(No Model.)

# W. S. VAN SANT.

## COIN ACTUATED VENDING MACHINE.

No. 480,639. Patented Aug. 9, 1892.

*Fig. 1.*

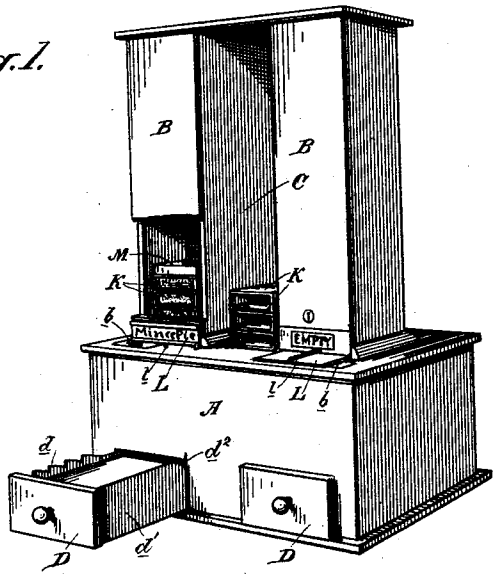



*Fig. 3.*

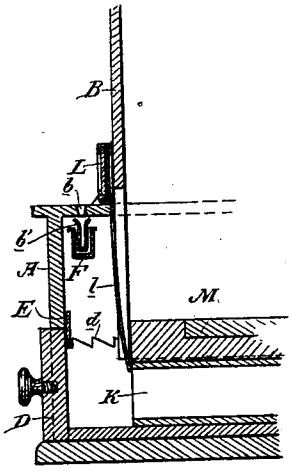
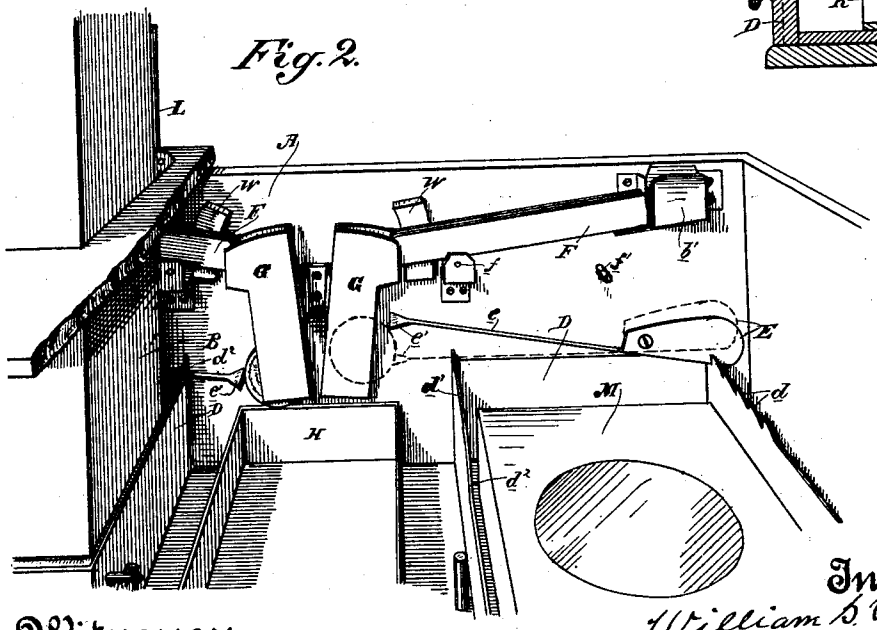



*Fig. 2.*




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# UNITED STATES PATENT OFFICE.

WILLIAM SHERMAN VAN SANT, OF AUBURN, CALIFORNIA.

## COIN-ACTUATED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,639, dated August 9, 1892.

Application filed May 2, 1892. Serial No. 431,544. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM SHERMAN VAN SANT, a citizen of the United States, residing at Auburn, Placer county, State of California, have invented an Improvement in Coin-Actuated Vending-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of machines dependent for their operation upon the deposit of a coin and adapted to supply small articles of merchandise.

Though my invention is adapted for the delivery of any suitable article, it is especially intended for furnishing sandwiches, pieces of pie, and other articles of food from which the device may be properly termed a "lunch-vending machine."

My invention consists in the novel construction and arrangement of the coin-actuated tripping mechanism for releasing the drawer wherein the articles are successively deposited, whereby one may be withdrawn, and in the details of construction and arrangement in connection therewith, all of which I shall hereinafter fully describe, and specifically point out in the claims.

The object of my invention is to provide a simple and accurate machine of this class.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my machine, one of the drawers D being open and the front of one of the vertical chambers B being broken away to show the interior. Fig. 2 is a perspective view of the interior of base A, showing the coin-passages and drawer-lock and trip. Fig. 3 is a vertical section of the front of the machine, showing the holding-arm *l* of the inscription-plate L.

A is the hollow base of the frame of the machine. Upon this is secured the top of the frame, which consists of one or more vertical chambers B, here shown as two in number, the lower ends extending down into the hollow base. Between these chambers is a space or receptacle C for depositing the empty packages or casings, as I shall hereinafter describe. In the hollow base A are mounted the sliding drawers D, here shown as two in number. Each drawer and the locking and tripping mechanism being exactly the same, a description of one will suffice for both. One of the sides of the drawer is provided with the ratchet-teeth *d*, with which a pivoted weighted or gravity pawl E, mounted upon the inner surface of the front of the base, is adapted to normally engage. The other side *d'* of the drawer is provided with a downwardly-extending surface or inclined plane $d^2$, forming a tripping-cam, as I shall presently describe.

In the outside of the top of the base is made the coin-slot *b*. This communicates with a receiving-passage *b'* within the base. This passage communicates with a tilting runway F, which is pivoted at *f* and has a weight W at one end, whereby its other end is held in a normally-elevated position, being limited by a stop *f'*, as shown.

The pawl E, heretofore mentioned, has a shank or stem *e* extending over the side *d'* of the drawer and provided with the contact-plate *e'*, which lies directly under the end of the tilting runway F. The end of this runway is in communication with a vertical passage G, the lower end of which is in communication with the coin-drawer H, mounted in the hollow base of the frame and adapted to be opened by means of a suitable lock at the back of the base. This vertical passage G is located in such position to the contact-plate *e'* of the pawl-stem *e* that the space between the two is not normally sufficient to allow the proper coin to pass.

The operation of this tripping mechanism is as follows: Normally the weighted pawl E is in engagement with the ratchet side *d* of the drawer D and holds said drawer closed. When the coin is deposited, it passes by gravity along the inclined runway F and into the vertical passage G. In this passage it encounters the contact-plate *e'*, and not being able to pass between said plate and the passage G it forces the plate downwardly, its weight being sufficient to overcome the weight of the pawl E at the other end of stem *e*, which said pawl it thus lifts from its engagement with the drawer. This downward movement of plate *e'* is limited by the shank or stem *e* of the pawl resting upon the side *d'* of the drawer; but the space is not yet sufficient to allow the coin to pass by the plate, and consequently it remains temporarily in

this position; but this movement, as just mentioned, has raised the pawl E from its engagement with the ratchet side $d$ of the drawer, and thereupon said drawer can be drawn outwardly. In moving outwardly the inclined plane $d^2$ of its side $d'$, passing under the stem or shank $e$ of the pawl, allows said stem or shank to be depressed farther, and the coin will thereupon drop down into the receiving-drawer. The pawl E, being now free, returns by gravity to its initial position, and as the drawer is slid in again the pawl will slip over its ratchet-teeth and engage its foremost one, and thus lock the drawer once more. In this mechanism the runway F, being a tilting one, enables me to so regulate it as to provide for the detection of any pieces inserted in the machine having a weight greater than the required coin. This is done by the weight W, which should be of a character and so adjusted as to yield before a piece or coin having too great weight. Wherefore said heavy piece, instead of passing down the runway, will tilt it in the wrong direction and will simply drop into the drawer and not actuate the tripping-pawl. The space separating the contact-plate $e'$ of the tripping-pawl and the vertical passage G is regulated to the diameter of the proper coin, so that any coin having a less diameter will pass down the vertical passage without contact with the plate.

K represents packages or other suitable covers for the articles to be vended. For sandwiches and pieces of pie—such as I intend to adapt my machine to sell—I have small open-ended cans. These are fitted in vertical column in the chambers B of the top of the frame. The lowermost can rests in the bottom of the drawer and is of a thickness to pass out with the drawer when pulled forwardly, the remainder of the column being kept back.

In order to indicate when the machine is empty, I have pivoted to the front of the base of the chamber B a sign-plate L. This may consist of a suitable frame with a glass adapted to receive behind it a card having the name of the article to be vended printed upon it. Different cards may thus be introduced. This sign-plate is pivoted in such a manner that it falls forward by gravity to a horizontal position and exposes behind the sign "Empty." It is held up to cover this sign and to present its own inscription by means of an arm $l$, which extends downwardly within the chamber B, and is held in an approximately-vertical position by the column of cans inside. A weight-block M is placed upon the top of the cans to hold the column in place. When the last can lies in the drawer, this block still holds the arm $l$ in place; but when the last can is removed the block drops down into the drawer, and the arm $l$ being now free the sign-plate L drops forward by gravity to conceal its own inscription and to expose the sign "Empty."

The articles to be vended are placed in the chambers B by removing their front plates, which are held normally in position by means of a suitable lock.

The space C between the columns is to receive the empty cans after the purchaser has removed the article vended.

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

1. In a coin-actuated vending-machine having a coin-passage, a sliding drawer having a ratchet-surface at one side, a pawl normally engaging the ratchet-surface of the drawer and released from contact therewith by the passage of the coin, and an inclined plane on the drawer, upon which the stem of the pawl is held by the weight of the coin to hold the pawl out of contact with the ratchet-surface while the drawer is being pulled out, substantially as herein described.

2. In a coin-actuated vending-machine having a coin-passage, a drawer having a ratchet-surface at one side and an inclined plane at the opposte side, and a pivotally-secured pawl normally engaging said ratchet-surface and having its stem in the path of the coin, said stem adapted to be held against the inclined plane on the drawer by the weight of the coin to hold the pawl elevated and to ride down said inclined plane as the drawer is pulled out, whereby the coin is released from the stem, substantially as herein described.

3. In a coin-actuated vending-machine, the combination of the sliding drawer having on one side a ratchet and on its other side an inclined plane, the gravity-pawl engaging the ratchet of said drawer for locking it, the stem or shank of said pawl passing over the other side of the drawer and controlled by its inclined plane, the contact-plate of said stem or shank, and a suitable coin-passage to direct the coin to said contact-plate, substantially as herein described.

4. In a coin-actuated vending-machine, the combination of the sliding drawer having the ratchet-teeth on one side and the inclined plane on the other, the gravity-pawl engaging the ratchet-teeth for locking the drawer, the stem or shank of said pawl passing over the inclined plane side of the drawer, the contact-plate of said stem or shank, the opposing vertical passage for the coin, and a suitable runway to direct the coin to said vertical passage, substantially as herein described.

5. In a coin-actuated vending-machine, the combination of the sliding drawer having the ratchet-teeth on one side and the inclined plane on the other, the gravity-pawl engaging the ratchet-teeth for locking the drawer, the stem or shank of said pawl passing over the inclined plane side of the drawer, the contact-plate of said stem or shank, the opposing vertical passage for the coin, and the weighted tilting runway communicating with the vertical passage, substantially as herein described.

6. In a coin-actuated vending-machine, the combination of the vertical chamber containing the articles to be vended, a drawer underlying said chamber, the drop-plate containing the inscription of the articles to be vended and adapted to cover and expose another inscription, and the arm of said drop-plate passing down in the chamber and held in place by the contents thereof, substantially as herein described.

In witness whereof I have hereunto set my hand.

WILLIAM SHERMAN VAN SANT.

Witnesses:
EDWARD S. ATKINS,
WILLIAM H. CURTIS.