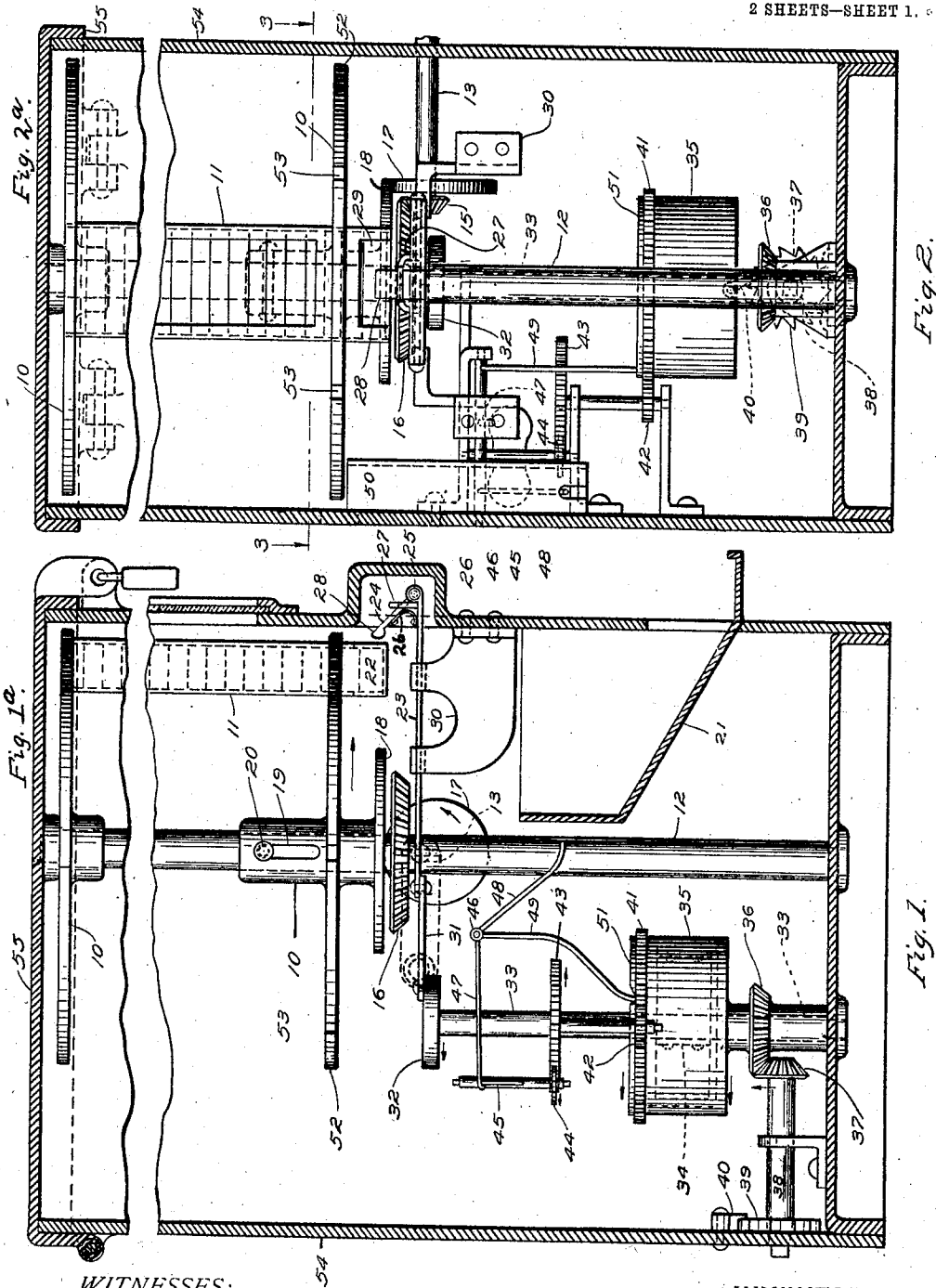


No. 823,634.

PATENTED JUNE 19, 1906.

J. E. PACKARD.
VENDING MACHINE.
APPLICATION FILED NOV. 2, 1903.

2 SHEETS—SHEET 1.



WITNESSES:

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Michael J. Buckley

INVENTOR.

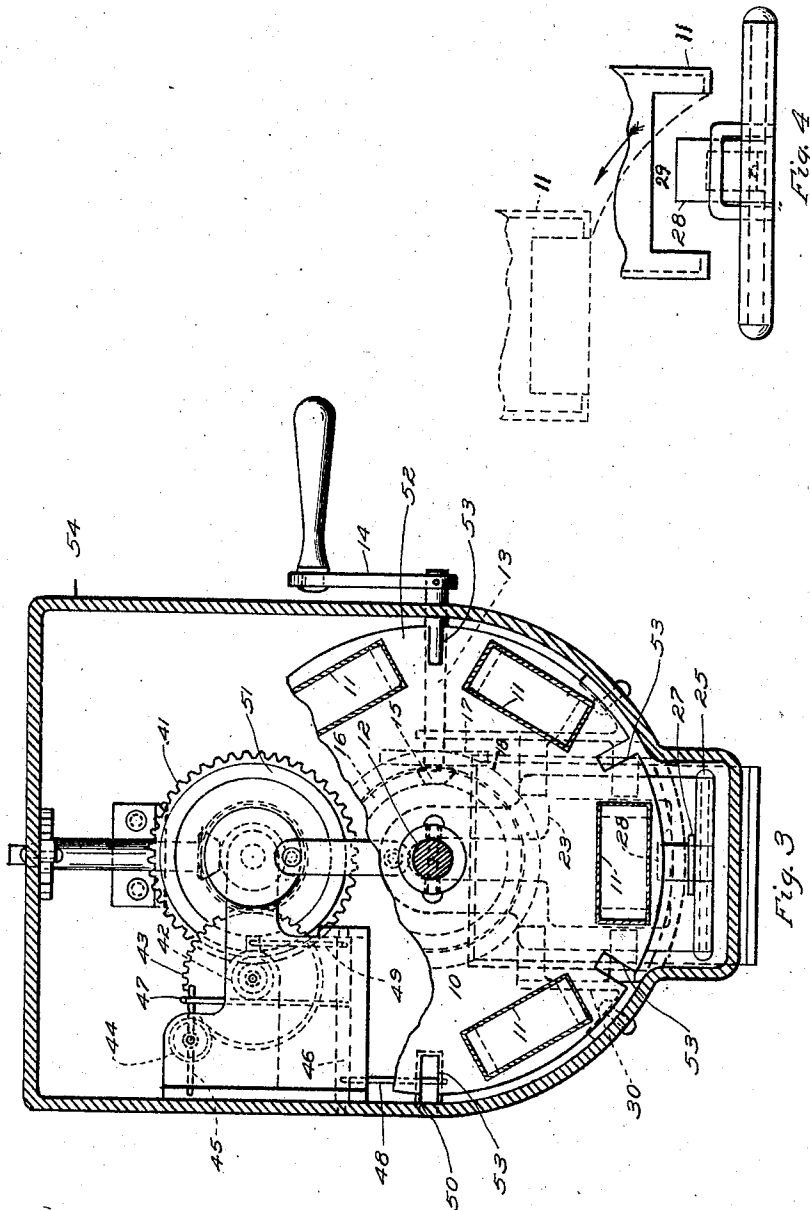
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BY Henry Love Clarke
ATTORNEY.

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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JOHN E. PACKARD, OF CHICAGO, ILLINOIS, ASSIGNOR TO MULTI-VENDING COMPANY, A CORPORATION OF SOUTH DAKOTA.

VENDING-MACHINE.

No. 823,634.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed November 2, 1903. Serial No. 179,514.

To all whom it may concern:

Be it known that I, JOHN E. PACKARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Vending-Machine, whereof the following is a specification.

My invention relates to that type of coin-controlled vending-machines wherein the goods to be sold are stored in a plurality of magazines in a movable goods-carrier and the said goods-carrier is shifted to bring one or another of the said magazines into registry with the discharge mechanism; and my invention has for its object the providing of mechanism whereby the movement of the goods-carrier and the movement of the discharge devices may be effected independently, but the one automatically and the other by manual operation, and also has for its objects the effecting of all other improvements in operation or construction that may be found to obtain in the devices hereinafter described or claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of the internal mechanism of the machine with the case in section and the upper portion of the goods-carrier and adjacent case-wall broken away, the goods-carrier being shown as lowered. Fig. 1^a is a fragmentary side elevation of the upper part of the goods-carrier and a fragmentary section of the top of the case and shows the position of the top of the goods-carrier when raised to the upper limit of its up-and-down movement. Fig. 2 is the same, but with the mechanism in front elevation. Fig. 2^a is a view bearing the same relation to Fig. 2 that Fig. 1^a bears to Fig. 1. Fig. 3 is a sectional plan view taken on the line 3-3 of Fig. 2. Fig. 4 is a fragmentary detail of the goods-ejector mechanism.

Like reference-numerals indicate like parts in all the figures.

10 is a goods-carrier having a plurality of goods-magazines 11 11 and arranged to rotate with the main shaft 12 and also to have a vertical reciprocatory movement upon said shaft.

13 is a crank-shaft provided with a crank 14 to be turned by the operator and with a miter-gear 15 to mesh with the miter-gear 16 on the main shaft 12 and effect the rota-

tion of the goods-carrier. The said crank-shaft 13 is also provided with a cam 17, engaging the base 18 of the goods-carrier 10 and so arranged that as the miter-gears 15 16 turn the goods-carrier sufficiently to shift the next goods-magazine into registry with the discharge mechanism the entire goods-carrier will be vertically reciprocated on the main shaft 12, so as to be raised out of interference with the discharge mechanism during such shifting operation and so as to tend by its own weight to bring its next magazine into proper registry with the discharge mechanism when the operator releases the crank 14. The vertical slot 19 in the central sleeve of the goods-carrier and, engaged in said slot, the stud-pin 20 on the main shaft 12 allow the goods-carrier to be reciprocated upon the main shaft at the same time that it is rotating with said shaft. When a goods-magazine is brought into registry with the discharge-chute 21, a goods-package 22 may be discharged by the horizontally-reciprocating ejector 23, whose arm 24 is normally in position to engage the lower portion of the lowest of such packages. This arm 24 is hinged at 25 and held in normal position by the spring 26 and staple 27, but is of such rounded form at its tip 28 that it will be depressed by the lowest goods-package, and so avoid interference therewith as the ejector 23 returns to its normal position after having entered the aperture 29 at the base of one of the goods-magazines. The ejector 23 reciprocates in the support 30 and is yoke-shaped, so as to span the main shaft 12 and allow the goods-packages to fall through the yoke when they are pushed out of a goods-magazine by the arm 24.

The inner end of the yoke-shaped ejector 23 is pivotally attached by the link 31 to crank-wheel 32 on the motor-shaft 33, and the said motor-shaft is actuated by the motor-spring 34. The other end of said motor-spring is attached to the inside of the cylindrical box 35, which is free to rotate on the shaft 33 and is rotated to wind the spring by means of the gears 36 37 and winding-shaft 38, controlled by ratchet and pawl 39 40. The motor-shaft is controlled by the train of gears 41 42 43 44, fan 45, and trip 46. Said trip 46 has three arms 47, 48, and 49. Arm 47 engages the fan 45. Arm 48 is in the path of the coin that falls through the coin-chute

50 and when depressed by a coin causes the arm 47 to release the fan, and arm 49 engages a cam-plate 51 on the top of gear 41 in such manner that during one rotation of said gear the trip will be held in its release position.

It is obvious that the movements of the goods-carrier and the motor-actuated reciprocation of the ejector are entirely independent of each other and that the one is manually controlled and the other is automatic and coin-controlled. To substantially prevent the actuation of the motor before a goods-magazine is brought into proper registry with the discharge mechanism, the coin-chute 50 is intersected by the rim 52 of the rotating goods-carrier, and the said rim prevents the insertion of a coin in the coin-chute except when one of the slots 53 of said rim is in registry with said coin-chute, the said slots being so arranged that one of them will so register with the coin-chute whenever a goods-magazine is in proper registry with the discharge mechanism.

The machine is inclosed in a suitable case 54, provided with a locked lid 55.

My invention is hereinabove set forth as embodied in one particular form of construction; but the invention is not limited to such particular form or to less than all the possible forms in which the subject-matter of the following claims may be embodied.

I claim—

1. In a vending-machine, in combination, a hand-actuated operating device, a coin-controlled automatic operating device, a movable goods-carrier mechanism and, cooperating therewith, an independently-movable delivery mechanism, one of said devices being connected to one and the other to the other of said mechanisms, and means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, substantially as specified.

2. In a vending-machine, in combination, a hand-actuated operating device, a coin-controlled automatic operating device, a pivotally-movable goods-carrier mechanism and, cooperating therewith, an independently-movable delivery mechanism, one of said devices being connected to one and the other to the other of said mechanisms, and means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, substantially as specified.

3. In a vending-machine, in combination, a hand-actuated operating device, a coin-controlled automatic operating device, a rotary goods-carrier mechanism and, cooperating therewith, an independently-movable delivery mechanism, one of said devices being connected to one and the other to the other of said mechanisms, and means for permitting the two said mechanisms to be operated si-

multaneously without interfering with each other, substantially as specified.

4. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism and, cooperating therewith, an independently-movable coin-controlled and automatic delivery mechanism, and means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, substantially as specified.

5. In a vending-machine, in combination, a hand-operated pivotally-movable goods-carrier mechanism and, cooperating therewith, an independently-movable coin-controlled and automatic delivery mechanism, and means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, substantially as specified.

6. In a vending-machine, in combination, a hand-operated rotary goods-carrier mechanism and, cooperating therewith, an independently-movable coin-controlled and automatic delivery mechanism, and means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, substantially as specified.

7. In a vending-machine, in combination, a movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, a hand-actuated operating device, and a coin-controlled motor, said device being connected to one and said motor to the other of said mechanisms, substantially as specified.

8. In a vending-machine, in combination, a pivotally-movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, a hand-actuated operating device, and a coin-controlled motor, said device being connected to one and said motor to the other of said mechanisms, substantially as specified.

9. In a vending-machine, in combination, a rotary goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, a hand-actuated operating device, and a coin-controlled motor, said device being connected to one and said motor to the other of said mechanisms, substantially as specified.

10. In a vending-machine, in combination, a hand-operated movable goods-carrier, an independently-movable delivery mechanism cooperating therewith, means for permitting

the two said mechanisms to be operated simultaneously without interfering with each other, and a coin-controlled motor to actuate said delivery mechanism, substantially as specified.

11. In a vending-machine, in combination, a hand-operated pivotally-movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a coin-controlled motor to actuate said delivery mechanism, substantially as specified.

12. In a vending-machine, in combination, a hand-operated rotary goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a coin-controlled motor to actuate said delivery mechanism, substantially as specified.

13. In a vending-machine, in combination, a hand-actuated operating device, a coin-controlled automatic operating device, a movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, one of said devices being connected to one and the other to the other of said mechanisms, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and means whereby the cooperating parts of the two said mechanisms are intermittently brought into proper registry with each other for such cooperation, substantially as specified.

14. In a vending-machine, in combination, a hand-actuated operating device, a coin-controlled automatic operating device, a movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, one of said devices being connected to one and the other to the other of said mechanisms, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a cam-controlled device whereby the cooperating parts of the two said mechanisms are intermittently brought into proper registry with each other for such cooperation, substantially as specified.

15. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled and automatic delivery mechanism cooperating therewith, the two said mechanisms being relatively so arranged and connected that they may be operated simultaneously without interfering with each other, and means adapted to facilitate the proper positioning of the goods-carrier for the delivering of goods, substantially as specified.

16. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled and automatic delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a cam-controlled device adapted to facilitate the proper positioning of the goods-carrier for the delivering of goods, substantially as specified.

17. In a vending-machine, in combination, a hand-operated goods-carrier mechanism having both pivotal and bodily reciprocatory movements, an independently-movable coin-controlled and automatic delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a cam-controlled device adapted to effect the aforesaid reciprocation of the goods-carrier to prevent the latter from interfering with and to bring it in proper registry with the delivery mechanism, substantially as specified.

18. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled and automatic delivery mechanism, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and means adapted to prevent the insertion of coins except when a goods-magazine is in proper registry with the delivery mechanism, substantially as specified.

19. In a vending-machine, in combination, a movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, the two said mechanisms being relatively so arranged and connected that they may be operated simultaneously without interfering with each other, a coin-controlled device, and means whereby the cooperating parts of the two said mechanisms are intermittently brought into proper registry with each other for such cooperation, substantially as specified.

20. In a vending-machine, in combination, a movable goods-carrier mechanism, an independently-movable delivery mechanism cooperating therewith, a coin-controlled device connected to said mechanism, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a cam-controlled device whereby the cooperating parts of the two said mechanisms are intermittently brought into proper registry with each other for such cooperation, substantially as specified.

21. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled delivery mechanism cooperating therewith, the two said mechanisms being rela-

tively so arranged and connected that they may be operated simultaneously without interfering with each other, and means adapted to facilitate the proper positioning of the goods-carrier for the delivering of goods, substantially as specified.

22. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and a cam-controlled device adapted to facilitate the proper positioning of the goods-carrier for the delivering of goods, substantially as specified.

23. In a vending-machine, in combination, a hand-operated goods-carrier mechanism having both pivotally and bodily reciprocatory movements, an independently-movable coin-controlled delivery mechanism cooperating therewith, means for permitting the two said mechanisms to be operated simultane-

ously without interfering with each other, and a cam-controlled device adapted to effect the aforesaid reciprocation of the goods-carrier to prevent the latter from interfering with and to bring it in proper registry with the delivery mechanism, substantially as specified.

24. In a vending-machine, in combination, a hand-operated movable goods-carrier mechanism, an independently-movable coin-controlled delivery mechanism, means for permitting the two said mechanisms to be operated simultaneously without interfering with each other, and means adapted to prevent the insertion of coins except when a goods-magazine is in proper registry with the delivery mechanism, substantially as specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN E. PACKARD.

Witnesses:

HENRY LOVE CLARKE,
JOHN H. MILLER.