Dec. 18, 1934. J. RINALDI 1,984,893

VENDING MACHINE

Filed April 3, 1933 2 Sheets-Sheet 1

Fig. 1.

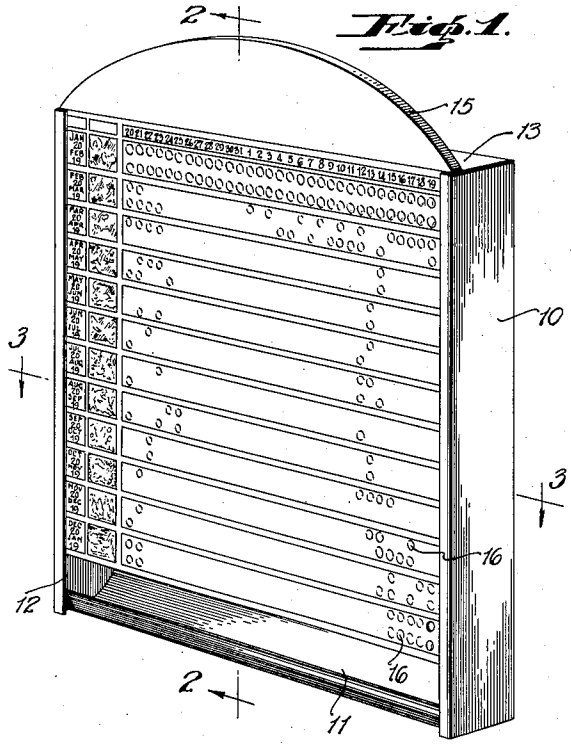


Fig. 2.

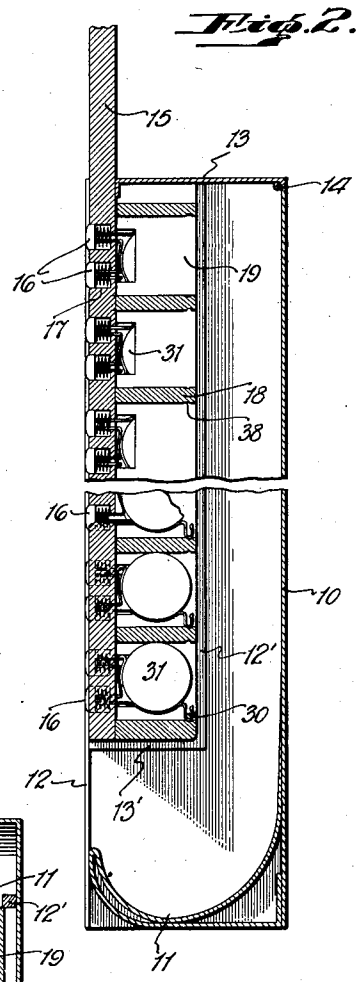


Fig. 3.

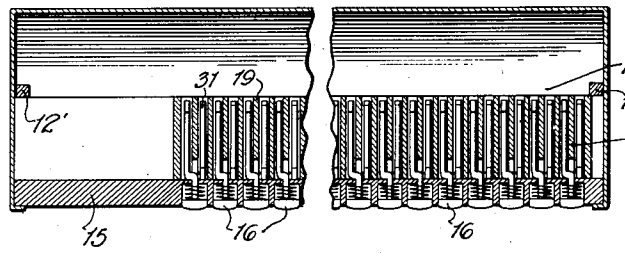


Fig. 8.

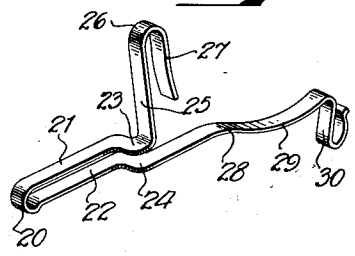
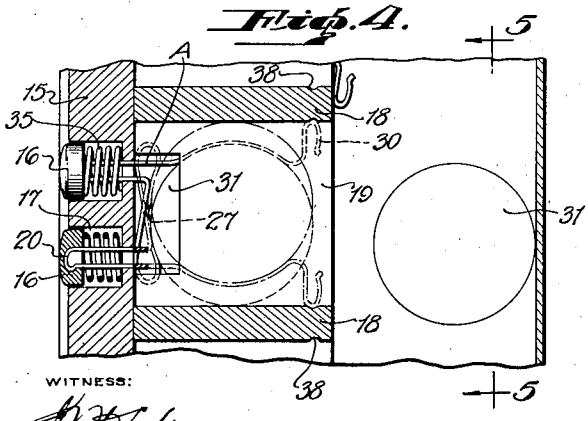


Fig. 4.



WITNESS:

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Fig. 5.

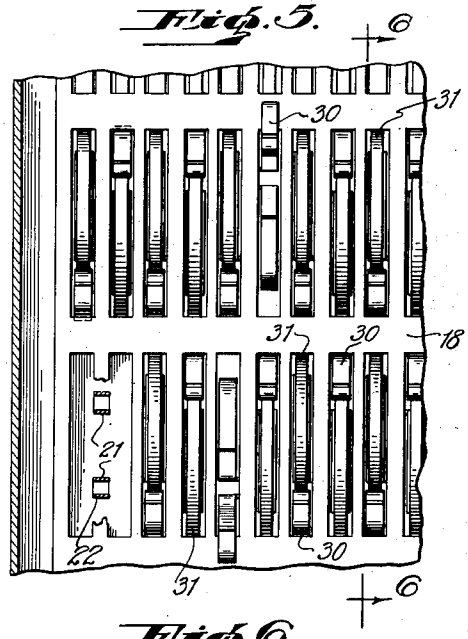


Fig. 7.

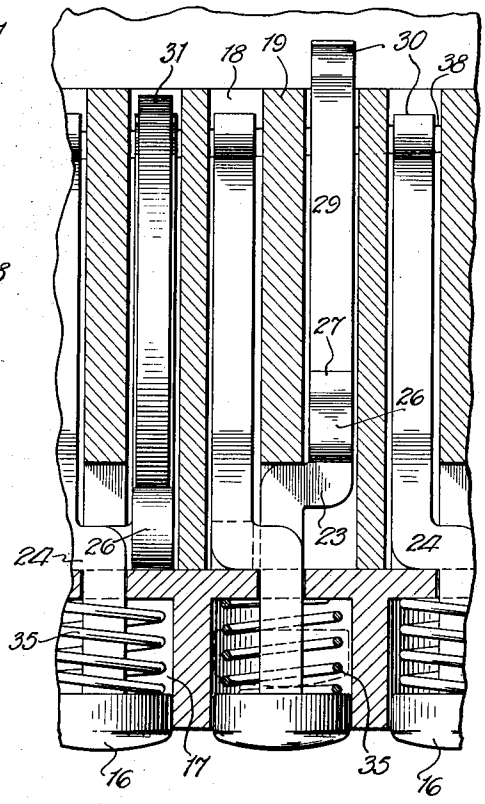


Fig. 6.

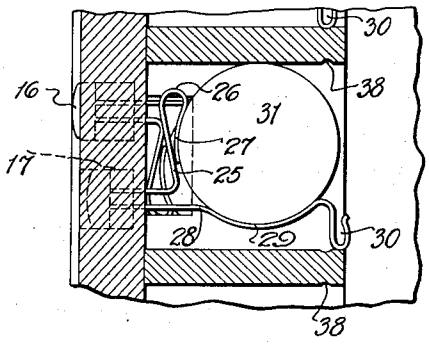


Fig. 9.

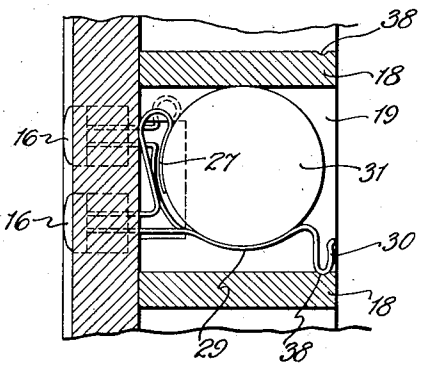
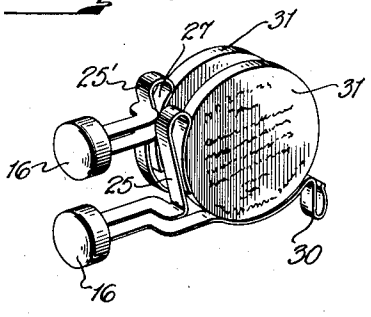


Fig. 10.



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UNITED STATES PATENT OFFICE

1,984,893

VENDING MACHINE

Jean Rinaldi, New York, N. Y.

Application April 3, 1933, Serial No. 664,262

2 Claims. (Cl. 312—46)

This invention relates to new and useful improvements in vending machines.

While the invention is adaptable to the vending of various articles, in its present embodiment it is illustrated as a machine for vending disk-like elements preferably in the form of coins upon which is carried certain reading matter. The disk-like elements may, however, be in the form of candy or of any other material.

It is an object of the invention to provide a vending machine in which the operator may at random discharge one or more of the commodities adapted to be dispensed by the machines.

It is a further object of the invention so to construct the machine that when an article has been dispensed thereby there will be a visual indication that another article cannot be dispensed by the same mechanism. This indication is maintained until the machine is again set or filled thereby insuring that at each operation the purchaser will receive an article.

The device herein illustrated is not of the coin controlled type, it being merely a mechanism for holding and discharging the articles to be vended.

Other objects of the invention will appear as the nature thereof is better understood and reference will be had to the following specification and the accompanying drawings, wherein:

Figure 1 is a perspective view of a vending apparatus constructed in accordance with the present invention,

Figure 2 is a vertical sectional view taken on the line 2—2 of Figure 1,

Figure 3 is a horizontal sectional view taken on the line 3—3 of Figure 1, the figure being partially broken away,

Figure 4 is a detail vertical sectional view on an enlarged scale,

Figure 5 is a detail vertical sectional view taken on the line 5—5 of Figure 4,

Figure 6 is a detail vertical sectional view on an enlarged scale taken on the line 6—6 of Figure 5,

Figure 7 is a horizontal fragmentary sectional view taken substantially on the line 3—3 of Figure 4 on an enlarged scale,

Figure 8 is a detail perspective view of a portion of the mechanism,

Figure 9 is a detail vertical sectional view on an enlarged scale illustrating a modified form of the invention, and;

Figure 10 is a detail perspective view illustrating that form of the invention shown in Figure 9.

In its present embodiment the device consists of a housing 10 which is preferably of rectangular form. This housing is provided with an article receiving tray 11 near its bottom and the article dispensing mechanism is so positioned that when the articles are discharged therefrom they will fall into the tray 11, at which point they are readily accessible through the front opening 12. The housing 10 has a hinged top wall 13 and this top wall is adapted to swing about its hinge 14 to provide access to the interior of the housing 10.

The article dispensing mechanism is bodily removable through the top of the housing when the hinged top wall is moved to open position, the vending mechanism being slidably mounted in front of a guide 12' which has a right angular extension 13' upon which the vending mechanism is supported when in position in the machine. It will be understood that this construction is employed at each side of the housing and permits of bodily removal of the vending mechanism in order that the articles which have been dispensed by the machine may be replaced.

The vending mechanism is preferably carried by a panel board 15 and it consists of a plurality of depressible buttons 16 mounted in recesses 17 upon the front face of the board.

Extending rearwardly from each of said buttons, there is a resilient article embracing member adapted to receive and hold the article to be vended. The buttons 16 heretofore mentioned are preferably arranged in pairs and the rear face of the panel board 15 is provided with a plurality of horizontal partitions 18 and vertical partitions 19 so arranged as to provide a plurality of compartments. There is one compartment for each resilient member and these resilient members are so arranged that when the article is mounted therein and the buttons set for operation, the resilient member and the article carried thereby will be positioned entirely within its respective compartment.

In Figure 8, I have illustrated a perspective view of one form of resilient member which I prefer.

The resilient members by reason of their offset portions occupy positions opposite to each other although the operating buttons 16 which are carried thereby and mounted upon the bent portions 20 of the resilient members are arranged one above the other.

In Figure 4, I have illustrated on an enlarged scale the manner in which this mechanism operates. It will be noted that by a reversal of the

members the hooked portion 30 of one member engages the lower partition 18 of the compartment in which it is mounted while the hooked portion 30 of the other resilient member engages the upper partition 18 of the compartment in which the mechanism is mounted, the two resilient members in each compartment being divided by the vertical partition 19 which is mounted in said compartment. In Figure 4 the reference character 31 indicates a disk-like article to be dispensed by the machine. This article rests upon the lower partition 18 and is held between said lower partition and the curve 29 of the resilient member designated A in said figure with the leg 27 of said resilient member engaging the edge of the disk-like member 31. In this manner the article to be dispensed is held within its compartment until it is desired to discharge the same. To discharge the article, the upper button 16 in Figure 4 is depressed against the action of a resilient member 35 herein illustrated as a coil spring, whereupon the resilient member is forced to the right in Figure 4 until its hooked end 30 passes by the edge of the upper partition 18 in said figure. As the resilient member assumes this position the arm 22 thereof will spring upwardly and engage the outer edge of the partition 18 releasing the hold upon the disk-like member 31 whereupon the spring leg 27 will flick the article 31 to be dispensed to the position in the space between the rear wall of the casing of the dispensing mechanism as illustrated in Figure 4. The article 31 to be dispensed, then passes downwardly to the tray 11 where it may be reached through the hand opening 12. The engagement of the hooked end 30 of the resilient member with the edge of the partition 18 will retain the button within its recess 17 thus indicating that the article to be dispensed which is controlled by said button has been discharged and that a pressing of the button will not effect the discharge of another article.

Figure 2 of the drawings illustrates the manner in which the articles 31 are carried by the other resilient member controlled by the lower button of each group. It will be noted by reference to this figure that the articles to be dispensed are retained between the upper partition and the curved portion 29 of the resilient member 22 of each resilient member. Depression of the lower button of any group will force the resilient member rearwardly and its hooked end 30 will pass downwardly around the edge of the partition below the article to be dispensed thus relieving the tension upon the article 31 and leaving it free to be flicked out from between its holder and the upper partition, by the leg 27 of the resilient member. If desired, notches 38 may be employed in the partitions 18 more securely to hold the resilient members in position when an article to be dispensed is carried thereby.

In Figures 9 and 10, I have illustrated a slightly modified form of the invention. In the form illustrated in these figures the two resilient members are not of the same construction nor are they reversed as in the heretofore described form. By reference to Figure 9 it will be apparent that the hooked portion 30 of each resilient member engages the upper face of the partition 18 above which it is mounted instead of one engaging the upper face of the lower partition and the other the lower face of the upper partition.

In this form of the invention the resilient member upon which the lower button 16 is mounted is of the same construction as the resilient members in the heretofore described form of the invention. The resilient member by which the upper button 16 is mounted is, however, slightly different in that the extension 25' thereof which corresponds to the extension 25 in the form heretofore described is considerably shorter, thus allowing for the positioning of the upper button 16 directly above the lower button 16 without reversal of the members as in the heretofore described form.

This form of the invention operates in substantially the same manner as the heretofore described form since upon pushing either of the buttons 16, the hooked portion of its resilient member will pass over the rear edge of the partition 18, thus allowing the portion 29 of the resilient member to move downwardly under the tension under which it is placed to release the article 31 to be vended, it being understood that the article 31 is held in position by engagement with the under face of the partition 18 directly above it and the portion 29 of the resilient member. When the hooked portion 30 of the resilient member passes around the rear edge of the partition 18 the resilient finger 27 of the resilient member will flick the article 31 from the compartment in the passage at the rear of the housing through which it passes to the tray 11.

From the foregoing it is apparent that the present invention provides a new and novel vending mechanism which is simple of construction and of relatively cheap manufacture and in which there are comparatively few parts to get out of order.

While the invention has been herein illustrated in its preferred forms, it is to be understood that the invention may be carried out in other forms than those herein shown and that it is therefore not to be limited to the specific illustrations herein set forth.

Having thus described the invention, what is claimed as new and what it is desired to secure by Letters Patent of the United States, is;

1. A vending apparatus comprising a housing having a compartment, a resilient member movable through said compartment and adapted when within the compartment to retain an article to be vended between itself and one wall of the compartment with the resilient means under tension, and means for moving said resilient member through the compartment to relieve the tension thereof and permit of discharge of the article to be vended.

2. A vending apparatus comprising a housing having a removable portion, said removable portion being provided with a plurality of compartments, means in each compartment and cooperating with one of the side walls thereof for holding the article to be vended between itself and the side wall of the compartment with which it cooperates, means for effecting a release of the article to be vended and means for ejecting the article to be vended upon release thereof, said last mentioned means comprising a resilient member retained under tension while the article to be vended is held between the article carrying means and the wall of the compartment with which it cooperates.

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