No. 883,523. PATENTED MAR. 31, 1908.

E. P. BRUTON.

VENDING MACHINE.

APPLICATION FILED MAR. 5, 1907.

3 SHEETS—SHEET 1.

Fig. 1.

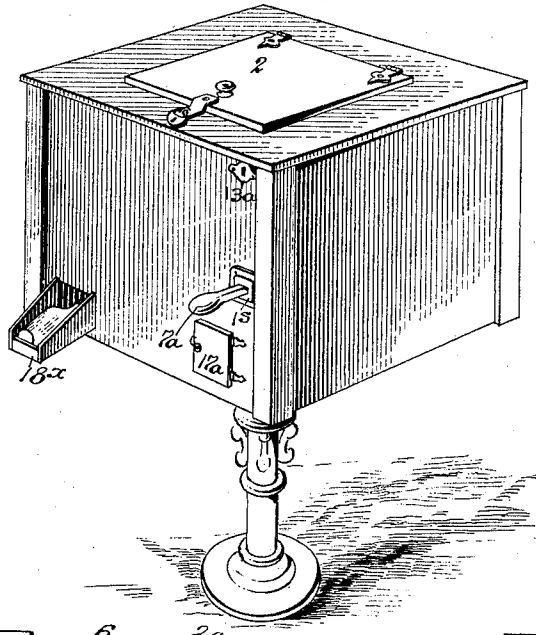
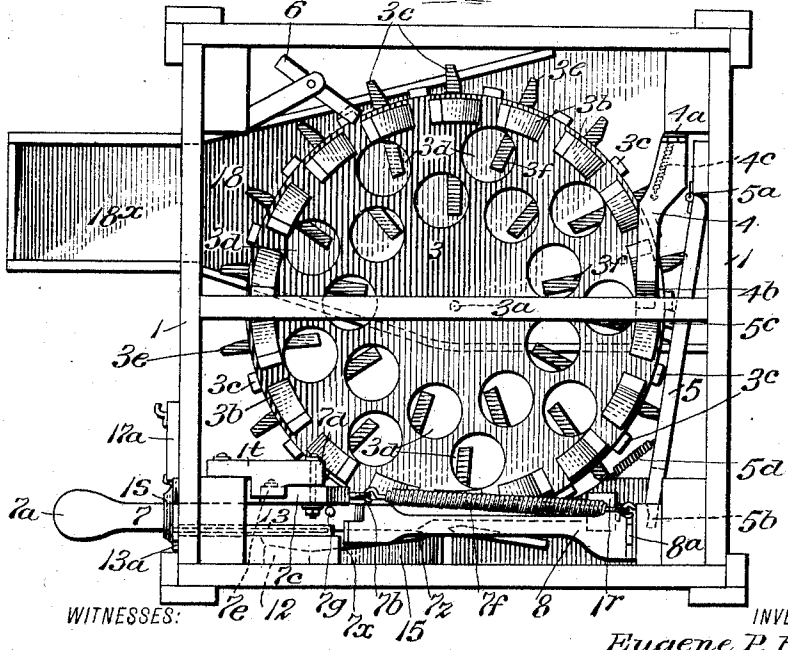


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 4.

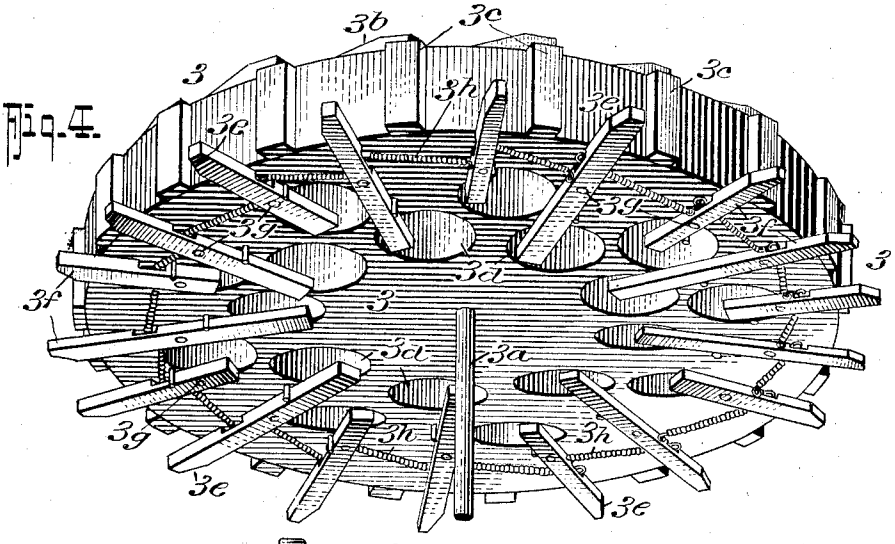


Fig. 3.

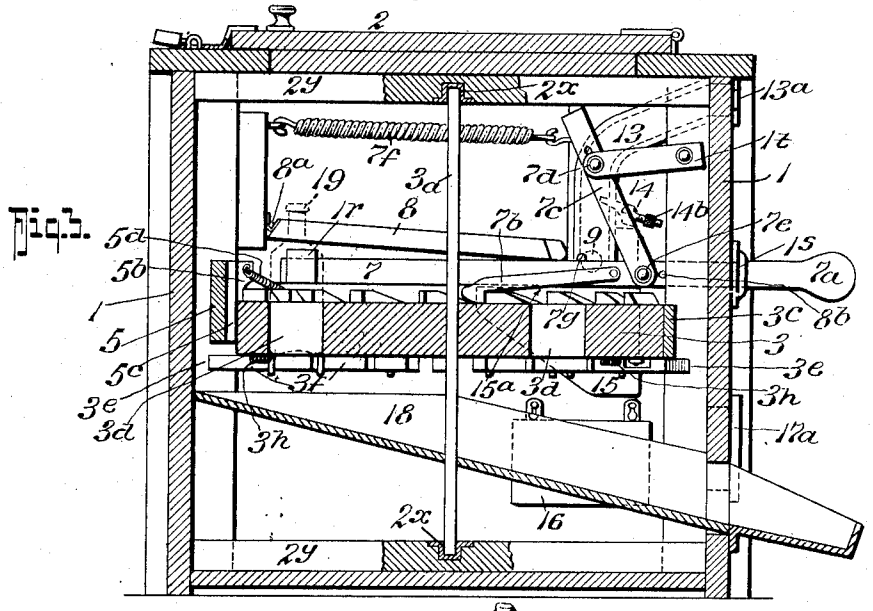
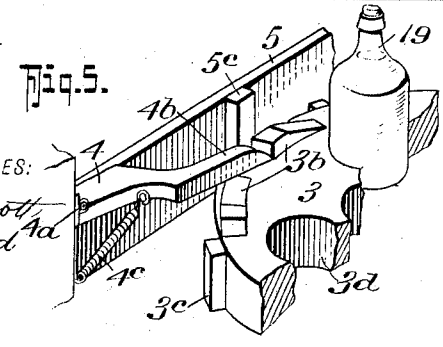


Fig. 5.



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3 SHEETS—SHEET 3.

Fig. 6.

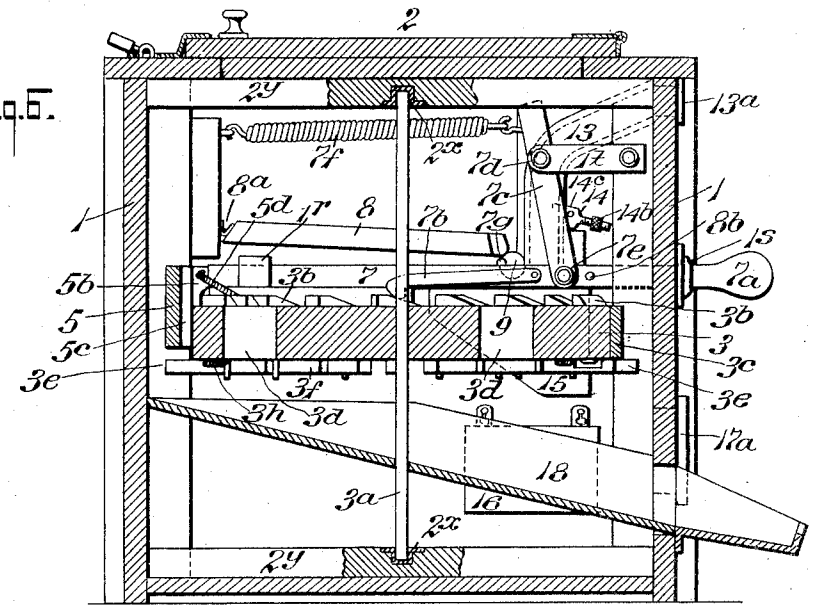


Fig. 7.

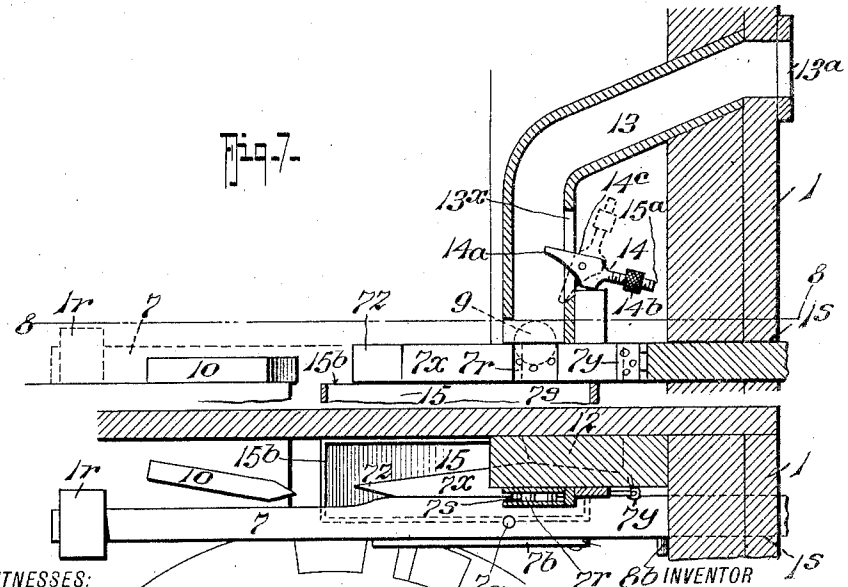


Fig. 8.

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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

No. 883,523. Specification of Letters Patent. Patented March 31, 1908.

Application filed March 5, 1907. Serial No. 360,676.

To all whom it may concern:

Be it known that I, EUGENE P. BRUTON, residing at Rockingham, in the county of Richmond and State of North Carolina, have invented certain new and useful Improvements in Vending-Machines, of which the following is a specification.

My invention relates to certain new and useful improvements in vending machines, and it particularly seeks to provide a vending machine for vending bottles and the like containing various liquids, such for instance as "coca-cola", "gingerale" etc., and in its generic nature the invention comprises a rotatable article carrier having a series of article receiving pockets across the bottom of which retaining fingers project, coin controlled means for rotating the article carrier predetermined distances at each operation, and means for moving the retaining fingers out of alinement with their respective article holding aperture, as the coin controlled feeding mechanism rotates the rotatable article carrier, means for normally locking the article carrier from rotation, means operated by the coin controlled mechanism for releasing the rotatable carrier at times, and means for preventing the rotation of the article carrier except in one direction.

My invention also includes certain novel construction of coin controlled mechanism which coöperate with the rotatable carrier rotating mechanism.

In its more detail nature my invention has for its object to provide a machine of the character stated of a very simple and effective construction which can be easily manufactured at a minimum cost and will readily and effectively serve its intended purposes.

In its still more detail features my invention comprises certain novel construction, combination and arrangement of parts all of which will be first described in detail and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which:—

Figure 1, is a perspective view of my invention. Fig. 2, is a top plan view, the casing top being removed, the parts being in their normal position. Fig. 3, is a vertical, central, longitudinal section of the machine, looking toward the coin controlled operating mechanism. Fig. 4, is an inverted perspective view of the rotatable article carrier. Fig. 5, is a detail perspective cross section showing the means for normally locking the rotatable member from movement and the means for preventing backward movement thereof. Fig. 6, is a similar view to Fig. 3, showing the position of the parts as the coin controlled latch is being released. Fig. 7, is a detail longitudinal section of the coin control operating mechanism. Fig. 8, is a horizontal section on the line 8—8 of Fig. 7.

Referring now to the accompanying drawings in which like letters and numerals of reference indicate like parts in all of the figures, 1 designates the casing which may be of any approved ornamental type and of any approved ornamental design. The casing 1 is preferably provided with a removable top 2 which is normally locked in place and which may be removed in order to fill the rotatable carrier 3. The rotatable carrier 3 is supported by having its shaft 3^a journaled in bearings 2^x in braces 2^y, secured within the casing 1. The article carrier 3 is in the nature of a circular disk and is provided on its top surface adjacent its periphery with a rack portion 3^b to coöperate with the back check pawl 4 which is pivotally mounted at 4^a to the casing and normally has its rack engaging end 4^b held in engagement with the rack 3^b by a coil spring 4^c, as shown.

Around the periphery of the rotatable carrier 3 and suitably spaced at intervals are a series of stops 3^c which coöperate with the stop 5^a that is carried by the pivotally mounted arm 5 which is pivotally mounted at 5^a to the casing and has a finger 5^b for purposes presently explained, the arm 5 being held with its stop 5^c in engagement with the periphery of the rotatable carrier 3 by means of a coil spring 5^d, as indicated.

The carrier 3 is provided with a series of spaced article receiving pockets 3^d corresponding in number to the number of rack teeth in the rack 3^b, it being understood that the number of stops 3^c are equal in number to the rack teeth 3^b and to the pockets 3^d.

Beneath the rotatable article carrier 3 is mounted a series of fingers 3^f which are pivoted at 3^e and normally held to project beneath the pockets 3^d by springs 3^h as shown, the forward ends of the fingers 3^f being projected as at 3^e beyond the periphery of the carrier 3 to be engaged by a fixed stop member 6 secured to the casing so that

as the rotatable carrier 3 rotates the fingers 3^f will be moved out of alinement with their respective pockets 3^d at times.

7 designates the combined coin pusher and carrier rotating bar which is slidably mounted in bearings 1^r in the casing and projects through an aperture 1^s toward the front of the machine and terminates in a handle 7^a, as indicated. The pusher 7 carries a pivoted pawl 7^b which engages the rack member 3^b of the rotatable carrier to rotate the same as the pusher 7 is pulled forward. The pusher 7 is pulled forward by a lever 7^c that is fulcrumed at 7^d to a bracket member 1^t projected from the inner wall of the casing and the lever 7^c is fulcrumed at 7^e to the pusher 7. 7^f designates a coil spring secured to the lever 7^c and to the casing wall which tends to normally force the pusher 7 forward.

The pusher 7 carries a stop 7^z which engages a lock pawl 8 that is pivotally secured at 8^a to the casing wall and the lock pawl 8 is adapted to be released from engagement with the stop 7^g by being forced upwardly by the coin 9 as will be presently more clearly understood, the forward movement of the pawl 8 being limited by a stop 8^b, as shown.

The pusher 7 includes a hinged bar 7^x hinged at 7^y to the main portion of the pusher 7 and provided at its free end with a bevel portion 7^z to coöperate with a wedge member 10 secured to the casing 1, the member 7^x lying parallel and in close contact with the main body portion of the pusher 7 when in its normal position, and along the line of contact between the member 7 and the member 7^x the same is formed with a coin receiving pocket 7^r, the inner or coin contacting faces of which are provided with studs 7^f to retain the coin until the members 7 and 7^x are separated by the wedge 10 when the pusher reaches the inward limit of its movement in a manner that will be presently more fully explained.

12 designates a projection on the casing 1 which when the pusher 7 is in its forward position holds the member 7^x tightly against the member 7 to retain the coin in the coin pocket. 13 designates the coin chute which leads from the front coin slot 13^a of the machine to the coin pocket in the pusher 7, and the coin chute 13 is provided with a weighted balance lever 14 whose ends 14^a projects into the path of the coin and whose end 15^a is provided with an adjustable weight 14^a, as shown, the member 14 lying with its upper face 14^c so arranged that a coin of such weight as will not trip the member 12 will slide out of the side opening 13^x of the coin chute and be ejected before it reaches the coin pocket of the pusher 7.

15 designates a coin conveyer held with its mouth 15^a beneath the pusher 7 to receive the coin as it reaches the pusher 7 and convey it to the coin box 16 from whence the coin can be removed through the bar 17^a in the front wall of the casing.

The casing 1 is also provided with a chute 18 to receive the bottles 19 as they are released from the rotatable carrier and convey the same to the holder 18^x at the front of the machine.

So far as described, the manner in which my invention operates will be best explained as follows: The rotary carrier is first filled with the desired salable article, such for instance as bottles of "gingerale" or the like, and the purchaser desiring to operate the machine places the proper coin (say a nickel) into the coin slot, after which the coin passes through the coin chute over the weighted selecting lever 14 and drops into the coin pocket of the pusher 7, it being understood that the coin remains slightly projected beyond the upper plane of the pusher 7, so that as the pusher 7 is pushed inwardly the coin will ride under the pawl 8 and raise the same out of engagement with the stop on the pusher 7, and thus permit the pusher 7 to pass its full stroke inwardly. As the pusher 7 passes inwardly its pivotally carried pawl will ride over the adjacent rack teeth 3^b to engage the raised portion thereof. At the same time that the pusher 7 is traveling inwardly its heel will engage the finger 5^b of the member 5, and release the stop 5^c from engagement with stop 3^c, thus permitting the pusher 7 as it is returned to its normal position by the action of the spring on the lever 7^c to rotate the carrier 3 one step, it being understood that as soon as the stop 3^c has passed the stop 5^c, the stop 5^c is again projected in the path of the step 3^c and the next succeeding stop 3^c will engage the stop 5^c and prevent more than a single stop of rotation taking place. The pawl 4 will automatically coöperate with the rack 3^b to prevent backward movement of the rotatable carrier at all times.

As the rotatable carrier is moved the fixed stop 6 will engage one of the fingers on the under side of the rotatable carrier and push it from out of alinement with one of the pockets thereof, thus permitting the article in said pocket to drop onto the chute and be ejected at the front of the machine.

While the pusher 7 is being pushed inwardly and as the coin raises the pawl 8 the member 7^x by virtue of the wedge member will be separated from contact with the member 7 and the coin dropped into the conveyer and be carried to the coin box. As soon as the pusher is again in its normal position the pawl 8 will again project in alinement with the pusher stop and prevent a second operation of the machine until a new coin has been entered.

Should a coin of less weight than that of the desired coin be fed into the machine, the

weighted lever 14 will not tilt and the coin will therefore slide out of the coin chute and not operate the machine.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete operation, construction and numerous advantages of my machine will be readily apparent to those skilled in the art to which the invention appertains.

What I claim is:—

1. In a vending machine, a rotatable article carrier, combined with coin controlled mechanism for rotating the carrier, said coin controlled mechanism comprising a pusher, a pawl pivotally secured thereto, said article carrier having a rack for engagement with said pawl, said pusher having a hinged section to form with the pusher a coin receiving portion, means for normally retaining said hinged section against the pusher to hold the coin, coin released means for normally preventing movement of the pusher in one direction, means coöperatively connected with the pusher for forcing it in an opposite direction to return the same to its normal position and simultaneously operate the carrier, and means for engaging said hinged section of the pusher when moved in one direction to separate the same from engagement with the pusher to release the coin, substantially as shown and described.

2. A vending machine, an article carrier combined with coin controlled mechanism for operating the same, said coin controlled mechanism comprising a reciprocating pusher, a pawl pivotally secured thereto, said article carrier having a rack coöperating with said pawl, said pusher having a coin receiving portion, a hinge member secured to the pusher, and having a coöperating coin receiving portion and adapted to lie normally in contact with the pusher, a latch normally preventing the movement of said pusher in one direction and having a portion coöperable with the coin to release the latch from the pusher as the pusher is moved in one direction, means coöperatively connected with the pusher for forcing it in an opposite direction to return the same to its normal position and simultaneously operate the carrier, and means coöperating with said hinged section for releasing the coin at times, substantially as shown and described.

3. In a vending machine, an article carrier, a coin controlled mechanism therefor, comprising a pusher, an independently mounted pawl for actuating the pusher to hold it normally locked, a pawl carried by the pusher for directly engaging the article carrier to operate the same, a lever mechanism secured to the pawl having a fixed fulcrum, a spring secured to said lever and to a fixed portion of the machine for operating said lever to move the pusher in one direction, said pusher having a coin receiving portion, a coin slot coöperating therewith, a selecting member fulcrumed on said coin slot and projecting to the inside thereof, said member including an adjustable weight to coöperate therewith, all being arranged substantially as shown and described.

4. In a vending machine, an article carrier, a coin controlled mechanism comprising a pusher, an independently mounted pawl for engaging the pusher to hold it normally locked, a pawl carried by the pusher for directly engaging the article carrier to operate the same, a lever mechanism secured to the pawl and having a fixed fulcrum, a spring secured to said lever and to a fixed portion of the machine for operating the said lever to move the pusher in one direction, said pusher having a coin receiving portion, a coin slot coöperating therewith, a selecting member fulcrumed on said coin slot and projecting to the inside thereof, said member including an adjustable weight to coöperate therewith, said coin receiving portion of the pusher comprising a coin groove in the pusher, a hinge section having a coin groove secured to the pusher to lie adjacent thereto, and means for engaging said hinge section as the pusher reaches the limit of its stroke in one direction to separate the hinge section from the pusher to release the coin, substantially as shown and described.

EUGENE P. BRUTON.

Witnesses:
THOS. L. COVINGTON,
ROBT. S. JENKINSON.