June 1, 1926. 1,587,114

W. J. GOUDEAU

VENDING MACHINE

Original Filed Oct. 22, 1923 2 Sheets-Sheet 1

Fig. 1

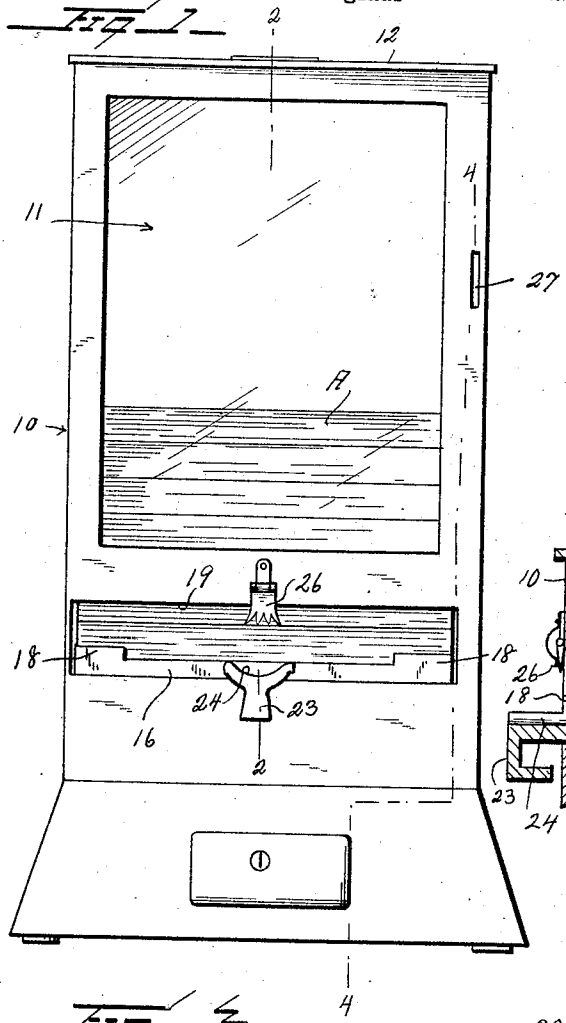


Fig. 6

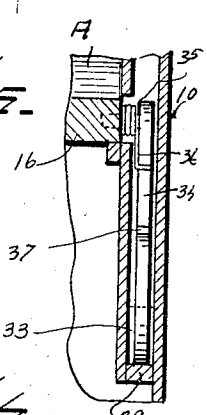


Fig. 5

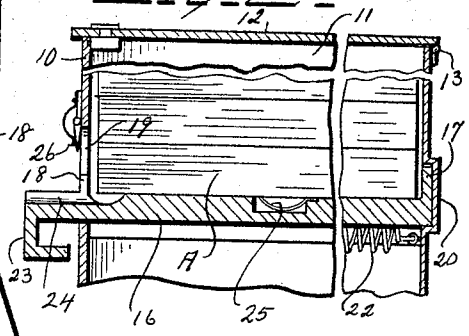


Fig. 7

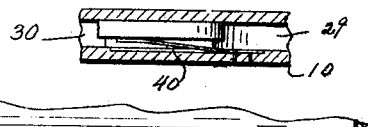
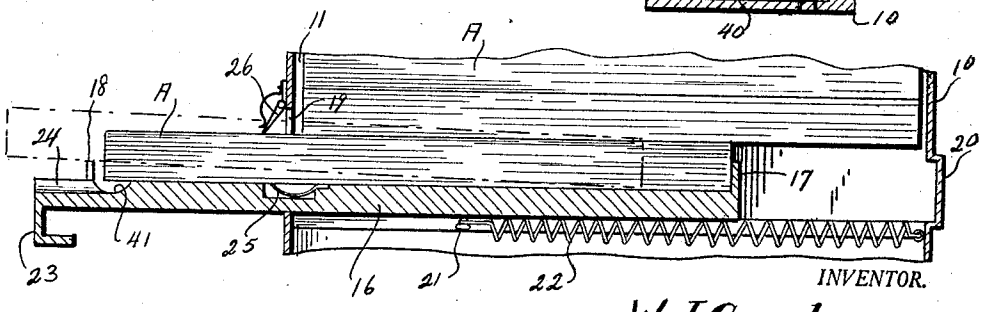


Fig. 4



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Fig. 4.

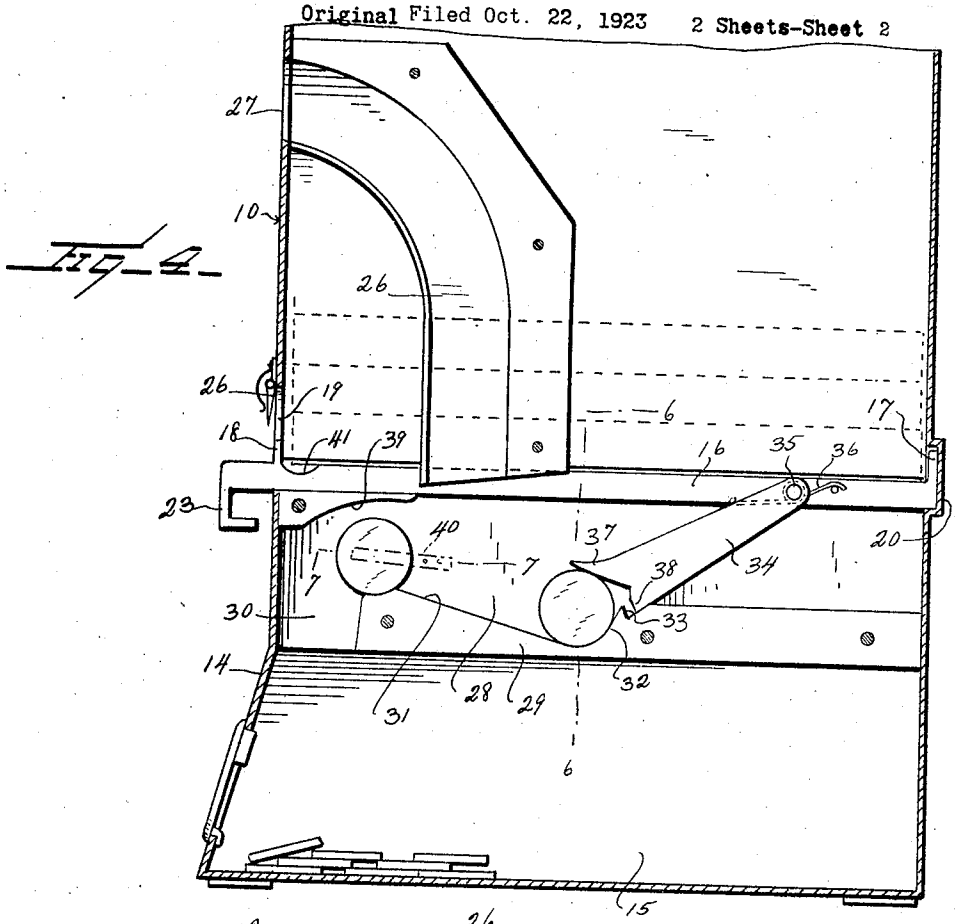
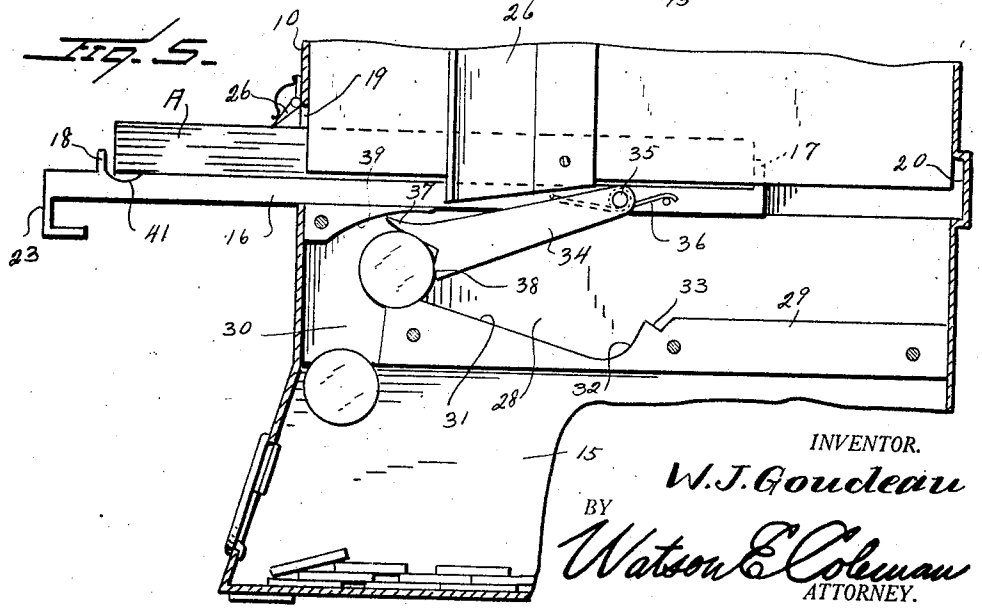


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILTON J. GOUDEAU, OF DRIVER, ARKANSAS.

VENDING MACHINE.

Application filed October 22, 1923, Serial No. 670,043. Renewed January 30, 1926.

This invention relates to vending machines, and particularly to a vending machine having coin actuated means, the machine being particularly designed for vending tablets, boxes of stationery, writing paper, composition books, copy books, and like articles.

The general object of this invention is to provide a mechanism of this character which is very simple, which may be readily operated, and in which the extractor or article support is held from any delivery movement until a coin is dropped in the coin slot, the detent which holds the extractor or deliverer from delivery movement being then automatically raised upon a forward movement of the delivering tray and lifted out of its locking position to permit the outward movement of the tray to a certain extent sufficient to permit the article to be grasped and withdrawn.

A further object is to provide a detent so constructed that the tablet after it is once shifted outward cannot be shifted inward again so as to prevent any return movement of the tablet or other article and this device acting until the article is entirely extracted.

A still further object is to provide means for forcing the article into engagement with this detent.

Another object is to provide means which will prevent the removal of the tablet or other article from the delivery tray without an outward movement of the tray itself.

Still another object is to provide a device of this character in which the coin deposited in the coin slot after it has raised the latch holding the extractor will be shifted into such position that the coin originally deposited will prevent a coin subsequently deposited from dropping directly under any circumstances into the coin box but will cause this coin to move downward into position to engage said latch.

Other objects will appear in the course of the following description.

My invention is illustrated in the accompanying drawings, wherein:

Figure 1 is a front view of a vending machine constructed in accordance with my invention;

Figure 2 is a fragmentary vertical sectional view thereof on the line 2—2 of Figure 1;

Figure 3 is a fragmentary vertical sectional view thereof on the same lines as Figure 2, but showing the delivering tray pulled out and showing in dotted lines how the article is withdrawn from the tray when so pulled out;

Figure 4 is a vertical section through the vending machine on the line 4—4 of Figure 1, the coin actuated mechanism being in elevation;

Figure 5 is a section on the same plane as Figure 4 but showing the action of the coin mechanism when the tray is drawn out;

Figure 6 is a vertical section on the line 6—6 of Figure 4;

Figure 7 is a fragmentary section on the line 7—7 of Figure 4;

Referring to these drawings, 10 designates the casing enclosing the magazine 11 within which articles are disposed. This casing, of course, has the shape of the articles in plan view. Thus, for instance, the casing is shown as rectangular in form to contain a plurality of tablets A of writing paper, though it is to be understood that other articles of a like general form may be disposed in this casing and that the casing will be so formed as to approximately fit these articles. The upper end of the casing 10 is closed by a top 12 having a hinge 13 and any suitable lock whereby the lid may be locked after the casing 10 is filled.

The lower end of the magazine is supported upon a base 14 formed to provide a coin box 15. Disposed in the lower end of the magazine and above the coin box is a tray 16 in the form of a drawer, this tray having an upwardly extending flange 17 at its rear end and the forward end of the tray is formed with upwardly extending flanges 18 at its lateral ends. This tray is insertable into the casing of the machine through the slot or opening 19 and the tray operates within this opening. The tray may be mounted on suitable guides whereby it may slide in and out in the manner of a drawer. The rear portion of the casing 10 at the junction of the magazine with the base is offset, as at 20, to accommodate the flange 17. The under face of the tray carries a depending lug 21, to which a contractile spring 22 is attached urging the tray downward into the magazine. The forward end of the tray at its middle is provided with a downwardly directed handle 23 which at its middle is formed

with a finger slot 24. The tray carries a resilient prong 25 which extends up through a slot or opening in the tray and bears against the under side of the article A.

Mounted upon the front wall of the magazine and immediately above the opening 19 is what may be termed a pawl 26. This prong or pawl is sharp-pointed and is pivoted and extends downward and forward so that it bears against the upper face of the article A. Preferably a spring will urge this pawl downward into this position. It is obvious now that upon a forward movement or retractile movement on one of the articles A, this pawl 25 will permit this forward movement without affecting or in any way engaging the article, but that if the tray be suddenly released and starts backward under the action of the spring 22, this pawl or prong 25 will engage the article and will prevent a rearward movement of the article and of the tray itself. In other words, this pawl or prong 25 holds the tablet or other article being vended out and the extractor out until the tablet is completely removed. Then the extractor may go back to its original position under the action of the spring.

For the purpose of holding the tray from retractile movement applied to the handle until the proper coin has been deposited, I provide a coin guide which extends downward from a coin slot 27 at the side of the machine and to a point below the movable tray. It discharges into a relatively narrow compartment 28. Immediately below the coin guide and in this compartment is disposed a strip 29 having a thickness at least equal to that of the coin and the forward end of this strip terminates short of the front wall of the compartment 15 so that a coin may drop through the slot or passage 30 thus formed. Rearward of the forward end of the strip 29 the upper face of the strip is downwardly and rearwardly inclined, as at 31, and then upwardly curved, as at 32, and rearward of this upper curvature or seat 32 there is formed a notch 33.

Pivotally mounted upon the side wall of the casing or upon any other suitable support is a latch 34. This is pivoted at 35 and is urged downward by a spring 36. This latch at its free end is formed with a projecting finger 37 and below this finger with a rounded face, which with the lower edge of the latch constitutes a detent tooth 38 engaging in the notch 33, while the finger 37 projects out over any coin which may be disposed on the seat 32.

The operation of this unlocking device will be obvious. The coin is dropped in the coin slot, passes down the chute 26, and is discharged upon the inclined face 31, where it rolls down to the seat 22 and rolls beneath the finger 37. In this position if the tray be pulled outward the latch will move with it and the coin will roll up the incline 31 and as it does so lifts the latch out of the notch 33, thus entirely releasing the tray. As the tray moves forward, the latch pushes the coin upward into a position between the highest point of the strip 29 and the under curved face 39 of the coin slot 30. At that point the coin is pressed against the side wall of the passage by means of a leaf spring 40. At this time the tray has been pulled out to its full extent and can go no further. The tablet is then pulled out by hand and when the tablet has been fully retracted the tray is released and is pulled inward by the spring 22, the coin being left engaged by the spring 40. In this position the coin will prevent a second coin inserted in the coin chute 26 from bouncing into the passage 30 but will guide the coin downward to the seat 32. It will be obvious, of course, as the new coin is brought forward by the retraction of the tray it will push the original coin out and into the coin passage 30 and allow it to drop down into the coin receptacle 15. The under face of the slide or tray is formed with a slot 41, or opening through which the finger may be inserted after the tray has been pulled out whereby the tablet or other article to be vended will be lifted up, raising the detent 25, and the tablet then entirely removed from the tray. Normally, however, this opening or slot 41 is disposed inward of the front wall of the casing 10 so that the finger cannot be inserted through this opening in an effort to manipulate the articles to be vended. It will be seen that the flange 18 prevents any removal of the tablet without the retraction of the tray and that the tray cannot be retracted unless the coin has been deposited.

The operation of the mechanism will be obvious from what has gone before and it is not believed to be necessary to repeat it. As before remarked, while the device is particularly designed for vending flat articles such as tablets, boxes of stationery, copy books, etc., it may be adapted for vending other different merchandise without departing from the spirit of the invention.

I do not wish to be limited to the exact construction illustrated, as it is obvious that many changes might be made in the construction and in the general finish of the machine without departing from said spirit as defined in the appended claims.

I claim:—

1. A vending machine having a slidable member, coin actuated mechanism normally preventing the outward movement of the sliding member comprising a latch pivotally mounted on the sliding member and urged downward, said latch having a forwardly directed finger, a fixed member below the

sliding member having a notch with which the latch is normally engaged, a coin supporting member disposed below the coin slot of the coin and having a downwardly and rearwardly inclined upper surface inclined downward to a point beneath the finger of the latch whereby to guide a coin into position beneath said finger and cause the coin to lift the finger upon a forward movement of the slidable member and the finger, and means at the apex of said inclined portion for holding a coin in position upon a full stroke of the slidable member and thereby block the further passage of that coin until a second coin is shifted upward into such position.

2. In a vending machine having a slidable tray, coin actuated mechanism normally preventing the discharge movement of the tray comprising a latch pivotally mounted on the tray and urged downward, said latch having a forwardly directed finger, a fixed member below the tray having a notch with which the latch is normally engaged, a downwardly inclined member disposed below the coin slot of the machine and inclined downward and to a point beneath the finger on the latch whereby to guide a coin into position beneath said finger and cause the coin to lift the finger upon a forward movement of the tray and finger, and means at the apex of said inclined portion for holding a coin in position upon a full stroke of the tray to thereby block the further passage of that coin until a second coin is shifted upward into such position.

In testimony whereof I hereunto affix my signature.

WILTON J. GOUDEAU.