Oct. 18, 1932. G. J. TILTON 1,883,833

SHELF DEVICE FOR REFRIGERATOR CABINETS

Filed Sept. 4, 1931

Fig.1

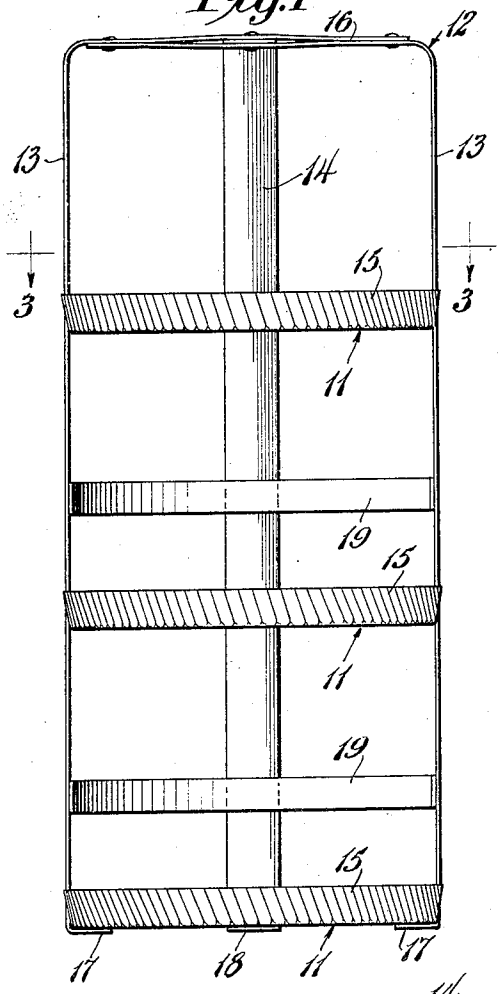
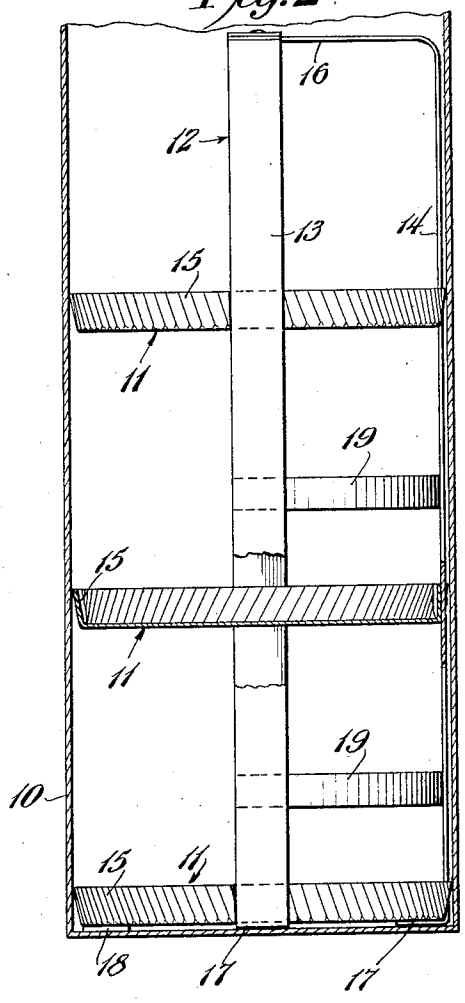


Fig.2



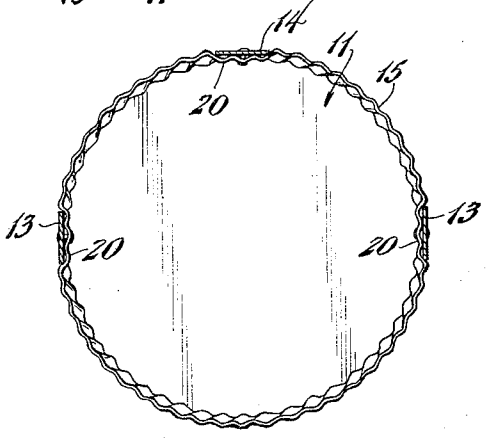


Fig.3

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UNITED STATES PATENT OFFICE

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SHELF DEVICE FOR REFRIGERATOR CABINETS

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This invention relates to shelf devices and aims to provide an improved multiple shelf structure especially adapted to be inserted in the well of a refrigerator cabinet and having means to prevent it from freezing in the well.

Other aims and advantages of the invention will appear in the specification when taken in connection with the accompanying drawing, wherein:—

Fig. 1 is a front elevation of a device embodying the invention;

Fig. 2 is a side elevation of the device shown in position in the well of a cabinet, the well being shown in section; and

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1.

In storing ice cream packages and other frozen confections for retail trade, the packages are generally stacked or piled in layers in the wells of refrigerator cabinets. Heretofore, confections of various kinds and flavors have been stored in the same well, often necessitating the removal of many packages before the particular kind and flavor of confection is located. Frequently it is at the bottom of the well. This procedure not only requires considerable time but exposes the packages removed and also the interior of the well to room temperature. Thus the refrigerator machinery must run more frequently to maintain the necessary low temperature in the cabinet.

The present invention provides a device comprising a plurality of spaced shelves connected to form a unit and adapted to contain packaged confections of various kinds and flavors. The unit is constructed and arranged to be inserted in a well so that, whenever a particular package is desired, the unit may be raised from the well until the shelf containing the desired package is exposed above the top of the well. The package may then be quickly removed and the device returned to its position in the well.

Referring particularly to the drawing, the device is there shown in connection with a cylindrical well 10 although it may be made to fit wells of other shapes. Herein, the device is shown as comprising a plurality of pan-shaped shelves 11 secured in spaced relation in a frame 12. The frame and the shelves are preferably formed of sheet metal. The frame is here shown as comprising side and rear supporting members or uprights 13 and 14 respectively, which are secured to the upstanding flanges 15 on the shelves. The upper ends of the supporting members 13 and 14 are bent inwardly and secured together to form a lifting handle 16 and the lower ends are bent under the bottom shelf to provide feet 17 at the sides and rear of the device. To provide a foot at the front, a small piece of sheet metal 18 may be secured to the bottom of the lowest shelf. Thus, the bottom shelf is prevented from freezing and sticking to the bottom of the well. To prevent articles from falling off the shelves, semi-circular sheet metal straps 19 may be secured to the inside of the supporting members between the shelves.

In order that the device may be readily removed from the well, the shelf flanges 15 are shown as being flared outwardly and corrugated, the corrugations being at a slight angle to the vertical. These corrugations provide a series of cutting teeth, so that as the device is raised, they will scrape off the frost which accumulates on the walls of the well. The cutting teeth provided by the corrugations extend radially beyond the outer faces of the uprights 13 and serve to space the uprights from the wall of the well thereby minimizing the danger of the uprights being frozen in the well. In this instance, the corrugations are formed at an angle to the vertical so that the teeth formed thereby have a tendency to take shear cuts. In this example the flanges 15 are shown as being bent or offset inwardly where they are secured to the supporting members, as at 20, so that the corrugations on each side of the supporting members project beyond them. Thus, the upper edges of the flanges and the feet 17 and 18 are the only parts of the device which actually contact with the walls or bottom of the well.

When filling the device, each shelf may be stacked or filled with one or more flavors of confection, so that when a particular kind

of confection is wanted, it is only necessary to grasp the handle 16 and raise the device until the shelf on which the desired package is located can be reached. The package is readily removed through the front of the device. Each time the device is raised, the frost on the walls of the well is removed by the corrugated flanges 15.

From the foregoing description, it will be seen that the improved shelf device may be easily and cheaply manufactured in various shapes and sizes to fit wells of different sizes. Its construction permits of easy cleaning both of itself and the well. Moreover, by providing the flanges with corrugations, the shelves may be made as large as the well so that practically all the space in the well may be utilized.

Obviously, the present invention is not restricted to the particular embodiment thereof herein shown and described.

What I claim is:—

1. A shelf device comprising, in combination, a plurality of vertical supporting members having their upper ends bent inwardly and secured together; a plurality of spaced shelves between the supporting members and secured thereto; and upwardly and outwardly bent corrugated flanges on the shelves, said flanges having inwardly offset portions to receive the supporting members.

2. In combination with the well of a refrigerator cabinet; a shelf device adapted to be removably positioned therein, said device comprising side and rear supporting members; a plurality of spaced sheet metal shelves; upwardly and outwardly inclined corrugated flanges on the shelves, the upper edges of said flanges being of such size as to fit snugly in the well and scrape off accumulated frost on the walls as the device is raised.

3. A shelf device comprising, in combination, an upright frame; a plurality of sheet metal shelves secured in the frame; said shelves having outwardly and upwardly flared flanges; and cutting teeth formed on the flanges at the upper edges thereof.

4. In combination with a cylindrical well of a refrigerator cabinet; a removable shelf device in the well comprising a plurality of vertical supporting members slightly spaced from the walls of the well; a plurality of circular shelves mounted between the supporting members; and upstanding flanges on the shelves having upper cutting edges extending beyond the supporting members whereby to prevent the supporting members from coming in contact with the wall of the well and to scrape accumulated ice or frost from the wall as the device is lifted out.

5. A multiple shelf unit for refrigerator or ice cream cabinets comprising a plurality of uprights providing supports; handle means connecting the upper ends of the uprights; vertically spaced shelves secured to the uprights adapted to fit snugly in the cabinet; feet on the lower ends of the uprights below the bottom shelf; and means on the shelves to space the uprights from the wall of the cabinet, said feet and said spacing means on the shelves serving to minimize sticking of the device to the bottom and side walls of the cabinet as frost or ice accumulates thereon.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

GEO. J. TILTON.