the exit of the chute, a crank and a spring secured to the crank, the said spring normally causing the jaws on the collar to be adjacent to the exit of the chute, a plate with a notch turning freely upon the shaft, the notch being normally adjacent to the jaws, a pinion turning with the plate, a rack engaging with the pinion and a stop on the rack, the said stop being in such a position that it will be engaged by the crank when the jaws are above the cut-away portion of the table, and means operated by the rack for opening the chute.

This specification signed and witnessed this thirteenth day of December, 1906.

CHARLES PERDRISAT.

Witnesses:

J. LAPPINS,
JEAN RUGGER.