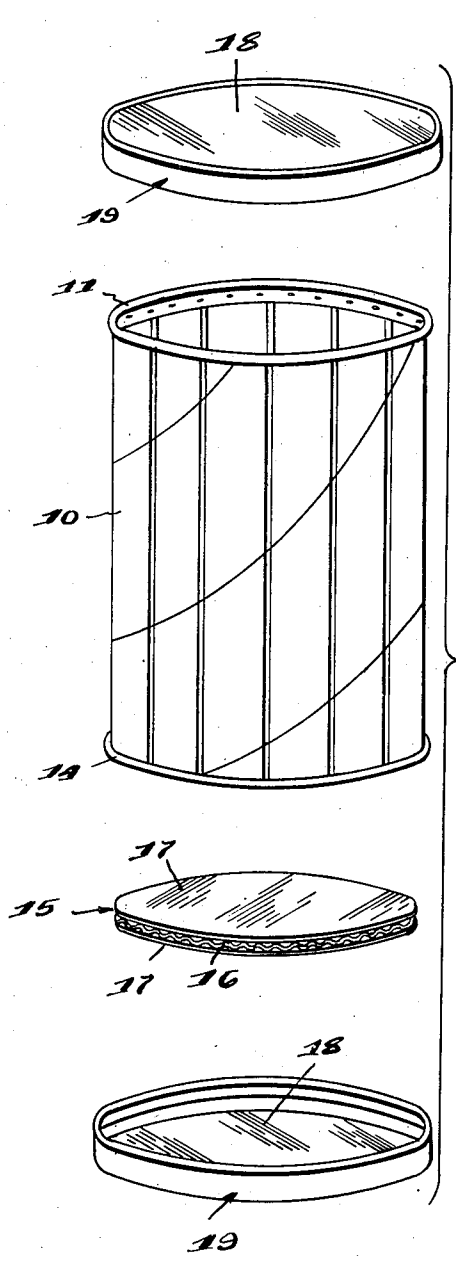
Dec. 15, 1942. I. L. WILCOX 2,305,506

BULK PACKAGE FOR FOOD PRODUCTS

Filed June 24, 1940



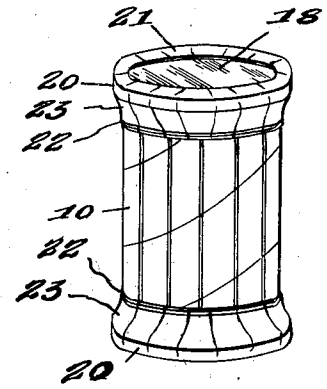


Fig-2-

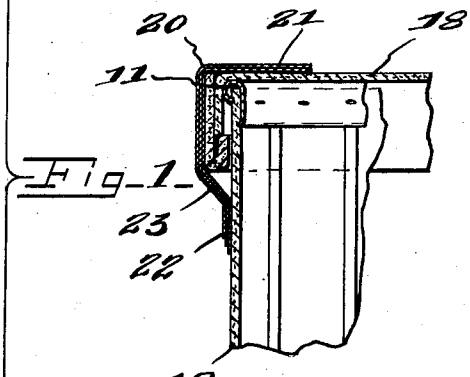


Fig-1-

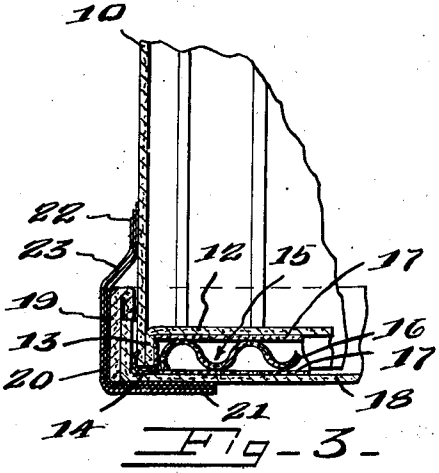


Fig-3-

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BULK PACKAGE FOR FOOD PRODUCTS

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Application June 24, 1940, Serial No. 342,004

1 Claim. (Cl. 229—5.5)

This invention relates to a package for certain food products such as frozen fruits, eggs and sweet cream. The package is of appreciable dimensions for the shipment of such products in bulk or relatively large quantities, the average package having a capacity in the neighborhood of five gallons. Inasmuch as such products are usually shipped over considerable distances and receive comparatively rough handling in storage rooms, it has been customary to employ metallic containers for shipment of these products in bulk. However, such containers possess certain disadvantages. For example, the cost of metallic containers is relatively high and due to the fact that certain of these products, particularly frozen fruits, must be processed and packaged in a relatively short space of time, it necessitates the purchase of containers in large volume and accordingly, the problem of storing and handling the cylindrical metallic containers is serious, particularly in connection with the processing of such products in the field where they are harvested. It will be understood that these products are placed in the containers and immediately frozen to a solid integral mass and thereafter kept at a sub-zero temperature until the containers are opened for the consumption of the contents.

The metallic containers not only add materially to the cost and difficulty in packaging the products, but also possess further disadvantages from the standpoint of the consumer of the product. It is necessary to maintain the metallic container at room temperature for an appreciable length of time before the frozen contents can be removed therefrom. After the containers have been emptied, the problem of their disposition remains which generally means hauling the empty containers away periodically. Otherwise at room temperature, or in warm weather, they are likely to create a considerable odor, attract flies, and otherwise make an unsanitary situation.

The general object of this invention is a package for the shipment of frozen food products in bulk, which package is formed of fibrous material and which embodies a construction by which the containers may be shipped to the packer in knock-down or collapsed condition thereby effecting a saving in storage space, and which may be conveniently expanded to tubular form, filled and effectively sealed to form a package sufficiently durable and rugged to withstand the handling such containers receive after being filled.

The invention has as a further object a package of the type alluded to which, while of particularly economical construction and possessing the advantages set forth above, may be quickly and conveniently emptied by the consumer and the empty package conveniently disposed of.

The invention has as a further object a package embodying a construction whereby the packages, or the covers thereof, will not become interlocked with adjacent containers because of the jarring during shipment.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawing in which like characters designate corresponding parts in all the views.

Figure 1 is an exploded view illustrating the arrangement of some of the parts in the assembly of the container.

Figure 2 is a perspective view of a container embodying my invention which has been filled and sealed for shipment.

Figure 3 is a fragmentary, vertical, sectional view of a sealed container embodying the structure shown in Figures 1 and 2.

The package consists of a tubular barrel or body member 10 which is supplied to the packer in collapsed or flat condition and which is expanded into tubular form, and a metallic reinforcing ring 11 is secured to the upper end of the barrel. A bottom member 12 formed with a depending annular flange 13 is fixedly secured to the opposite end of the barrel by another metalic ring 14. The barrel 10, bottom member 12, and the rings 11, 14 constitute a container which forms the nucleus of the package. The body 10 and bottom closure are formed of fibrous material such as paper board, and in view of the fact that the barrel 10 is shipped in flat folded condition the parts already referred to and the additional parts which are employed to fabricate the completed package may be purchased in large quantities inasmuch as they occupy a minimum space and are conveniently handled.

The main container portion of the package is of the type disclosed in Patent No. 2,033,888 to L. E. LaBombard, March 10, 1936, and the container proper is assembled as by the machine shown in Patent No. 2,113,699 to E. N. Lowry, April 12, 1938.

The bottom closure 12 is spaced from the adjacent edge of the barrel 10 in order to employ the ring 14 to secure the bottom closure to the

barrel in liquid tight relation. A disk 15 is positioned in the intervening space between the bottom member 12 and the lower edge of the container. This disk consists of an intermediate member 16 formed of corrugated paper board interposed between flat disks 17. The disk 15 functions to support the bottom member 12 to prevent any sagging thereof which might result in leakage. It is to be kept in mind that this package is relatively large and the weight of the contents varies from thirty to forty pounds, and that these packages receive extraordinary rough handling. In addition to acting as a reinforcing member for the bottom closure, the disk 15 also acts as a cushion against rough handling.

The lower end of the container is further protected by a slip cover consisting of a discoidal portion 18 having an annular flange encircled by a reinforcing member 19, the flange assembly of the cover encircling the lower adjacent end portion of the body 10. This slip cover is secured to the body of the container by a strip 20 of flexible material in the form of a tape wound about the member 19 of the cover and overlapping the external surface of the barrel 10 adjacent the flange of the cover, the tape being adhesively secured to both the flange of the cover and the adjacent surface of the barrel. Preferably, and as is clearly shown in Figure 3, the tape 20 consists of a plurality of layers and is of sufficient width to also overlap the marginal surface of the discoidal portion 18 of the cover as at 21 in addition to overlapping the barrel as at 22.

As previously stated, the general object of this invention is to start out with the economical knock-down fibrous container and in assembling the container into the completed package embody a structure which will not add materially to the cost of the package but which will result in a sufficiently rigid and durable package. The arrangement of the reinforcing disk 15, slip cover 18, and tape 20, result in a particularly strong structure for the lower or bottom end of the package, the tape 20 not only serving to materially add to the rigidity and ruggedness of the package, but also preventing any condensation that might accumulate and follow down the outside of the barrel 10 being absorbed by the flange 19 of the slip cover. When the package is subjected to ordinary room temperatures, condensation quickly collects on the outside of the package and follows down the side wall of the body and unless the bottom structure of the package is adequately protected it would be quickly destroyed. The tape 20 forms an inclined surface 23 which directs the condensation over the flange of the slip cover and forms adequate protection therefor.

The package is completed by the application of a complemental slip cover to the upper edge of the container, and this cover is secured by the tape 20 in the same manner as the bottom slip cover. In this instance, the tape 20 performs the additional function of retaining the top slip cover in place during shipment of the package.

These packages are usually shipped in upright position on the floor of a fruit car or truck, and during transit the packages are continually jarred in a vertical direction with the result that frequently the cover of a package, and particularly the cover of a metal container, becomes interlocked or positioned upon the tops of adjacent containers with the result that the container is suspended entirely by the cover. The continual jarring generally results in the cover being pulled off from the top of the container. The inclined surface 23 formed by the tape 20 employed to secure the upper slip cover serves as a means to prevent the cover from becoming interlocked on adjacent packages.

Packages embodying the structure described have been shipped across the continental United States and have arrived at their destination in perfect condition. The structure provides an unusually durable package which has proven entirely adequate for the purposes specified notwithstanding the fact that the package is entirely fabricated from paper board material with the exception of the ring members 11, 14. The package not only provides a saving in cost, but also an appreciable saving in transportation inasmuch as the package is of considerable less weight than a complemental metallic container.

The advantages of the structure described do not end with the completion of the package. When it is desired to open the package it is not necessary to employ a thawing out process. The top and bottom slip covers are readily removed by severing the tape 20 at the inclined portion 23 by means of a knife. Thereafter, the body of the package is readily removable from the frozen contents by severing or slitting the paper body lengthwise whereupon it may be immediately removed from the frozen core. The severed parts of the package may be conveniently disposed of by burning the same in the boiler or incinerator at the plant of the consumer.

What I claim is:

A bulk package for food products comprising a tubular body formed of fibrous material, a bottom member secured in one end of the body and being spaced axially from the end thereof, a slip cover positioned on each end of the body, a disk of fibrous material arranged in the space between said bottom member and the adjacent slip cover and serving to support the discoidal portion of the bottom member by the slip cover, and a plurality of layers of tape encircling the flange of each slip cover and overlying and being sealed to the discoidal portion thereof and the side wall of the body adjacent the flange of the slip cover.

ISAAC L. WILCOX.