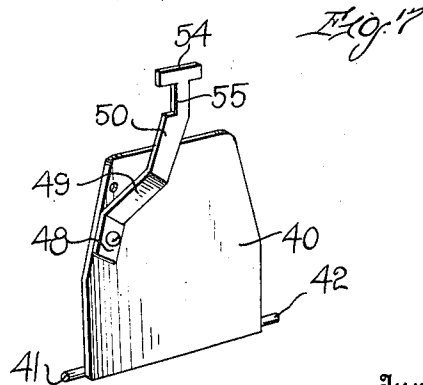
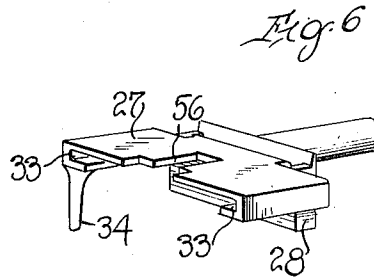
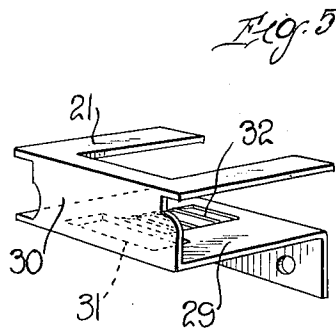
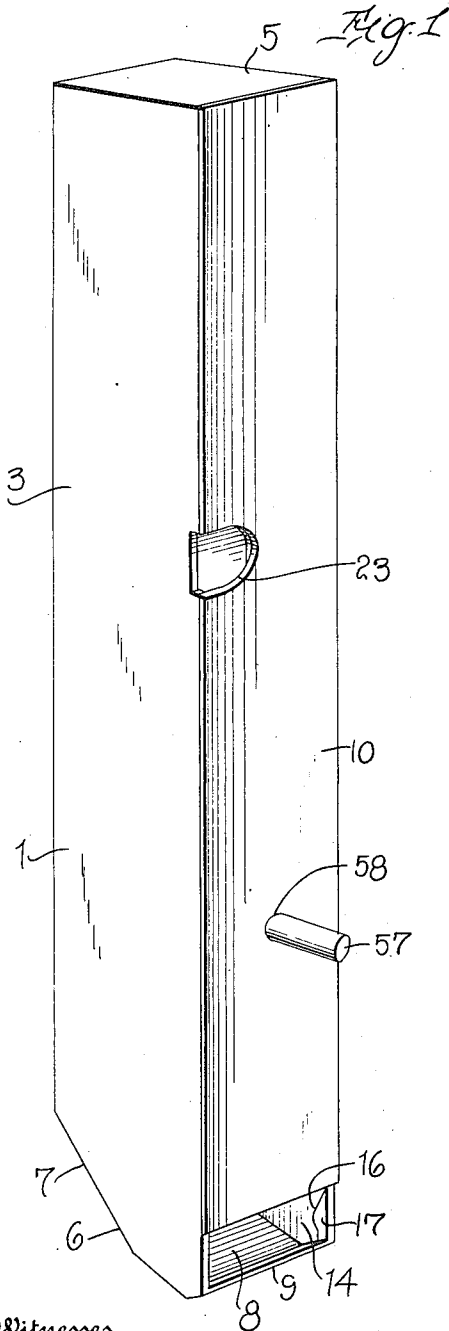


C. S. BACHMAN.
VENDING MACHINE.
APPLICATION FILED MAY 20, 1914.

1,125,037.

Patented Jan. 19, 1915.

3 SHEETS—SHEET 1.



Witnesses
Robert M. Sutphen
A. L. Hind

Inventor
C. S. BACHMAN

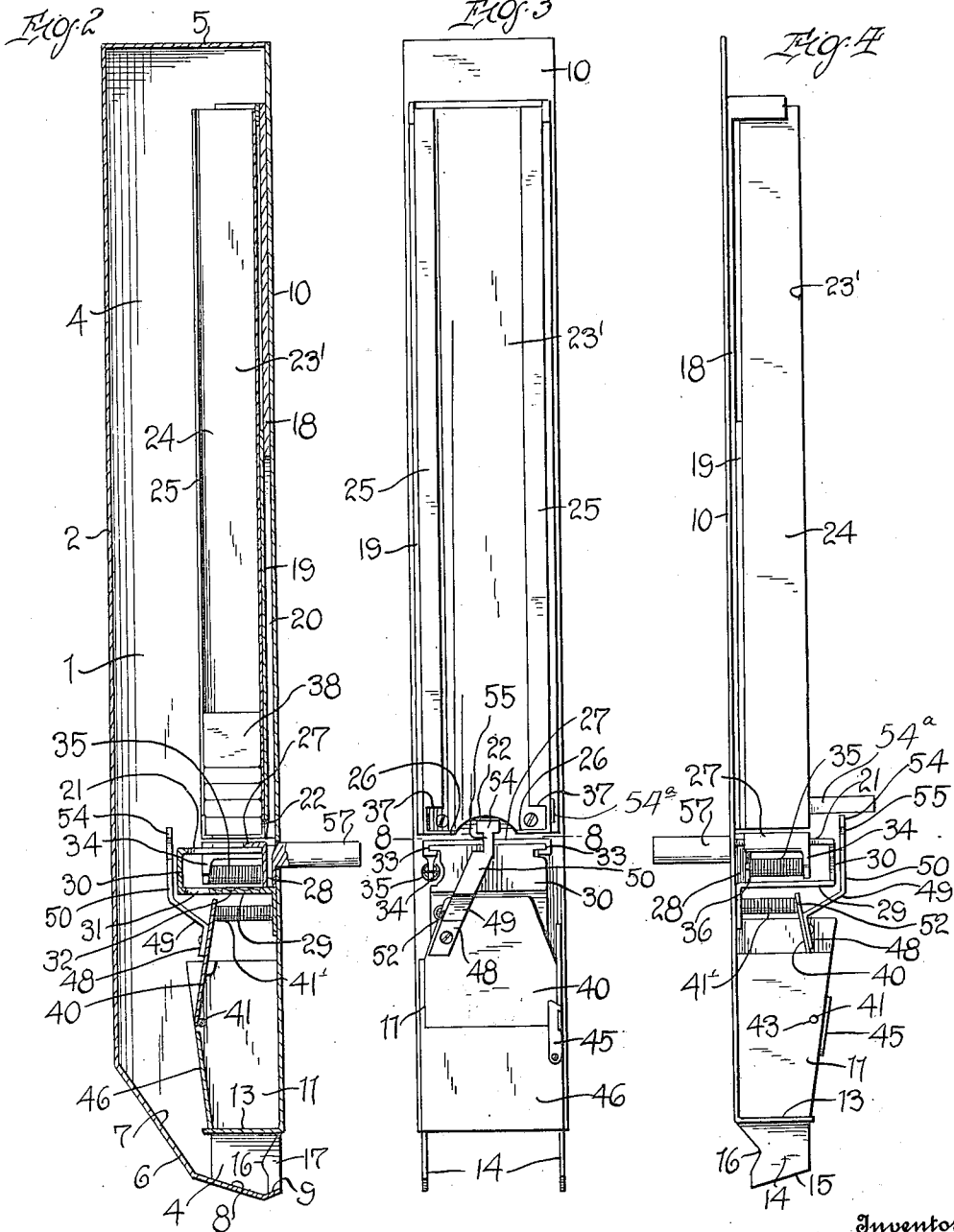
By *Watson E. Coleman*
Attorney

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3 SHEETS-SHEET 2.



Inventor
C. S. BACHMAN

Witnesses
Robert M. Sutphen
A. L. Hind.

By *Watson E. Coleman*
Attorney

Q. S. BACHMAN.
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3 SHEETS-SHEET 3.

Fig. 8

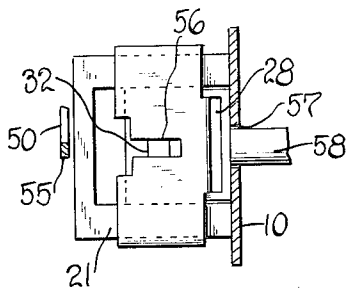


Fig. 9

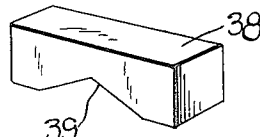


Fig. 10

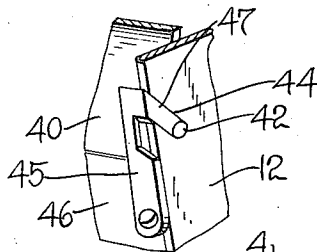


Fig. 12

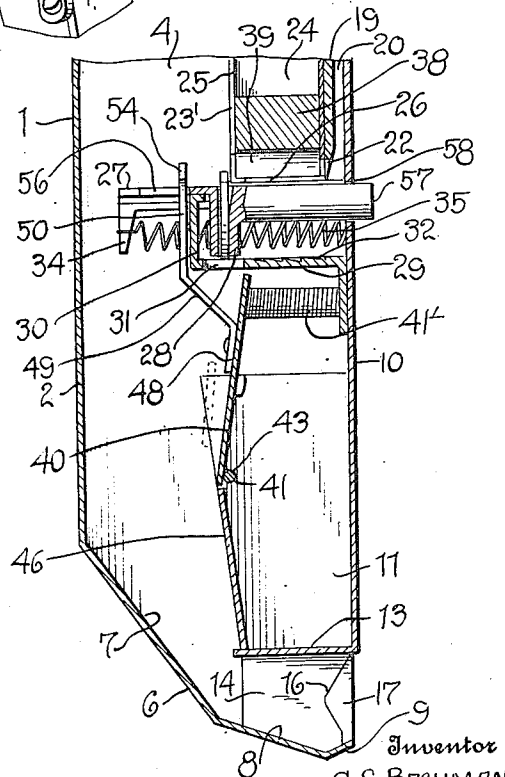
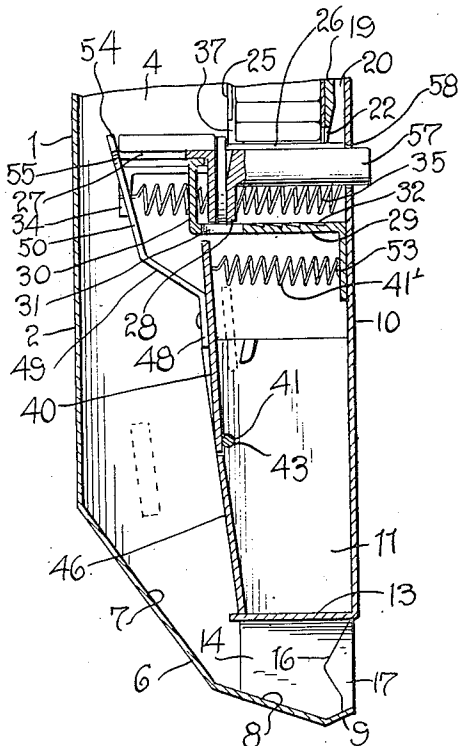


Fig. 11



Inventor
C. S. BACHMAN

Witnesses
Robert M. Sutphen
A. L. Hind.

By *Watson E. Coleman*
Attorney

UNITED STATES PATENT OFFICE.

CLAYTON S. BACHMAN, OF FULLERTON, PENNSYLVANIA, ASSIGNOR TO AUTOMATIC VENDING MACHINE COMPANY, OF BELVIDERE, NEW JERSEY, A CORPORATION OF DELAWARE.

VENDING-MACHINE.

1,125,037.

Specification of Letters Patent.

Patented Jan. 19, 1915.

Application filed May 20, 1914. Serial No. 839,812.

To all whom it may concern:

Be it known that I, CLAYTON S. BACHMAN, a citizen of the United States, residing at Fullerton, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to check controlled apparatus and particularly to that class wherein is included a magazine for the reception of the articles to be received, and the primary object of the invention is the provision of controlling mechanism wherein the coin will serve, under normal conditions, or at such times as the magazine contains the vendible articles, to effect a proper delivery of a single article in succession of the deposit of the coins, and I further contemplate the provision of controlling mechanism which may be relied upon for accuracy in the delivery of a single article in exchange for a coin of determined value.

It is further desired that it be fully appreciated that I also employ in a machine of the character set forth, a controlling mechanism wherein, in the event of the entire disposal of the merchandise, the coin will be returned to the customer, and in order that such purpose of the mechanism may be satisfactorily performed, the controlling mechanism will embody among features of its construction, means normally disposed in the path of delivery of the merchandise and actuated thereby to cause the coin to be directed in a determined course and into a container which is intended for its receipt, and that such means will be further designed so as to cause the coin to take a different course and be returned to the customer when the supply of merchandise is exhausted, and incident to this arrangement, the unfair retention of money by a machine of this nature will be effectually eliminated.

A further object of the invention is the provision of coin controlled apparatus having a delivery mechanism operating to effect a single delivery of the articles of merchandise and locking means of which the coin is adapted to form a part during the operation of moving the delivery mechanism to a delivering position, to prevent withdrawal of the coin after the starting

movement of the delivery mechanism is begun.

A further object of the invention is the provision of a machine of this character which will be efficient and reliable in operation; one which will consist of but comparatively few operating parts, and one which will permit of its being readily repaired when necessary by one who need have little mechanical experience.

A further object of the invention is the provision of a machine of this character, having a coin receiving receptacle in which the coins may be stored while the machine is in use and a movable coin deflector carried by and forming part of said receptacle and having removable connection therewith so as to permit of its being removed therefrom when it is desired to remove the coins.

Figure 1 is a perspective view of the machine. Fig. 2 is a vertical section there-through. Fig. 3 is a rear elevation of the front plate of the casing, showing the operating mechanism and the merchandise magazine. Fig. 4 is a side view thereof. Fig. 5 is a perspective view of the table. Fig. 6 is a perspective view of the slide. Fig. 7 is a perspective view of the deflector. Fig. 8 is a horizontal section taken on the line 8-8 of Fig. 3. Fig. 9 is a perspective view of the follower. Fig. 10 is a perspective view of a portion of the front plate of the coin receptacle showing the manner of mounting the deflector thereon. Fig. 11 is a vertical section on an enlarged scale showing the delivery mechanism operating to effect a delivery of the merchandise. Fig. 12 is a similar view showing the manner of permitting the coin to be returned in the event said coin is deposited in the machine after the delivery of the last piece of merchandise.

The machine herein illustrated may include a casing of any suitable well known construction, except for certain desired details to be hereinafter mentioned, and I wish it to be understood, that, while I will refer to a casing of a certain design and construction, I do not care to be limited to the use thereof. The casing 1 consists of a shell having a back wall 2, vertical parallel sides 3 and 4, a top wall 5 and a bottom 6, the latter having a chute forming a branch 7, a downwardly extending branch 8, and a

short transverse stop extension 9 which extends upward and outward at an angle from the branch 8. The removable front plate 10 is substantially co-extensive with the shell of the casing and at its lower end, it is provided with a coin receptacle consisting of sides 11 and 12 of varying lengths, and each being of a reduced width toward its lower end and connected with one another by a horizontal bottom 13. This bottom carries depending lugs 14—14, which fit between the walls 3 and 4 of the casing, and it is preferred that these lugs be provided with angular lower surfaces 15 which conform with the corresponding angle of the branch 8 and with recesses 16 into which bosses 17 of the sides 3 and 4 snugly fit. This arrangement permits the lower end of the plate 10 to be held against forward withdrawal and it also serves to permit the plate 10 to be swung outwardly when removing the plate from the casing. The upper end of the plate may be locked to the casing in any suitable well known manner. The lugs 14 serve to space the bottom 13 from the branch 8 so as to form an exit for the merchandise. At this time it is believed that it is appropriate to mention that the extension 9 forms a stop to prevent the entire ejection of the merchandise from the casing subsequent to movement of the merchandise over the chute wall 7 of the casing.

At the back of the plate 10 is secured a second shorter plate 18, while to the back of the plate 18 is secured another shorter plate 19. The plate 18 forms a spacer and it separates the plates 10 and 19 from each other. The plate 18 is recessed vertically, at 20, so as to expose the adjacent portion of the plate 19 to the plate 10 and to thereby form therewith, an intervening vertical coin chute whose lower end opens directly onto a horizontal table 21 and at this point, the plate 19 is provided with an arcuate recess 22. The plate 10 is provided with a slot 23 into which the coin may be placed and then delivered into the slot between said plates 10 and 19 and conducted by gravity toward the table 21.

Secured to the back of the plate 10 is a merchandise magazine 23' open at its top and provided with parallel spaced sides 24—24 having right angularly extending guard flanges 25 along their free vertical edges and flanges 26 at their lower ends. These last named flanges form a rest for the merchandise and they are located directly above the table 21 and in parallel spaced relation thereto. This arrangement is preferred so that the slide 27 may freely move over the table and under the flanges 26. This slide is provided with a short vertical coin carrier 28, in the form of a rectangular tube whose lower open end is disposed directly over a lower branch 29 of

the table 21. The branch 29 of the table is connected to the main body of the table by a vertical stop wall 30. At the back of the branch 29 is a discharge slot 31, while in advance of the slot and formed in the table so as to directly underlie the coin carrier as the slide is moved, are longitudinal ratchet teeth 32. The slide 27 is provided with guide grooves 33 whose walls embrace the side edges of the main body of the table 21. The slide carries a pin 34 and connected thereto is one end of a spring 35, the opposite end thereof having connection with the table 21, as at 36, and under the action of said spring, the slide is normally held directly under the lower end of the magazine, while the coin carrier is held normally alined with the coin slot between the plates 10 and 19 and in a position to receive the coin. The slide, as described, forms a delivery mechanism, by means of which a single article of merchandise may be moved through the recesses 37 in the lower ends of the flanges 25. Mounted to move in the merchandise magazine, is a weight or follower 38 which is adapted to bear against the merchandise and thereby hold the same against the base flanges of the side walls 24. This follower is provided with a recess 39 on its lower surface for a purpose to be hereinafter described.

Mounted to swing beneath the lower branch 29 of the table 21 is a deflector 40 which forms a part of the coin receptacle. This deflector carries side lugs 41 and 42, the former being fitted in a passage 43 in the wall 11 and the latter mounted in a slot 44 in the wall 12 and confined therein by a pivoted keeper 45. This keeper is mounted on the well 46 of the coin receptacle and it is provided with an angular lug 47 which fits in the slot 44 above the lug 42 and thereby confines the latter in the slot as will be understood. This construction permits the deflector to be quickly removed from the coin receptacle when the pivoted keeper is adjusted to a released position. The deflector is adapted to be actuated on the discharging movement of the merchandise, and it is provided with an arm 48 offset at 49 and then extended at 50 over and against the stop wall 30 of the table 21 and normally held yieldingly thereagainst by means of a spring 41'. This spring has detachable connection, at 52, with the deflector and at 53 it has suitable connection with the table 21 or some other part of the casing. Under the action of the spring the upper end of the deflector is normally extended partly over the open end of the coin receptacle and at a point slightly in advance of the slot 31. The arm 48 has a substantially T-shaped upper end or head 54 whose shank 55 is adapted to freely pass through a slot 56 in the slide 27 when the slide is moved

after the delivery of the last article of merchandise from the magazine, and to thereby prevent the deflector from moving from its normal position. The oblong part of the T-head of the arm 48 lies above the plane of the slide 27 and is disposed directly in the path of the discharging merchandise. When the coin receptacle is in place in the casing 1, the back of the latter is spaced from the back of the former and between these parts is thus formed a space into which the articles of merchandise may be discharged so as to fall upon the chute 7. The slide 27 is provided with a hand operated plunger 57 which freely slides in a passage 58 in the wall 10.

A brief description of the operation of the machine may be given as follows: The machine is primarily intended for the vending of chewing gum, and on reference to Fig. 2, it is seen that the merchandise is stacked in its receiving chamber within the casing 1 and above the merchandise is mounted the follower 38, and under the weight of such follower the lower article of merchandise is made to rest upon the base flanges 26—26, and in a position whereby to permit of its being engaged by the coin when the latter is moved by the coin carrier 28 of the slide 27. After the coin is placed in the coin carrier and pressure is applied to the plunger so as to move the same to the position shown in Fig. 11, the article of merchandise will be delivered from the magazine and deposited in the space between the coin receptacle and the adjacent walls of the casing 1 and will drop into the lower discharge end of the casing as will be understood. In this operation, the merchandise engages directly against the head 54 of the arm 48, of the deflector 40, causing said deflector to move to the position shown in full lines in Fig. 11, and the coin as a consequence of such movement of the arm, will be directed into the coin receptacle.

In the event that one should deposit a coin in the machine after the last article of merchandise has been delivered, it is obviously apparent that on movement of the plunger 57 to its delivery position, the head 54 of the arm 48 will remain stationary and the deflector 40 will maintain its normal position shown in Fig. 12, where its upper edge lies immediately in advance of the forward wall of the coin slot 31. The coin car-

rier is adapted to aline with the slot 31 so as to permit the coin to pass from the carrier and through the slot and then into the space between the coin receptacle and the adjacent walls of the casing 1 so as to be returned to the customer. In either of these operations just described, the coin, when arranged in the carrier 28, is adapted to slide vertically therein and during the movement of the plunger from its normal position to its delivering position, the coin is adapted to serve the purpose of a locking dog and to cooperate with the ratchet teeth 32 and thereby hold the plunger against returning under the action of the spring 35.

In order to positively prevent the article of merchandise from binding at its point of discharge and to effect an immediate delivery of the merchandise, I employ a yieldable arm 54^a secured to the side of the magazine 24 and provided with a free end which is located normally and in fact, at all times, in such a position as to permit of its being engaged by the merchandise and then influenced under its inherent action to cause the merchandise to be properly thrown over and beyond the extension or head 54 when the deflector is in the position shown in Fig. 11.

What I claim, is:

In a coin, controlled vending machine, a delivery slide, provided with coin receiving means, whereby in the movement of said slide in one direction, the coin will engage and deliver an article of merchandise, a coin receptacle arranged beneath said delivery slide, a deflector plate, means for removably pivoting said plate at one of its ends upon the coin receptacle, a spring connected to the other end of said plate and normally holding the same in position to direct the coin from the delivery slide into the merchandise discharge chute, when the merchandise is exhausted, and an upwardly projecting arm on said plate adapted to be engaged by the article as it is delivered from the machine to move said plate and position the same to direct the coin into said receptacle.

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

CLAYTON S. BACHMAN.

Witnesses:

ROBERT A. MOYER.
HENRY FRICK.