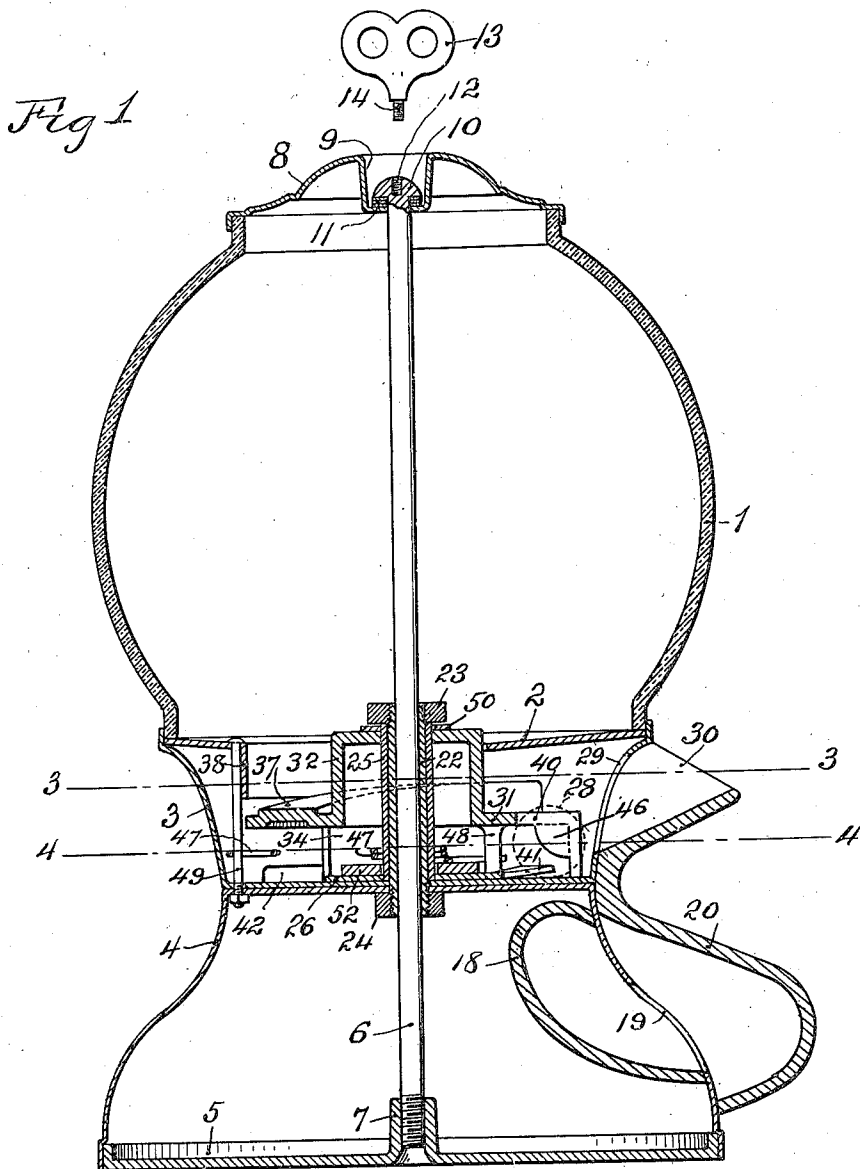


J. E. TAYLOR.
 VENDING MACHINE.
 APPLICATION FILED JUNE 28, 1915.

1,192,019.

Patented July 25, 1916.
 4 SHEETS—SHEET 1.



WITNESSES:

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Jesse E. Taylor
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 HIS ATTORNEY.

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4 SHEETS—SHEET 2.

Fig 2

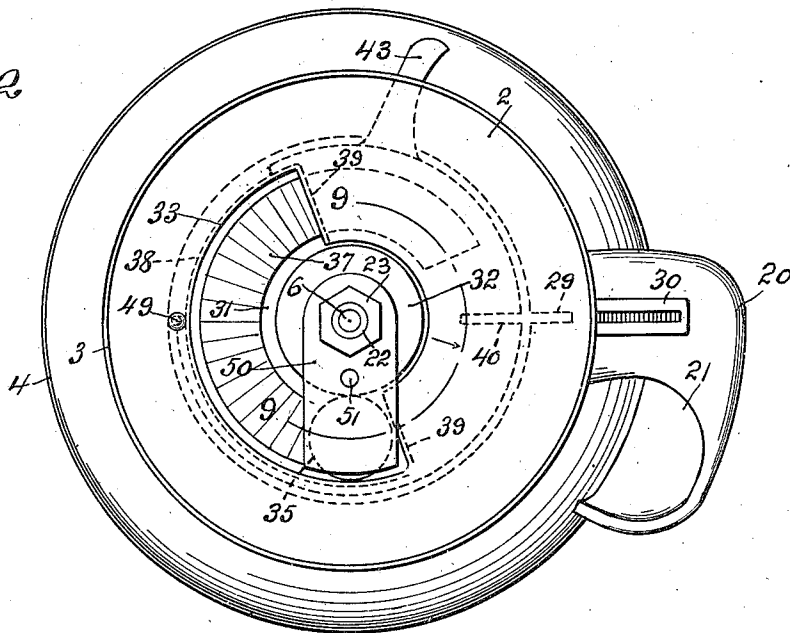
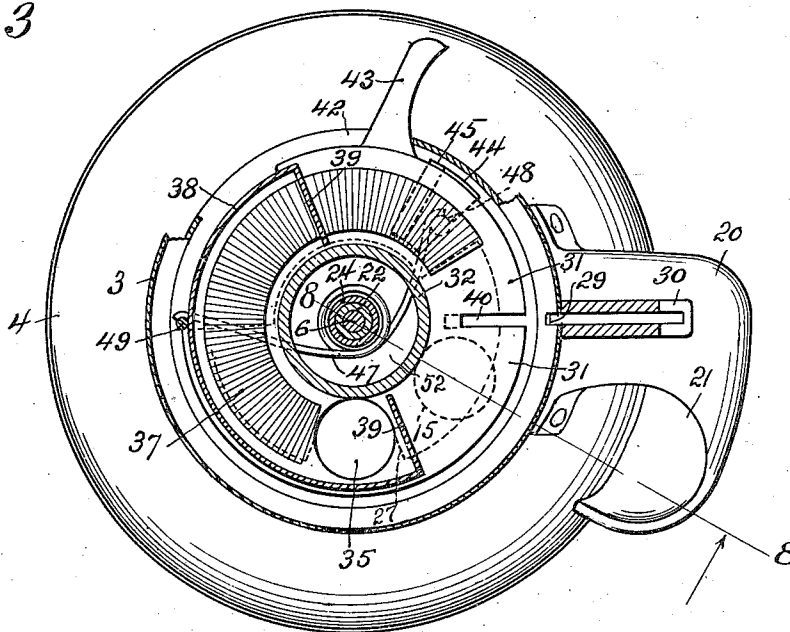


Fig 3



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4 SHEETS—SHEET 3.

Fig 4

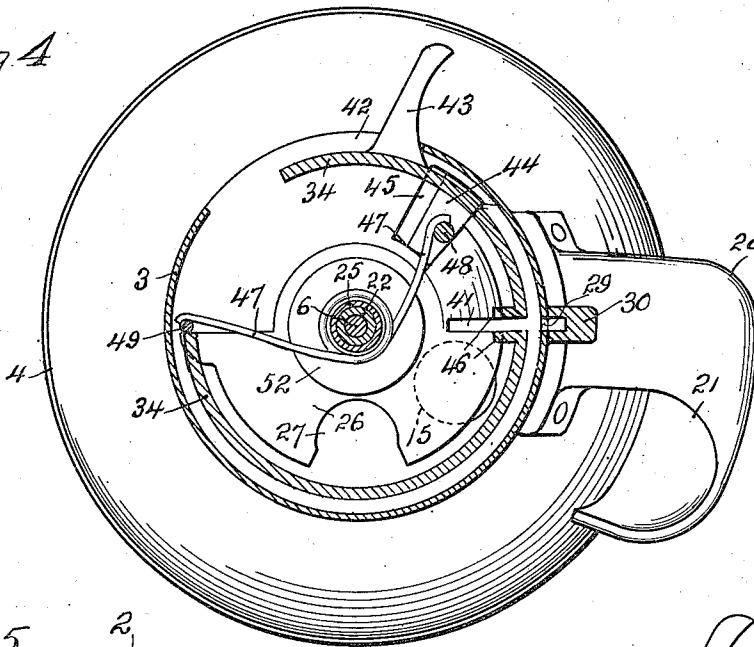


Fig 5

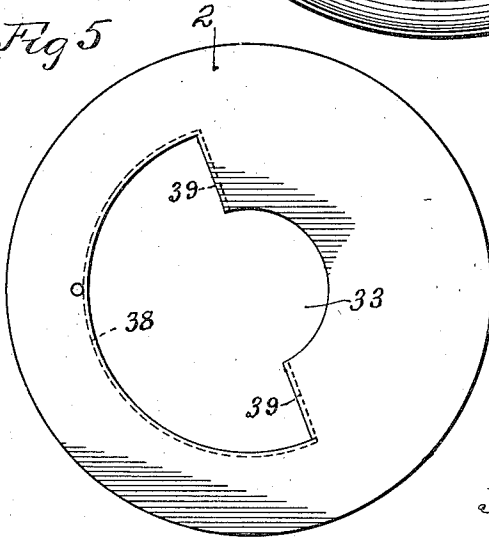


Fig 6

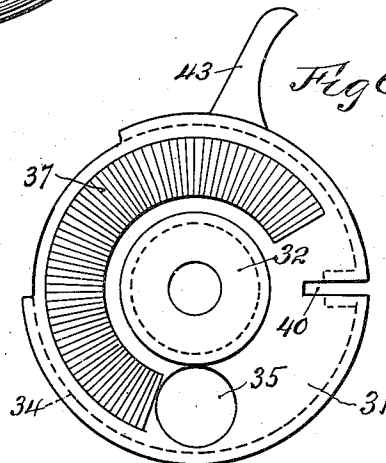
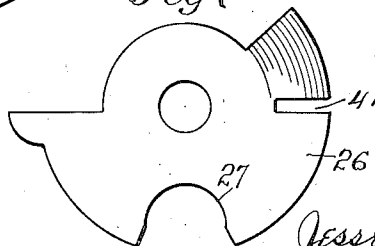


Fig 7



WITNESSES:

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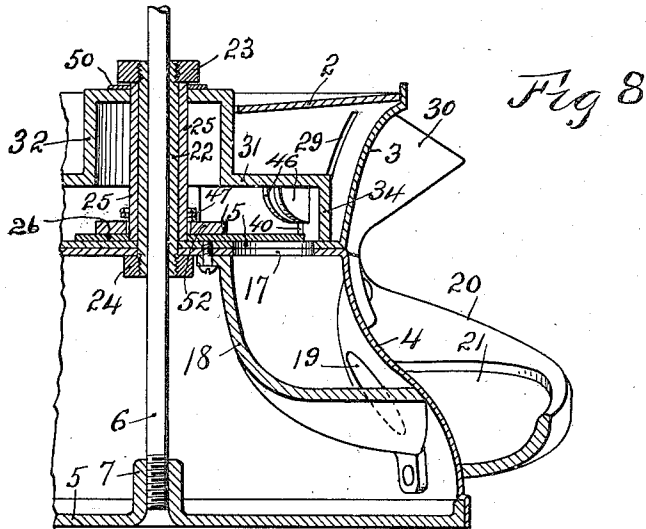
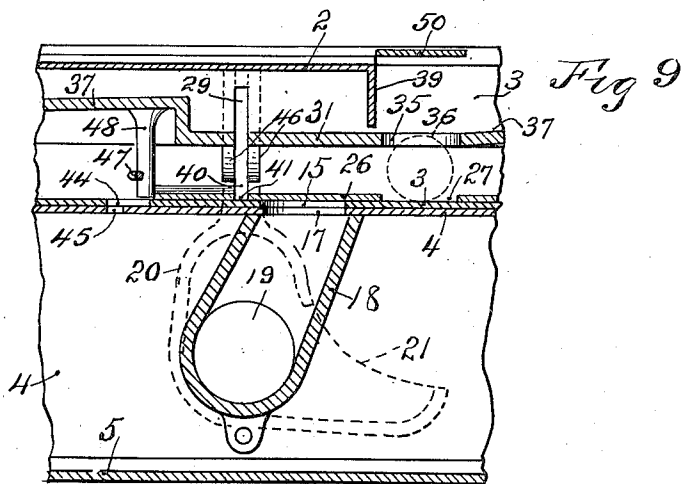
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1,192,019.

Patented July 25, 1916.
4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

JESSE E. TAYLOR, OF KANSAS CITY, MISSOURI, ASSIGNOR TO DE WITT EMBREE, OF KANSAS CITY, MISSOURI.

VENDING-MACHINE.

1,192,019.

Specification of Letters Patent.

Patented July 25, 1916.

Application filed June 28, 1915. Serial No. 36,858.

To all whom it may concern:

Be it known that I, JESSE E. TAYLOR, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented a certain new and useful Improvement in Vending-Machines, of which the following is a specification.

My invention relates to improvements in vending machines.

One of the objects of my invention is to provide a vending machine which is attractive in appearance, which may be cheaply manufactured and is not liable to get out of order, and from which the articles to be vended cannot be extracted therefrom fraudulently.

Another object of my invention is to provide novel means for securing certain delivery of an article upon the payment of the proper coin.

Still another object of my invention is to provide novel means for obtaining synchronous oscillation of the delivery member and valve which control the consecutive discharge of the articles to be vended.

The novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings which illustrate the preferred embodiment of my invention, Figure 1 is a central vertical sectional view of my improved machine. Fig. 2 is a plan view of the same, with the globe and some of the parts removed. Fig. 3 is a horizontal sectional view, partly broken away on the line 3—3 of Fig. 1. Fig. 4 is a horizontal sectional view on the line 4—4 of Fig. 1. Fig. 5 is a plan view of the stationary guard. Fig. 6 is a plan view of the oscillatory delivery member. Fig. 7 is a plan view of the oscillatory valve. Fig. 8 is a vertical sectional view on the line 8—8 of Fig. 3. Fig. 9 is a panoramic view or vertical sectional stretch-out on the curved line 9—9 of Fig. 2.

Similar reference characters designate similar parts in the different views.

The machine is provided with a casing consisting of a spherical globe 1, preferably of transparent glass, and which is mounted upon the upper side of a substantially horizontally disposed guard plate 2, best shown in Fig. 5, which is of circular form and, preferably inclined inwardly, from its periphery, the guard plate being supported at

its edges upon and within a circular pan 3, the bottom of which rests upon the upper side of an inverted pan-shaped base 4, the lower end of which is normally closed by a horizontal circular plate 5.

The parts hereinbefore described are secured together by means of a central vertical rod 6, the lower end of which is screw-threaded and fitted into an internally threaded vertical central boss 7 on the upper side of the plate 5.

Mounted upon the top of the globe 1 is a cover 8 which is provided with a central depression 9, Fig. 1, having a central hole through which the rod 6 extends. The upper end of the rod 6 is provided with a head 10 adapted to bear upon washers 11 which rest upon the upper side of the depressed portion 9. The upper side of the head 10 is provided with a vertical hole 12 threaded oppositely to the hole in the boss 7 and adapted to have fitted therein the threaded end 14 of a key 13. By turning the key in the proper direction, the rod 6 may be engaged or disengaged from the plate 5.

The globe 1 and pan 3 form an article containing receptacle adapted to contain the articles to be vended. The bottom of the pan 3 is provided with a hole 15 which registers with a hole 17 in the top of the base 4, said holes forming a discharge opening which communicates with a chute 18, Figs. 8 and 9, which discharges through a lateral opening 19 in the base 4 into a hood 20, secured to the outer side of the base 4, and having an outlet 21 at one side of the opening 19. The chute 18 is preferably curved laterally so that the holes 17 and 19 and the outlet 21 are not alined. This construction renders it difficult for any one to insert a wire and fraudulently operate the machine.

Mounted on the rod 6 is an inner sleeve 22 having its ends threaded and provided respectively with nuts 23 and 24, the latter bearing against the under side of the top of the base 4, and the nut 23 bearing against the upper end of an outer sleeve 25, the lower end of which rests upon the upper side of the bottom of the pan 3, Fig. 8.

Encircling the outer sleeve 25, and oscillatable thereon, is a valve comprising, preferably, a flat plate 26, Fig. 7, which normally in its closed position, Figs. 8 and 9, covers the article discharge opening 15.

The valve 26 is provided with a peripheral notch 27 which registers with the discharge opening 15 when the valve has been swung to the discharge position. Such swinging of the valve 26 is effected by a suitable coin 28, Fig. 1, being inserted through a slot 29, Fig. 8, in the side of the pan 3 and at the inner end of a coin chute 30, which is secured to the outside of the pan 3. For moving the valve 26 through the intermediacy of the coin 28, and also for obtaining the delivery of an article to be vended, there is provided an oscillatory delivery member 31, Fig. 6, of circular form, and which is provided with a central circular hollow raised boss or projection 32, which extends through a semicircular hole 33 provided in the guard plate 2. The boss 32 is provided with a central vertical hole through which extends the sleeve 25 on which the delivery member is oscillatable. The delivery member 31 is provided with a downwardly extending vertical partly annular flange 34 which rests upon the upper side of the bottom of the pan 3. The delivery member 31 is provided with a vertical hole 35 adjacent to its periphery, and which serves as a pocket for receiving the article which is to be delivered, one of these 36 being shown in dotted lines in Fig. 9.

The upper side of the delivery member 31 is provided with an inclined runway 37, Fig. 1 and Fig. 3, which inclines toward and discharges into the pocket 35. This machine is particularly adapted for feeding gum, candy, etc., in the form of balls, which will roll down the inclined runway and will drop one at a time into the pocket 35, the diameter of which, and its height above the bottom of the pan 3 are such that only one ball can be held at one time in the pocket. For preventing the gum balls 36 passing, excepting as they are being delivered on sale, below the guard 2, said guard is provided with an arcuate downwardly extending flange 38, Fig. 3, which partly encircles the hole 33 and is at the outside of and is concentric with the runway 37, and which has radially inwardly extending ends 39 under which the runway 37 can pass, but which prevent any ball passing under the guard plate 2 excepting the one which is in the pocket 35. The delivery member 31 is provided with a radial slot 40 extending through the flange 34, and which in the closed position of the delivery member, is in register with the slot 29, Figs. 1, 3, 4, 8 and 9, and also in register with a radial peripheral slot 41 in the valve 26. The pan 3 is provided in its side with a horizontal slot 42 through which extends a handle 43 on the delivery member 31, and by means of which the delivery member is manually operated.

When a coin of the proper kind is inserted through the chute 30 and slot 29 into the

slot 40 of the delivery member, the coin will rest upon the floor of the pan 3 in the slot 41 of the valve 26. The balls in the receptacle containing the articles to be vended will run by gravity upon the runway, and one of the balls 36, Fig. 9, will be in the pocket 35 and resting upon the floor of the pan 3. If, with a coin inserted as above described, the handle 43 is swung counter clockwise, as viewed in Fig. 4, the coin 28 being engaged with the valve 26 and with the delivery member 31, will swing the valve synchronously with the delivery member. When the delivery member has been swung to the delivery position, the pocket 35 and notch 27 will be in vertical alinement with the discharge opening 15, at which time the ball 36 will pass through the opening 15 and opening 17 into the chute 18, and will pass therefrom into the hood 20 from which it may be removed by the purchaser. At the time the discharge opening 15 is alined with the pocket 35 and notch 27, the coin 28 will be directly above two holes or passages 44 and 45 provided respectively in the bottom of the pan 3 and in the top of the base 4, and the coin will drop through these passages into the base 4 or coin receptacle. In order that the delivery member can not be retracted with the coin, the passage 44 is wider than the passage 45, Fig. 4 and Fig. 10, so that the coin will first drop onto the top of the base 4 before the delivery member has reached a position in which a ball can be discharged into the hood 20. The edge of the passage 44 will thus obstruct the retraction of the coin, so that the delivery member must be swung until the coin is also over the passage 45 for a person to get a ball delivered. For securely supporting the coin 28 in a vertical position in the slot 40 of the delivery member, the flange 34 on its inner side and at opposite sides of the slot 40 is provided respectively with two parallel inwardly extending ears 46, Figs. 1, 8 and 9. For retracting the delivery member 31 to the closed position shown in Figs. 2, 3 and 4, there is provided a spring wire 47 which encircles the sleeve 25 and which has one end bearing against a downwardly extending post 48, the upper end of which is secured to the under side of the delivery member 31. The other end of the spring wire 47 bears against a vertical rod 49, Fig. 1, which extends through the guard plate 2 and the bottom of the pan 3 and the top of the base 4.

For retracting the valve 26 from the delivery position to the closed position, shown in Figs. 4, 8 and 9, the post 48 is extended so that it will strike one edge of the valve 26, the other edge of which is adapted to strike the rod 49 for limiting the closing movement of the valve. Said rod is also struck by the flange 34, Fig. 4, for also limiting the closing movement of the delivery

member 31. For the purpose of preventing the balls to be delivered becoming wedged over the pocket 35, there is secured to the upper side of the boss 32 of the delivery member, a horizontal plate 50, Figs. 2, 8 and 9, which, when the delivery member 31 is in the closed position shown in said figures, is disposed above and is spaced apart from the pocket 35, thereby preventing more than one ball being disposed above the ball 36 which is in the pocket 35. When the delivery member is turned to deliver a ball, the ball which is just above the one in the pocket is held back by the flange 39, Fig. 9, and is supported by the runway 37. Upon the retraction of the delivery member 31 to the closed position after the delivery of the ball which is in the pocket, the ball which is lowest on the runway 37 and against the flange 39, will drop into the pocket 35, and the guard plate 50, in retracting with the delivery member, will pass over the pocket 35 and will keep more than one ball from being piled up on the ball which is in the pocket. The swinging guard plate 50 also serves as an agitator for stirring and loosening the balls above the runway 37. The guard plate 50 is retained in place on the boss 32 by means of a vertical pin 51, Fig. 2, which extends through the guard plate 50 and into the boss 32, and also by means of the outer sleeve 25, which extends through a hole provided therefor in the plate 50.

In the operation of the machine, a proper coin is placed in the coin chute 30, from which it passes into the slots 40 and 41. If now the handle 43 be swung to the right, as viewed from the front of the machine, the delivery member will carry the ball 36 which is in the pocket 35 to a point over the discharge opening 15. At the same time, the coin which is in the slots 40 and 41, will be carried to a position over the slot 45, and will swing the valve 26 to a position in which the notch 27 will aline with the discharge opening 15, thereby permitting the ball to be delivered into the hood 20, as hereinbefore described. Upon the operator releasing the handle 43, the coin will drop into the hollow base 4 to the passages 44 and 45, and the spring 47 will retract the delivery member 31 to the closed position, the delivery member carrying with it, by means of the post 48, the valve 26, thereby causing the valve to close the discharge opening 15. If a coin is not inserted into the machine, and the delivery member 31 is oscillated, the only effect produced will be to roll the ball which is in the pocket 35 back and forth upon the valve 26 which closes the discharge opening and prevents the ball from being delivered into the chute 18. For retaining the valve 26 in place upon upper side of the pan 3, there may be provided a suitable device, such as an annular weight 52 which

encircles the sleeve 25 and rests upon the valve 26.

I do not limit my invention to the structure shown and described, as modifications, within the scope of the appended claims, may be made without departing from the spirit of my invention.

What I claim is:—

1. In a vending machine, an article receptacle having a discharge opening for the articles to be vended, a guard covering said opening, an oscillatory delivery member having means for engaging one of the articles in said receptacle and moving it past said guard to said discharge opening, an oscillatory valve normally closing said discharge opening, said valve and said delivery member being provided each with means for engaging a coin so as to move said valve to a position uncovering said discharge opening when the delivery member is swung to the delivering position, and means by which the valve and delivery member are simultaneously retracted to the closed position, after the coin has been carried to a predetermined position and released.

2. In a vending machine, an article receptacle having an opening for the discharge of articles to be vended, a guard covering said opening, an oscillatory delivery member having means for engaging one of the articles in said receptacle and moving it past said guard to said discharge opening, an oscillatory valve normally closing said discharge opening, said valve and said delivery member being provided each with means for engaging a coin so as to move said valve to a position uncovering said discharge opening when the delivery member is swung to the delivering position, means for retracting the delivery member to the closed position, and means carried by the delivery member for retracting the valve to the closed position.

3. In a vending machine, an oscillatory delivery member, an oscillatory valve, the valve and delivery member having means for engaging a coin by which, when the delivery member is moved in one direction to the discharge position, the coin will move the valve to the discharge position, the delivery member having means for retracting the valve from said position.

4. In a vending machine, a casing having an article receptacle and a coin receptacle and provided with an opening connecting said receptacle for the passage of coins, and having an opening for the discharge of articles to be vended, a guard covering both of said openings, an oscillatory delivery member having means for moving an article in the article receptacle past said guard to the article discharge opening, and provided with means for engaging a coin and for discharging it into the opening connected with

the coin receptacle, and an oscillatory valve normally closing the article discharge opening and having means for being engaged by said coin and for being moved thereby to a position uncovering the article discharge opening.

5. In a vending machine, a casing having an article receptacle and a coin receptacle and provided with an opening connecting said receptacles for the passage of coins, and having an opening for the discharge of articles to be vended, a guard covering both of said openings, an oscillatory member having means for moving an article in the article receptacle past said guard to the article discharge opening, and provided with means for engaging a coin and for discharging it into the opening connected with the coin receptacle, and an oscillatory valve normally closing the article discharge opening and having means for being engaged by said coin and for being moved thereby to a position uncovering the article discharge opening, and movable by said delivery member to the closed position.

6. In a vending machine, an oscillatory delivery member having a handle by which it may be manually oscillated and provided with means for moving a coin from an inserted to a delivery position, yielding means for retracting the delivery member from said delivery position, and an oscillatory valve having means for being engaged by said coin and moved thereby to a discharge position, and movable by the delivery member to the closed position.

7. In a vending machine, a casing having an article receptacle and a coin receptacle connected with each other by a coin discharge passage, the article receptacle having an article discharge opening, a guard covering said discharge opening in said article receptacle, an oscillatory valve normally closing said discharge opening, and an oscillatory delivery member having means for being normally oscillated and provided with means for engaging a coin and moving it to said passage, and provided with means for carrying one of the articles in said receptacle to be delivered past said guard to said discharge opening, the delivery member having means for retracting said valve to the closed position, and the oscillatory valve being movable by said delivery member, through the intermediacy of said coin, to a position uncovering said opening.

8. In a vending machine, a casing having an article receptacle and a coin receptacle connected therewith by a coin discharge passage, the article receptacle having an article discharge opening, an oscillatory valve normally closing said discharge opening, and an oscillatory delivery member having a pocket for receiving an article to be de-

livered and for carrying it to said discharge opening, said oscillatory delivery member having a runway inclining toward and discharging into said pocket and provided with means for engaging a coin and for discharging it into said passage, and having means for retracting said valve, and the oscillatory valve being movable by said delivery member, through the intermediacy of said coin, to a position uncovering said opening.

9. In a vending machine, an article receptacle having a coin discharge passage and an article discharge opening, an oscillatory valve normally closing said opening and an oscillatory delivery member having a pocket for carrying an article to be delivered to said discharge opening and provided with a guard above and spaced apart from said pocket and oscillatable with said delivery member, the delivery member having means for retracting said valve to the closed position, and having means for engaging a coin and for discharging it into said passage, and the oscillatory valve being movable by said delivery member, through the intermediacy of said coin, to a position uncovering said opening.

10. In a vending machine, an article receptacle having a coin discharge passage and an article discharge opening, an oscillatory valve normally closing said opening, and an oscillatory delivery member having a pocket for carrying an article to be delivered to said discharge opening and provided with a guard above and spaced apart from said pocket and oscillatable with said delivery member, the delivery member having a runway inclining toward and discharging into said pocket, the delivery member having means for retracting said valve to the closed position, and provided with means for engaging a coin and carrying it to said passage, and the oscillatory valve being movable by said delivery member, through the intermediacy of said coin, to a position uncovering said opening.

11. In a vending machine, an oscillatory delivery member having a coin slot, an oscillatory valve provided with a coin slot, the valve being adapted to be moved to the delivery position by said delivery member through the intermediacy of a coin mounted in said slots, and means for simultaneously retracting the delivery member and valve from the delivery position.

12. In a vending machine, an oscillatory delivery member having a coin slot, and an oscillatory valve provided with a coin slot and adapted to be moved to the delivery position by said delivery member through the intermediacy of a coin mounted in said slots, the delivery member having means for retracting the valve from the delivery position.

13. In a vending machine, a casing hav-

ing an article discharge opening and a coin discharge passage and having at one side of said passage a coin stop, an oscillatory delivery member having means for carrying an article to be delivered to said discharge opening and provided with means for engaging and moving a coin past said stop to said passage, the stop being adapted to engage said coin and hold it and the delivery member from being retracted, and an oscillatory valve normally closing said discharge opening and having means for being engaged by said coin and moved thereby to a position uncovering said opening when said coin has been carried to said passage.

14. In a vending machine, a casing having an article discharge opening and a coin discharge passage and having at one side of said passage a coin stop, an oscillatory delivery member having means for carrying an article to be delivered to said discharge opening and provided with means for engaging and moving a coin past said stop to said passage, the stop being adapted to engage said coin and hold it and the delivery member from being retracted, and an oscillatory valve normally closing said discharge opening and having means for being engaged by said coin and moved thereby to a position uncovering said opening when said coin has been carried to said passage, the delivery member having means for retracting said valve to the closed position.

15. In a vending machine, a casing having means for supporting a coin and provided with an article discharge opening and a coin discharge passage, an oscillatory delivery member having means for carrying an article to be discharged to said discharge opening and provided with means for engaging the coin which is supported by said casing and moving the coin to said passage, and an oscillatory valve normally closing said discharge opening and having means for being engaged by said coin and for being moved thereby to a position uncovering said discharge opening.

16. In a vending machine, a casing having means for supporting a coin and provided with an article discharge opening and a coin discharge passage, an oscillatory delivery member having a slot for receiving said coin which is supported by said casing, the delivery member having means for carrying said coin to said discharge passage, while the coin is supported on said casing, and an oscillatory valve normally closing

said discharge opening provided with a slot for receiving said coin and adapted to be moved by said coin to a position uncovering said discharge opening.

17. In a vending machine, a casing having means for supporting a coin and provided with an article discharge opening and a coin discharge passage and provided with means for engaging the coin which is supported by said casing and for moving it to said passage, and an oscillatory valve normally closing said discharge opening and provided with means for being engaged by said coin and movable thereby to a position uncovering said discharge opening, the delivery member having means for retracting the valve to the closed position.

18. In a vending machine, an article receptacle having a discharge opening, a delivery member having means for engaging and for delivering articles to said opening, and a valve normally covering said opening and movable by said delivery member, through the intermediacy of a coin or similar device, to a position uncovering said opening.

19. In a vending machine, an article receptacle having a discharge opening, an oscillatory delivery member having means for engaging and for delivering articles to said opening, and a valve normally covering said opening and movable by said delivery member, through the intermediacy of a coin or similar device, to a position uncovering said opening.

20. In a vending machine, an article receptacle having a discharge opening, a delivery member having means for engaging and for delivering articles to said opening, and an oscillatory valve normally covering said opening and movable by said delivery member, through the intermediacy of a coin or similar device, to a position uncovering said opening.

21. In a vending machine, an article receptacle having a discharge opening, an oscillatory delivery member having means for engaging and for delivering articles to said opening, and an oscillatory valve normally covering said opening and movable by said delivery member, through the intermediacy of a coin or similar device, to a position uncovering said opening.

In testimony whereof I have signed my name to this specification.

JESSE E. TAYLOR.