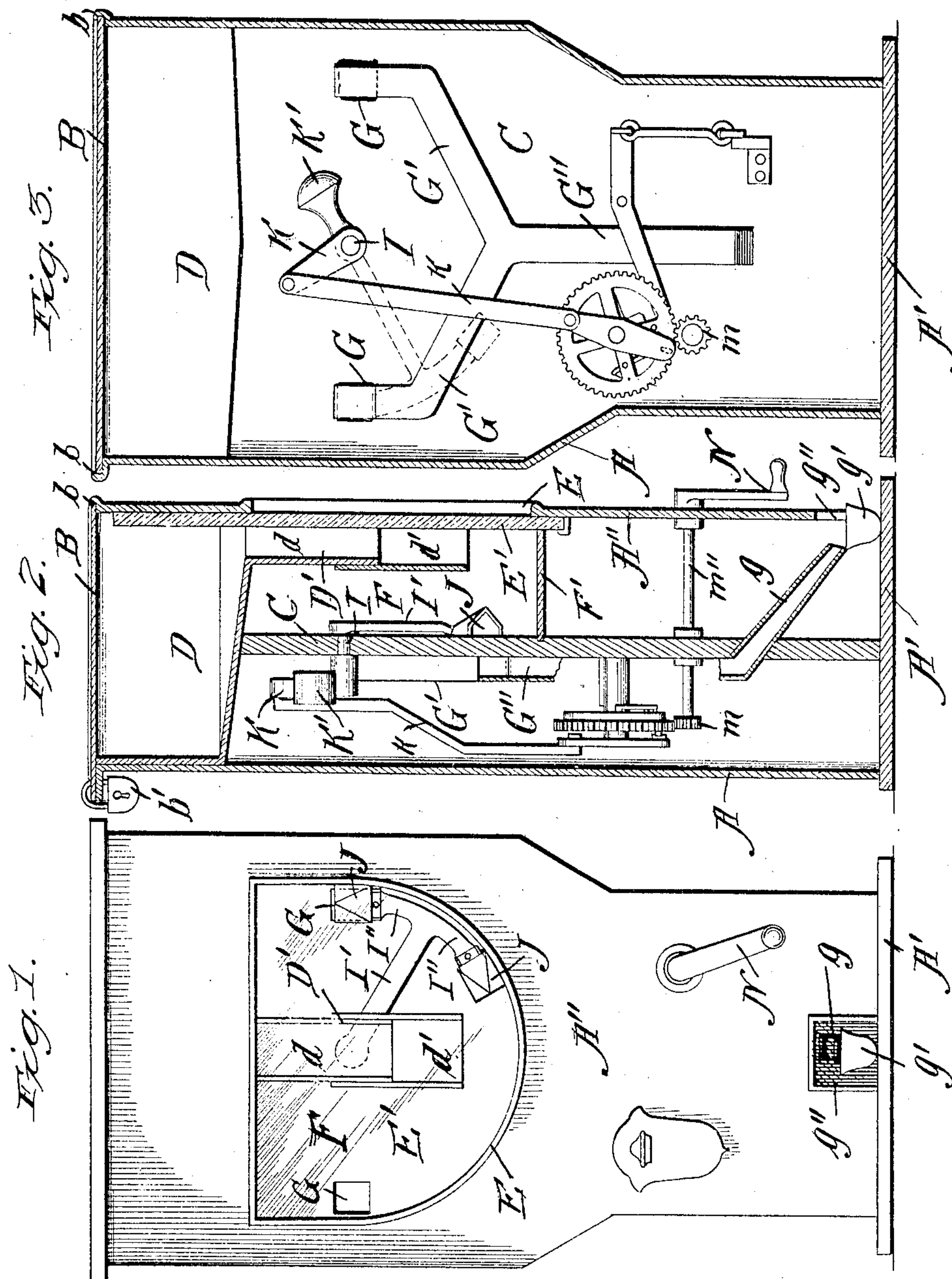


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W. ROHDE & E. V. MUELLER.
VENDING MACHINE.

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VENDING-MACHINE.

No. 871,890.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM ROHDE and EDWARD V. MUELLER, citizens of the United States, and residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Vending-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of our specification.

Our invention relates to a vending machine in which the candy or other article to be sold is open to view, and in which a crank, after the insertion of a certain coin, throws into operation the mechanism which delivers the candy or other article that is being vend- ed, into a properly placed receiver from which it may be taken by the party inserting the coin.

The object of our invention is to produce a vending machine of simple and compact construction, and in which the contents of the machine, that is the articles to be vended, are displayed to best advantage, so as to induce persons to make use of the machine.

The advantages of our improved machine will appear as we proceed with the specification.

In the drawings:—Figure 1 is a front elevation. Fig. 2 is a transverse sectional view and Fig. 3 is a rear elevation with the rear plate removed.

Our improved vending machine is provided with an outer case A, having a suitable base A', upon which it stands. This casing is preferably of the general shape indicated in the drawings, although of course any convenient shape may be used. The main part of it is made of sheet metal, except the base which is preferably made of wood, the sheet metal casing being secured to the base in any convenient manner. The top B is removable so that the inside working parts may be gotten at or withdrawn through the top opening, and also so that the small candies or other articles to be vended may be introduced into the machine. The manner indicated of attaching the top consists simply in supplying the upper edges of the front and back of the casing with flanges b, the top being thus permitted to be either slid on or off. When in place, it may be locked in any usual manner, as by a pad-lock b'.

The reservoir for holding the candies and the mechanism for operating the machine are all supported on a board C of the general shape of a vertical section through the inside of the casing, said board thus engaging the sides and bottom of the casing, and being thereby held in a vertical position.

D is a reservoir with its bottom sloping to the front and also towards the center of the casing, (as indicated in Fig. 2) the bottom resting on the top of the board C which is suitably cut so as to support it. The front face A'' of the casing A is provided with an opening E of general semi-circular shape, against which is supported a plate of glass, E', through which a sub-reservoir F, presently to be described, and also the mechanism by means of which the candies or other articles to be vended, are dipped up and delivered to delivery chutes, are plainly visible to the person operating the machine.

The lowest point in the reservoir D is at its forward side at the middle, and at this point is fitted to it a display chute D' having sides and back, but open at the front, the front edges of said chute bearing against the glass plate E' which thus forms the front wall of said chute. The chute D' is made in two pieces d, d', the one sliding within the other, the length of the chute being thereby made adjustable. Through this chute the contents of the reservoir D fall by gravity into the sub-reservoir F. The sub-reservoir F consists of a generally semi-circular closed chamber, its back being formed by the board C, its front by the glass E' its top by the bottom of the reservoir D, and its own sides and bottom formed by a curved strip of metal F' which is supported in any convenient manner between the board C, and the glass E'. I find in practice that the curved strip of metal F' is readily supported on the board C by having the edge of the strip engage a groove in said board. Its natural elasticity and the engagement of its other edge against the front wall of the casing or the glass sufficiently braces it to sustain the weight of the candy or other article, and leaves it readily disconnectible.

It is apparent that when the candies or other vendible articles are placed in the reservoir D that they will be caused by gravity to pass through the chute D' into the sub-reservoir F from which they are gathered up

by the scoops which are to deliver them upon the operation of the machine; also that by adjusting the length of the chute D', the height at which the candy stands in the sub-reservoir may be regulated.

G, G are openings in the board C into which fit the upper ends of the branch delivery chutes G', G' (see Fig. 4) which slope downwardly and towards the middle where they join together into one vertical chute G'', which near the bottom of the board C, projects forward and downwardly in the form of a spout g, which is led into the neighborhood of a small cup g' accessible from the outside of the casing: This cup g' is placed just within an opening g'' at the front and bottom of the casing which is of sufficient size to accommodate it. It is thus apparent that any small articles delivered into either of the openings G, G, will be delivered by one or the other of the branch delivery chutes G', G', into the main chute G'' and thence through the spout g into the saucer or cup g'.

Journaled in the board C at the center of the circle of which the bottom and sides of the chamber F form an arc, is a short trunnion I, with an arm I' made integral or secured to it, and having right and left branches I'', which engage closely against the face of the board C. The ends of the branches I'' are provided with scoops J, J, which are adapted, as the arm I' is oscillated to the right or to the left, to come into a position registering with the openings G, G. The arm I' with its branches I'' and the scoops J have together somewhat the shape of an anchor. The scoops J, J, are preferably detachably secured to branches so that scoops of various sizes may be used.

On the rear face of the board C at the opposite end of the trunnion I is secured a bell-crank-lever K, one end of which is provided with a counterweight K', and the other end of which is pivoted to a link k. The normal positions of the counterweight K', and the anchor-shaped arm I' are as indicated in Figs. 2 and 3, with the scoop J in a position to empty at one of the openings G.

N is a crank having its shaft m'' journaled in the front face of the casing and in the board C, beyond which it projects, having at its end a gear m. A coin-controlled mechanism interposed between small gear m and the link k, so that the turning of the crank N will cause the link k to oscillate up or down as the case might be, so as to bring one of the scoops G up into position opposite one of the openings G', so that upon the insertion of a coin the turning of the said crank will produce a single oscillation in one direction of the arm I', to bring one of the scoops to register with an opening G. The arm I' then remains in this position, no matter how much the crank N is turned. Upon the insertion of another coin, the turning of the

crank N will cause the arm I' to swing in the opposite direction, and bring the other scoop J to register against the other opening G.

It is apparent that the movement above described of the arm J', and with it the scoops J, cause the latter to pass through the piled up candy or other articles within the sub-reservoir, and carry the same up to one of the openings G, where it is emptied. The coin controlled mechanism forms no part of the present invention, and is therefore not described.

The arrangement indicated of the reservoir and sub-reservoir, with the adjustable chute D' connecting them, offers a fine display of the contents of the machine, the contents not only being exhibited *en masse* in the sub-reservoir, where they are more or less piled up in such manner as to prevent an accurate determination of any specially desirable components of the vendible article in the sub-reservoir, but the chute D' brings these contents forward into the position for the best display, so that a strong appeal is made to those particular human qualities which make such a machine attractive.

Whereas I have described my improved vending machine as being made of sheet metal, it is apparent that it may be made of any material and I do not wish to be limited in this respect.

It is also apparent that the mechanical details of construction may be varied without departing from the spirit of my invention.

1. In a vending machine, in combination with the case, a reservoir in the upper part thereof, a sub-reservoir below said reservoir, a glass front giving view to said sub-reservoir, a display chute suspended from said reservoir with its front edges against said glass front, an oscillating arm journaled in the rear wall of said sub-reservoir, oppositely disposed scoops secured at the end of said arm bearing closely against said rear wall, said scoops being open at the rear, delivery openings in said rear wall, and mechanism adapted to bring one or the other of said scoops into registering position with said openings.

2. In a vending machine, a casing having an openable top, a center-board of the general section of the inside of the casing, a reservoir supported on said casing, a sub-reservoir with its back formed of said center-board, and its sides and bottom formed by a strip of metal secured to said center-board, a glass front to said casing giving view to said reservoir, scoops adapted to vibrate in said sub-reservoir, openings in said center-board above the bottom of said sub-reservoir, a main chute and branches connecting with said openings leading to the outside of the case, and mechanism adapted to operate said scoops to bring them alternately to the level of said delivery openings.

3. In a vending machine, in combination with the case, a reservoir, a vibratory arm trunnioned against the back wall of said reservoir, scoops turned in opposite directions supported by said arm, openings in the path of said scoops one for each scoop in the back of said reservoir, delivery chutes communicating with said openings, and mechanism adapted to vibrate said arm.

4. In a vending machine, a casing, a reservoir therein having a discharge opening, a delivery chute leading from the opening, a carrier movable through the reservoir, a trunnion mounted in the wall of the reservoir having the carrier secured upon one end thereof, a counterweight for the carrier mounted upon the opposite end of the trunnion, an operating handle, and means interposed between the same and the trunnion for rocking the latter whereby the carrier is oscillated.

5. In a vending machine, a casing, a reservoir substantially the full width of the casing located in the top of the latter, a vertical partition disposed transversely of the casing below the reservoir, a supplemental reservoir arranged between one side of the partition and the opposing side of the casing, a carrier mounted to oscillate through the supplemental reservoir, means for oscillating the carrier, a discharge chute leading from the supplemental reservoir having inlet openings arranged to register with the carrier, and a spout depending from the main reservoir into the supplemental reservoir arranged in advance of the carrier and having its front wall formed by the adjacent wall of the casing, said adjacent wall being formed by a transparent plate disclosing the entire interior of the supplemental reservoir and the spout.

6. In a vending machine a casing, a reservoir therein having a discharge opening located a distance above the bottom portion of the same on opposite sides thereof, a delivery chute in communication with said openings,

a carrier mounted to oscillate between the two openings and having pockets designed to register therewith and means for shifting the carrier.

7. In a vending machine, a casing, a reservoir substantially the full width and breadth thereof located in the top part of the same, a cover for the casing, a vertical partition extending transversely of the casing below the reservoir, an arcuate wall extending between the partition and one wall of the casing and forming with the same a supplemental reservoir, a chute discharging from the main reservoir into the supplemental reservoir, openings at opposite sides of the supplemental reservoir through the rear wall of the same, a delivery chute in communication with said openings, a carrier mounted in said rear wall and movable concentric to the arcuate wall and in close juxtaposition thereto, pockets associated with the carrier designed to register respectively with the openings and provided with open advancing ends and open side walls designed to register with said openings and closed by the rear wall of the supplemental casing when out of register with the openings, and means for shifting the carrier,

8. In a vending apparatus, a reservoir, discharge openings in the same at opposite sides thereof, a delivery chute associated with the openings, a carrier provided with pockets designed to be registered alternately with the openings, a manually operated handle designed to be rotated and mechanism interposed between the handle and carrier for actuating the carrier upon the operation of the handle and for converting the rotary movement of the handle into an oscillatory movement of the carrier

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