J. FRITSCHE.

STAMP VENDING MACHINE.

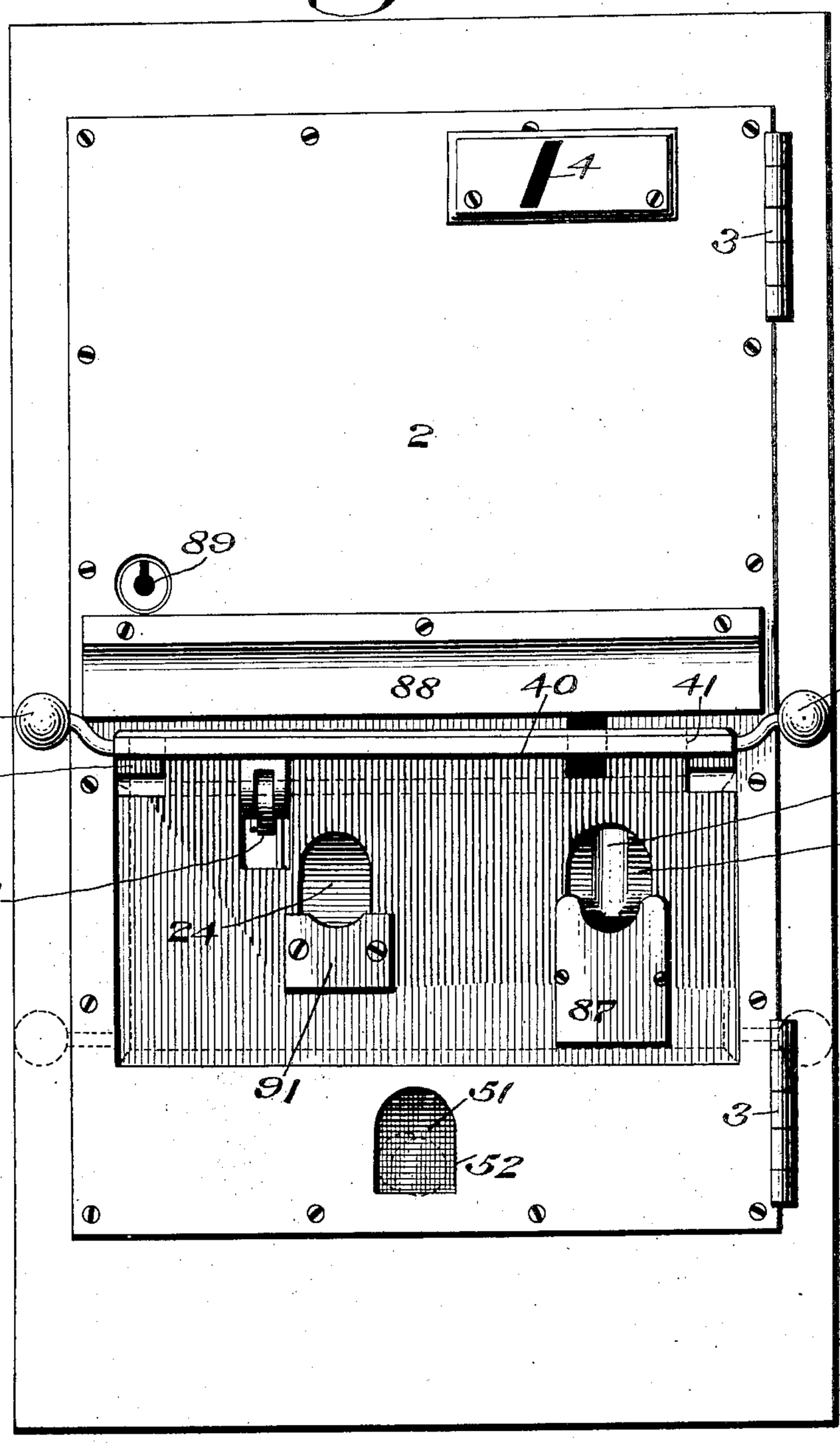
APPLICATION FILED MAY 14, 1908.

929,932.

Patented Aug. 3, 1909.

4 SHEETS—SHEET 1.

Fig. 1.



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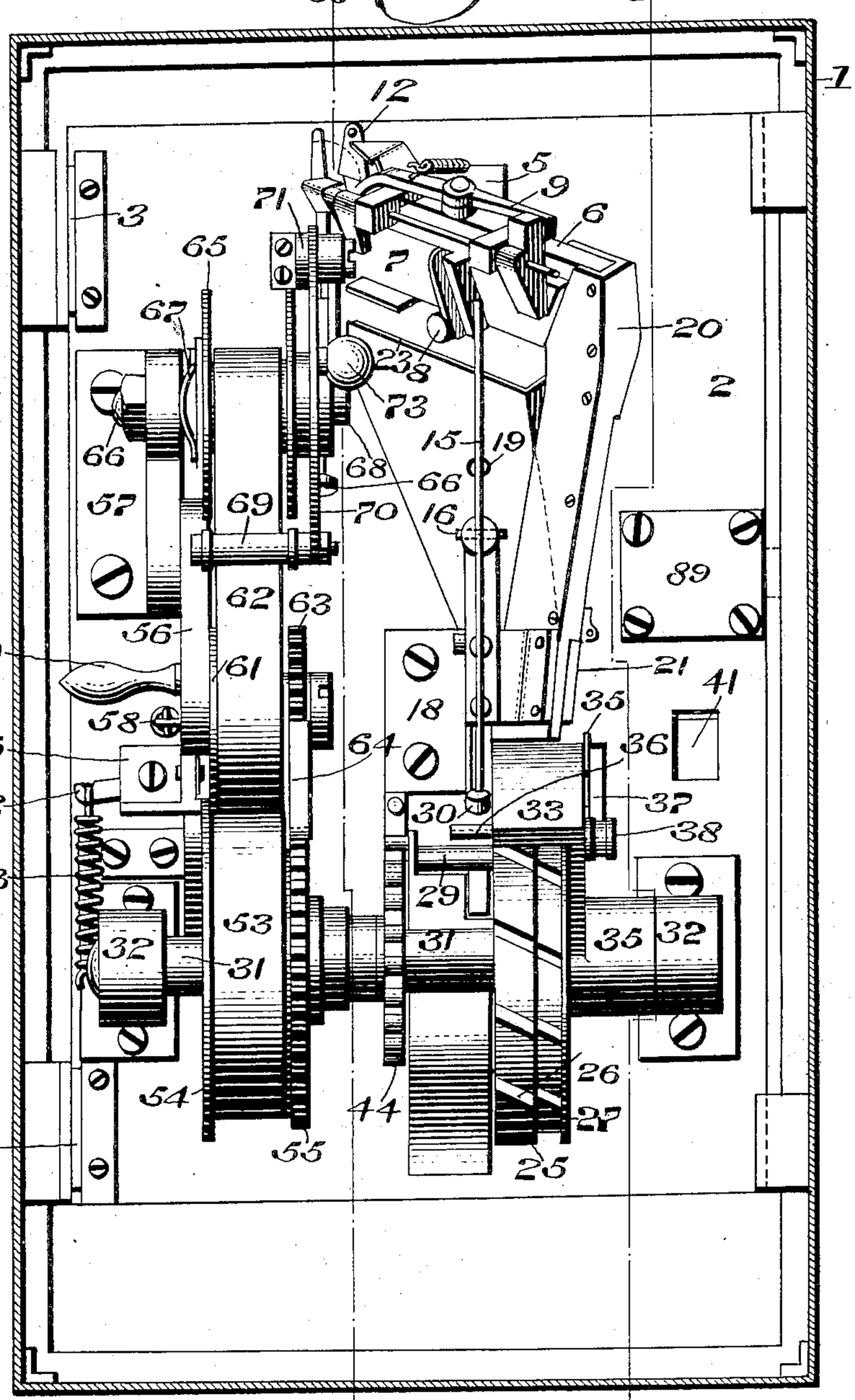
4 SHEETS—SHEET 2.

Fig. 2.



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4 SHEETS—SHEET 3.

Fig. 3.

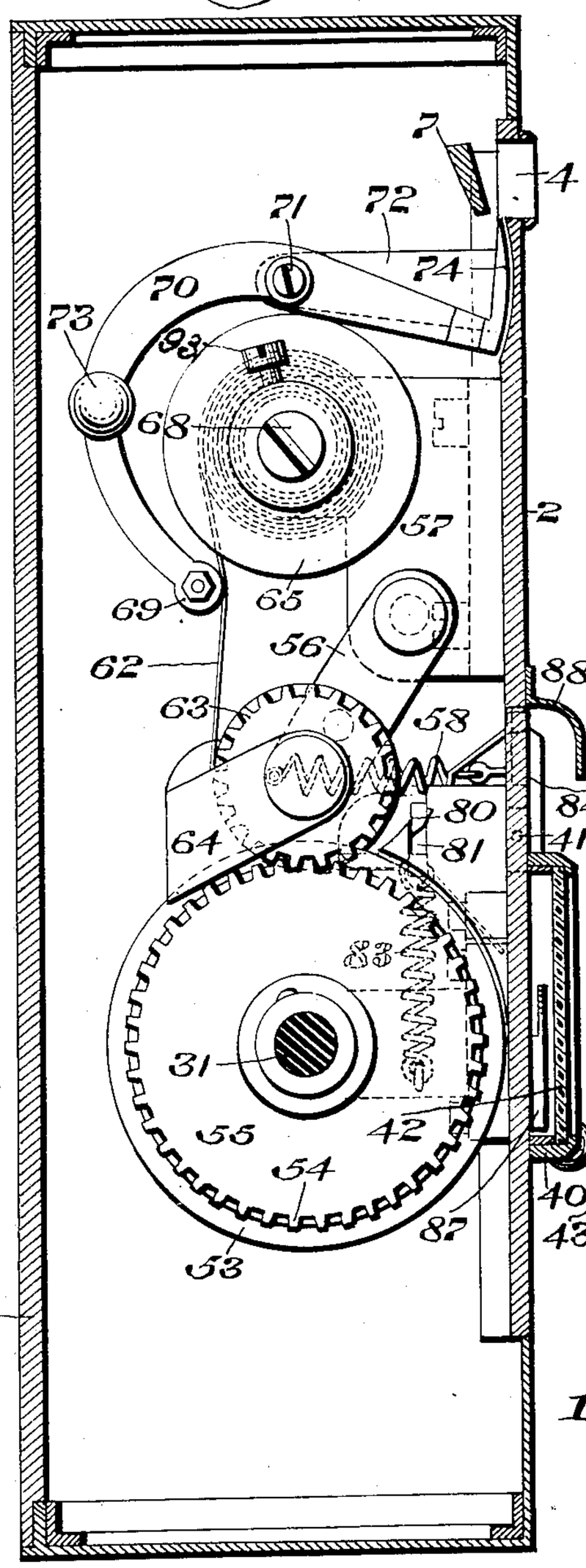
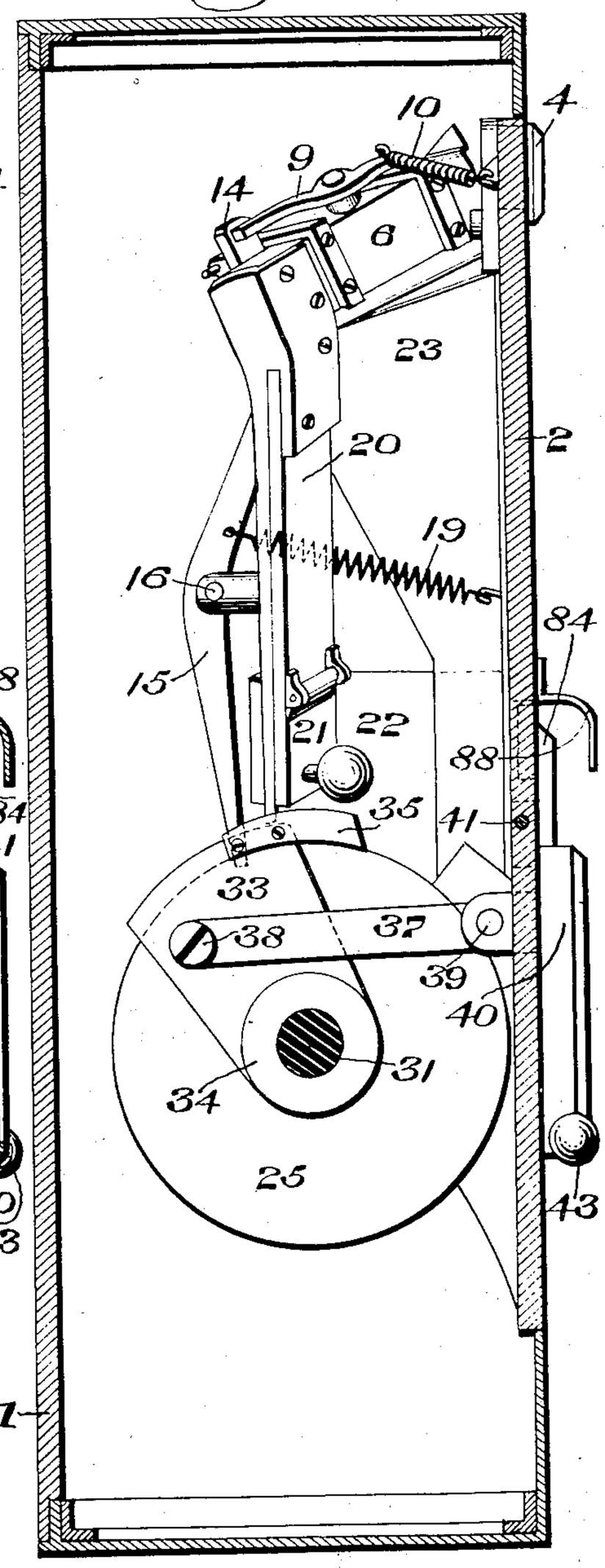


Fig. 4.



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4 SHEETS—SHEET 4.

Fig. 8.

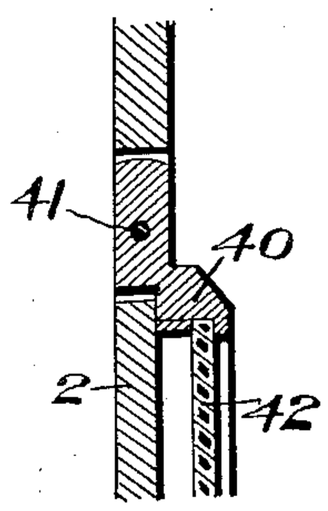

Fig. 5.

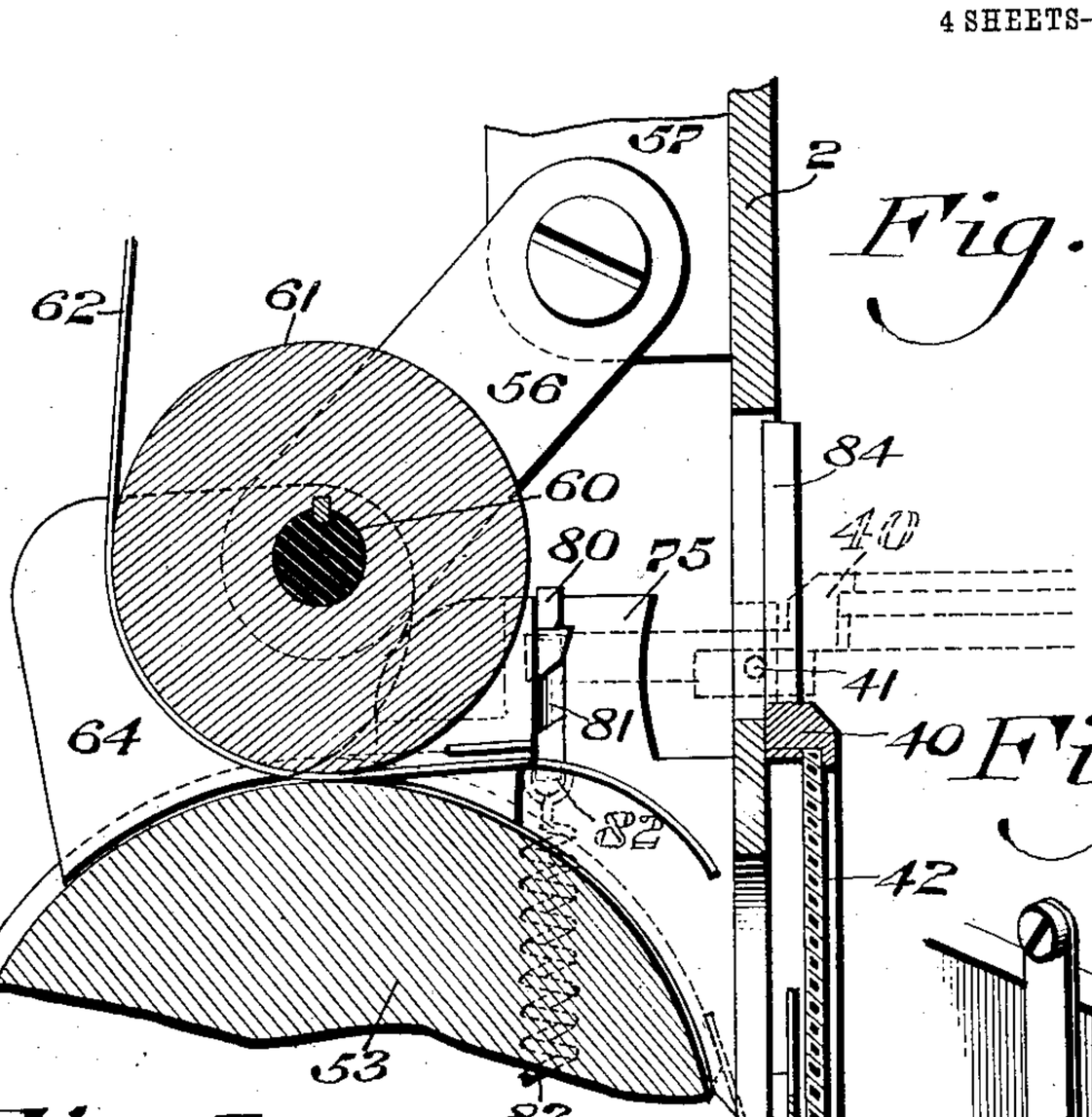

Fig. 9

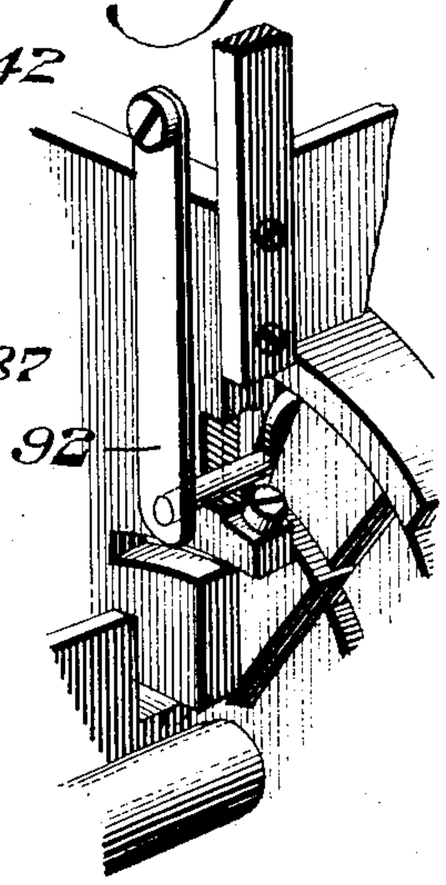

Fig. 7.

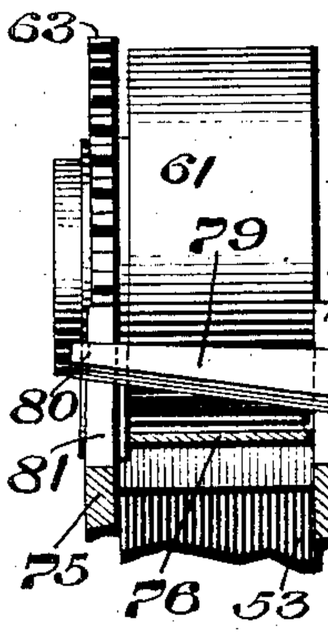

Fig. 6.

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UNITED STATES PATENT OFFICE.

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STAMP-VENDING MACHINE.

No. 929,932. Specification of Letters Patent. Patented Aug. 3, 1909.

Application filed May 14, 1908. Serial No. 432,835.

To all whom it may concern:

Be it known that I, JOHN FRITSCHE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Stamp-Vending Machine, of which the following is a specification.

My present invention consists of a novel construction of a vending machine which is especially adapted for the vending of postage stamps and similar articles and wherein the parts are so constructed and correlated that the machine is rendered "fool proof."

It further consists of a novel construction of stamp feeding mechanism which is preferably coin controlled and which is actuated by the movement of a suitable door or lever.

It further consists of a novel construction of stamp severing or arresting mechanism which is actuated by the movement of a suitable door or lever which preferably normally covers the pocket into which the stamps are discharged from the machine.

It further consists of a novel construction of a vending machine in which all of the operating mechanism is carried by the door.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention I have shown in the accompanying drawings one form thereof, since this embodiment has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein set forth.

Figure 1 represents a front elevation of a stamp vending machine embodying my invention. Fig. 2 represents a sectional view thereof, the same being viewed from the rear. Fig. 3 represents a section on line *x*—*x*, Fig. 2. Fig. 4 represents a section on line *y*—*y*, Fig. 2. Fig. 5 represents a sectional elevation of a portion of the machine showing more particularly the stamp feeding mechanism, the stamp severing or arresting mechanism and the means for operating the latter. Fig. 6 represents a section elevation of a portion of the machine showing more clearly the means employed for exposing the coins to view which last operated the machine. Fig. 7 represents a front elevation showing a portion of the stamp feeding mechanism and also a portion of the stamp severing mechanism. Fig. 8 represents in sectional elevation, a portion of the machine showing more clearly the manner in which the door is hinged. Fig. 9 represents a perspective view partly broken away of a portion of the machine.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—In the embodiment of my invention shown in the drawings I have preferred to show the casing 1 as being rectangular in form, although it is to be understood that such casing may have any desired form or contour.

I desire at the outset to lay special stress on the manner in which the component parts of my machine are correlated and arranged since all of the operating mechanism is carried by the door 2, which is hinged to the casing 1, as indicated at 3, whereby I am enabled to produce a construction which may be placed in the wall of a building, post or other suitable place in such a manner that the front of the machine may be flush with the surface, if desired.

In order that the construction and operation of my device may be clearly understood, I will first explain the construction and operation of the fraud preventive device which includes the coin slot and next the coin wheel, although I make no claims to such structures in the present application since in my prior patents No. 864,527, granted August 27, 1907, and No. 852,111, granted April 30, 1907, I have described and broadly claimed such constructions.

The door 2 is provided with a coin slot 4 through which the coins are inserted into the machine, said coin slot being of the proper dimensions to receive a perfect coin.

5 designates a bracket fixed to the door 2 to which is secured a coin slot 6 which comprises a stationary portion secured to the bracket 5 and a pivoted member 7, said member 7 being pivoted in such a manner that it normally moves outwardly from the stationary member due to its own weight. The distance to which the pivoted member 7 may approach the stationary member is adjusted by means of a screw 8.

9 designates a lever pivoted to the stationary portion of the coin slot 6, said lever having secured thereto one end of a spring 10, the other end of which is secured to the

bracket 5 whereby the end 11 of said lever 9 is normally maintained in the path of the coin passing through the coin slot.

12 designates a weighted lever pivoted at 13 to the door 2 whereby a coin passing through the coin slot 4 will be pressed against the pin 11 in order that any check or coin having an aperture therein, which is passed into the machine, will be retained on the pin 11 and will not pass through the coin slot 6. The end of the lever 9 contacts with a lug or extension 14 carried by the pivoted member 7 of the coin slot, whereby when said pivoted member moves outwardly the lever 9 will be rocked on its fulcrum and the pin 11 removed from the washer or other device which has been retained thereon, so that such device may drop therefrom, as will be hereinafter more fully explained.

15 designates a lever fulcrumed at 16 to the arm 17 carried by the bracket 18, which latter is preferably cast integral with the door 2. The upper end of the arm 15 is normally maintained against the pivoted member 7 of the coin slot by means of a spring 19, one end of which is secured to said lever 15, the other end thereof being secured to any suitable fixed point, such as the bar 2.

20 designates a coin chute into which coins of proper dimension will pass, said chute having at its lower end a hinged plate 21 provided with a weight 22, whereby the same is normally maintained in the position indicated in Figs. 4 and 10.

23 designates a chute, the upper end of which is in proximity to the under side of the coin slot 6, said chute 23 leading to a discharge opening 24 accessible to the purchaser, as most clearly seen in Figs. 1 and 10.

I will now describe the coin wheel into which the coins passing through the slot 21 are discharged.

25 designates a coin wheel having angularly inclined slots 26 therethrough, it being noted that one side of the coin slot 25 is closed by means of a guard plate 27. The coin wheel is provided with an annular groove or slot 28, as seen in Fig. 6.

29 designates a plate which is maintained in position by means of a set screw 30, said plate having a plurality of apertures with which said set screw is adapted to engage, whereby the coin wheel is adapted to be employed with a single coin when said plate 29 is located in the annular groove 28, it being understood that in Fig. 2 this plate 29 is shown as being out of engagement with the annular groove 28 so that the coin wheel is adapted to be employed with two coins. The coin wheel 25 is keyed or otherwise fixed on a shaft 31, which latter is mounted in brackets 32, preferably cast integral with the door 2.

33 designates an angular plate or member which is provided with a hub 34 loosely mounted on the shaft 31, said plate 33 being provided with an extension 35 whereby the coins are properly directed in their movement, as will be hereinafter more clearly explained in the operation. The plate 33 is provided with a pin or lug 36 which is adapted to contact with the lower end of the lever 15 and thereby permit the coin slot to open.

37 designates a link, one end of which is pivoted at 38 to the plate 33, the other end of said link being pivoted at 39 to a door 40 which is hinged to the door 2, as is indicated at 41. The door 40 may, if desired, be provided with a transparent front 42. The door 40 is provided with handles or knobs 43, whereby the same may be actuated when desired. The shaft 31 has fixed thereon a cam wheel 44 provided with a multiplicity of cams 45, which latter are adapted to engage a cam 46 rigidly secured to a retainer 47, which latter is pivoted at 48 to brackets 49 carried by the door 2. The lower end of the bracket 47 is deflected inwardly and is cut away as indicated at 50 in order that the coins may be temporarily retained at such point, it being noted that a piece of glass or other transparent material 51 closes the aperture 52 in the cover 2.

Stamp feeding mechanism.—53 designates a feed roller provided with a flange 54 on one side thereof and having on the opposite side thereof, a gear 55 suitably secured thereto, said feeding roller 53 being rigidly secured on the shaft 31 in any suitable manner.

56 designates an arm, one end of which is pivoted to the bracket 57, which latter is preferably cast integral with the door 3, said arm 56 having secured thereto one end of a spring 58, the other end of which is secured to the door 2.

59 designates an actuating handle for the arm 56.

60 designates a shaft or journal carried by the arm 56 and on which is mounted a tension feed roller 61 around which the paper 62 passes, it being understood that the tension of the spring 58 causes the roller 61 to maintain the paper 62 in close contact with the feeding roller 53.

63 designates a gear mounted on the shaft 60, said gear meshing with the gear 55 rigidly mounted on the shaft 31, whereby the tension roller 61 is rotated in unison with the feeding roller 53.

64 designates a guard pivotally supported on the shaft 60, whereby the stamps are prevented from coming into contact with the gears 53 or 55.

65 designates a stamp reel which is mounted on the shaft 66, carried by the bracket 57 by means of a set screw 93.

67 designates a spring washer whereby the reel 65 is moved outwardly toward the nut 68 secured to the shaft 66.

69 designates a roller mounted on the lever 70 which is pivoted at 71 to a bracket 72 carried by the door 2 in any suitable manner, said lever 70 being provided with a weight or enlargement 73, whereby the curved end 74 of said lever will be moved upwardly when the strip of stamps on the reel 65 is exhausted, and thereby close the coin slot 4 in order that no coins may be inserted into the machine when the stamps have run out.

75 designates a bracket carried by the door 2 and having a cross piece 76 over which the strip of stamps is fed after it passes from the rollers 53 and 61.

77 designates a plate pivoted at 78 to the bracket 75, said plate 77 having preferably integral therewith the knife 79 which is adapted to move in close proximity to the cross piece 76, said knife 79 having an extension 80 which moves in a slot 81 in the bracket 75.

82 designates a rearward extension from the plate 77 to which one end of the spring 83 is secured, the other end of said spring being secured to one of the brackets 32.

84 designates an arm fixed to the door 40, said arm 84 being adapted to engage the end 80 of the knife 79 and force the same downwardly against the tension of the spring 83.

85 designates a discharge opening for the stamps which is provided with a recess 86, whereby stamps may be readily removed. It will be noted that a bracket 87 is secured beneath the aperture 85 in order to form a pocket from which the stamps may be readily removed.

88 designates a cover carried by the door 2 and extending over the hinges.

89 designates a lock whereby the parts are maintained in assembled position.

91 designates a bracket for the discharge opening 24.

92 designates a spring having a stud adapted to engage a slot 26 in the coin wheel to prevent improper movement thereof.

The operation of my novel construction of stamp vending machine will now be readily understood and is as follows:—The machine is adapted to be employed with either one or two coins and assuming that a two-cent stamp is to be vended, the plate 29 is adjusted by means of the screw 30 so that the coin slot 26 is adapted to retain two coins at a time. The intending purchaser places, one at a time, one cent in the coin slot 4 and if the coin inserted is of the proper dimensions, said coin will pass directly through the coin slot 6 through the coin chute 20 and will pass into one of the inclined slots 26, as will be clearly understood by reference to Fig. 6. The second coin inserted into the machine if of proper dimensions passes in the same manner as the first coin, as will be understood by Fig. 6. The operator next raises the door 40 by means of the handle 43 secured thereto, whereby owing to the link connection 37, the plate 33 will be moved forwardly and the forward edge of said plate will engage the top of the upper coin in the coin slot 26 and cause the coin wheel to be rotated one step improper rotation of the coin wheel being prevented by spring 92. Since the coin slot 25 is rigidly secured to the shaft 31, said shaft 31 will also be rotated, thereby causing the gear 54 to rotate a distance sufficient to feed the stamp into the proper position to be severed from the stamp strip by the severing mechanism. Since the rollers 61 and 53 are connected together by means of the gears 63 and 55, a stamp is fed into such position that the line on which said stamp should be severed is directly under the blade 79. This feeding of the stamp takes place during the raising of the door 40. As soon as the feeding of the stamp is stopped and the stamp to be severed is in proper alinement, the presser member 84 carried by the door, engages the portion 80 of the plate 79, whereby on the continued upward movement of the door 40 the blade 79 will be moved downwardly against the tension of the spring 83 and the stamp will be severed from the stamp strip and will pass into the pocket formed by the bracket 87 and the aperture 85 so that the delivered stamp is in a position accessible to the purchaser. As the coin wheel 25 rotates to its full extent the coins therein will pass therefrom into the coin chute 47, as will be best understood by reference to Figs. 1, 6 and 11 and owing to the provision of the transparent member 51 the coins which last worked the machine will be exposed to view. The coin retainer 47 is intermittently rocked so that the coins retained therein may be intermittently discharged therefrom. As the shaft 31 rotates the cam member 44 rotates in unison therewith and the cams 45 will contact with the cam 46 carried by the presser 47, thereby rocking the same on its pivot 48 so that the coins contained therein may be dropped therefrom into the bottom of the machine or into a suitable cash receptacle. As soon as the cam member 45 passes beneath the cam member 46, the coin retainer 47 will return to its normal position as indicated most clearly in Fig. 6, owing to its weight and the manner in which it is pivoted. I also employ in my device, means for closing the coin slot 4 in case the strip of stamps has been exhausted and this is accomplished in the following manner: The roller 69 carried by the lever 70 is always in engagement with the stamp strip 62. When, however, the stamps are exhausted owing to the counterbalance 73,

the lever 70 will rock on its fulcrum 71 so that the end 4 will close the coin slot 14 and thereby prevent the insertion of any coins into the coin slot. I also provide means whereby in case more coins are inserted in the machine than is necessary to operate the same, the excess coins will be returned to the purchaser. Assuming for example, that three coins have been passed trough the coin slot 4 and have passed down the coin chute 20, two of the coins will be seated in one of the slots 26 of the coin wheel 25, which at such time are in alinement with the coin chute. The excess coin or coins, however, will be located above the second coin in the coin slot 26 of the coin wheel. When the operator now raises the door 40, thereby causing the plate 33 to be moved forwardly, owing to the manner in which the member 21 is pivoted such member will be permitted to move outwardly and the coins in the coin chute 20 will discharge therefrom and pass through the coin chute 90 to the delivery opening 24.

I wish to call particular attention to certain novel features of my device. In the present instance I have preferred to show the means for actuating the coin mechanism and severing mechanism as being a door 40 but it is of course to be understood that any suitable form of a lever or actuating handle may be employed if desired, and the operation of the machine will be the same. The door 40 when in closed position, covers both the stamp delivery opening and the delivery opening for coins of improper dimension.

A machine constructed as herein shown and described has been found to be practically fool-proof since when the door is opened the upper portion thereof abuts against the guard 88 so that it is impossible to actuate the stamp feeding mechanism without inserting coins of proper dimension into the machine.

I wish to call particular attention to the manner in which all the operating parts are supported, since the same are supported in the present instance, on the door whereby my device may be inserted in a wall or other portion of a building and when the door is opened all the parts of the machine are easily accessible for the purpose of inspection or for the insertion of a new stamp reel. Owing to the manner in which the stamp feeding mechanism is connected with the coin controlling mechanism, it will be apparent that the stamps will be fed accurately at all times, since when coins are inserted in the coin slot the coin wheel and the shaft on which said wheel is mounted will be always moved the same distance.

It will be clearly understood from the above description and by reference to the drawings, that the severing mechanism comprising a blade 79, is employed in cases in which a continuous strip of stamps is employed and it is desired to sever a stamp from the strip during the operation of the cutting mechanism. In many cases, however, it is desirable to have the blade 79 simply serve as a presser member so that the last stamp on the strip may be readily torn off after the stamp has been fed the proper distance beneath the severing or arresting blade 79, since in many cases a perforated strip of stamps is employed and in such cases the end of the stamp would be fed to a position accessible to the purchaser, whereupon the same could be readily detached from the strip by the purchaser.

One of the main advantages of employing a door construction is that it is impossible to obtain a stamp from the stamp strip without actuating the door and it is also impossible to tamper or actuate the stamp feeding mechanism by other means than the door when the door is either in open or closed position or is being actuated.

It will be noted that if the stamp strip should become broken between the feeding rolls and the stamp reel, the coin slot 4 will be closed by the end 74 of the weighted lever 70.

It will now be apparent that I have devised a novel and useful construction of a stamp vending machine which embodies the features of advantage enumerated as desirable in the statement of invention and the above description and while I have in the present instance shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit and scope of the invention or sacrificing any of its advantages.

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

1. In a stamp vending machine, a shaft suitably mounted, a feed roller fixed thereon, a tension roller adapted to co-act with said first feed roller and to be driven by said shaft, a stamp reel, stamp arresting mechanism, means including a door for rotating said shaft step by step and for actuating said arresting mechanism, and a cover for said door.

2. In a stamp vending machine, a casing, a door hinged thereto, a stamp reel carried by said door, stamp feeding mechanism carried by said door, a severing mechanism to which the stamps are fed from said feeding mechanism, said door having a stamp delivery opening, and means carried by said door adapted to normally cover said delivery opening for controlling said feeding mechanism and for actuating said severing mechanism.

3. In a stamp vending machine, a casing having a delivery opening, a stamp reel, a plurality of feed rollers adapted to feed a stamp from said rollers into proximity to said opening, one of said rollers having a flange, pivotally supported means coacting with said flange to guide the stamps being fed, a bracket carried by said casing, a blade pivoted thereto and adapted to engage a stamp, yielding means for normally maintaining said blade out of contact with the stamps, and means for actuating said rollers and for causing said blade to engage the stamps.

4. In a stamp vending machine, the combination with a casing, of a door pivoted thereto, stamp feeding mechanism supported on said door, a stamp reel supported on said door, a bracket supported on said door and having a platform over which stamps are fed, stamp arresting mechanism located in proximity to said platform and normally out of engagement with stamps, and means carried by said door for actuating said feed mechanism and said arresting mechanism.

5. In a stamp vending machine, a shaft rotatably mounted, a feed roller thereon, a gear fixed on said shaft, an arm pivotally supported, a feed roller rotatably carried thereby, a gear fixed to said feed roller, a spring for causing the engagement of said gears, a guard for said gears a stamp reel, and means for rotating said shaft step by step and for preventing further movement of the stamp strip carried by said reel.

6. In a stamp vending machine, a casing, a door pivoted thereto and having a delivery opening, a second door pivoted to said first door and normally covering said delivery opening, a stamp feeding mechanism controlled by said second door, a stamp reel for the stamp strips, stamp arresting mechanism, and means carried by said second door for actuating said arresting mechanism.

7. In a stamp vending machine, a casing, a door pivoted thereto and having a delivery opening, a second door pivoted to said first door and normally covering said delivery opening and having a transparent front, a stamp feeding mechanism controlled by said second door, a stamp reel for the stamp strips, stamp arresting mechanism, and means carried by said second door for actuating said arresting mechanism.

8. In a stamp vending machine, a casing, a door pivoted thereto and provided with a stamp delivery opening, a shaft rotatably mounted on said door, a feed roller fixed to said shaft, an arm pivotally supported on said door, a feed roller journaled thereon, a gear fixed to said feed roller and co-acting with said first gear, a stamp reel journaled on said door and adapted to carry a stamp strip, means carried by said arm for preventing said strip contacting with said gears, a blade pivotally supported on said door, a spring secured to one end of said blade and having its other end secured to said door for maintaining said blade normally out of engagement with the stamp strip, a second door pivoted to said first door and normally covering said delivery opening, said second door controlling the step by step movement of said shaft, and means carried by said second door for actuating said blade.

9. In a stamp vending machine, a casing, a door pivoted thereto having a stamp delivery opening, a second door hinged to said first door and normally covering said delivery opening, stamp feeding mechanism controlled by said second door, a stamp reel for the stamp strip, a stamp severing mechanism, and an arm carried by said second door for actuating said stamp severing mechanism.

10. In a stamp vending machine, a casing, a door hinged thereto, feed mechanism carried by said door, a stamp reel for the stamp strip and carried by said door, a bracket carried by said door and having a platform over which the stamps are fed, stamp arresting mechanism adapted to engage the stamp strip in proximity to said platform, and a lever carried by said door for controlling said feeding mechanism and for actuating said stamp arresting mechanism.

11. In a stamp vending machine, a casing, a door pivoted thereto having a stamp delivery opening, a second door hinged to said first door and normally covering said stamp delivery opening, feeding mechanism controlled by said second door, a stamp reel on said first door, a stamp severing mechanism, means carried by said second door for actuating said stamp severing mechanism, and a cover for said second door.

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