

July 29, 1930.

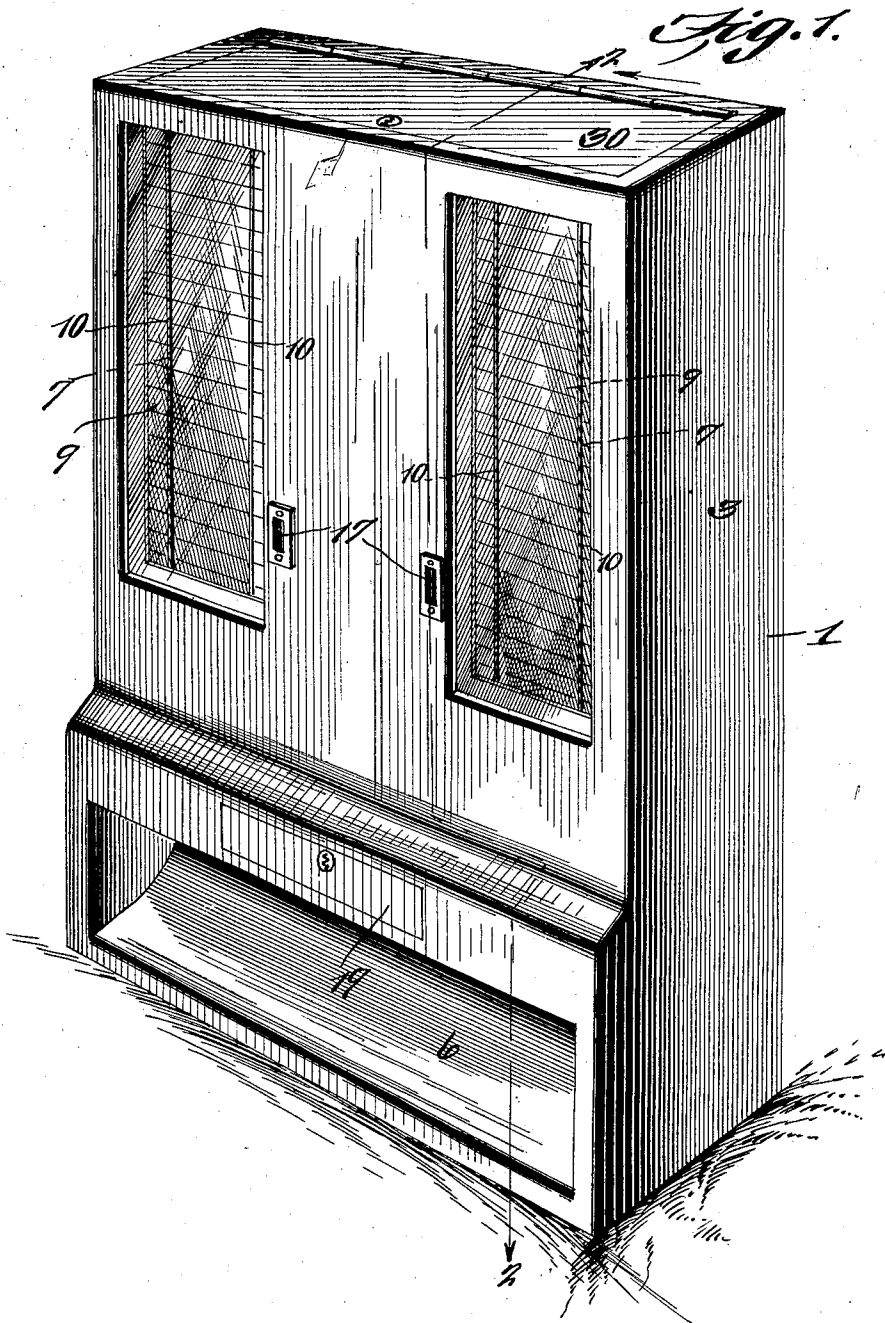
J. I. LEHRMAN

1,771,933

VENDING MACHINE OF REFRIGERATION TYPE

Filed June 28, 1929

3 Sheets-Sheet 1



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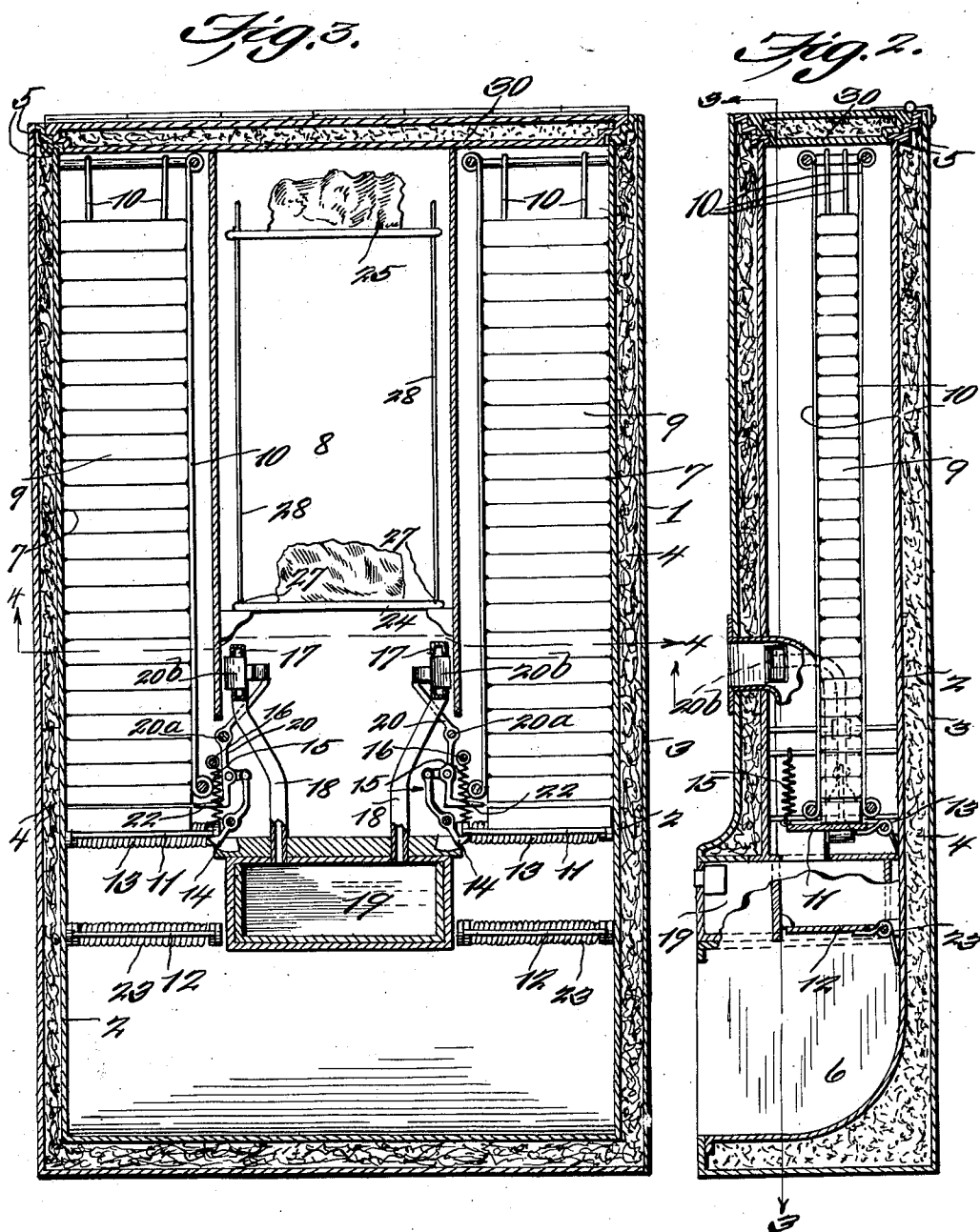
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VENDING MACHINE OF REFRIGERATION TYPE

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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

Fig. 4.

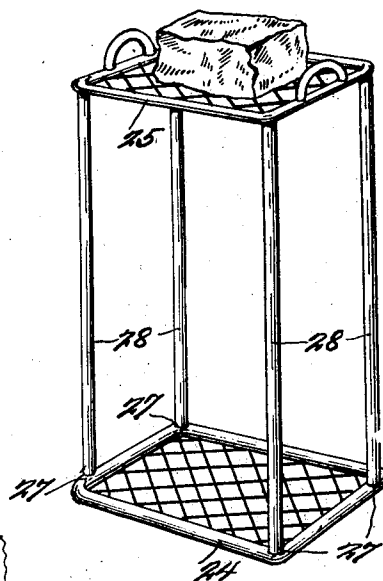
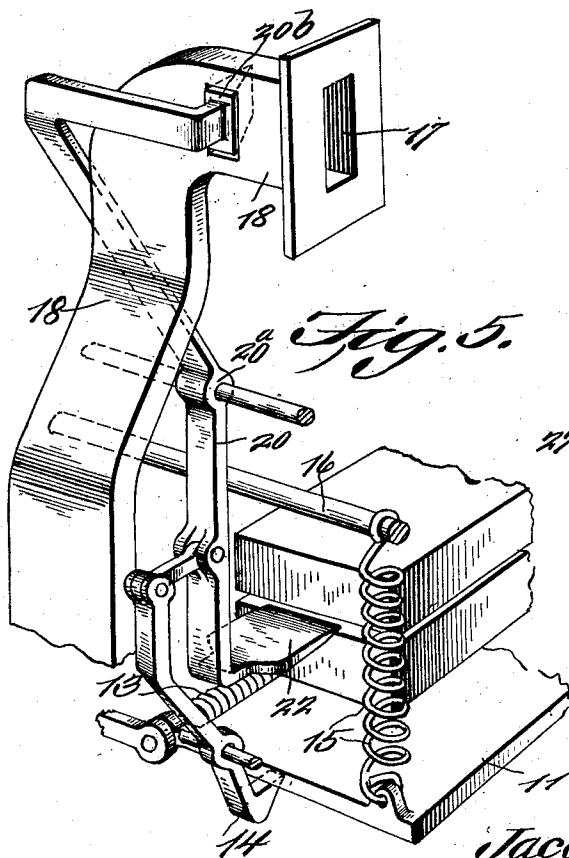
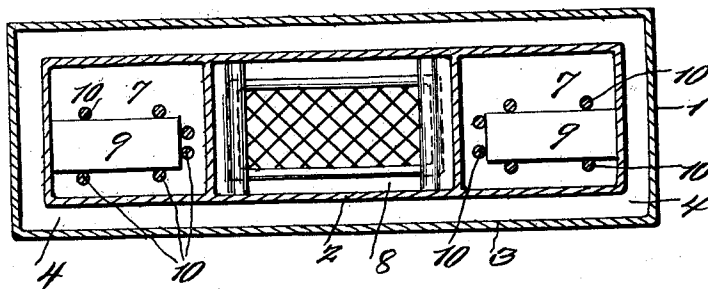


Fig. 6.

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UNITED STATES PATENT OFFICE

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VENDING MACHINE OF REFRIGERATION TYPE

Application filed June 28, 1929. Serial No. 374,563.

This invention relates to an improved vending machine, and the purpose of the invention is to provide a machine of this character adapted for vending merchandise such as coated ice cream in various forms, the machine including a refrigeration construction to keep the confection cold or rather in a frozen condition.

Another purpose is to provide a vending machine comprising a casing with compartments for the merchandise, together with a coin actuated mechanism for permitting the discharge of the merchandise one at a time, that is to say when the proper denomination of coin is deposited in the machine an article of merchandise is discharged, said mechanism including means for checking the remainder of the merchandise, when one article of merchandise is dispensed.

Another purpose of the invention is the provision of a refrigerating compartment having upper and lower shelves for the support of any suitable dry ice, preferably frozen carbon dioxide there being wires in the refrigerating compartment for the support of the shelves to insure their rigidity.

A feature of the invention consists in the provision of retaining wires to keep the merchandise in its position; the merchandise in the present instance being in the form of packages containing perishable eatables, such as frozen ice cream and the like, and it is the aim to use these wires to retain the packages one above the other uniformly, so that they can be easily and conveniently dispensed.

It is to be understood that the particulars herein given are in no way limitative, and that while still keeping within the scope of the invention, any desired modification of details and proportions may be made in the construction of the appliance according to circumstances.

The invention comprises further features and combination of parts to be hereinafter set forth, shown in the drawings and claimed.

In the drawings:—

Figure 1 is a view of the improved vending machine constructed in accordance of the invention.

Figure 2 is a vertical sectional view on line

2—2 of Figure 1, showing the mechanism to be actuated by a coin for dispensing the articles of merchandise, and also showing the refrigeration compartment.

Figure 3 is a sectional view on line 3—3 of Figure 2 more clearly showing the dispensing mechanism.

Figure 4 is a transverse sectional view on line 4—4 of Figure 3.

Figure 5 is an enlarged detailed view of the article dispensing mechanism.

Figure 6 is a detailed view of the ice supporting shelving.

Referring to the drawings, 1 identifies a cabinet which comprises inner and outer casings 2 and 3, the inner casing being slightly smaller than the outer casing and suitably spaced for the reception of an insulating material, such as a composition of cork, possibly asbestos or any other suitable material shown at 4. The inner and outer casings may be constructed of any suitable material.

The front wall of the cabinet is suitably paneled for advertisements of the kind of confection to be vended.

In constructing the cabinet the inner casing is fitted within the outer casing from the top, the top wall of the outer casing being the last part to be applied. This top wall for closing the space containing the material 4 is fastened in place by spot welding or the like as shown at 5. The insulating material between the bottom of the outer casing and the bottom of the article chute 6 being inserted prior to the insertion of the inner casing, then the space between the sides, front and back is filled with the insulating material.

The inner casing is divided into three compartments, two side compartments 7 and an intermediate compartment 8, the side compartments receiving the merchandise as identified at 9. Suitable wires 10 are stretched or otherwise mounted in the side compartments adjacent the walls of the intermediate compartment so as to retain the articles of merchandise in alignment one above the other, so that each article will be properly dispensed.

The lower ends of the side compartments are provided with super-imposed merchandise supports 11 and 12, the upper supports

11 being spring tensioned at 13 at their hinge connections, in such wise as to cause supports 11 to tilt downward, when a coin trip detent 14 is released. Springs 15 are provided connected to the supports 11 and being of sufficient tension to return the supports to their initial positions after they are allowed to drop, the springs 15 being connected to a rod 16.

The cabinet is provided with coin slots 17, from which the coin chutes 18 extend, the coin chutes communicating with a coin receptacle or box 19. The trip detents 14 are mounted adjacent the coin chutes and are associated with elements 20, which are pivoted at 20^a and have heads 20^b, located in the passages of the coin chutes, so that when a coin is deposited in the slot it will engage with the head and thereby permit the support 11 to drop. When the trip detent is actuated, it cooperates with an article retaining device 22 to keep the remaining articles from dropping.

The lower supports 12 are also spring tensioned at 23 adjacent their hinge mountings to return said supports to their initial positions. The lower supports act to support the article of merchandise in such wise as to retard its fall to some extent. However the article of merchandise after being released from the upper support 11, engages with the lower support and overcomes the tension of the spring 23, allowing the article of merchandise to drop into the article chute.

Arranged in the intermediate compartment are shelves 24 and 25, the latter being supported a substantial distance above the former. These shelves 24 and 25 are constructed of some suitable metal open work and are adapted to support dry ice, such as frozen carbon dioxide for the purpose of keeping the merchandise cold and from perishing, namely keeping the merchandise in a frozen condition.

The lower shelf is fastened at 27 to the supporting rods 28, which in turn are connected to the lower shelf. The upper shelf has handles 29, whereby the two shelves may be lifted and removed from the intermediate compartment, when the closure 30 is opened, such being the case when it is necessary to replenish the ice.

The invention having been set forth, what is claimed is:

1. A vending machine having a magazine for articles to be dispensed and provided with a coin chute for delivery of a coin into a coin box, a spring tensioned element for supporting the articles in said magazine, a detent pivotally mounted to support said member, a rocking device pivotally mounted in the vending machine casing and having one end lying across the path of the coin in the chute, and in turn operatively connected to the detent, whereby as a coin passes through the chute, it in turn operates the rocking device and with-

draws the detent from under the spring tensioned member, allowing an article to be delivered from the magazine, said rockable device having its other end provided with means for engagement between the article being delivered and an adjacent article.

2. A vending machine comprising a cabinet having a magazine for articles to be delivered, a coin chute in the cabinet and provided with a coin box, a pivoted element operatively mounted in the cabinet having a head lying across the passage of the coin chute to be engaged by a coin passing through the chute, one end of said element having means adapted to engage between an article to be delivered and a succeeding article, when the element is actuated by a coin, spring tensioned means actuated to deliver said article, a detent to support said spring tensioned means to support the article prior to being delivered, and means connecting the detent and the element, whereby as the element is actuated to retain the succeeding articles, the detent releases the spring tensioned means.

3. A vending machine comprising a cabinet having a magazine for articles to be delivered, a coin chute in the cabinet and provided with a coin box, a pivoted element operatively mounted in the cabinet having a head lying across the passage of the coin chute to be engaged by a coin passing through the chute, one end of said element having means adapted to engage between an article to be delivered and a succeeding article, when the element is actuated by a coin, spring tensioned means actuated to deliver said article, a detent to support said spring tensioned means to support the article prior to being delivered, and means connecting the detent and the element, whereby as the element is actuated to retain the succeeding articles, the detent releases the spring tensioned means, and means to return the spring tensioned means to its initial article supporting position, whereby the detent may again engage with the spring tensioned means.

4. A vending machine comprising a cabinet having a magazine for the reception of articles to be dispensed, a coin chute having a coin box in the cabinet, an oscillatory element mounted in the cabinet and having means at one end positioned across the path of a coin, means at the other end of the element adapted to engage between an article to be delivered and a succeeding article when the element is actuated, means spring tensioned to deliver an article, a detent operatively engaged with said spring tensioned means to support the article prior to its delivery, and a connection between the detent and the element, whereby as the means at one end of the element engages between an article to be delivered and a succeeding article,

said detent releases the spring tensioned means allowing the article to be delivered.

5. A vending machine comprising a cabinet having a magazine for the reception of articles to be dispensed, a coin chute having a coin box in the cabinet, an oscillatory element mounted in the cabinet and having means at one end positioned across the path of a coin, means at the other end of the element adapted to engage between an article to be delivered and a succeeding article when the element is actuated, means spring tensioned to deliver an article, a detent operatively engaged with said spring tensioned means to support the article prior to its delivery, and a connection between the detent and the element, whereby as the means at one end of the element engages between an article to be delivered and a succeeding article, said detent releases the spring tensioned means allowing the article to be delivered, and spring means to overcome the spring tensioned means to return it to its initial holding position.

In testimony whereof he affixes his signature.

JACOB I. LEHRMAN.

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