April 25, 1933. J. E. HARTLE, JR 1,905,169

VENDING MACHINE ATTACHMENT

Filed April 11, 1931

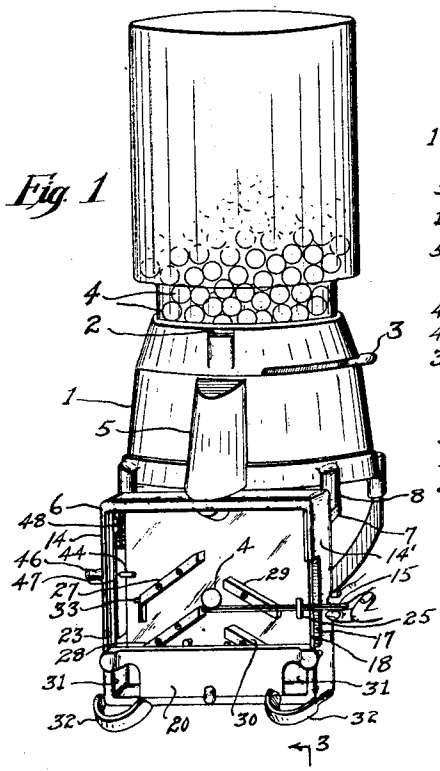


Fig. 1

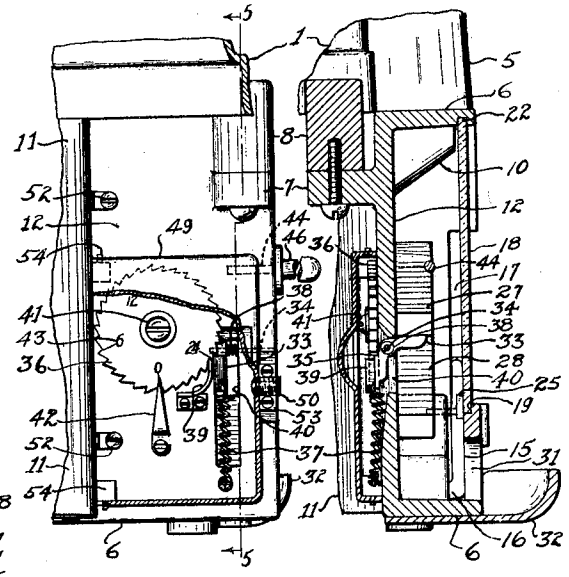


Fig 4

Fig 5

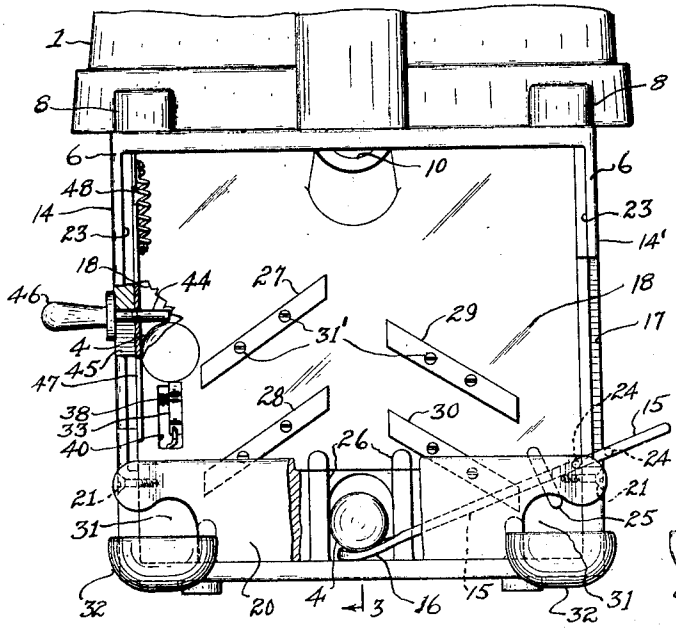


Fig. 2

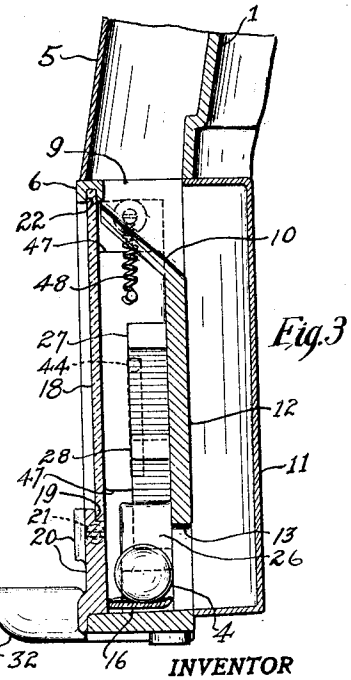


Fig. 3

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UNITED STATES PATENT OFFICE

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VENDING MACHINE ATTACHMENT

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This invention relates, generally, to vending machines; and the invention has reference, more particularly, to a novel attachment for vending machines, which attachment provides a game of skill whereby a purchaser, if skillful, can obtain a premium in addition to the article purchased.

This invention has for its principal object to provide a novel attachment for vending machines, which attachment constitutes a game of skill adapted to be played by the purchaser of an article from the vending machine, which game of skill if properly played will entitle the purchaser to a premium, thereby increasing the interest of purchasers in the vending machine and increasing the sales thereof.

Another object of the present invention lies in the provision of a novel vending machine attachment which is of simple, rugged construction, and which may be readily applied to a standard vending machine, the said attachment comprising a rectangular casing having a transparent front wall, a playing spoon behind this wall, a registering device and certain hazards, the purpose of the game being to manipulate the article purchased by means of the spoon so as to avoid the hazards and move the article purchased onto the registering device to be registered, thereby entitling the purchaser to a premium.

Still another object of the present invention is to provide a novel vending machine attachment which acts to deliver the article purchased to the purchaser, regardless of whether the article is registered or not, the said device having means for affording a permanent record of the number of premiums paid.

Other objects of this invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the same.

The invention is clearly illustrated in the accompanying drawing, in which:—

Fig. 1 is a perspective view of a vending machine equipped with the novel attachment of the present invention and illustrates the manner of using the attachment.

Fig. 2 is an enlarged view in front elevation with parts broken away of a portion of the structure shown in Fig. 1.

Fig. 3 is a sectional view taken along line 3—3 of Fig. 2 looking in the direction of the arrows.

Fig. 4 is a fragmentary view in rear elevation of a portion of the attachment structure; and

Fig. 5 is a sectional view taken along line 5—5 of Fig. 4.

Similar characters of reference are employed in all of the above described views to indicate corresponding parts.

Referring now to said drawing, the reference numeral 1 designates a vending machine of a well known type, the same having a penny or other coin slot 2 and an operating handle 3. The machine 1 is adapted to vend spherical articles 4, such as candied chewing gum and the like. In applying the novel attachment of this invention to the machine 1, the article discharge pocket at the front of the machine is preferably removed and a chute member 5 is placed over the machine discharge aperture for conveying the purchased articles discharged through this aperture to the attachment of this invention.

This novel attachment in its preferred form comprises a substantially rectangular casing 6 having a back wall 12, side walls 14 and 14′ and a top and bottom. Rearwardly directed brackets or lugs 7 are provided near the top of casing 6 for attachment, as by screws, to depending legs 8 provided on the vending machine 1. The top of the casing 6 is provided with a central aperture 9 underlying the chute 5 so that articles discharged from chute 5 fall through aperture 9 and onto a downwardly and rearwardly inclined wall or chute portion 10 formed in the casing 6. Chute portion 10 conveys the articles rearwardly to a vertical chute 11 positioned against the rear wall 12 of casing 6 and secured thereto by suitable fastening means, as by screws 52 (see Fig. 4). The rear wall 12 is provided with a central aperture 13 in its lower portion through which the articles 4 pass after being discharged from chute 11.

A spoon 15 has its bowl portion 16 normally positioned adjacent the opening 13, so that

as an article passes through this opening it will be deposited upon this bowl portion 16 of spoon 15, as illustrated in Figs. 2 and 3. The handle of spoon 15 extends outwardly through a vertical slot or opening 17 provided in the side wall 14′ of casing 6. The handle of spoon 15 is confined within slot 17 by a glass or other transparent front wall 18 provided at the forward portion of casing 6. The lower marginal edge portion of the glass plate or wall 18 is supported as in a rabbet 19 provided in a transversely extending base plate 20, which base plate 20 is removably secured to the casing 6, as by screws 21 extending through apertures in the side walls 14 and 14′ of this casing and threaded into the base plate. The upper marginal edge portion of the glass plate or wall 18 is preferably received and supported within a groove 22 provided in the casing 6. The side marginal edge portions of the glass plate or wall 18 preferably lie in rabbets 23 provided in the side walls 14 and 14′ of casing 6.

The handle of spoon 15 is preferably provided with spaced rearwardly directed projections or pins 24 which lie adjacent opposite sides of the side wall 14′ of casing 6 at slot 17 therein. Pins 24, by engaging the opposite surfaces of this side wall 14′, serve to always position the bowl portion of spoon 15 substantially at the center of the width of the casing, although this spoon bowl 16 may be raised or lowered by means of the handle of the spoon, as illustrated in Fig. 1. The handle of spoon 15 is illustrated as provided with a guard or bar 25 which extends transversely of the handle. Guard 25 by engaging the rear surface of front plate 18 is adapted to prevent the unwarranted revolving of spoon 15 and also serves to keep the bowl portion of the spoon in a horizontal position for supporting the article 4. This guard may be omitted in some instances. The casing 6 is formed with two panels or partitions 26 at the sides of the opening 13. These partitions extend forwardly from the rear wall 12 for a distance toward the base plate 20 and act to confine the articles 4 so that as the same are discharged from the vending machine they will come to rest upon the bowl portion 16 of spoon 15.

A plurality of inclined bars 27, 28, 29 and 30, providing inclined planes at their upper surfaces, are secured to the front surface of rear wall 12 of the casing 6. These inclined bars are adapted to be secured in desired adjusted position upon the rear wall 12 as by screws 21 extending through apertures in these bars and threaded into the rear wall 12. Bars 27 and 28 incline downwardly toward side wall 14 of the casing 6 and the inclined bars 29 and 30 incline downwardly toward side wall 14′ of this casing. A vertical passage is provided between the bars 27, 28 and 29, 30, which vertical passage is adapted to allow vertical movement of the article 4 by manipulating spoon 15. Sufficient space is left between bar 27 and bar 28 to receive an article 4 and likewise sufficient space is left between bars 29 and 30 to receive one of these articles.

If the article 4 is discharged from the spoon 15 so as to fall on any one of these inclined planes, it will roll down the same toward one side wall of the casing 6. If the article is deposited on the planes 28, 29 or 30, it will roll down these planes and will be immediately discharged through discharge apertures 31 provided in the base plate 30. After passing through a discharge aperture 31 it will then come to rest in one or the other of pocket members 32 positioned at the lower corners of the casing. If, however, the article 4 is deposited on the inclined plane provided by the bar 27, this article will roll down the same and come to rest upon a forwardly directed, substantially horizontally disposed arm of a bell-crank lever 33 forming a part of a registering device.

Bell-crank lever 33 is pivotally mounted upon a transverse pin 34 extending across a rectangular aperture 40 provided in the rear wall 12 and has a depending arm formed with a shoulder or pawl 35 for engaging a ratchet wheel 36 turnably mounted as on a screw 41 which is threaded into the rear wall 12. The end portions of pin 34 are fixed in apertures provided in the rear wall 12 at the sides of rectangular aperture 40. A coil spring 37 pulls downwardly upon the depending arm of bell-crank lever 33, thereby tending to hold this bell-crank lever in the position especially illustrated in Fig. 5. A coil spring 38 surrounds the pin 34 within aperture 40 and urges the bell-crank lever 33 transversely along this pin so that pawl 35 thereof is normally engaged with one of the teeth of ratchet wheel 36. A stop pawl 39 is secured to the rear surface of wall 12 and engages the ratchet wheel 36 for preventing reverse movement of ratchet wheel 36. A pointer 42 is provided on the rear wall 12 and preferably cooperates with numerals 43 printed on the ratchet wheel 36 to thereby indicate the number of tooth distances this wheel has turned through during any given period.

A transversely extending pin 44 projects inwardly through a vertical slot 45 provided in the side wall 14 of casing 6 adjacent the bell-crank lever 33. A handle 46 mounted exteriorly of the casing 6 is secured to the pin 44. A slide plate 47 is fixed upon pin 44 and is adapted to slidably engage the inner surface of the wall 14 of casing 6. A coil tension spring 48 is attached at its upper end to the upper portion of the side wall 14 of casing 6 and at its lower end to slide plate 47. Tension spring 48 urges slide plate upwardly and normally positions the handle

46 so that the pin 44 engages the upper end of slot 45 above bell-crank lever 33. An article 4, after rolling down the inclined plane of bar 27, comes to rest upon the horizontal arm of bell-crank lever 33 and is positioned just under the pin 44, as especially shown in Fig. 2.

If now the handle 46 is depressed against the tension of spring 48, the pin 44 will be depressed, thereby engaging article 4 and causing this article to move downwardly depressing bell-crank lever 33 and effecting upward turning movement of pawl 35 to move ratchet wheel 36 through the distance of one tooth. Continued downward movement of handle 46 causes the article 4 to move downwardly and off of the bell-crank lever 33 after which the article falls through opening 31 and into the pocket 32 where the same is accessible to the purchaser. As soon as the article rides off of bell-crank lever 33, spring 37 moves this bell-crank lever into its normal position especially illustrated in Fig. 5. While this bell-crank lever is returning to its normal position, coil spring 38 is compressed slightly as the pawl 35 of bell-crank lever 33 rides over the next successive tooth of ratchet wheel 36.

In use, the purchaser after putting a penny or other proper coin in slot 2, pulls upon the handle 3, whereupon the article 4 is discharged from the vending machine and is deposited upon the bowl portion 16 of spoon 15, the spoon at this time resting in the bottom of the casing 6 as illustrated in Figs. 2 and 3. The purchaser then manipulates the handle of spoon 15 with the intention of raising the article 4 and placing the same upon the inclined bar 27. This is difficult to do because it will be noted that the vertical slot 17 terminates at about the height of the top of inclined bar 27 so it is very hard for the purchaser to shift the article from the spoon and onto the inclined plane of bar 27. Ofttimes in his effort to get the article 4 onto the inclined plane 27, the purchaser will drop the article onto one of the planes 28, 29 or 30, whereupon the article is discharged immediately into one of the pockets 32. However, should the purchaser succeed in getting the article onto the inclined plane of bar 27, the same will roll down and onto the horizontal arm of bell-crank lever 33. The purchaser may then call the storekeeper's attention to the position of the article, whereupon either the storekeeper or the purchaser may depress handle 46, thereby registering the article and at the same time discharging the same through the pocket 32. The storekeeper will then give the purchaser a premium, which may be a chocolate candy bar or the like, or other prize as a reward for the skillful operation of the machine.

At the end of a given period, the number of premiums that have been given out may be determined by reading the position of ratchet wheel 36 with respect to pointer 42. In this way, the account between the storekeeper and the owner of the vending machine may be kept straight, the registering device serving as a check on the storekeeper and preventing him from collecting for more premiums than he actually gave out.

The registering device of the attachment is illustrated as covered by the locked housing 49 having a lock 50 therein which may be unlocked by use of the proper key held by the owner of the vending machine. Lock 50 is illustrated as consisting of a screw threaded through a bracket 53 attached to casing 6. This screw has a socket in its outer end for receiving a key and by turning the screw by means of the key, the same may be caused to engage or disengage a recess in housing 49 at will, thereby locking or unlocking the housing. When housing 49 is unlocked it may be bodily removed from its supporting hinge blocks 54. Use of the locked housing 49 is desirable to prevent unauthorized persons from tampering with the registering device and also gives the owner of the vending machine a positive check upon the storekeeper in that it informs the owner of the vending machine how many premiums the storekeeper has paid.

It will be noted that the novel attachment of this invention is of extremely simple construction and may be easily applied to any standard vending machine. The said attachment creates considerable interest on the part of the purchaser, thereby enhancing the sales of the machine, while at the same time providing premiums for skillful purchasers.

It will be apparent that the inclined bars 27, 28, 29 and 30 may be placed at various positions upon the rear wall 12 of the casing 6. Thus, by so varying the positions of these bars, the placing of the article 4 on inclined bar 27 may be made easier or more difficult as desired. Such adjustment of these inclined bars may be obtained by providing additional threaded holes in the rear wall 12 for receiving the screws 31′, or these bars may have slots instead of holes therein for receiving the screws 31′, thereby permitting the adjustment of the bars on the screws as will be apparent. In some instances the registering device may be omitted, in which case the novel attachment is used merely as a game, whereby a purchaser may try to get the article onto any one of the bars or upon the bar 27 and then watch the article roll down into one of the pockets 32. Of course, when the attachment is not equipped with the registering device, the handle 46 will also be omitted together with its connected slide plate 47.

As many changes could be made in the above construction and many apparently

widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:—

1. A vending machine attachment comprising, an apertured casing with a transparent front wall, a spoon having a bowl portion adapted to rest at the bottom of said casing and a handle portion extending outwardly through the aperture in said casing, chute means for conveying an article discharged from a vending machine onto the bowl portion of said spoon, a registering device mounted on said casing and having an operating arm extending into the interior of said casing for actuation by a vended article, said casing having an article discharge aperture in the lower portion thereof, and inclined members mounted within said casing, one of said members serving to convey a vended article placed thereon to said discharge aperture and another of said members serving to convey the vended article to said registering device arm.

2. A vending machine attachment comprising, an apertured casing with a transparent front wall, a spoon having a bowl portion adapted to rest at the bottom of said casing and a handle portion extending outwardly through the aperture in said casing, chute means for conveying an article discharged from a vending machine onto the bowl portion of said spoon, a registering device mounted on said casing and having an operating arm extending into the interior of said casing for actuation by a vended article, said casing having an article discharge aperture in the lower portion thereof, inclined members mounted within said casing, one of said members serving to convey a vended article placed thereon to said discharge aperture and another of said members serving to convey the vended article to said registering device arm, and means for manipulating an article while in engagement with said registering device arm for effecting an operation of said register and the discharging of the article through said discharge aperture.

3. A vending machine attachment comprising, an apertured casing with a transparent front wall, a spoon having a bowl portion within said casing and adapted to rest on the bottom of said casing, said spoon having a handle portion extending outwardly through an aperture in said casing, chute means for conveying an article discharged from a vending machine onto the bowl portion of said spoon, a registering device carried by said casing and having an operating arm projecting into the interior of said casing for actuation by a vended article, a plurality of spaced inclined bars mounted within said casing, certain of said bars being adapted to convey an article dropped from said spoon to apertures in said casing for discharge therefrom, and one of said inclined bars serving to convey the article to the operating arm of said registering device, and means for engaging the article while in contact with said registering device arm to effect an operation of the registering device and the discharge of the article through an aperture in the casing.

4. A vending machine attachment comprising, an apertured casing with a transparent front wall, a spoon having a bowl portion within said casing and adapted to rest at the center of the bottom of said casing, said spoon having a handle extending outwardly through an aperture in said casing, said handle being adapted to be manipulated to effect the raising or lowering of the bowl portion of said spoon, chute means for conveying an article discharged from a vending machine onto the bowl portion of said spoon, a registering device carried by said casing and having an operating arm projecting into the interior of said casing for actuation by a vended article, a plurality of spaced inclined bars mounted within said casing adjacent the path of movement of the bowl portion of said spoon, certain of said bars being adapted to convey an article dropped from said spoon to apertures in said casing for discharge therefrom, and one of said bars serving to convey the article onto the operating arm of said registering device, and means for engaging the article while in contact with said registering device arm to effect an operation of the registering device and the discharge of the article through an aperture in the casing.

5. A vending machine attachment comprising, an apertured casing with a transparent front wall, a spoon having a bowl portion within said casing and adapted to rest at the center of the bottom of said casing, said spoon having a handle extending outwardly through an aperture in said casing, said handle being adapted to be manipulated to effect the raising or lowering of the bowl portion of said spoon, means on said handle and engaging said casing to confine the movement of said spoon bowl portion to a substantially vertical path, chute means for conveying an article discharged from a vending machine onto the bowl portion of said spoon, a registering device carried by said casing and having an operating arm projecting into the interior of said casing for actuation by a vended article, a plurality of spaced bars contained within said casing at opposite sides of the vertical path of movement of the bowl portion of said spoon, said bars being inclined downwardly and outwardly from the path of movement of the spoon bowl portion, certain of said bars being adapted to convey an article dropped from said spoon to apertures

in said casing for discharge therefrom, and one of said bars serving to convey the article onto the operating arm of said registering device, and means for engaging the article while in contact with said registering device arm to effect an operation of the registering device and the discharge of the article through an aperture in the casing.

6. A vending machine attachment comprising, a casing having an article discharge opening and a transparent wall extending above said opening, a spoon contained within said casing, said casing having a slot in the wall thereof through which the handle of said spoon projects, chute means for conveying an article from a vending machine onto said spoon, a registering device mounted on said casing, article conveying members contained within said casing for conveying vended articles toward said discharge opening, one of said conveying members acting to deliver an article to said registering device before such article reaches said discharge opening, and means for effecting the registration and discharge of said article.

7. A vending machine attachment comprising, a casing having an article discharge opening and a transparent wall extending above said opening, a bodily movable spoon contained within said casing, said casing having a slot in the wall thereof through which the handle of said spoon projects, said handle enabling said spoon to be manually moved as a whole with respect to said casing, chute means for conveying an article vended from a vending machine onto said spoon, and article conveying members contained within said casing for conveying articles dropped from said spoon toward said discharge opening.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 26th day of March, 1931.

JACOB E. HARTLE, JR.