(No Model.) 2 Sheets—Sheet 1.

J. A. POFF.

VENDING MACHINE.

No. 489,830. Patented Jan. 10, 1893.

Fig. 1.

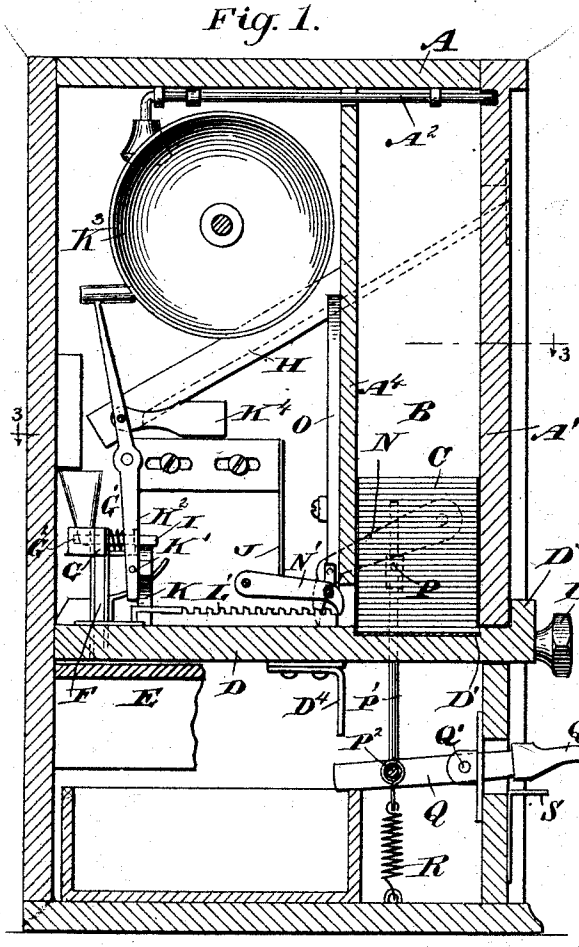


Fig. 2.

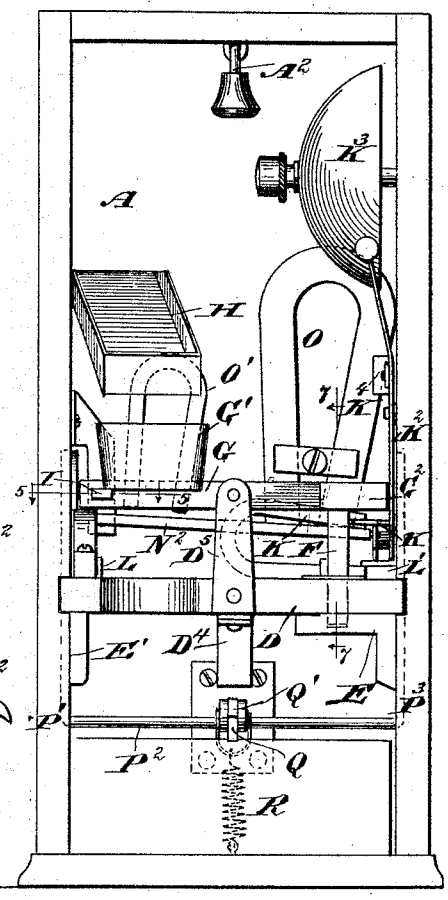
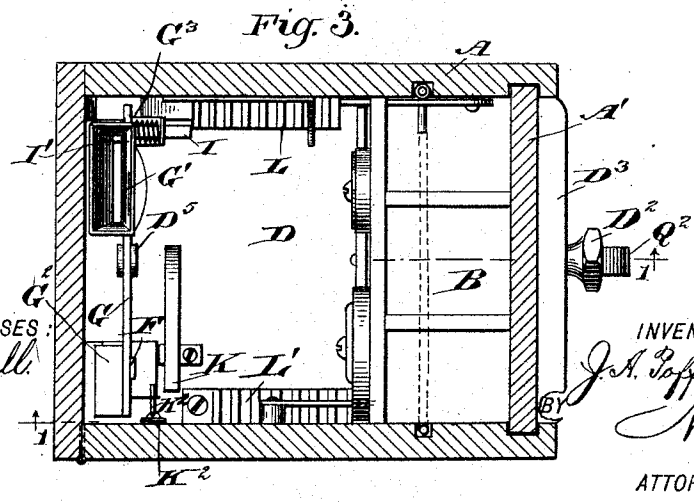


Fig. 3.



WITNESSES:

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C. A. Sedgwick

INVENTOR

J. A. Poff

BY Munn & Co

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

J. A. POFF.

VENDING MACHINE.

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Fig. 4.

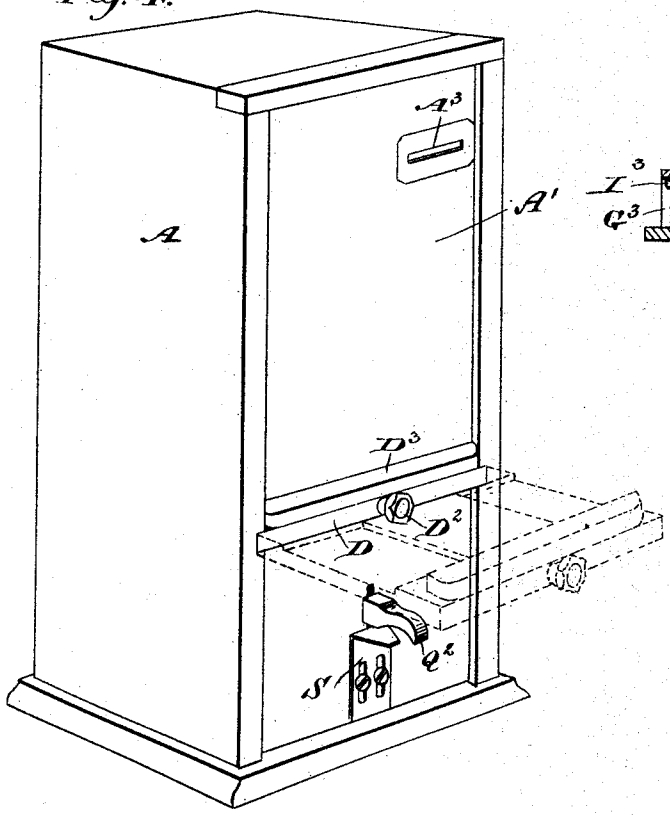


Fig. 5.

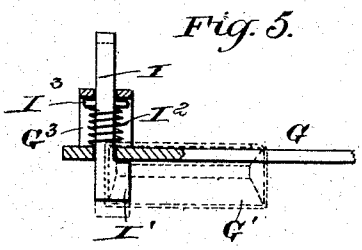


Fig. 6.

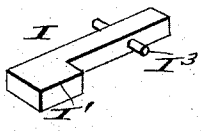


Fig. 7.

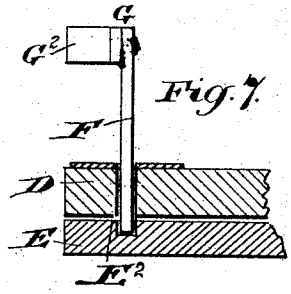


Fig. 8.

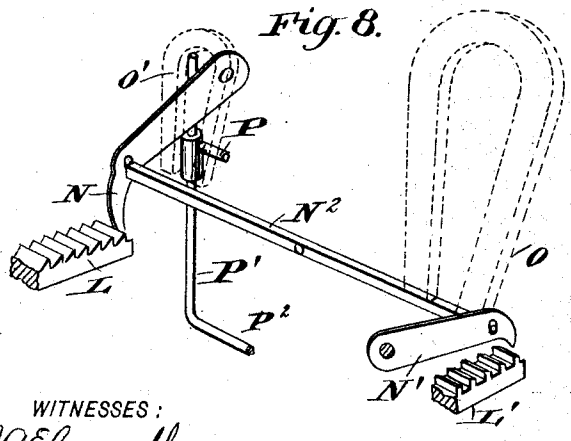
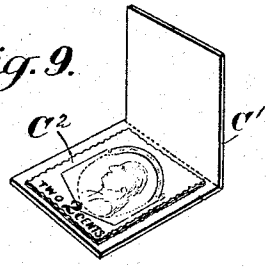


Fig. 9.



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UNITED STATES PATENT OFFICE.

JOSEPH A. POFF, OF LAWRENCE, KANSAS.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 489,830, dated January 10, 1893.

Application filed May 25, 1892. Serial No. 434,258. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH A. POFF, of Lawrence, in the county of Douglas and State of Kansas, have invented a new and Improved Vending-Machine, of which the following is a full, clear, and exact description.

The invention relates to coin-operated machines for automatically selling postage stamps, envelopes, and other similar articles.

The object of the invention is to provide a new and improved vending machine which is simple and durable in construction, very effective in operation, and arranged to prevent tampering with the contents of the casing.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a transverse section of the improvement on the line 1—1 of Fig. 3; Fig. 2 is a rear elevation of the improvement with the door removed; Fig. 3 is a sectional plan view of the same on the line 3—3 of Fig. 1; Fig. 4 is a perspective view of the improvement; Fig. 5 is a sectional plan view of the coin operating lever and an unlocking device for the coin; Fig. 6 is a perspective view of the bolt for the coin unlocking lever; Fig. 7 is a transverse section of part of the drawer, and the lever for locking the same in place, the section being taken on the line 7—7 of Fig. 2; Fig. 8 is a perspective view of the auxiliary locking device for the drawer; and Fig. 9 is a perspective view of the stamp-holder.

The improved vending machine is provided with a suitably constructed casing A, formed at the front with a compartment B adapted to receive the articles C to be sold by the machine. The compartment B is closed by a door A′ fitted to slide in the sides of the casing A, and adapted to be locked in place so as to close the compartment B, by means of a bolt A^2 fitted to slide transversely in suitable bearings arranged on the under side of the top of the casing A, as will be readily understood by reference to Fig. 1.

The articles C to be sold are placed one on top of the other, and in the case of postage stamps the stamp or stamps are placed in an envelope C′, of any desired material, preferably, however, formed of a piece of cardboard having a crease to form two parts folded one upon the other, the stamp or stamps C^2 being placed between the two parts, see Fig. 9. The free ends of the two parts of the envelope are fastened together by gum, or other means, so as to retain the stamp in the sealed envelope. The lowermost article of the number of articles C placed one on top of the other, is adapted to pass into a recess D′ formed in a drawer D fitted to slide transversely in suitable guideways E and E′ attached to the sides of the casing A. The front end of the drawer D projects through the front of the casing, directly below the lower end of the door A′, and on the outer end of the drawer is attached a knob D^2, for conveniently pulling the drawer outward to move the lowermost article, contained in the recess D′, to the outside of the casing at the front end thereof.

In order to cover the opening in the front of the casing, the drawer D′ is provided with a plate D^3 fitting upon the front of the door A′, so as to prevent dust or other impurities from passing through the opening for the drawer into the casing A. The outward sliding motion of the drawer D is limited by a stop D^4 attached to the under side of the drawer and adapted to engage the inner surface of the lowermost fixed part of the front of the casing A.

In order to lock the drawer D in place, an arm F is provided, pivoted on one end of the coin receiving lever G, fulcrumed on a bracket D^5 attached to the drawer D at the rear end thereof. The arm F passes through an opening in the drawer D and engages a recess E^2 formed in the guideway E for the drawer D, see Fig. 7.

On the end of the lever G, opposite to the arm F is secured a coin receiving receptacle G′, made in the shape of a hopper, and into which passes the coin from the coin chute H extending upward and forward to the front door A′, to connect with the slot A^3 arranged in the door A′ and through which the coin is passed from the outside to drop into the chute H, along which it slides to the rear end thereof, to finally drop into the coin receiving receptacle G′ at the end of the coin receiving

lever G. The end of the lever with which the arm F is connected is provided with a weight G^2, for counterbalancing the other end of the lever carrying the coin receiving receptacle G', the weight being so arranged that the proper coin counterbalances the weight and arm F.

In order to hold the coin in the receptacle G until the proper time comes for dropping the same, as hereinafter more fully described, a bolt I is provided, fitted to slide transversely in suitable bearings arranged in the lever G and in a bracket G^3 secured to the said lever, see Fig. 5. On the rear end of this bolt I is arranged a lug I' extending under the opening of the coin receptacle G', so that a coin of the proper size passing into the said receptacle, is supported by the lug I' until the latter is pushed rearward to disengage the coin and permit the same to drop downward to the lower part of the casing, usually into a special drawer provided for this purpose. A spring I^2 is coiled on the bolt I, one end of the said spring resting against one side of the lever G, the other end pressing against a pin I^3 held in the bolt I, as will be readily understood by reference to Figs. 5 and 6. When the bolt I is in the normal position, held there by the spring I^2, as shown in Fig. 5, then the lug I' rests against the rear face of the lever G, the said lug also projecting under the bottom opening of the receptacle G' to support the coin therein. Now, it will be seen that when a coin of smaller size is passed through the slot A^3 into the chute H and slides down the same into the receptacle G', then it passes through the same without actuating the lever G. When, however, the proper coin is introduced, it passes into the receptacle G' and is supported therein on the lug I', thus overbalancing the other weighted end of the lever G, whereby the lever is caused to swing downward with the receptacle G', its weighted end swinging upward. By this movement of the lever G, the arm F is withdrawn from the recess E' in the guideway E, and consequently the drawer D is unlocked. When the drawer is pulled outward, the lever G moves with it so that the front end of the bolt I is finally brought in contact with an arm J supported in the casing A from one side thereof. By further outward movement of the drawer D the bolt I is pressed rearward against the tension of the spring I^2, so that the lug I' of the said bolt is moved from under the coin to permit the latter to pass out of the receptacle G' into the lower part of the casing. The lever G then swings partly back (caused by the weight G^2), that is, until the lower end of the arm F rests on top of the guideway E. When the drawer D is pushed inward, back to its normal position, then the arm F finally drops into the recess E^2 so that the drawer is again locked in place.

On the drawer D and near the rear end thereof, is secured a permanent magnet K adapted to attract a pin K' formed on a striker K^2 fulcrumed on one side of the casing A at the inside thereof. The striker K^2 is adapted to strike a bell K^3 for sounding an alarm every time the drawer D is drawn outward. A weighted arm K^4 near the upper end of the striker K^2, serves to return the latter to its normal position after the pin K' is dropped off the magnet K on the forward movement of the drawer D. It is understood that when the drawer is moved outward the magnet K attracts the pin K' and holds it temporarily and thus imparts a swinging motion to the pivoted striker K^2 until the pin K' finally drops off the magnet K on the further forward motion of the drawer D. The striker is then returned to its normal position by the weighted arm K^4, the striker then striking the bell K^3 and sounding the same.

In order to securely hold the drawer D in place, an auxiliary locking device is provided, which is arranged as follows:—On the sides of the drawer D and on top of the same are arranged two transversely extending racks L and L' having their teeth standing in opposite directions. The racks L and L' are adapted to be engaged by the pawls N and N' respectively, fulcrumed on the sides of the casing A and standing in opposite directions, according to the position of the teeth on the racks L and L', so that when the pawls are in engagement with the racks, the drawer D cannot be pulled outward. The two pawls N and N', see Fig. 8, are connected with each other, near their free ends, by a lever N^2 pivoted at its middle to the back A^4 of the compartment B. The end of the lever N^2 next to the pawl N' is adapted to be engaged by a permanent magnet O secured to the back A^4, and the opposite end of the said lever is adapted to be engaged by a magnet O' somewhat less powerful than the magnet O. The pawl N is adapted to be engaged at its lower edge, by a pin held on a rod P' fitted to slide vertically in one side of the casing A. When this rod P' is moved upward, its pin P causes an upward swinging motion of the pawl N so that the latter is disengaged from its rack L, and at the same time a swinging motion is given to the lever N^2 so that the other end of the said lever swings downward and moves the pawl N' in mesh with the rack L', the teeth of which, however, stand in such a position as not to prevent the outward sliding motion of the drawer D. When the pawl N' swings downward, as described, by the action of the pin P on the pawl N, then the lever N^2 swings away from the magnet O, its other end swinging into the field of the magnet O', which latter then holds the lever N^2 in this position; that is, the pawl N out of mesh with the rack L and the other pawl N' in mesh with the rack L'. The rod P' is connected by a transversely extending rod P^2 with an arm P^3 fitted to slide in the other side of the casing A. The middle rod P^2 is engaged by a lever Q fulcrumed at Q' to a bracket attached to the inside of the front of the casing A, the said lever ex-

tending through the front to the outside and carrying at this outer end a finger piece Q^2 for conveniently actuating the lever Q from the outside of the casing. This finger piece Q^2 is located directly below the knob D^2 of the drawer D, and must be pressed by the operator to unlock the drawer D by raising the pawl N, as above described. The lever Q and the parts connected with the same are returned to their normal position after the pressure is released from the finger piece Q^2, by a spring R engaging the arm Q, as will be readily understood by reference to Figs. 1 and 2. The downward swinging motion of the finger piece Q^2 of the lever Q is limited by a stop S attached to the front of the casing A, see Figs. 1 and 4.

The operation is as follows:—When the several parts of the device are in the position shown in the drawings, and the compartment B is filled with the articles to be sold so that the lowermost article engages the recess D′, then the operator, by dropping the proper coin into the slot A^3, unlocks the drawer D, as above described, the coin passing through the chute H into the coin receiving receptacle G′, in which it is held by the lug I′, as above described. The swinging motion given to the lever G by the coin raises the arm F out of the recess E^2 so as partly to unlock the latter, the complete unlocking taking place as soon as the operator presses on the finger piece Q^2 to raise the pawl N out of engagement with the rack L attached to the drawer D. The operator now pulls on the knob D^2 so that the drawer D slides outward and carries along the lowermost article C held in the recess D′. As soon as the drawer has been withdrawn the operator removes the article and pushes the drawer back into its normal position, whereby the several parts are returned to their normal position, ready to receive another coin for repeating the operation. It will be understood that when the drawer D is moved outward, as above described, the coin is dropped from the receptacle G′ by the rearward sliding of the bolt I, the latter striking the arm J. Thus, when the drawer is pushed back it is again locked in place by the arm F engaging the recess E^2.

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

1. A vending machine, provided with a drawer mounted to slide and adapted to carry an article to the outside of the casing, and a coin receiving lever arranged transversely or at right angles to the direction of movement of and adapted for unlocking the said drawer, the said lever being movable back and forth with the drawer substantially as shown and described.

2. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, and a coin receiving lever supported by and movable with the drawer and adapted to lock the said drawer normally in position, the said lever being arranged transversely of or at right angles to the direction of movement of the drawer whereby a longitudinal vibration or jarring of the drawer will not tend to jar the lever out of locked position, substantially as shown and described.

3. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, a coin receiving lever movable with the drawer and adapted to lock the said drawer normally in position, a receptacle held on the said coin receiving lever and adapted to receive the coin, to unlock the drawer, and devices whereby to retain the coin in and permit its escape from said receptacle, substantially as shown and described.

4. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, a coin receiving lever movable back and forth with the drawer adapted to lock the said drawer normally in position, the said receiving lever being provided with a depending pivotally supported arm for locking the drawer in place, such arm being extended through the drawer and arranged to engage the framing and a coin receiving receptacle held on the said lever and adapted to receive the coin to impart a swinging motion to the lever, to move the said arm upward to unlock the drawer, substantially as shown and described.

5. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, a coin receiving lever movable with the drawer and adapted to lock the said drawer normally in position, the said receiving lever being provided with an arm for locking the drawer in place, a coin receiving receptacle held on the said lever and adapted to receive the coin, to impart swinging motion to the lever to move the said arm upward to unlock the drawer, a coin chute held in the said casing and adapted to discharge the coin into the said coin receptacle, a spring pressed bolt whereby to retain the coin in the receptacle, and an abutment for engagement by said bolt, substantially as shown and described.

6. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, a coin receiving lever

adapted to lock the said drawer normally in position, the said receiving lever being provided with an arm for locking the drawer in place, a coin receiving receptacle held on the said lever and adapted to receive the coin, to impart a swinging motion to the lever to move the said arm upward to unlock the drawer, a coin chute held in the said casing and adapted to discharge the coin into the said coin receptacle, a spring-pressed bolt held on the said coin receiving lever and adapted to support the coin in the said receptacle, the said lever coin receptacle and bolt being movable back and forth with the drawer and an abutment for engagement by the bolt when the drawer is properly advanced, substantially as shown and described.

7. A vending machine, comprising a casing having a compartment containing the articles to be sold, a drawer mounted to slide in the said casing and adapted to engage the lowermost of the articles, to carry the same to the outside of the casing, a coin receiving lever supported to move back and forth in the casing and adapted to lock the said drawer normally in position, the said receiving lever being provided with an arm for locking the drawer in place, a coin receiving receptacle held on the said lever and adapted to receive the coin, to impart a swinging motion to the lever to move the said arm upward to unlock the drawer, a coin chute held in the said casing and adapted to discharge the coin into the said coin receptacle, a spring-pressed bolt held on the said coin receiving lever and adapted to support the coin in the said receptacle, and a fixed arm arranged in the said casing and adapted to be engaged by the said bolt, when the lever is advanced with said bolt to move the latter from under the coin in the receptacle, to permit the coin to pass out of the latter, substantially as shown and described.

8. A vending machine, comprising a casing having a compartment for holding the articles to be sold, a drawer having a recess engaging the lowermost of the articles, racks held on the said drawer, pawls engaging the said racks, and a lever connecting the said pawls for actuating the same to unlock the drawer, substantially as shown and described.

9. In a vending machine substantially as described, the combination of a sliding delivery drawer, a lever supported by, movable back and forth with, and adapted to lock the drawer and release the same and provided with a coin receptacle, a bolt by which to retain the coin in the receptacle, and an abutment for engagement by said bolt when the drawer is properly advanced, whereby to operate the bolt to release the coin, all substantially as and for the purposes set forth.

10. In a vending machine, the combination with a coin receiving lever supported to be moved or advanced after it has been adjusted to unlocked position and provided at one end with a receptacle adapted to receive the coin, of a spring-pressed bolt fitted to slide on the said lever, and having a lug extending under the outlet of the said receptacle to hold the coin in place, and an abutment arranged to be engaged by the said bolt when the lever is advanced, substantially as shown and described.

11. In a vending machine, the combination with a drawer and a permanent magnet thereon, of an alarm bell having a striker adapted to be actuated by the said permanent magnet, substantially as shown and described.

12. In a vending machine, the combination with a drawer and a device for locking the same, of a permanent fixed magnet adapted to hold the said device out of engagement with the drawer to permit the latter to be moved, substantially as shown and described.

13. In a vending machine, the combination with a drawer mounted to slide, of two racks secured on the said drawer and having their teeth standing in opposite directions, pawls engaging the said racks, a lever carrying the rail pawls on its ends, and a permanent magnet adapted to engage one end of the said lever to hold one of the pawls out of engagement with its rack teeth and the other in engagement with its respective rack teeth, substantially as shown and described.

14. In a vending machine, the combination with a coin receiving lever provided at one end with a receptacle adapted to receive the coin, of a spring-pressed bolt fitted to slide on the said lever, and having a lug extending under the outlet of the said receptacle to hold the coin in place, and means, substantially as described, for imparting a sliding motion to the said bolt to disengage the latter from the coin, as set forth.

15. In a vending machine, the combination with a drawer mounted to slide and adapted to carry the article to be sold to the outside of the casing, a coin receiving lever adapted to receive the coin at one end, and an arm held on the other end of the said lever and passing through the said drawer to engage a recess in one of the guideways for the said drawer, to lock the latter in place, substantially as shown and described.

16. In a vending machine, the combination with a drawer mounted to slide and formed with a recess adapted to receive the article to be sold, of racks secured on the said drawer, pawls engaging the said racks, a lever connecting the pawls with each other, and a permanent magnet adapted to engage the said lever, to hold one of the said pawls out of engagement with the racks, substantially as shown and described.

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Witnesses:
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