J. R. ARMINGTON.

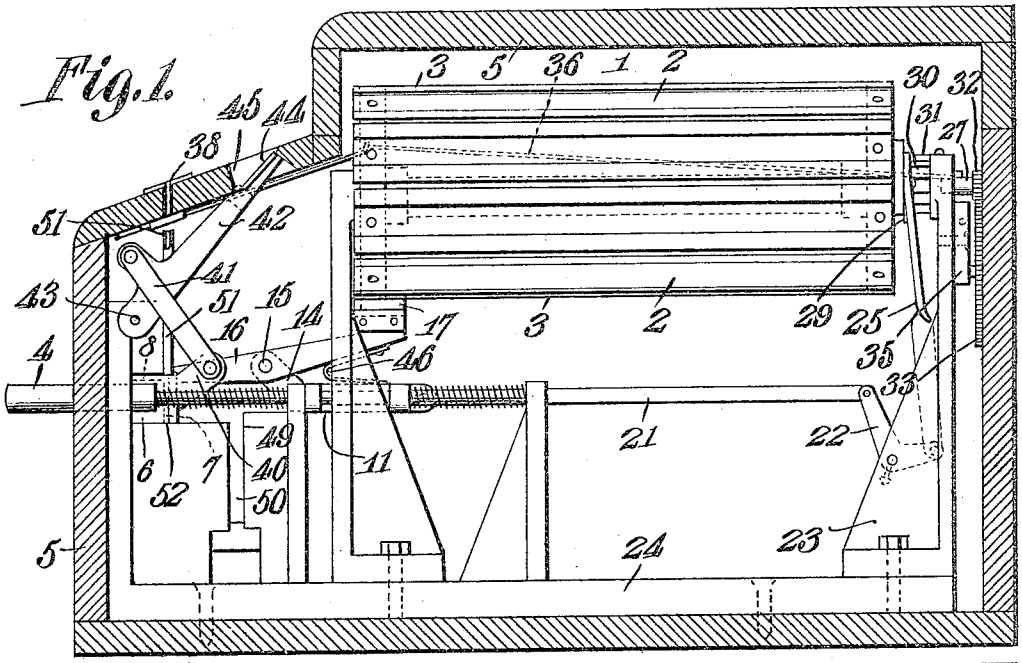
STAMP VENDING MACHINE.

APPLICATION FILED JAN. 30, 1909.

942,766. Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



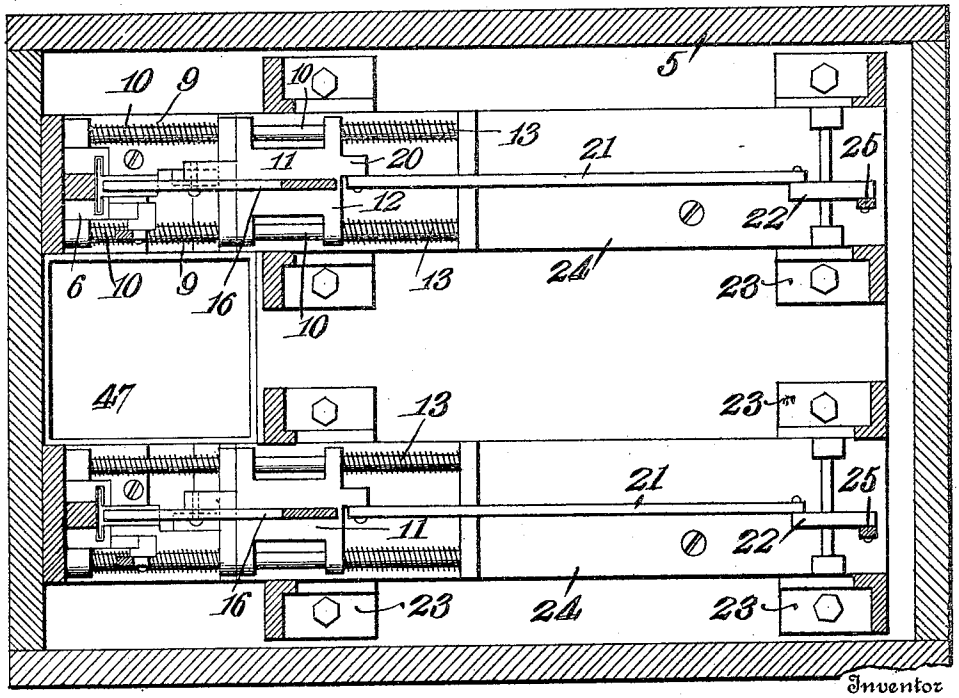


Fig. 2.

Inventor

John R. Armington.

By Victor J. Evans

Attorney

Witnesses

A. B. Galt.

R. M. Smith.

J. R. ARMINGTON.

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2 SHEETS—SHEET 2.

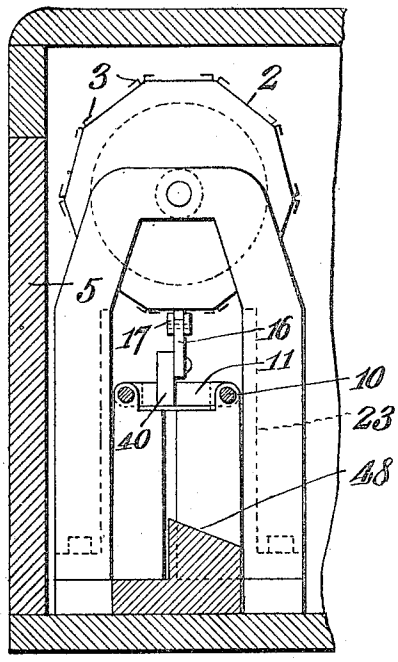

Fig. 3.

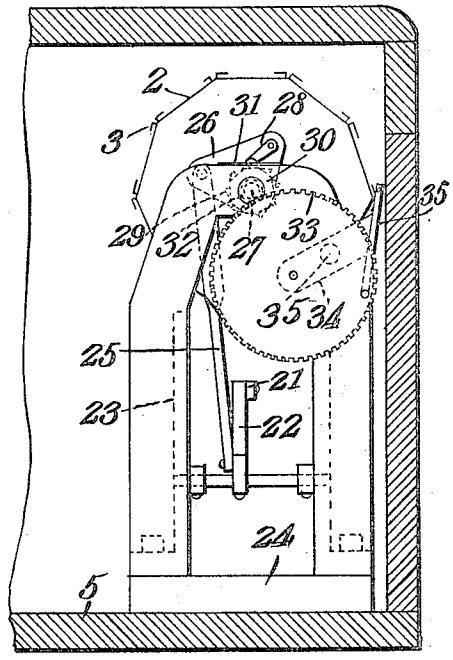

Fig. 4.

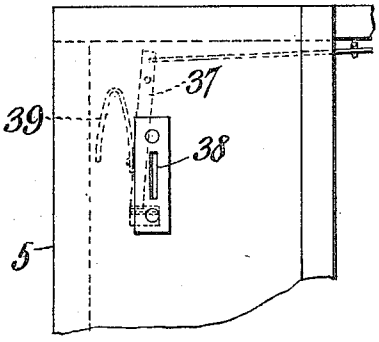

Fig. 5.

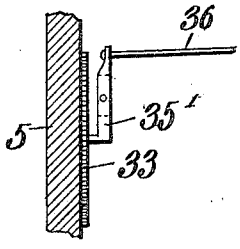

Fig. 6.

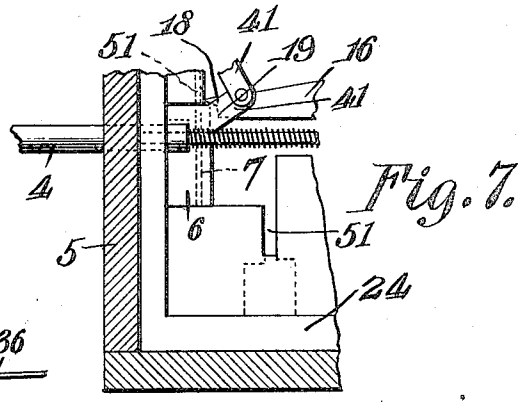

Fig. 7.

Witnesses

Inventor

John R. Armington.

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

JOHN R. ARMINGTON, OF ROANOKE, VIRGINIA.

STAMP-VENDING MACHINE.

942,766. Specification of Letters Patent. Patented Dec. 7, 1909.

Application filed January 30, 1909. Serial No. 475,172.

To all whom it may concern:

Be it known that I, JOHN R. ARMINGTON, a citizen of the United States, residing at Roanoke, in the county of Roanoke and State of Virginia, have invented new and useful Improvements in Stamp-Vending Machines, of which the following is a specification.

This invention relates to stamp vending machines, the object of the invention being to provide a simple, practical and reliable machine which will be operated by the purchaser after depositing a coin or coins of the proper denomination therein, and to deliver one or more stamps corresponding in value to the coins inserted in the machine.

The machine embodies means for delivering a large number of stamps one at a time to one or more purchasers and the machine also contemplates different compartments or sections or units adapted for the holding and delivery of stamps of different values.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a vertical fore and after section through a stamp vending machine embodying the present invention. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a vertical cross section of approximately one-half of the machine taken adjacent to the front end thereof. Fig. 4 is a vertical cross section of approximately one-half of the machine taken adjacent to the rear end. Fig. 5 is a top plan view of one corner of the machine showing the coin entrance. Fig. 6 is a detail longitudinal section, showing the locking dog and gear. Fig. 7 is a detail longitudinal section taken adjacent to the front of the machine, showing the plunger and plunger head and the parts connected therewith.

The machine contemplated in this invention comprises essentially a revolving stamp holding cylinder 1 which is illustrated in Figs. 1, 3 and 4, is of polygonal form or provided with a series of flat faces 2 preferably ten in number, and each of said faces is provided with oppositely arranged combined guiding and holding strips 3 of approximately the width of a strip of postage stamps. The length of the cylinder and the strips 3 is also sufficient to contain a strip of stamps equal to one-tenth of a sheet containing one hundred stamps. Therefore, the combined capacity of all of the sides 2 and strips 3 of the cylinder is equal to one complete sheet of one hundred postage stamps. It may be noted at this point that the stamp sheet is divided into ten strips and these strips are inserted under the overhanging flanges of the combined holding and guiding strips 3.

In Fig. 2 I have illustrated two stamp vending units and it will be understood that each stamp vending unit comprises one of the stamp holding cylinders 1, the object in using more than one unit being to provide for the accommodation of stamps of different values such as one-cent stamps, two-cent stamps and the like.

In connection with each stamp holding cylinder, there is employed a hand-operated plunger 4 which slides through an opening in the front of the cabinet 5. This cabinet may be of any suitable size and construction to receive the operative mechanism of the vending machine. At its inner end, the plunger 4 carries with it a plunger head 6 provided in its inner vertical wall with a slot 7 and also provided in its upper horizontal wall with a slot 8 the purpose of which slots will hereinafter appear. The plunger 4 is normally held outward in its projecting position by means of oppositely arranged coil springs 9 which encircle pins or slots 10 connected with the plunger head as shown in Figs. 1 and 2.

Arranged in rear of the plunger head 6 and in line therewith is a stamp carriage having oppositely arranged lugs 12 formed with openings adapting said carriage to travel back and forth on the guides or rods 10 above referred to, the carriage being normally urged forward toward the front of the cabinet by means of coil springs 13 embracing said guides or rods. The carriage 11 is provided with an upstanding lug 14 on which is fulcrumed at the point 15 a stamp feeding lever or finger 16, said lever being provided at its rear end with a contact piece or head 17 adapted to bear upward against the foremost stamp on the lower side of the cylinder 1 for a purpose which will hereinafter appear. The opposite or forward arm of the lever is provided with an inclined shoulder 18 with which the plunger head 6

coöperates as said head is pushed inward. Said forward arm of the stamp feeding lever or chamber 16 is also provided with a substantially vertical shoulder 19 against which the plunger head 6 acts after it has acted on the shoulder 8, the said inclined shoulder being employed for the purpose of obtaining the necessary rocking movement of the stamp feeding lever or finger to move the contact piece or head 17 out of engagement with the strip of stamps on the lower side of the cylinder.

Connected to a lug 20 on the rear of the carriage 11 is a connecting bar 21 which at its rear end is pivotally attached to a pulley crank lever 22 fulcrumed on one of the frame pieces 23 extending upward from the base 24 on the unit frame, as shown in Fig. 1. Connected to the other arm of the bell crank lever 22 is a link 25 which extends upward as shown in Fig. 1 and connects as shown in Fig. 4 to a pivoted pawl carrier 26 which is fulcrumed on the shaft 27 of the cylinder 1. The pawl carrier 26 carries a pivoted pawl 28 which successively engages the teeth of a ten-toothed ratchet wheel 29 fast on the shaft 27. On the same shaft 27 there is arranged a detent wheel 30 having ten flat faces adapted to be successively engaged by a flat spring detent 31 so as to prevent accidental rotative movement of the cylinder and hold the strips of stamps in the proper relation to the other part of the mechanism as hereinafter described.

On the stamp shaft 27 there is mounted fast a spur pinion 32 which meshes with a large spur gear wheel 33 journaled on a bracket arm 34 and provided with a socket or hole 35 in which is adapted to snap the angular end of a locking dog 35′, best illustrated in Fig. 6, said dog serving to lock the entire mechanism against further movement when the stamps are exhausted. In order to prevent the insertion of any coins in the machine after the stamps are exhausted, a connecting rod 36 extends from the dog 35′ to a slot closing gate 37, best illustrated in Fig. 5, the said gate being mounted to swing across and obstruct the coin entrance or slot 38. The closing movement of the gate 37 and the movement of the dog 35′ into engagement with the wheel 33 is insured by a spring 39 which bears against the gate 37 as shown in Fig. 5 and closes said gate as soon as the point of the dog 35′ drops into the notch or hole 35 in the locking gear 33.

Extending inward from the plunger head 6 and upward is a lug 40. Connected pivotally to the lug 40 is a link 41 which connects pivotally at its opposite end to a shearing and delivering arm 42, the said arm being povitally mounted at 43 within the cabinet. At its free end the arm 42 is provided with a stamp receiver or holder 44 embodying flanges beneath which a single stamp is adapted to be received and held. It will be noted that the fulcrum point of the arm 42 is about in alinement with the lowermost strip of stamps at the bottom of the cylinder 1 so that as said lowermost strip of stamps is fed forward, the foremost stamp projecting beyond the front end of the cylinder will be received by the holder 44 and sheared from the remainder of the strip of stamps when the arm 42 moves upward. The stamps so held by the receiver 44 are carried forward into a discharge opening 45 in the top wall of the cabinet adapting the same to be removed by the thumb or finger of the operator by sliding the same out of engagement with the receiver.

46 designates a spring which is interposed between the carriage 11 and the adjacent end of the stamp feeding finger 16 for the purpose of holding the contacting piece or head 17 in engagement with the foremost stamp of the lowermost strip contained on the cylinder.

In the bottom portion of the cabinet there is arranged a coin receptacle 47 preferably in the form of a draw and where two units are employed, as shown in Fig. 2, the draw 47 may be arranged between the units and inclined floors 48 may be provided leading into the direction of the receptacle 47 so as to direct the falling coins into said receptacle.

49 designates a shoulder against which the plunger head 6 is adapted to bring up when it reaches the limit of its rearward movement while 50 designates a space down through which the coins drop when released from the plunger head 6.

51 designates a coin tube or chute leading from the coin entrance 38 downward to the plunger head, the latter being provided with a coin pocket 52 into which the coin is held as the plunger head 6 is moved rearwardly.

The operation of the vending machine may be described as follows. As a coin of the proper denomination is inserted in the entrance of a slot 38, it falls by gravity into a pocket 52 into the plunger head. The operator then pushes inward on the plunger 4 causing the coin to operate against the inclined shoulder 18 of the lever or finger 13. This causes a slight rocking movement of said lever or finger which moves the contact head 17 out of engagement with the stamps on the cylinder 1. In the further movement, the coin acts against the shoulder 19 and moves the lever or finger 15 together with the carriage 11 rearward, the distance of one stamp. Thereupon the plunger head comes in contact with the stop shoulder 49 and the spring 46 acts to force the contact piece or head 17 upward against the foremost stamp. At the same time, the forward arm of the lever 16 presses downward on the coin in the plunger head and the coin

drops down the runway 50 and finds its way into the receptacle 47. The lever 16 may then slip forward through the slot 8 in the plunger head under the expansive action of the springs 13. In this movement, the strip of stamps on the lower side of the cylinder is fed forward the distance of one stamp, causing the foremost stamp to pass outward from the guiding and holding strips into the receiver 44 which then occupies a horizontal position. Upon releasing the plunger 4 the plunger head is moved outward by the action of the springs 9. At the same time, the shearing or delivering arm is swung upward on its pivot 43, said arm operating to shear the foremost stamp from the strip and carrying the same upward to the position indicated in Fig. 1. The stamp may now be removed from the receiver. It will also be observed that in each inward movement of the plunger 4 and the carriage 11, the connecting bar 21 is moved rearward and through the connections above described, a partial rotation is imparted to the cylinder 1 sufficient to bring the next row of stamps in position to be engaged by the head of the stamp feeding finger or lever 16. This operation continues until all of the stamps have become exhausted from the cylinder whereupon the locking dog 35 snaps into engagement with the wheel 33, locking the mechanism and at the same time the slot closing gate 37 swings across and obstructs the entrance slot 38, preventing the insertion of additional coins.

In Fig. 2, I have illustrated a cabinet containing two stamp units, for example, one for one-cent stamps and the other for two-cent stamps. In order to provide for depositing two pennies instead of one, the plunger head 6 may be made deeper, as shown in Fig. 7, or in other words, to contain 2 pennies one upon the other edgewise, the upper penny being positioned at the proper elevation to act upon the shoulders 18 and 19 of the stamp feeding finger or lever 16.

Various changes in the form proportion and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

I claim:—

1. A stamp vending machine comprising a revoluble holder adapted to contain separated parallel strips of stamps and bring the same successively to a given position, means for intermittently feeding a strip of stamps lengthwise and projecting the stamps one at a time from the holder, and means for separating the stamps from the strip and delivering the same.

2. A stamp vending machine comprising a revoluble holder adapted to contain separated parallel strips of stamps, means for intermittently turning said holder to bring the strips successively to a given position, plunger operated means for intermittently feeding a stamp strip lengthwise, and means for separating the stamps one at a time from the strip and delivering the same.

3. A stamp vending machine comprising a revoluble holder adapted to contain separated parallel strips of stamps, means for intermittently turning said holder to bring the strips successively to a given position, means for intermittently feeding a strip of stamps lengthwise and projecting the same one at a time beyond the holder, and means for separating the stamps from the strip and delivering the same.

4. A stamp vending machine comprising a holder adapted to contain a strip of stamps, a feeding element operating to feed the stamp strip lengthwise with a step-by-step movement, and an arm embodying a stamp receiver which receives the stamps one at a time from the holder, separates them from the strip and transfers them to the delivery holder.

5. A stamp vending machine comprising a revoluble holder embodying a circular series of guideways for strips of stamps, means for intermittently feeding the strips of stamps lengthwise and projecting the stamps one at a time beyond the holder and means for separating the stamps from the strip and delivering the same.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN R. ARMINGTON.

Witnesses:
ROY FITCH,
D. E. LOCKETT.