

1,044,682.

3 SHEETS—SHEET 1.

Fig. 1.

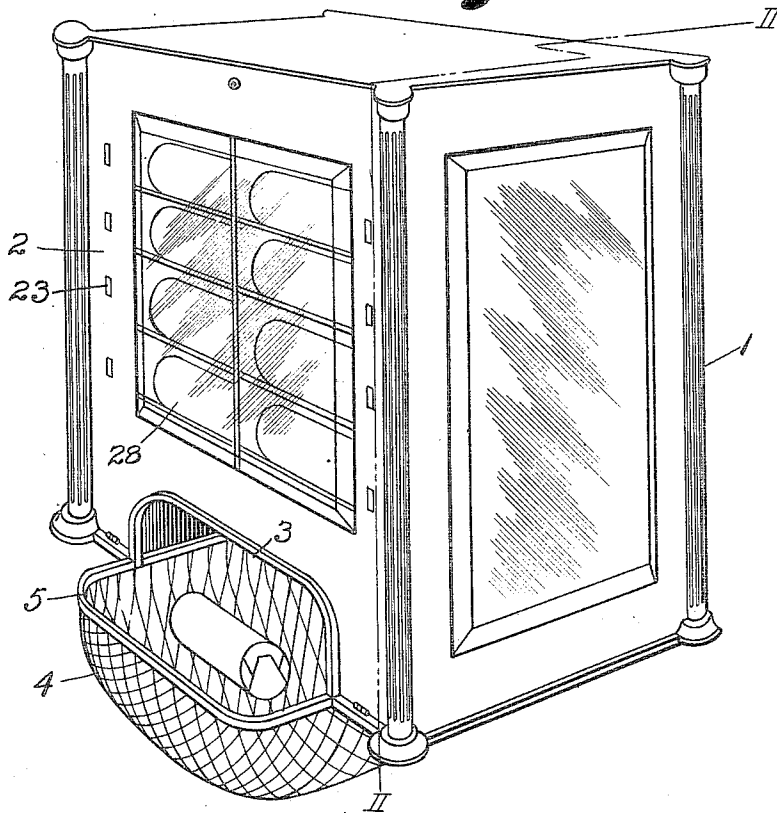
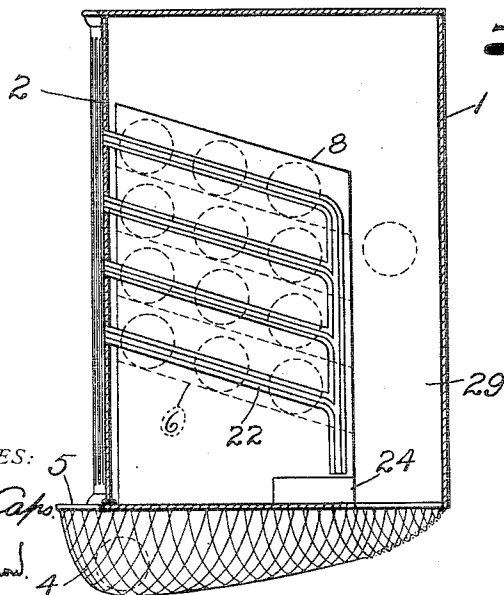


Fig. II.



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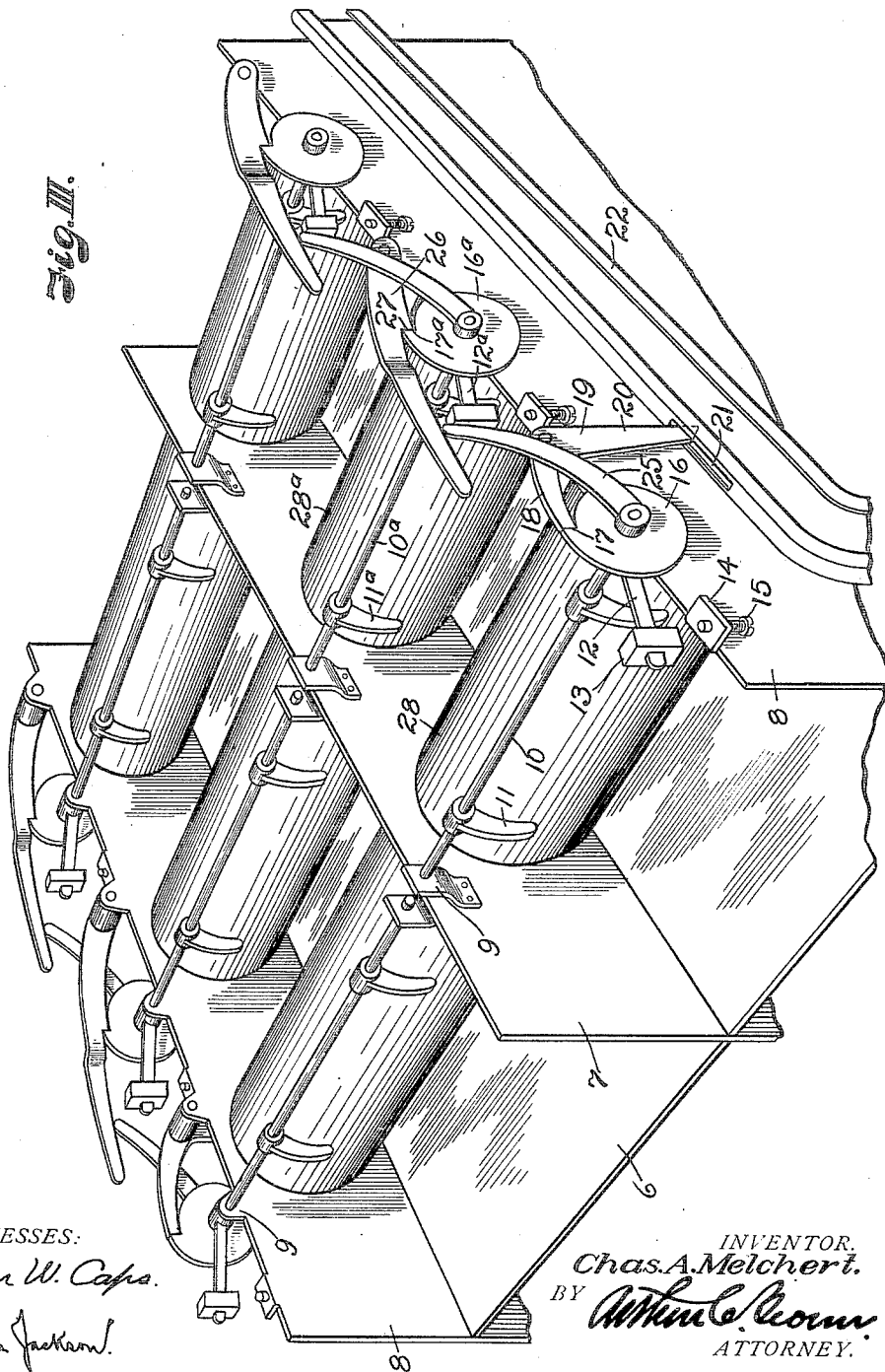
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C. A. MELCHERT.
 VENDING MACHINE.
 APPLICATION FILED SEPT. 15, 1911.

1,044,682.

Patented Nov. 19, 1912.

3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

Fig. IV.

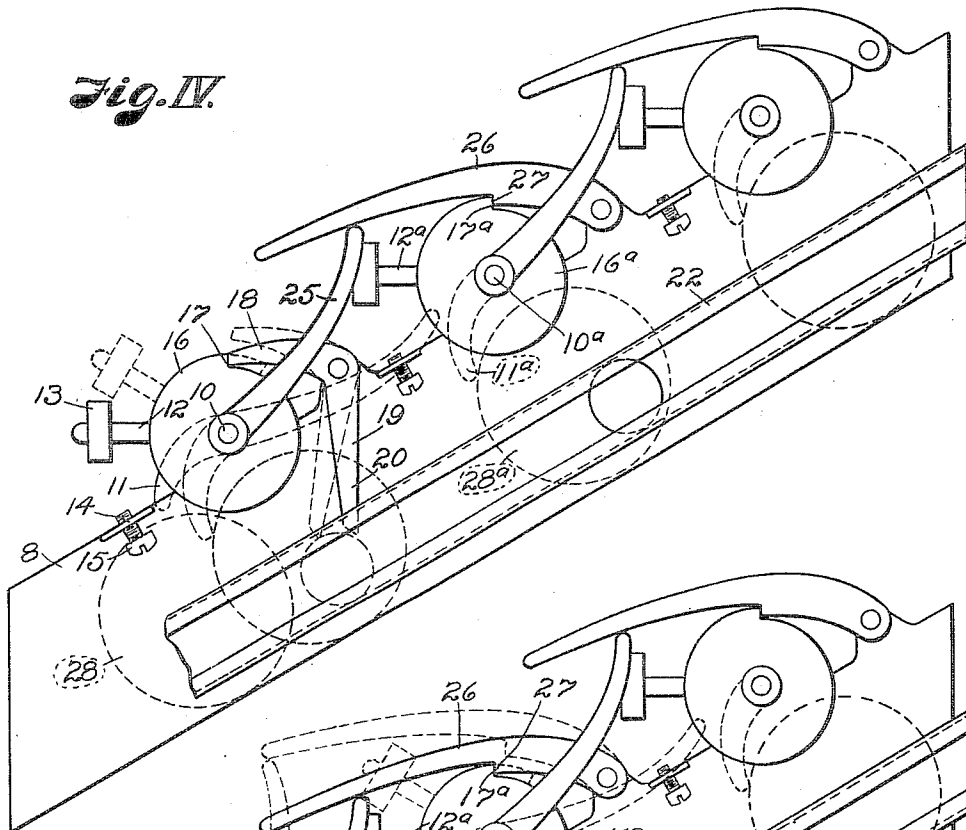
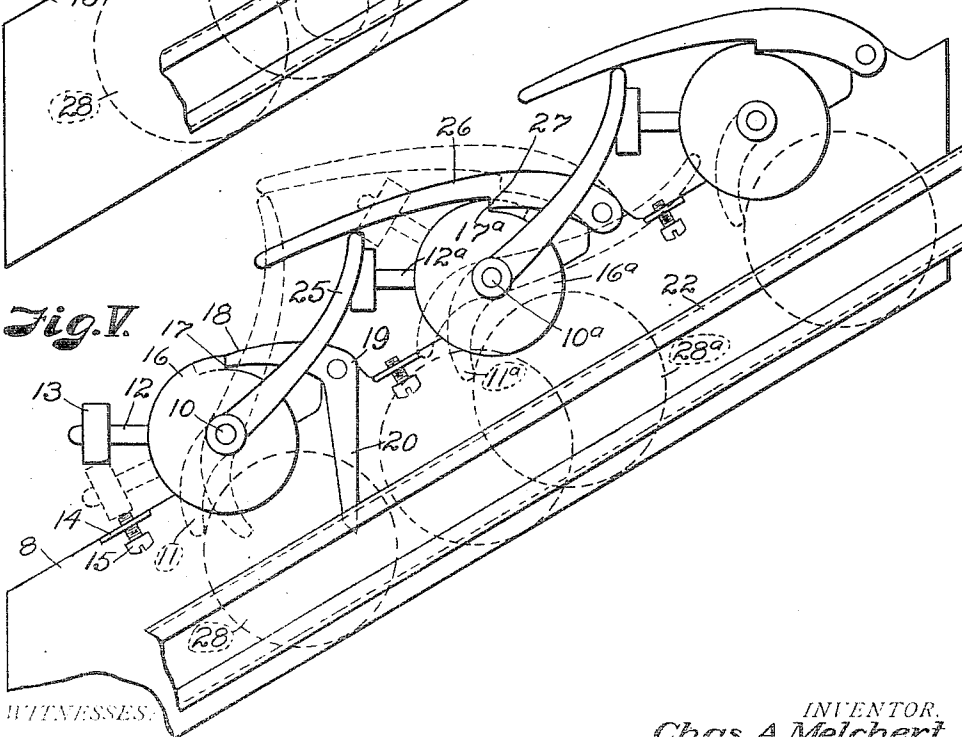


Fig. V.



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UNITED STATES PATENT OFFICE.

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VENDING-MACHINE.

1,044,682.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed September 15, 1911. Serial No. 649,523.

To all whom it may concern:

Be it known that I, CHARLES A. MELCHERT, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Vending-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to coin controlled vending machines, and has for its object to provide a machine of that character, within which a plurality of vendible articles may be stored, and from which said articles may be singly and automatically delivered upon the insertion of a suitable coin.

The present invention relates more particularly to a machine for use in hotels or like places, where guests or other persons may wish to purchase one or more of several different articles, such as toilet articles, and the machine herein shown and described is of a type which may be placed in the rooms of a hotel so that a guest may supply himself with any of the articles contained therein.

In the drawings forming part of this specification:—Figure I is a perspective view of a vending machine constructed according to my invention. Fig. II is a vertical section of same. Fig. III is an enlarged perspective view of a double horizontal tier of articles which may be carried in the machine, and the controlling mechanism therefor. Fig. IV is a side view of a single controlling mechanism, the parts being shown in inoperative position in full lines and in initial operative position in dotted lines. Fig. V is a view of the same parts after the delivery of a package and showing, in dotted lines, the positions of the parts when feeding a succeeding package to the first stop.

Referring more in detail to the parts:—1 designates a case, having an open bottom, and preferably having a front 2, hinged at the base and provided with an open arch 3, at the bottom.

Suspended from the base of the case is a

hammock or the like 4, into which a fragile article may be dropped without injury. The hammock is extended entirely beneath the base and inclined downwardly from toward the front so that an article delivered thereto from the rear of the machine will roll to the front of the machine, in order that it may be easily removed through the open space formed by the arch 3 and a horizontal arch 5 which forms a part of the hammock frame.

Located within the case are one or more platforms 6 which extend preferably from front to back of the case and are inclined downwardly toward the rear. There is one platform for each different article to be sold, and these may be arranged one above the other or in horizontal alinement, or both (as illustrated); when arranged horizontally a partition 7 being arranged to divide the platform and form separate bins for the different articles.

As each platform or bin has an individual operating mechanism, irrespective of the arrangement, but one of such mechanisms will be described in detail with the understanding that such description relates equally to all.

Mounted in the case 1 is a frame comprising side plates 8 and, when bins are arranged in horizontal alinement, the partition 7, having paired apertured lugs 9 at the upper portions thereof, there being a number of pairs of such lugs spaced throughout the length of the bin.

Revolubly mounted in the lower pair of lugs 9 is a shaft 10, having fingers 11 fixed thereto and depending into the bin. Also fixed to the shaft is an arm 12, having an adjustable weight 13 mounted thereon and adapted to tension the shaft so that it will hold the arms 11 toward the upper end of the bin, the frame 8 being provided with an adjustable stop for limiting the downward movement of the weighted arm, preferably comprising a flange 14 and screw 15. Also fixed on the shaft 10 is a cam disk 16, having a shoulder 17, against which an arm 18 of a bell crank lever 19 abuts to hold the shaft against revolution.

Lever 19 is pivotally mounted in the frame 8 and has an arm 20 projected through a slot 21 into an inclined coin chute 22, one end of which communicates

with an admission slot 23 in the case 1 and the other terminates over a coin receptacle 24 within the case. Also fixed on shaft 10 is a trip 25 which extends upwardly and forwardly and supports a lever 26 that is pivotally mounted on the frame and has a tooth 27 for engaging the shoulder 17^a on a cam disk 16^a that is fixed on a shaft 10^a a short distance forwardly of the front shaft 10.

The shaft 10^a is provided with stop fingers 11^a and weight arms 12^a of the same construction and arrangement as relative parts in the first set, which are adapted for holding a package 28^a in spaced relation from a package 28 that is held by the first set. I also prefer to provide a third stop set above the second, of the same construction and arrangement.

The frame 8 is set in from the case at the rear to leave a space 29 through which the packages may pass to the hammock 4.

Presuming the parts to be assembled as described, a package 28 in the bin will bear against the fingers 11 and tension same rearwardly, the weight of the package lifting the weight 13 and holding the cam shoulder 17 against the arm 18 of the bell crank lever. When a coin is placed in the chute it travels downwardly therethrough, engaging the depending arm of the bell crank so that the upper arm is rocked out of holding engagement with the cam 16. When the cam is relieved from the bell crank, the weight of the package rocks the arms 11 and shaft 10 to lift the weight 13 and lower the trip 25 (dotted lines Fig. IV), the rocking action being sufficient to allow the package to pass free of the stop mechanism and roll into the space 29 and be delivered to the hammock, from which it may be removed by the purchaser. When the package has rolled free of the stop fingers, the weight 13 will drop till it engages the stop 14—15 (dotted lines Fig. V), carrying the shaft with it and thereby raising the trip 25 so that the latter lifts the lever 26 to free the disk 16^a of the second stop mechanism. The second stop mechanism then acts in the same manner as the first, to release the package 28^a and trip a succeeding stop mechanism. When the second package is released it rolls down the platform and engages the fingers 11, rocking the fingers and shaft until the shoulder of the cam 16 again engages the bell crank and sets the machine for a succeeding operation.

It is apparent that with a plurality of stop mechanisms, as described, but one of the packages can be delivered at a time, and that the packages cannot crowd each other, as the second package is not released until the first has passed completely free from its stop.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent is:—

1. A vending machine comprising stop mechanisms arranged in train and each adapted for actuation by the weight of a package, means for holding the first of said mechanisms against the tension of its package, and means for holding successive mechanisms against the tension of packages bearing thereagainst, and adapted for automatic and successive release following the delivery of the first package.

2. A vending machine comprising stop mechanisms arranged in train and adapted for retaining packages in spaced relation and each adapted for actuation by the weight of a package, means for holding the first of said mechanisms against the tension of its package, and means for holding successive mechanisms against the tension of packages bearing thereagainst, and adapted for automatic and successive release following the delivery of the first package.

3. In a vending machine, a stop mechanism comprising a revoluble shaft having fingers fixed thereon, means on said shaft for tensioning said fingers toward a holding position, and means for holding said shaft against movement in a direction opposite to that induced by said tensioning means.

4. In a vending machine, a stop mechanism comprising a revoluble shaft having fingers fixed thereto, means on said shaft for tensioning said fingers toward a holding position, and means for holding said shaft against movement in a direction opposite to that induced by said tensioning means, comprising a releasing lever.

5. In a vending machine, a stop mechanism comprising a shaft having stop members, means for tensioning said stop members toward a holding position, and means for holding said fingers against movement away from said holding position.

6. In a vending machine, a stop mechanism comprising a revoluble shaft having stop fingers, a weight attached to the shaft and adapted for tensioning said fingers toward a holding position, a member on said shaft having a shoulder facing oppositely to the line of force of said weight, and a latch for engaging said shoulder.

7. In a vending machine an inclined path, a shaft projected over said path, means on said shaft projected toward said path and adapted for interrupting the travel of a package thereover, a locking device for holding said means against the pressure of a package, and means for returning said shaft toward initial position after the delivery of a package.

8. In a vending machine, a rotatable stopping device adapted for retaining the package in position for delivery, means

adapted to be overcome by the weight of the package and for returning said stopping device toward set position after the delivery of a package, and a latch for holding said stopping device in set position.

9. In a vending machine, a chute, a shaft having a finger projected into said chute, a weight arm on said shaft for tensioning said finger toward a set position, a stop member on said shaft, and a lever adapted for engagement with said stop member.

10. In a vending machine, a chute, a shaft having a finger projected into said chute, a weight arm fixed on said shaft, an adjustable stop for said weight arm, a stop member fixed on said shaft, and a lever adapted for engagement with said stop member, for the purpose set forth.

11. In a vending machine, an inclined platform, a shaft projected over said platform and having fingers fixed thereon and depending toward the platform, means on said shaft for tensioning said fingers toward a set position, a cam disk fixed on the shaft, and a bell crank having one arm adapted for operative engagement with said cam.

12. In a vending machine, a chute, a plurality of parallel shafts, each having a stop finger thereon projected into said chute, means connected with each of said shafts for tensioning said stop fingers toward set position, stop members fixed on said shafts, means for holding the stop member on one of the shafts, means for holding the stop member on the second shaft, and a trip on the first shaft for releasing the holding means on the second shaft when said first shaft is rocked by its tensioning means.

13. In a vending machine, an inclined platform adapted for holding packages, parallel spaced shafts extending over said platform, each of said shafts having stop fingers thereon, means on said shafts for tensioning said fingers toward set positions, and means for retaining packages in spaced relation on said inclined platform.

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

CHARLES A. MELCHERT.

Witnesses:

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ARTHUR W. CAPS.