Oct. 15, 1940. G. S. VINEYARD 2,218,444

MERCHANDISE DISPENSER

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Fig.1

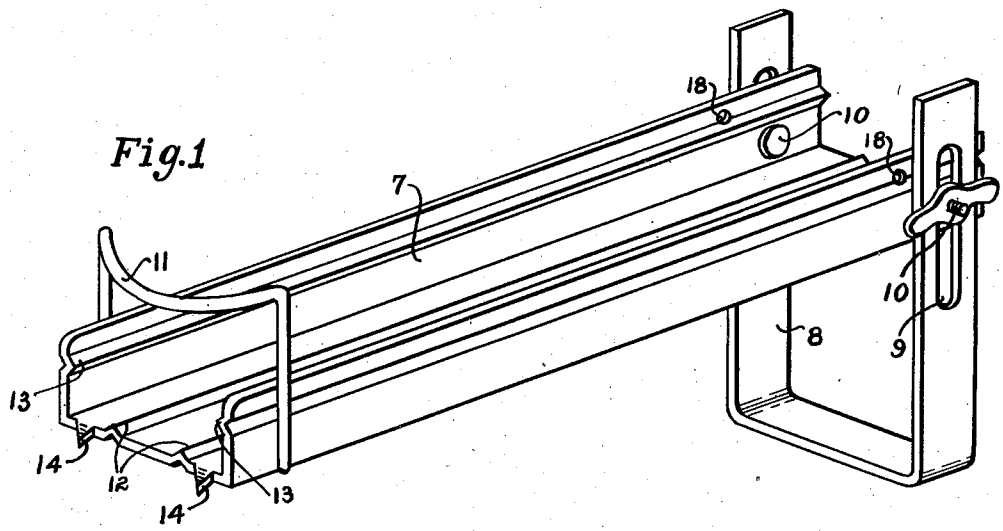


Fig.2

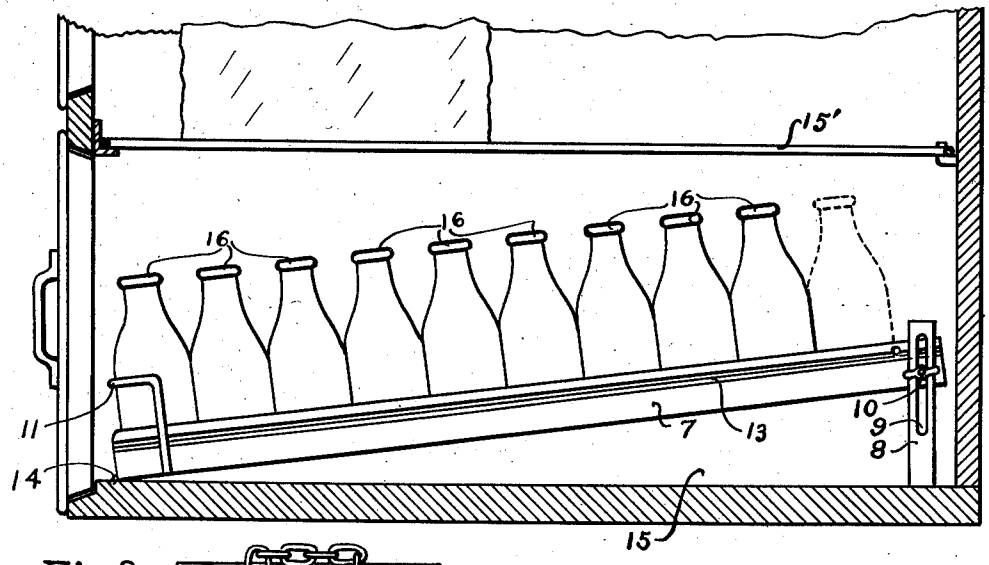
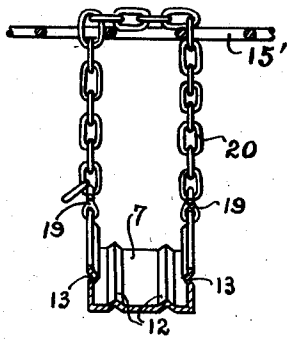


Fig.3



INVENTOR.
George S. Vineyard
BY J. Preston Sweeten
his ATTORNEY.

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Fig.4

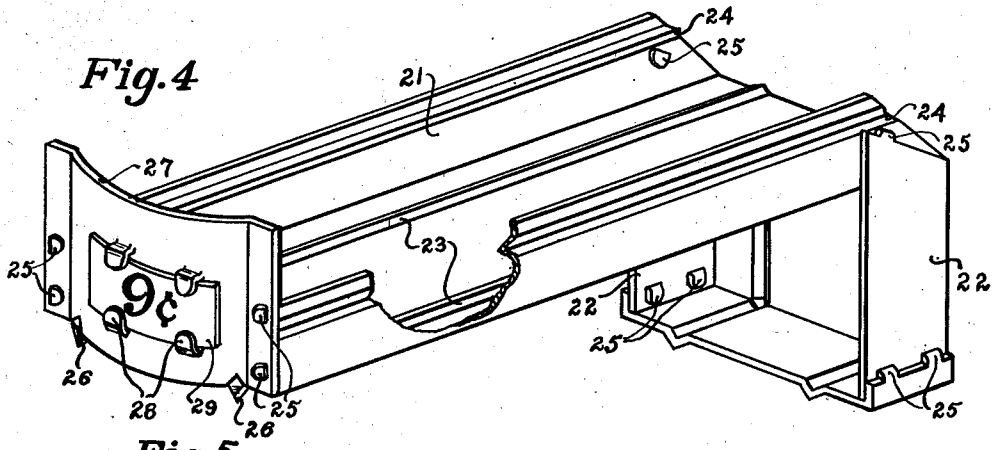


Fig.5

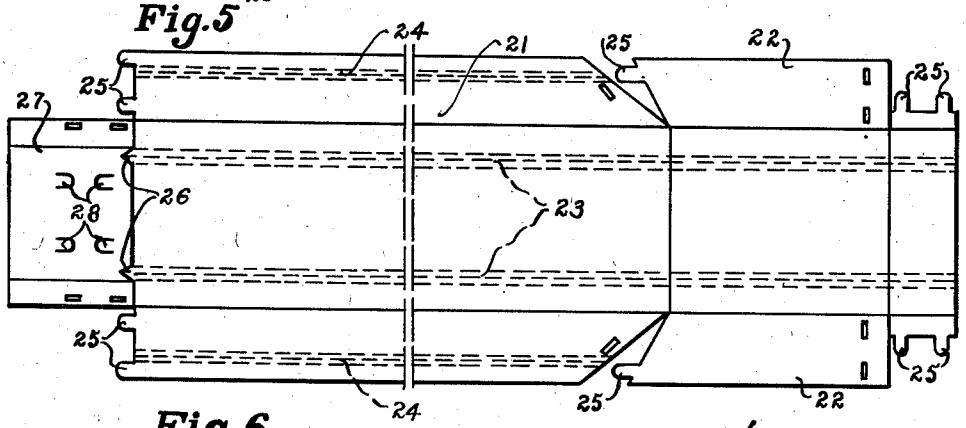
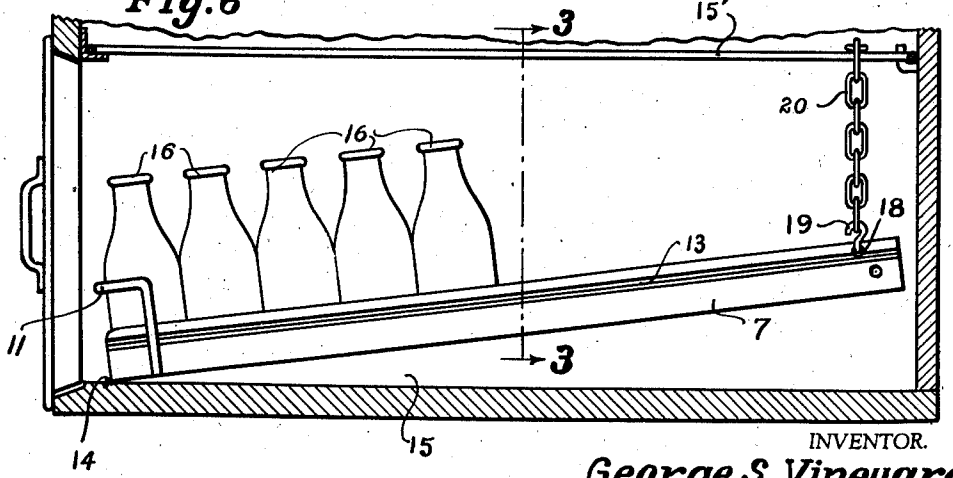


Fig.6



INVENTOR.

George S. Vineyard

BY

ATTORNEY.

Patented Oct. 15, 1940 2,218,444

UNITED STATES PATENT OFFICE

2,218,444

MERCHANDISE DISPENSER

George S. Vineyard, Amarillo, Tex.

Application April 11, 1938, Serial No. 201,445

7 Claims. (Cl. 211—49)

This invention relates to an improvement in dispensing merchandise, and more particularly to the dispensing of bottled milk or other bottled goods from refrigerator compartments, and the like.

When placed in a compartment of a refrigerator, bottled milk becomes somewhat inaccessible after the first few bottles have been removed from the front of the compartment. This is particularly true of a compartment near the floor and of other compartments having relatively little space between the tops of the bottles and the shelf next above.

The present invention overcomes all of these disadvantages in dispensing milk from refrigerated compartments, inasmuch as the milk is placed in an inclined chute, placed with the front lower end just inside the refrigerator door, and as the foremost bottle is removed the other bottles in the chute slide gently forward successively, thus providing bottles at the forward end of the chute until the latter is emptied.

This dispensing chute may be supported on legs to set on the floor of the refrigerator compartment or it may be suspended by means of a chain from the shelf above to provide a gentle incline, so that the bottles will slide gently forward as the foremost bottle is removed.

It is to be understood that while the drawings illustrate a preferred embodiment of this invention, with modifications thereof, but the device may be used for dispensing any type of merchandise for which it is adapted and that the design may be varied to meet particular needs and requirements, within the scope of the appended claims without departing from the spirit thereof.

In the accompanying drawings:

Fig. 1 is a perspective view of a preferred embodiment of the invention showing a stand which allows for varying the inclination of the dispenser;

Fig. 2 is a fragmentary vertical sectional view of a refrigerator showing the dispensing unit installed in the lower compartment thereof;

Fig. 3 is a vertical cross-section through the trough showing a modified form of support therefor, substantially on the line 3—3 of Fig. 6;

Fig. 4 is a perspective view of a one-piece modified form of trough with a portion broken away to show the construction;

Fig. 5 is a plan view of the blank for forming said trough; and

Fig. 6 is a longitudinal sectional view of the lower portion of a refrigerator showing the modified form of support.

With more detailed reference to Fig. 1 of the drawings, the numeral 7 represents a trough or chute which is held in elevated position at one end by means of an adjustable support 8. The support 8 is preferably U-shaped with the sides thereof embracing an end of the trough 7 and provided with slots 9 therein to receive bolts 10 for adjusting said end to the proper operating level and to hold the trough in the desired adjusted position. The trough 7 is preferably a long chute having indented ribs 12 in the bottom thereof, and similar ribs 13 in the sides thereof, to receive and guide bottles or the like standing in the trough and placed upon ribs 12, which ribs 12 and 13 are preferably of V-formation so as to reduce the friction between the bottles and the ribs. The ribs 12 form tracks for the bottles, while the ribs 13, being in the sides, form guides therefor. This construction allows a minimum amount of friction and permits the bottles to slide freely but gently forward along the trough with a very small incline thereof.

A guard 11 extends transversely across the forward end of the trough, being curved transversely thereof, to form a stop for the bottles. To prevent the trough from slipping out of place in the refrigerator compartment, prongs 14 are provided on the forward end thereof to engage the bottom of the compartment and thus hold the trough in proper dispensing position.

Fig. 2 shows the device installed in a refrigerator compartment designated generally by the numeral 15, with the bottles of milk 16 positioned in the trough or chute. Frequently bottles of milk are placed in a bottom compartment of a refrigerator where they are inaccessible, especially at the back thereof. By providing this improved chute therefor and inclined sufficiently for forward sliding of the bottles therein, the bottles will be accessible always at the front of the compartment. The dotted outline of the uppermost bottle shows how the bottles will slide downward as the foremost one is removed.

The trough may be provided with holes 18 in the sides thereof to receive hooks or links 19 for engaging a chain 20 which makes it possible to suspend the device from the shelf 15' of the refrigerator by extending over portions of the shelf, as shown in Fig. 3. In this manner the device may be used in a refrigerator even though the bottom is uneven or where the bottom of the compartment is insecure and it is desired to support the trough from above.

The modified form of chute, shown in Figs. 4 and 5, is quite similar to that shown in Fig. 1, ex-

cept that the entire structure, including the stand, is stamped from one piece of material, preferably sheet metal, having the trough **21** integral with the non-adjustable legs, **22**. The tracks **23** are provided, preferably of V-formation, as are the side guides **24** to reduce the friction to a minimum, as described above. The parts may be fastened together in any desired manner, but ears **25** are preferably provided, as shown, extending through slots and flattened down forming cleats, which permit the device to be built without soldering or welding.

Prongs **26** are also formed from the material to provide anti-slipping engagement. The end wall **27** is turned up to form a stop at the forward end of the trough and has struck-out tabs **28** to hold a price tag **29**.

I claim:

1. A dispenser comprising an elongated trough having a bottom and upstanding sides with lengthwise extending ribs indented in the bottom and sides thereof, prongs formed on the forward end of the bottom in positions to engage in a supporting surface, a guard attached to the sides at the last mentioned end and extending transversely of the trough in position to form a barrier for articles therein, and a substantially U-shaped stand having the sides thereof connected with the sides of the trough at the opposite end thereof for supporting the trough in an inclined position for downward sliding movement of articles therein by gravity.

2. A bottle dispenser comprising an elongated chute having a bottom constructed of sheet metal with upstanding longitudinal indented ribs adjacent apposite sides thereof on which the bottles are adapted to be supported, said chute having side rails extending along opposite sides thereof spaced laterally from the ribs, a front guard attached at its opposite ends to the side rails and extending transversely therebetween at the front end of the chute, and a support at the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the bottles in the trough by gravity.

3. A bottle dispenser comprising an elongated chute having a bottom constructed of sheet metal with integral upturned opposite sides at opposite edges of said bottom, said bottom and sides having longitudinal indented ribs therein for guiding the bottles, a front guard attached at its opposite ends to the side walls and extending transversely therebetween at the front end of the chute, and a support at the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the bottles in the trough by gravity.

4. An article dispenser comprising an elongated chute having a bottom constructed of sheet metal with upstanding longitudinal indented ribs adjacent opposite sides thereof adapted to receive articles, said chute having side walls extending along opposite sides thereof spaced laterally from the ribs, a front guard attached at its opposite ends to the sidewalls and extending transversely therebetween at the front end of chute, and a support secured beneath the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the articles in the trough by gravity.

5. An article dispenser comprising an elongated chute having a bottom constructed of sheet metal with upstanding longitudinal indented ribs adjacent opposite sides thereof adapted to receive articles, said chute having side walls extending along opposite sides thereof spaced laterally from the ribs, a front guard attached at its opposite ends to the side walls and extending transversely therebetween at the front end of the chute, and a support secured beneath the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the articles in the trough by gravity, and prongs secured to the front end of the bottom in positions to engage in a supporting surface.

6. A bottle dispenser comprising an elongated chute having a bottom constructed of sheet metal with upstanding longitudinal indented ribs adjacent opposite sides thereof on which the bottles are adapted to be supported, said chute having side rails extending along opposite sides thereof spaced laterally from the ribs, a front guard attached at its opposite ends to the side rails and extending transversely therebetween at the front end of the chute, a support at the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the bottles in the trough by gravity, and prongs secured to the front end of the bottom in positions to engage in a supporting surface.

7. An article dispenser comprising an elongated chute having a bottom constructed of sheet metal with upstanding longitudinal indented ribs adjacent opposite sides thereof adapted to receive articles, said chute having side walls extending along opposite sides thereof spaced laterally from the ribs, and an end wall integral with the bottom and attached at its opposite ends to the side walls and extending transversely therebetween at the front end of the chute, and a support at the rear end of the chute holding said rear end in an elevated position relative to the front end for downward sliding movement of the articles in the trough.

GEORGE S. VINEYARD.