

(No Model.)

5 Sheets—Sheet 1.

J. WALTON.
VENDING MACHINE.

No. 529,222.

Patented Nov. 13, 1894.

Fig. 1

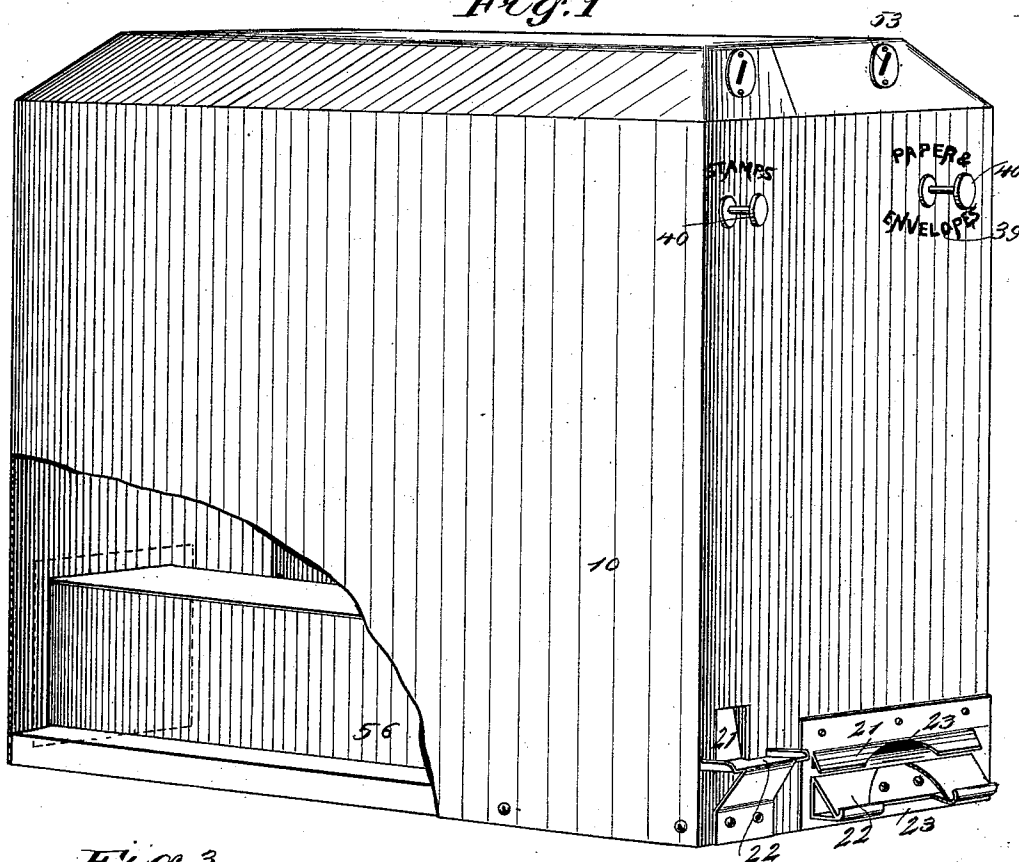


Fig. 3

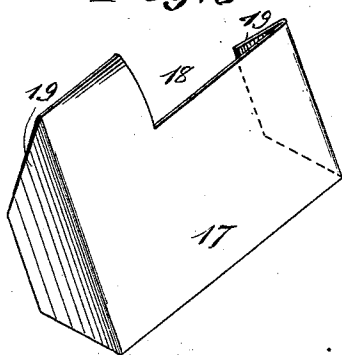


Fig. 2

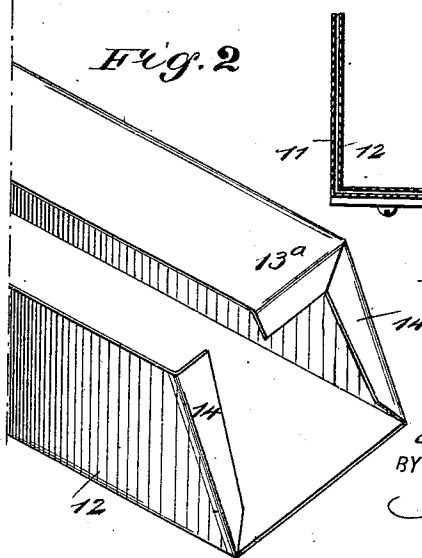
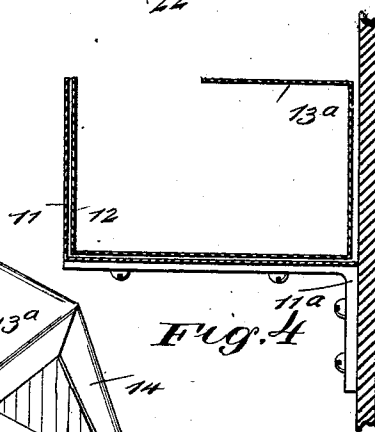


Fig. 4



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Fig. 5

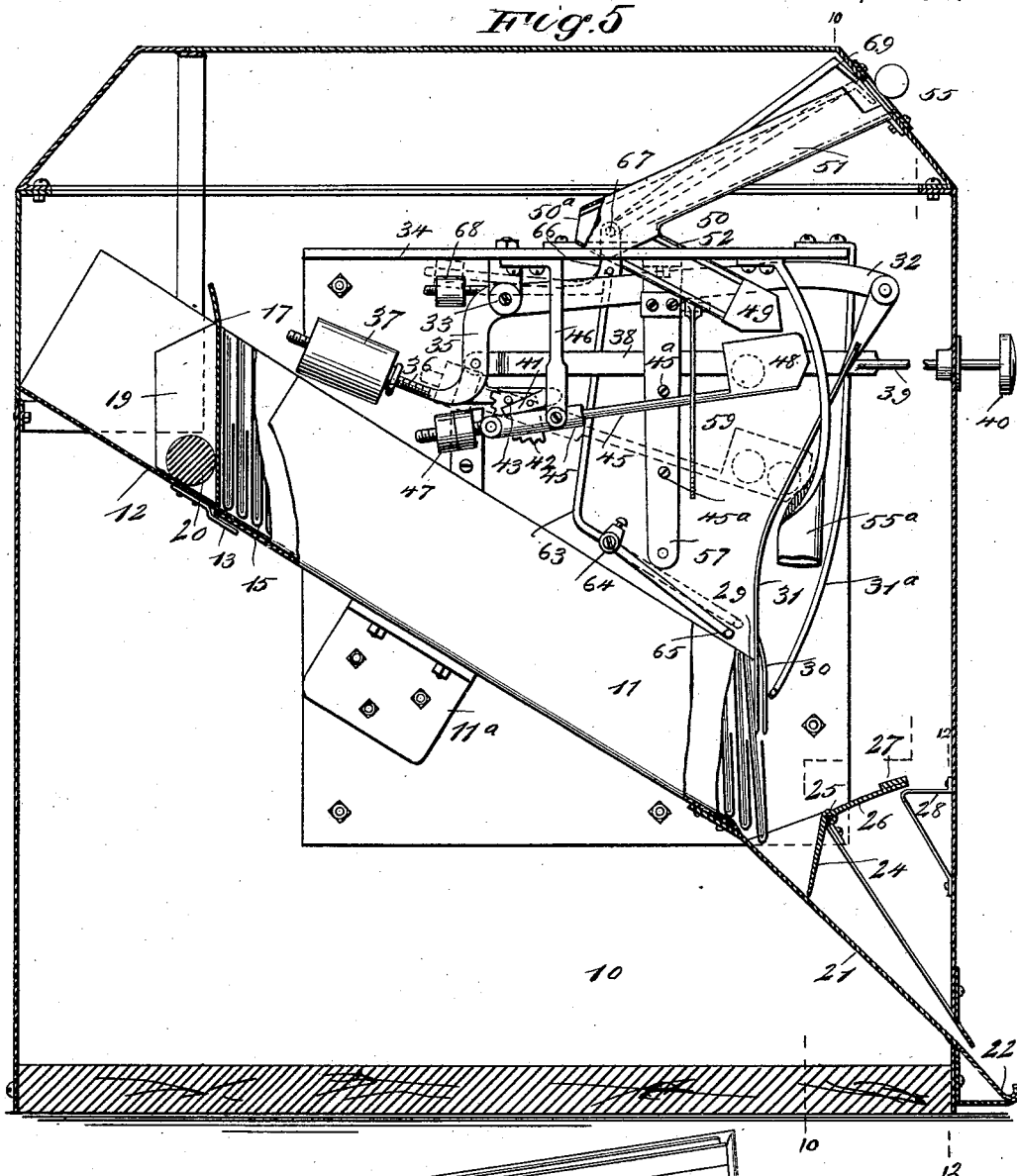
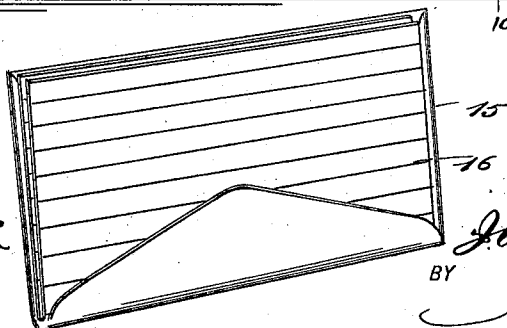


Fig. 6



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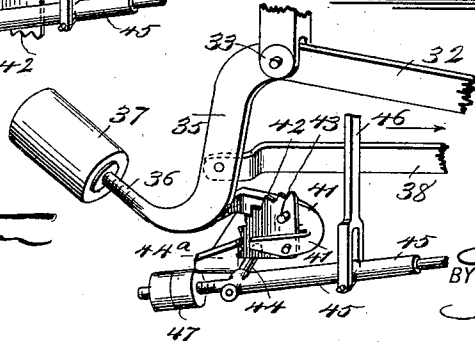
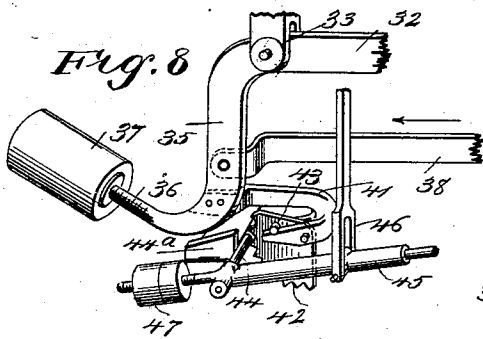
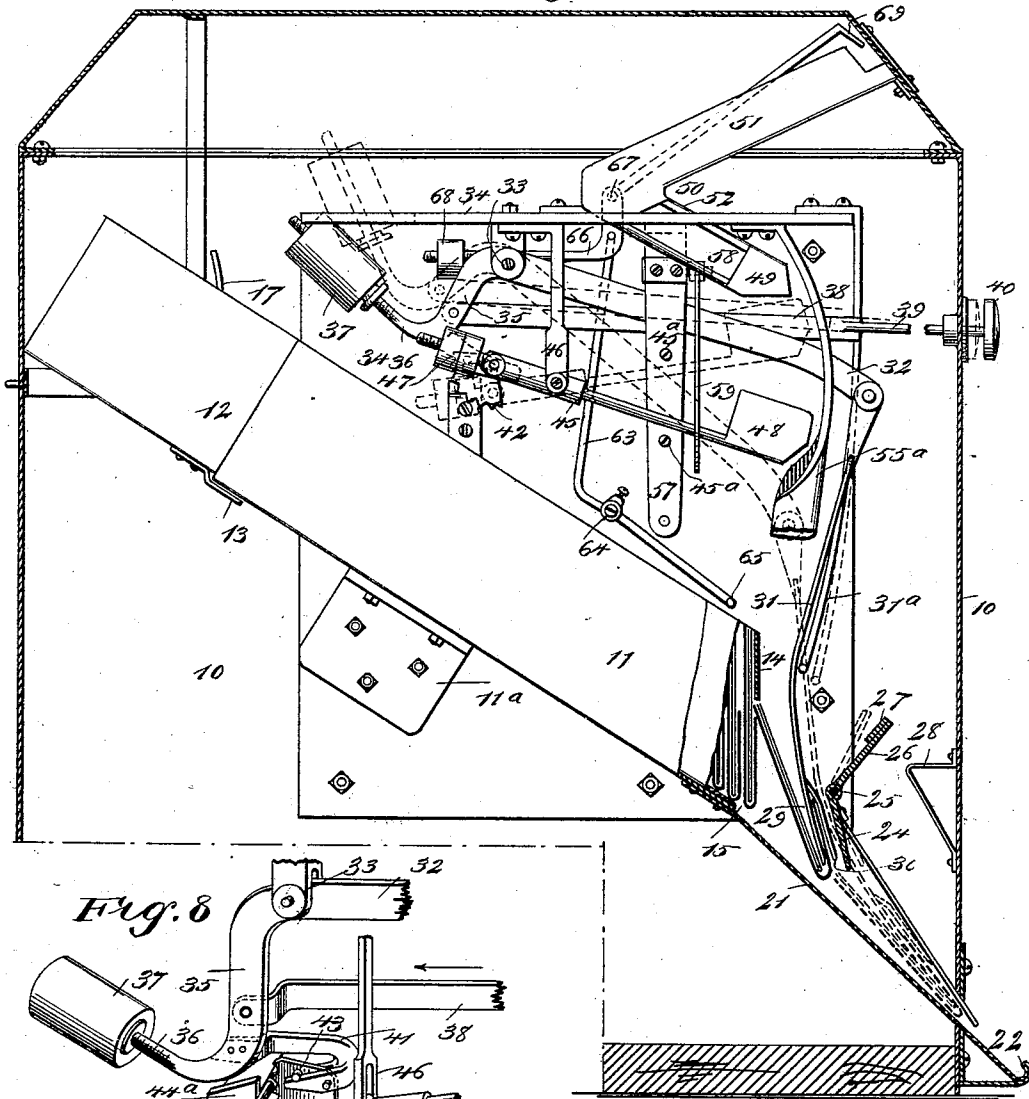
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Fig. 7



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Fig. 10

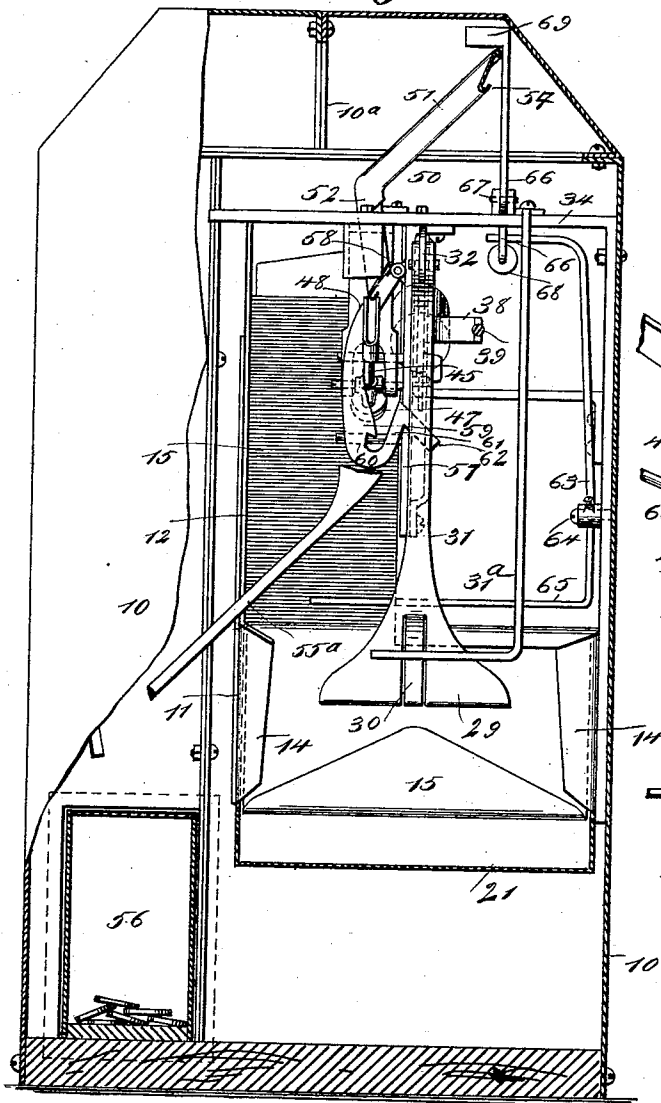


Fig. 11

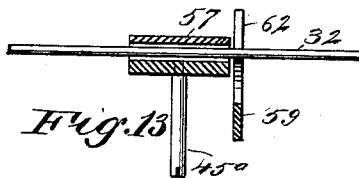
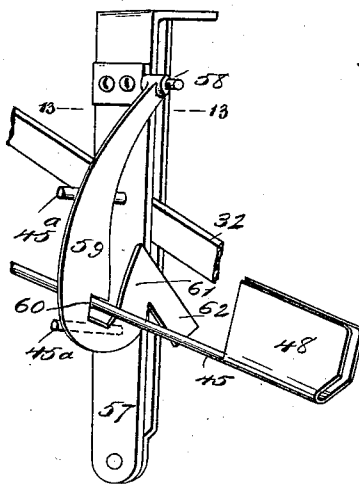


Fig. 13

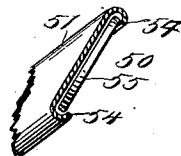
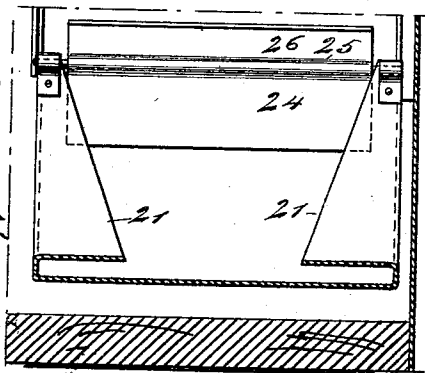


Fig. 14

Fig. 12

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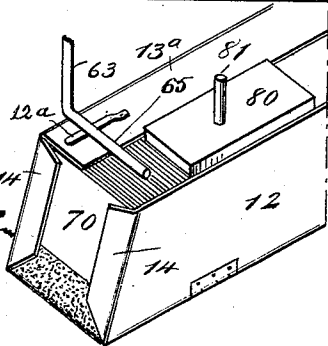
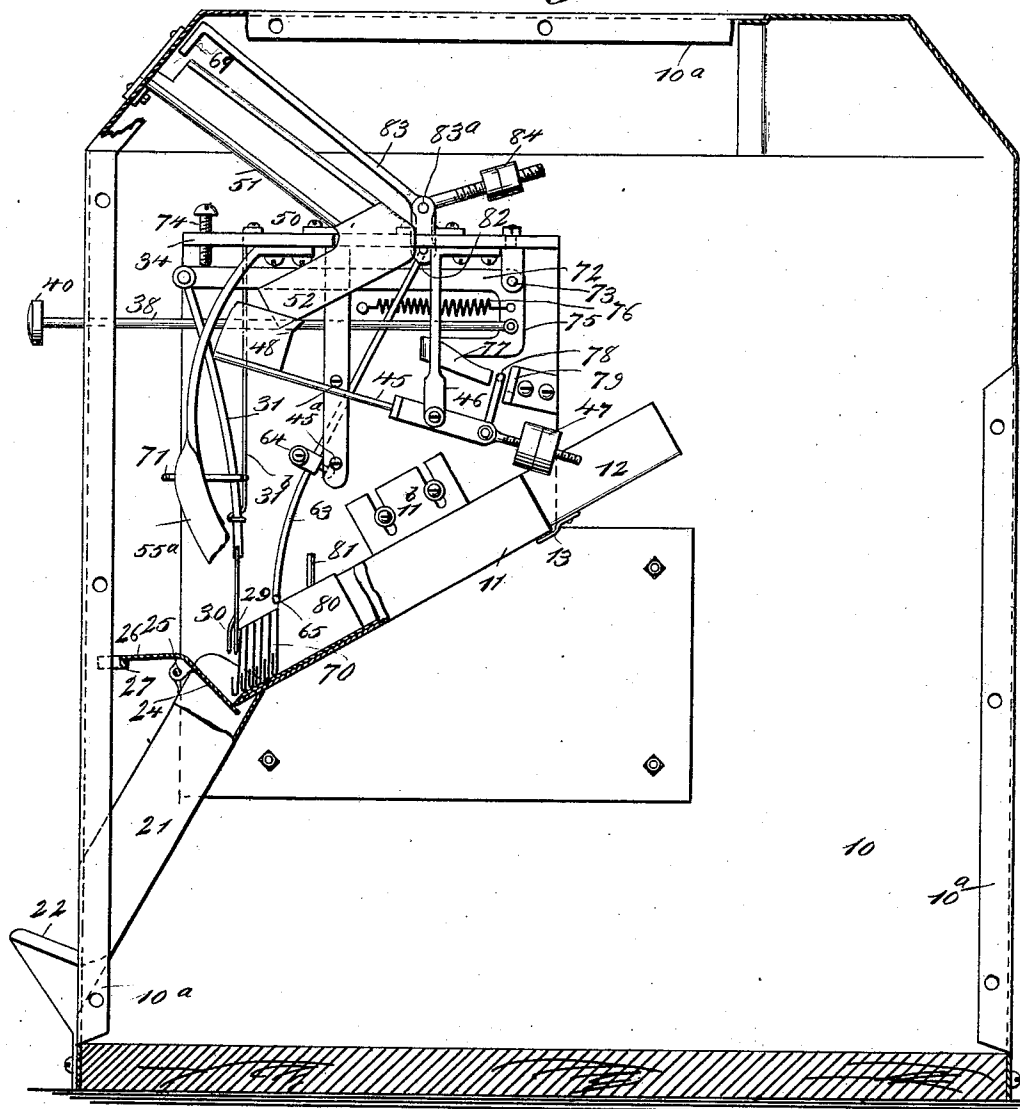
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Fig. 15



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Fig. 16

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UNITED STATES PATENT OFFICE.

JAMES WALTON, OF PHOENICIA, NEW YORK.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 529,222, dated November 13, 1894.

Application filed December 30, 1893. Serial No. 495,213. (No model.)

To all whom it may concern:

Be it known that I, JAMES WALTON, of Phoenicia, in the county of Ulster and State of New York, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of machines known as vending machines, which are adapted to contain certain commodities and to deliver them one by one on the depositing of coins in the machine.

The object of my invention is to produce a comparatively simple and inexpensive machine which has its mechanism arranged to work easily and in such a manner as not to get out of repair, and which is provided with means for delivering postage stamps and paper and envelopes, these being delivered by coin-controlled mechanism actuated by a coin dropped in the slot of the machine.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective exterior view of the machine embodying my invention. Fig. 2 is a broken detail perspective view of the envelope holder. Fig. 3 is a detail perspective view of the follower which is arranged in the envelope holder to push the envelopes down into reach of the delivering mechanism. Fig. 4 is a cross section through the envelope holder and its containing case. Fig. 5 is a detail sectional elevation of the envelope delivering mechanism, showing parts in normal or locked position. Fig. 6 is a perspective view of an envelope and sheet of paper, as arranged to be placed in the envelope holder. Fig. 7 is a view, similar to Fig. 5, but with the delivering mechanism in the act of delivering an envelope. Fig. 8 is a broken detail perspective view of the coin-controlled locking mechanism, the push bar which is used in delivering an envelope being shown in locked position. Fig. 9 is a similar view, showing the position of the lock or latch after the machine has been operated and as the lock is coming back to its normal position. Fig. 10 is a

vertical cross section on the line 10—10 of Fig. 5. Fig. 11 is a detail perspective view of the latch which engages the coin lever, the lever being shown in locked position. Fig. 12 is a cross section through the envelope chute on the line 12—12 of Fig. 5. Fig. 13 is a detail section on the line 13—13 of Fig. 11. Fig. 14 is a broken detail perspective view, partly in section, of the coin chute. Fig. 15 is a sectional elevation of the stamp vending mechanism, this being substantially like the envelope vending mechanism, except that the parts are smaller and a few modifications are used which will be pointed out hereinafter; and Fig. 16 is a broken detail perspective view of the stamp holder and certain of its accessories.

The machine may be used for vending either stamps or paper and envelopes, but it is preferably arranged with duplicate parts, so that both may be delivered by one machine, and in the following description the envelope vending mechanism will be described and shown with the greatest detail, as the stamp vending mechanism is substantially like it.

The mechanism of the machine is contained in a suitable case 10, which may be of any approved construction, but which, as illustrated, has two parts provided with meeting flanges 10^a which are suitably fastened together. In one side of the main case is a case or chute 11, which is open at the ends and top and is supported on brackets 11^a, or equivalent supports fastened to the sides of the main case 10. The case or chute 11 is adapted to contain the envelope holder 12 which fits snugly in the case 11, has one side hinged as shown in Fig. 16 to enable it to be thrown open to receive the envelope or stamps, and is provided with a clip 13, see Fig. 7, or other means for preventing it from sliding too far down into the case.

The holder 12 is of a size to have the envelopes fit nicely and transversely in it, and its lower end is provided with in-turned flanges 14 which prevent the envelopes from being pushed bodily through the holder, and the flanges project slightly from the end so that an envelope, when pressed against the flanges, may be pushed downward and outward from the holder. The holder is also partially covered on top, as shown at 13^a, and

on the top near the lower end of the holder is a spring catch 12^a, see Fig. 16, which is adapted to engage the arm of a plate which may be inserted in the holder to close its lower end while it is being filled. The envelopes 15, which are placed in the holder, are arranged with their flaps downward and forward, as shown in Fig. 5, and they are packed snugly together, each envelope having a folded sheet of paper 16 arranged on its side and held on the flap of the envelope.

The envelopes are held in place and forced downward to the end of the holder by a follower 17, which is preferably of sheet metal, but may be of any suitable material, this having one side projecting upward through the top of the holder 12, the other side being cut away, as shown at 18, so as to extend beneath the top 13^a of the holder. The follower has flanges 19 on its back side at opposite ends and between the flanges, is held a roller 20 which runs on the bottom of the holder 12 and enables the follower to slide readily downward, also giving to the follower the necessary heft to cause it to act properly.

The envelopes when pushed downward from the mouth of the holder 12 are delivered into an inclined chute 21, which is fastened to the lower end of the case 11 and projects downward and outward through the main case 10, the chute having an up-turned lower end 22 which serves to catch and hold an envelope in such a manner that it may be easily grasped by the fingers. To further facilitate the easy grasping of the envelope, the lower end of the chute 21 is cut away in the center, as shown at 23 in Fig. 1.

At the upper end of the chute 21 is a guard 24, which normally closes the chute and is pivoted, as shown at 25, the guard having an upwardly-extending end 26 which is weighted, as shown at 27, this end being adapted to strike an abutment 28. When in normal position, the guard 24 entirely closes the chute 21, and the guard, by reason of its inclination, cannot be swung inward but swings downward and outward very easily. Consequently an envelope will be readily pushed outward beneath the guard, but a wire or other instrument cannot be pushed upward through the chute so as to abstract an envelope.

The envelopes are pushed downward and outward by a fork having broad prongs 29, see Figs. 7 and 10, to engage the inner side of the envelope flap, and a middle prong 30 adapted to slide over the outer side of the envelope flap; and when the fork is pushed downward the lower end of the envelope in the holder is pushed downward from behind the flanges 14 and into the chute 21. The discharging fork has a spring shank 31 which extends upward and is pressed against the end of the envelope holder by a spring 31^a fastened to a support above the fork. The upper end of the shank 31 is pivoted to a tilting lever 32, see Figs. 5 and 7, which lever is fulcrumed in a bracket 33 on the frame 34, which

is arranged within the main case to support the working mechanism, and the lever, behind its fulcrum, is bent downward, as shown at 35, and then rearward as shown at 36, this rear end being screw threaded to receive a weight 37 which may thus be adjusted on the lever, and the weight is of sufficient heft to normally drop and raise the front end of the lever 32 and the discharging fork.

To the depending portion 35 of the lever 32 is pivoted a push bar 38, the forward end of which is rounded and reduced, as shown at 39, this end projecting through the main case 10, moving in a suitable bearing and terminating in a push button 40. When the button is pushed in, the rear end of the lever 32 is lifted, the forward end thrown downward and the discharging fork pushed downward, as shown in Fig. 7, the prongs 29 and 30 of the fork engaging the flap of an envelope and pushing the envelope into the chute 21 through which it and the paper sheet connected therewith pass to the lower end of the chute, where they may be easily removed. The springiness of the shank 31 permits the fork to be pushed well down into the chute, so that there is no question about the envelope being properly ejected.

The lever 32 and push bar 38 are kept normally locked so that the machine cannot be operated, the locking mechanism and the coin-controlled means of unlocking it being described below. Projecting forward from the depending part 35 of the lever 32 is a bent arm 41, the outer end of which lies substantially parallel with the push bar and lever and on this outer end is pivoted a segmental lock or latch 42, the edge of which is serrated, as shown, and this latch is prevented from dropping downward too far by a stud 43, see Figs. 8 and 9, which is adapted to strike the upper side of the bent arm 41. The latch or lock 42 drops normally into the position shown in Fig. 8, where it lies in front of an arm 44 on the tripping or coin lever 45 which is hung in a suitable hanger 46 and extends parallel with the lever 32.

The coin lever 45 is screw threaded at its rear end and provided with counterbalancing weights 47 and its front end carries a coin pocket 48, which is open at the top and at the ends, see Fig. 11, so that a coin may run from it readily when the front end of the coin lever is depressed. The weights 47 are adjusted so as to normally depress the rear end of the coin lever and throw the lock 42 into the path of the arm 44, and it will be seen that when this is done the push bar 38 cannot be pushed inward and consequently the machine cannot be operated. When, however, a coin is dropped in the pocket 48, the lever 45 is tilted, the arm 44 is raised out of the path of the lock or latch 42, and the push bar may then be moved inward, the lever 32 tilted and an envelope discharged as specified. After the push bar has been moved inward and pressure is released from it, the weight 37 returns the lever 32 and

push bar to normal position, the straight edge of the lock 42 striking the arm 44 and riding back over it, as clearly illustrated in Fig. 9. Behind the arm 44 is an abutment 44^a against which the arm may strike so as to take the strain off the lever 45 and its support.

The coin pocket 48 receives the coin from the lower end 49 of the coin chute 50, which chute is composed of two members 51 and 52, both being inclined but projecting at different angles so as to prevent an instrument from being run lengthwise through the chute; and the chute is arranged to receive a coin of a certain denomination and is open on the sides, having at its upper and lower edges flanges 54 which are only just wide enough to engage the flat side of the coin 55, and the chute is inclined laterally, as shown in Fig. 14, its open side being the lower so that, if a coin which is too small is dropped in the chute, the coin will fall out through the open side and the locking mechanism will not be disturbed. By reference to Figs. 5, 7 and 15, it will be seen that the chute members 51 and 52 are open on opposite sides. The chute is open at its elbow, (see 50^a, Fig. 5,) so that if a wire is run into it it will project through the opening instead of following the full length of the chute. The upper end of the chute opens through the main case, as shown at 53 in the usual manner. By reference to Fig. 10 it will be observed that the members 51 and 52 are arranged in oppositely inclined planes.

When a coin is dropped into the chute it rolls downward into the pocket 48, thus tilting the lever 45 and releasing the push bar, as specified, and when the pocket 48 swings down into the position shown by dotted lines in Fig. 5, the coin runs from the pocket into a spout 55^a and from this into a drawer 56 which may be removed when necessary to get the money. The spouts of the stamp vending and envelope vending mechanism may both be arranged to deliver into one drawer. The drawer has a closed top except for a slot to receive the spout 55^a, and it is fastened with an ordinary lock and key.

The movement of the coin lever 45 is limited by pins 45^a, between which it swings, as shown clearly in Fig. 11, these pins being secured to the slotted bracket or hanger 57 through which the main lever 32 extends. It will be understood that when the coin lever is tilted to move the arm 44 out of the path of the latch or lock 42, the lever must be held in this position long enough for the push bar 38 to be worked and the lever 32 tilted to eject an envelope. To this end a latch 59 is arranged to swing at right angles to the lever 45 and is pivoted at its upper end to the bracket 57, as shown at 58. This latch has a curved inner edge, against which the coin lever strikes and near its lower end is a notch 60 which is adapted to receive the coin lever and hold the same depressed, as illustrated in Fig. 11. The latch is of hook shape, being

bent upward near its free end, as shown at 61, to form a sort of guideway for the coin lever 45, and the free end 62 of the latch extends downward and diagonally across the slot in the bracket 57, directly in the path of the lever 32. It will thus be seen that when the coin lever 45 is tilted by a coin, it will follow down the inner edge of the latch, and when it comes opposite the notch 60 the weight of the arm or end 62 of the latch causes the latter to swing into engagement with the coin lever and hold the same until the push bar and main lever 32 may be operated. When the push bar is moved inward to eject an envelope and the lever 32 is thrown downward at its front end, as already described, the lever strikes the inclined end or arm 62 of the latch 59 and throws the latch to one side so as to release the coin lever 45, which is immediately returned by the weights 47 to its normal position. In this connection it will be understood that any necessary number of weights may be used so as to adapt the coin lever to the weight of any desired number of coins; that is to say, if a one cent article is to be vended by the machine, the weights are adjusted and the right number used to enable the lever to be tilted by a single cent, but if articles worth several cents are to be sold, the weights are correspondingly adjusted so that the several cents must be deposited in the pocket 48 to overbalance the weights.

It will be observed by reference to Fig. 7, that the upper end of the spout 55^a extends opposite the pocket 48 so that the coins are held in the pocket until the latter is sufficiently depressed.

The following mechanism is employed to close the coin slot when the machine is empty, so that nobody will be cheated by depositing coins and getting no equivalent. A lever 63 is pivoted above the envelope holder, as shown at 64, and the lever has its lower end 65 bent laterally, see Fig. 10, so as to extend across the top of the envelope holder and into the path of the upper end of the follower 17, which upper end is curved slightly, so that when it strikes the end 65 of the lever 63 it will lift on the lever, as well as move downward against it so as to tilt the lever on its fulcrum. The upper end of the lever 63 is loosely connected with a bent lever 66 which is fulcrumed, as shown at 67, and is provided with a weight 68 at its rear end while its upper end extends to a point near the coin slot 53 and terminates in a plate 69 which is adapted to swing across and close the coin slot. The weight 68 is of sufficient heft to hold the plate 69 away from the coin slot 53. When, however, the envelope holder is empty, the upper end of the follower 17 will be down in position to strike the end 65 of the lever 63 and will thus tilt the lever and actuate the lever 66 so as to throw the plate 69 downward across the coin slot, effectually closing the same.

From the foregoing description it will be understood that by dropping the coin in the

slot 53 and then pushing in the push button 40, an envelope and a sheet of paper will be delivered from the chute 21, and as the operation of the mechanism has been already described, it is not thought necessary to recapitulate here.

In Fig. 15 I have shown the stamp vending mechanism which is substantially like that already described, the parts, of course, being lighter and smaller and some of them being a different shape; the principle is the same, however, and the slight modification will be described to avoid confusion:—The stamps 70 are held in a holder 12, like that already described, except that it is smaller, and the stamps are doubled over at their lower edges, as shown in Fig. 15, to enable them to be easily ejected by the discharging fork. The case 11 which contains the holder is also held in this case in an adjustable bracket 11^b, but it may be supported in any convenient way. The spring shank 31 of the fork is shaped slightly different for ejecting stamps and moves in a keeper 71. A spring 31^b presses it to place, the spring being secured to the frame 34 and to the shank 31. The main lever 72 is also slightly different from the lever 32, but works in substantially the same manner, it being pivoted at its elbow 73 and extending downward, as shown at 75, this bent end being pressed by a spring 76 which holds the lever in normal position and is used as a substitute for the weight 37. The throw of the lever 72 is regulated by a screw 74 which is threaded in the frame 34 and extends into the path of the lever. By adjusting the screw the lever and fork 29 may be adapted to different sizes of stamps, and a similar screw may be applied to the lever 32 to adapt it to different sizes of envelopes. The lower end of the lever 72 terminates in a bent arm 77 which is beveled and returned upon itself so as to be, at its ends, substantially parallel with the top of the lever, and this arm is arranged in front of a stop arm 78, extending upward from the coin lever 45 and in front of an abutment 79 which presses the stop arm and which is slotted, as indicated by dotted lines in Fig. 15, so that when the bent upper end of the arm 78 is raised above the abutment 79 and arm 77, the latter may pass through the abutment and permit the lever to swing. The push bar 38, as shown in Fig. 15, is also round in cross section throughout its length, but it operates in the manner already described. The means for operating the plate 69 at the coin slot is also slightly modified.

In the stamp holder the follower is in the form of a block 80, see Fig. 16, which projects through the open top of the holder and carries a pin 81 adapted to engage the end 65 of the lever 63. The operation of the lever, when struck by the pin, is as already described, but the connection between the lever 63 and the plate 69 is somewhat different from that set forth above. The upper end of the lever 63 in Fig. 15 connects with a de-

pending lug 82 on the lever 63, which is fulcrumed at 83^a and connects at one end with the plate 69 and on its other end is provided with weights 84 to counterbalance the plate and hold it normally away from the coin slot. The tilting of the lever 63 tilts the lever 83 and closes the coin slot. The operation of the mechanism in Fig. 15 is like that already described, the dropping of the coin in the pocket 48 releasing the main lever 72 and permitting the push bar 38 to be shoved inward so as to operate the main lever and eject a stamp.

In the claims I shall refer to both stamps and envelopes as papers, because it is evident that anything of this nature, which may be carried in the holders, may be ejected by the discharging or rejecting forks and delivered on the turned-up ends 22 of the chutes 21.

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

1. The combination, with the containing case, and the paper receptacles therein, of a sliding rod whose end projects exteriorly of the case, a tilting lever fulcrumed on the case and extending longitudinally above the paper receptacle, said tilting lever having a pivotal connection with the said sliding rod, and a fork pivotally connected with the said tilting lever and provided with tines located in two different planes to engage a paper on both of its sides, substantially as described.

2. In a vending machine, the combination, with the operating rod for effecting the delivery of the articles, a coin lever, and a locking mechanism to prevent the movement of the operating rod when the coin lever is in its normal position, of a latch to engage the coin lever and hold it in a fixed position after it has been depressed by the insertion of a coin, and means connected with the said operating rod, for releasing the coin lever latch when the said operating rod is actuated, substantially as described.

3. A vending machine, comprising a containing case, an inclined paper holder arranged in the case, a chute leading from the paper holder through the wall of the case, an ejecting fork movable opposite the lower end of the holder, a tilting counterbalanced lever for working the fork, a push rod connected with the lever to operate the same, a lock or latch carried by the lever, a stop arm arranged in the path of the lock or latch, and coin-controlled mechanism for moving the stop arm from the path of the lock or latch, substantially as described.

4. A vending machine, comprising a containing case, an inclined paper holder arranged therein, a chute leading from the lower end of the holder through the wall of the case, an ejecting fork arranged to move opposite the lower end of the holder, a tilting counterbalanced lever connected with the fork, a push rod to tilt the lever, a swinging latch or lock carried by the lever, a coin lever adjacent to the main lever, a stop arm on the coin

lever to engage the lock, and means for tilting the coin lever and moving the arm by the dropping of a coin, substantially as described.

5 5. A vending machine, comprising a containing case, an inclined paper holder arranged therein, a chute leading from the paper holder through the wall of the case, a fork arranged to move across the end of the paper holder, a tilting counterbalanced lever pivoted to the fork, a push rod for operating the lever, a swinging lock connected with the lever, a tilting coin lever, an arm on the coin lever arranged to swing into the path of the lock or latch, a latch to engage one end of the coin lever and hold it in a fixed position, and
5 means for releasing the coin lever latch by

the swinging of the main lever, substantially as described.

6. The combination, of the paper-carrying mechanism, the tilting lever connected therewith to discharge the papers, the coin lever held to normally lock the main lever and adapted to be moved by a coin to release the main lever, and a swinging latch adapted to engage and lock the coin lever, the latch having an inclined releasing arm extending into the path of the main lever, substantially as described. 20 25

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