Dec. 26, 1933. H. H. McKEE ET AL 1,940,722

VENDING DEVICE

Original Filed Aug. 22, 1929 2 Sheets-Sheet 1

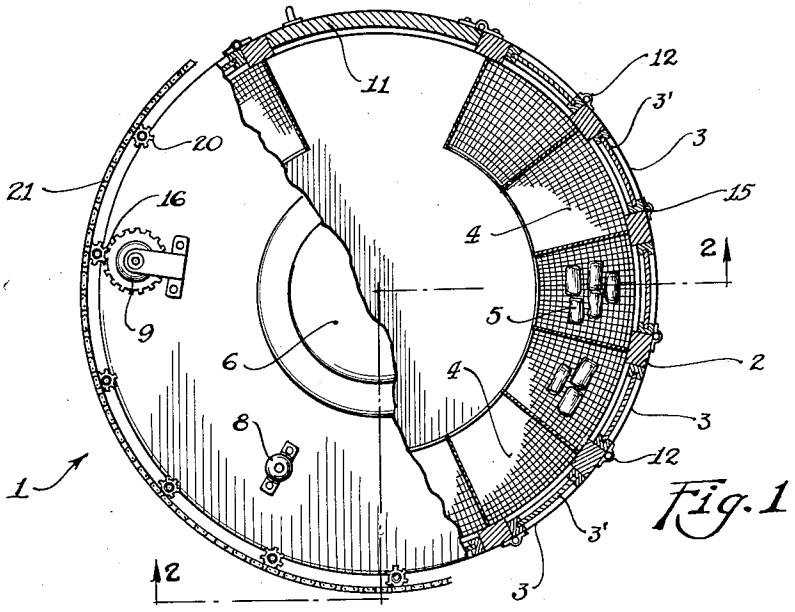


Fig. 1

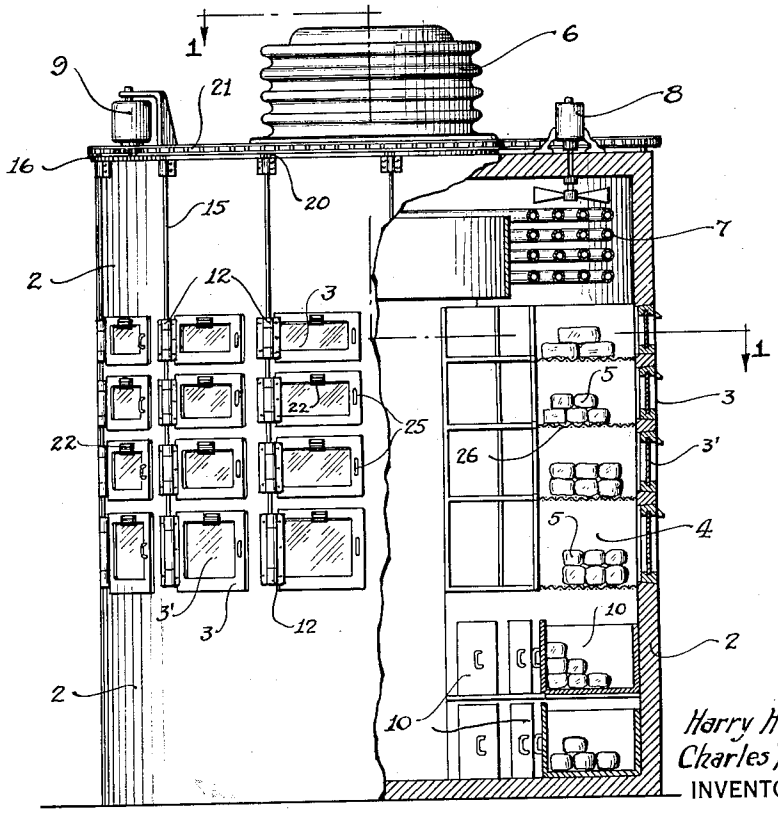


Fig. 2

Harry Henry McKee
Charles Taylor Walter
INVENTOR

BY Fay W. Johns
ATTORNEY

WITNESS -
Wm C. Meiser

Dec. 26, 1933. H. H. McKEE ET AL 1,940,722

VENDING DEVICE

Original Filed Aug. 22, 1929 2 Sheets-Sheet 2

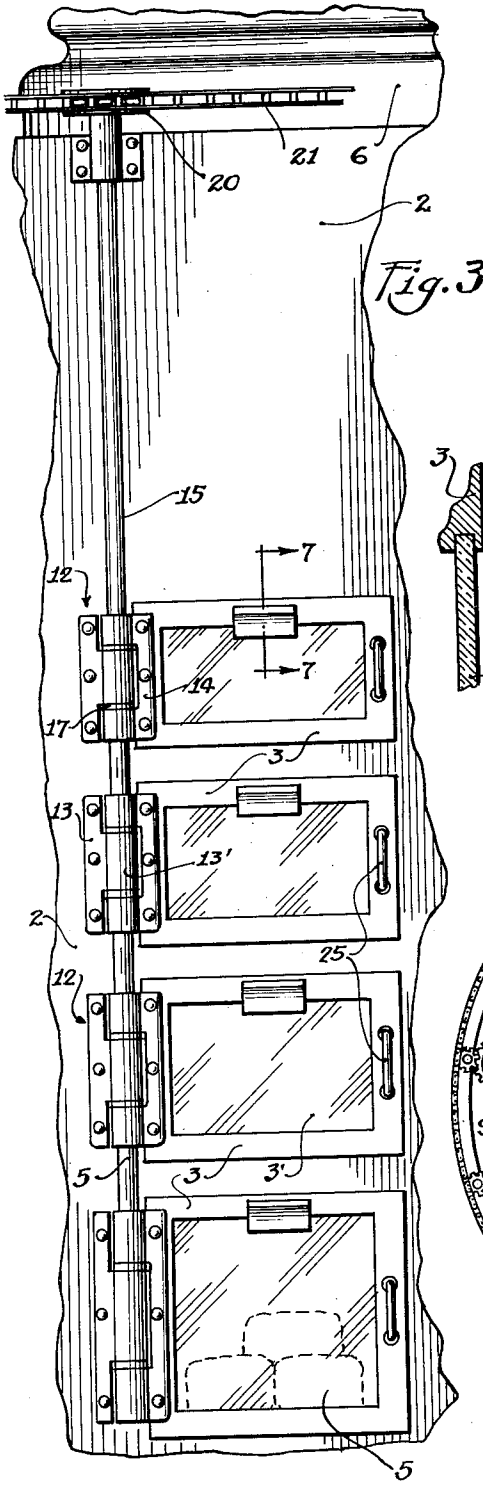
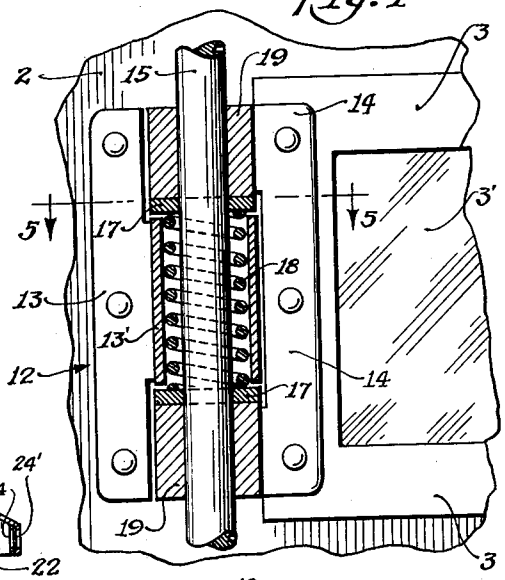


Fig. 3

Fig. 4



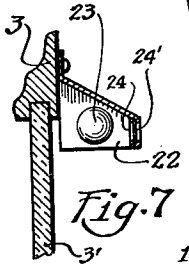


Fig. 7

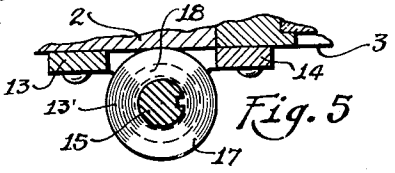


Fig. 5

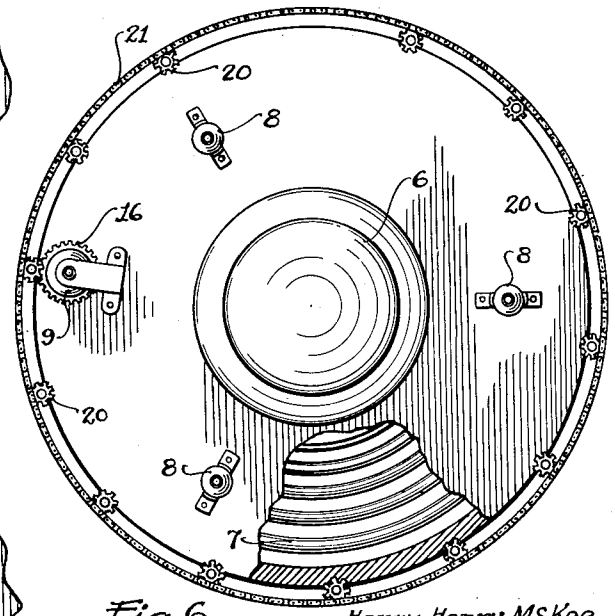


Fig. 6

WITNESS
Wm. C. Meiser

Harry Henry McKee
Charles Taylor Walter
INVENTORS
BY Thos. W. Johns
ATTORNEY

Patented Dec. 26, 1933

1,940,722

UNITED STATES PATENT OFFICE

1,940,722

VENDING DEVICE

Harry H. McKee and Charles T. Walter, Chicago, Ill., assignors, by mesne assignments, to Industrial Patents Corporation, Chicago, Ill., a corporation of Delaware

Original application August 22, 1929, Serial No. 387,614, now Patent No. 1,837,625. Divided and this application November 9, 1931. Serial No. 573,886

6 Claims. (Cl. 62—102)

This invention relates to means for retail merchandising and is directed especially to a refrigerated vending device.

This application is a division of our application entitled "Vending method and device," Serial Number 387,614, filed August 22, 1929 and which has matured into Patent No. 1,837,625, granted December 22, 1931.

The main objects of the invention are to provide a refrigerating and dispensing device adapted to assure proper temperature control of the meat and also facilitate rapid and economical dispensing of the meats either in standardized prewrapped packages or in locally prepared packages and to provide such a device adapted to accommodate self-service as well as personal service by the retailer or his clerks, with respect to goods not adapted for standardized package merchandising or pre-wrapping.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which:

Figure 1 is a plan of a vertically disposed cylindrical dispensing fixture, part of which is broken away on the line 1—1 of Fig. 2.

Fig. 2 is mainly a front elevation of the device of Fig. 1 with the right hand part shown in vertical section on the line 2—2 or Fig. 1.

Fig. 3 is a greatly enlarged front elevation of a limited portion of the device shown in Figs. 1 and 2.

Fig. 4 is an enlarged detail partly in section showing one of the automatic door closing, power-operated friction hinges.

Fig. 5 is a section on the line 5—5 of Fig. 4.

Fig. 6 is a plan substantially similar to Fig. 1 except that only a small part of the casing is removed to show the refrigerating coils.

Fig. 7 is a vertical section taken on line 7—7 of Fig. 3.

In the construction shown in the drawings the store fixture or vending cabinet is of upright, cylindrical shape, and comprises mainly a combined frame and wall part or shell 2, having dispensing doors 3 therein, compartments 4 to receive the goods 5 from which the customers are to select, a refrigerating device 6, refrigerating coils 7 connected thereto, power operated fans 8 to circulate the air in said fixture, automatic means driven by a motor 9 to close the doors 3, storage receptacles 10 to receive supplies of goods in quantity from the packers and a door 11 to admit an attendant.

In using this device the drawers 10 are replenished from time to time, as for instance daily. The wholesaler or packing house agent delivers pre-wrapped package goods and also meat in bulk if desired, into the compartments 10. Then the local attendant or clerk, who may be stationed either continuously or periodically within the central compartment transfers goods from the drawers 10 to the compartments 4 from time to time, according to the rate at which they are dispensed to customers, and so that the retailing compartments may never become entirely empty.

In order to supply the needs of customers desiring meats which are not adapted for pre-cutting or standardized package use, a chopping block or cutting table and other necessary equipment (not shown) may be supplied for use by the attendant or clerk in charge of the device.

This may be located either adjoining the device, or within those having a large sized cabinet. It is intended that such special orders may be conveniently filled by such attendant from appropriate stock in certain of the drawers 10, in which the goods are of the same general kind selected by the customer and shown in the corresponding display part of the device.

The automatic doors 3 are carried by hinges 12, each of special friction design and connected with the source of power 9. The construction of the hinges is illustrated in Figs. 3, 4, and 5. The hinge here shown comprises two leaves 13 and 14, one being fixed to the shell 2 and the other to the door 3. All of the hinges for a vertical line of doors have a common pintle shaft 15 which is connected through a common drive connecting chain and a reducing gear mechanism 16 to said motor 9. Each hinge includes a pair of washers 17, keyed to the shaft 15, and a helical compression spring 18 bearing against said washers, whereby the latter are held frictionally against the inner sides of the two arms 19 of the movable hinge leaf 14. The pintle shafts 15 are all caused to rotate in a direction to close the doors 3, as, for example, in a counter-clockwise direction as viewed from the top. The hinge leaf 13 has a sleeve part 13' which encloses the pintle shaft 15 and spring 18.

Each shaft 15 is provided at its top with a gear 20 fixed thereon and these gears are all connected by a driving chain 21 which in turn is driven by motor 9 through said reducing gear.

Each door 3 includes a glass panel 3' through which the goods may be inspected. In order to assure adequate illumination of the goods, each door is provided on its upper edge with a lamp fixture 22 having a lamp 23, a reflector 24, and also preferably having a display portion 24'

adapted to receive an appropriate title or legend describing the goods.

When a customer has inspected the goods and finds what he desires in the display, he grasps one of the door handles 25 and pulls open the corresponding door 3, whereupon he may readily take one or more packages which may be placed in a basket or other receptacle, such as used in self-service stores. Before leaving the store the purchaser passes a checker and cashier, where payment or adjustment is made for the purchases.

As soon as the door 3 is released by the customer, it is automatically closed gradually, by the continuously rotating shaft 15, slowly enough to avoid slamming, but with sufficient speed to prevent too much change of temperature within the compartment 4.

The fans 8 drive chilled air downward from the overlying coils 7 through the display sections 4, which have mesh bottoms 26, whereby the meats are maintained at a uniform constant predetermined temperature.

Although but one general embodiment of the device comprised by this invention is actually shown, it will be understood that details both as to the method and means for carrying out the invention, may be modified or omitted without departing from the spirit of this invention as defined by the following claims.

We claim:

1. A self-service vending device comprising a housing provided with a plurality of groups of dispensing compartments to receive the goods, the compartments of each group being arranged in a vertical series and provided at the front with doors located at the walls of the cabinet and having transparent portions to expose and permit visual inspection of the goods and removal of the same, and a common refrigerating device adapted and arranged to maintain the goods in each of the dispensing compartments in a refrigerated condition and at a substantially uniform temperature, said housing providing an attendant-receiving compartment which is provided with a main entrance door, from which attendant-receiving compartment an attendant can replenish the goods in the dispensing compartments.

2. A self-service vending device comprising a housing provided with a plurality of groups of dispensing compartments to receive the goods, the compartments of each group being arranged in a vertical series and having foraminous bottoms and provided at the front with doors located at the walls of the cabinet and having transparent portions to permit visual inspection of the goods and removal of the same, with an attendant-receiving compartment having a main entrance door and which attendant-receiving compartment can be employed as a place from which to replenish goods supplied to the dispensing compartments by an attendant while within the attendant-receiving compartment, and with a common refrigerating device located above the compartments and provided with means for forcing currents of cold air downwardly through the foraminous bottoms of the compartments to maintain the goods in each compartment of all of the groups in a refrigerated condition and at substantially a uniform temperature, which air is returned to the common refrigerating device by flowing into and thence upwardly within the attendant-receiving compartment.

3. A self-service vending device comprising a housing provided with a plurality of groups of dispensing compartments to receive the goods, the compartments of each group being arranged in a vertical series and having foraminous bottoms and provided with doors located at the walls of the cabinet and having transparent portions to expose the goods to view, with storage receiving spaces below the dispensing compartments, with an attendant-receiving compartment from which access is had to the rear of the storage spaces and to the rear of the dispensing compartments, with a common refrigerating device having coils located above the groups of compartments, and with a plurality of fans arranged to force currents of air over the coils and through the foraminous bottoms of the dispensing compartments to maintain the contents thereof in a refrigerated condition and at a substantially uniform temperature, the arrangement being such that the air employed for cooling is returned to the common refrigerating device through the attendant-receiving compartment.

4. A self-service vending device comprising a substantially cylindrical housing provided with a plurality of groups of dispensing compartments to receive the goods, the compartments of each group being arranged in a vertical series and having foraminous bottoms and provided with doors located at the walls of the cabinet and having transparent portions to expose the contents of the compartments to view, with a centrally located attendant-receiving compartment to which access is through a door closed main entrance, with storage spaces below the dispensing compartments, the construction being such that the dispensing compartments and the storage spaces are accessible from the central attendant-receiving compartment, with a common refrigerating device having circular coils located above the groups of compartments, and with a plurality of fans arranged to force currents of air over the coils and through the foraminous bottoms of the compartments to maintain the contents thereof in a refrigerated condition and at a substantially uniform temperature, the arrangement being such that the air is returned upwardly through the central attendant-receiving compartment to the common refrigerating device.

5. A self service vending device or cabinet of upright cylindrical shape comprising a housing or shell having dispensing compartments with door openings closed in the front of each, which dispensing compartments are in side by side group arrangement with the compartments in each group arranged one above the other, storage spaces below said dispensing compartments and a central attendant-receiving space access to which is obtained by a main entrance normally closed by a door constituting a part of the housing or shell, the arrangement being such that an attendant when in said central space can replenish from the storage spaces articles to be dispensed from the dispensing compartments.

6. A self service vending device constructed as defined in and by claim 5 and in which device there is refrigerating means for effecting cooling of air and which cooled air passes downwardly for effecting cooling of articles within the dispensing compartments then into the central attendant-receiving space and upwardly through the attendant-receiving space to the place where cooling thereof by the refrigerating means takes place preparatory to recirculation.

HARRY H. McKEE.
CHARLES T. WALTER.