March 1, 1938. R. L. BANGS 2,109,789

MEANS AND METHOD OF PACKING

Filed July 31, 1935

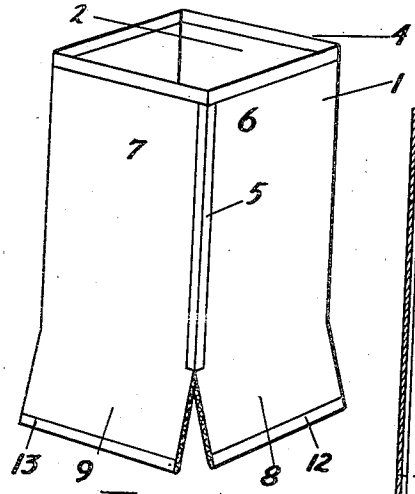


Fig. 1

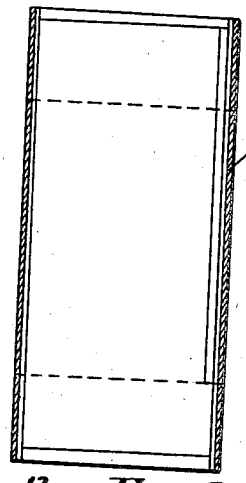


Fig. 2

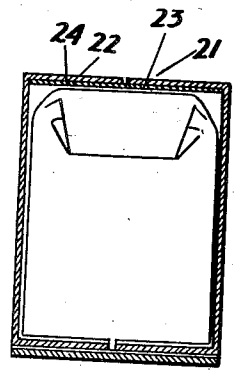


Fig. 3

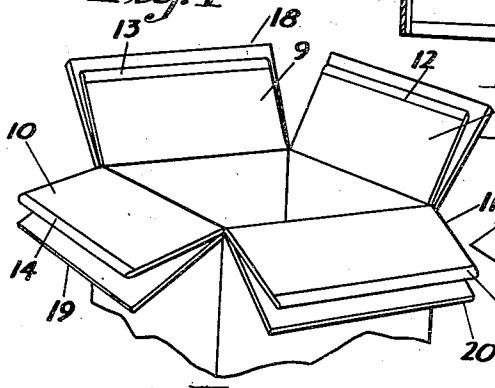


Fig. 4

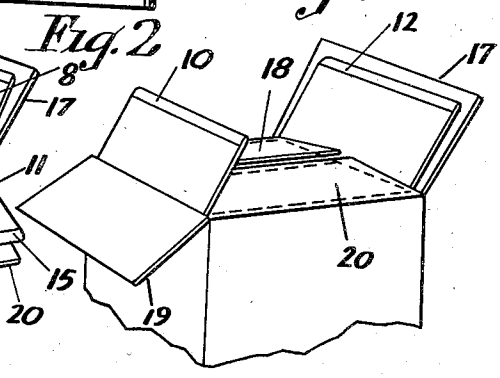


Fig. 5

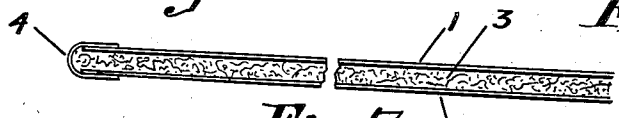


Fig. 7

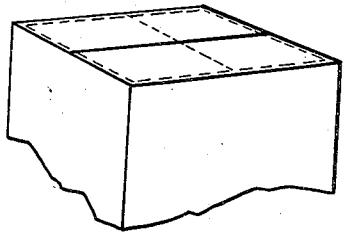


Fig. 6

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MEANS AND METHOD OF PACKING

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2 Claims. (Cl. 229—14)

The present invention relates to a means and method of packing foods perishable or otherwise, or other articles wherein a substantially constant temperature must be maintained.

The present invention is more particularly related, however, to a method and means of packing perishable foods, such as ice cream, meats or fish, for long or short shipments.

The present method of packing and the container aim to provide a more efficient method of packing at a substantially lower cost and in a comparatively simpler manner.

A great deal of the difficulty in maintaining good insulation is found at the end of the packages in the places where they are to be opened or where they are last sealed after the material has been placed in the package. A number of improvements have been made to overcome this difficulty, but the present invention provides a particularly simple and efficient means of accomplishing this result.

In the present invention the outer box is supplied with an inner liner of such a type, however, that the liner when closed into the box provides a substantially perfect seal and at the same time allows circulation of the air within the box which is usually where refrigerants are used and placed in the box to maintain a constant temperature.

The present invention will be more fully described in connection with the drawing in which Fig. 1 shows a view of the internal liner used in the method of packing in the present invention; Fig. 2 shows a cross section through the outer box and liner in a position opened at both ends; Fig. 3 shows a part sectional view of the box in a closed position; Fig. 4 shows in perspective the top of the box and liner in an open position; Fig. 5 shows the liner and box in a partially closed position; Fig. 6 shows in perspective the fragmentary view of the top of the box in a sealed position; and Fig. 7 shows a section through the liner itself.

As indicated in Figs. 1 and 7, the liner may be semi-flexible and comprise an outer cover 1 and an inner cover 2 between which an insulating material 3, such as wadding, batting, paper shredded or in whole sheets, or any other suitable material may be employed. The sheets 1 and 2 may be waterproof or only the inner sheet if this comes in contact with wet material. The end of the liner 4 may be sealed over by a proper seal if this is desired. The edges of the liner may be joined to form a continuous element, as indicated in Fig. 1, by means of the corner strips 5 pasted on the outer faces of the sides 6 and 7 of the liner. The lower ends of the liner may be sealed to form covers 8, 9, 10 and 11 as indicated in Fig. 4.

The lower covers or flaps 8, 9, 10 and 11 may be sealed as desired by the sealing edges 12, 13, 14 and 15. The liner is shaped to be contained within an outer corrugated box 16 which is provided with cover flaps 17, 18, 19 and 20, shown in Fig. 4. These cover flaps substantially align with the cover flaps respectively of the inner liner and, as indicated in Fig. 5, are positioned to be sealed either in successive order of rotation about the box, or, as indicated in Fig. 5, the inner flaps 11 and 13 are folded first with the outer flaps 20 and 18 folded over them. Over this there is folded the inner flaps 12 and 10, and the box is finally sealed by the outer flaps 17 and 19.

The end, sealed in the manner described above, is preferably used as the bottom of the container, the top of the container being closed by bending over the top of the liner, as indicated in Fig. 3, and sealing the top ends 21, 22, 23 and 24 in the usual manner. It will be noted that the inner liner is not slotted or cut at the corners and preferably does not fold to the contour of the outer box.

When a refrigerant is desired to be used for keeping the contents cold, this is placed in the top of the box in the space above or around the inner liner. If the refrigerant is placed at the top of the box, as viewed in the arrangement shown in Fig. 3, then sufficient circulation is established around the outside of the inner liner including the bottom of the box itself.

In this case the circulation may pass around the inwardly positioned flaps, as, for instance, 9 and 15, and maintain a complete circulation for the warmer currents to rise to the top and be replaced by the downward colder current. It is to be noted in this respect that the inner liner does not fit so snugly but that circulation is allowed around the sides of the inner liner. This is another advantage gained in the arrangement shown, since the inner liner is held in position by the closure of one pair of inner liner flaps over a pair of the cover flaps and thereby insures that the inner liner will be held in position and not slip to one side. With a normal amount of refrigerant in the container it is possible to preserve a remarkably constant temperature of the goods within the container over a considerable period of time. This is the more desirable method of refrigeration and is espe-

cially to be preferred to refrigeration in which the temperature of the material stored is at first maintained very cold and then later allowed to warm up.

Having now described my invention, I claim:

1. A method of assembling a container for packing foods, or the like, in which said container has an inner element and an outer element, both being provided with end flaps folding in a rectangular fashion which comprises folding pairs of opposite flaps of both inner and outer containers simultaneously so that the flaps of the inner container fold over the adjacent flaps of the outer container and sealing the tops of the inner and outer containers separately and apart from one another.

2. A container for packing perishable foods comprising in combination, an inner and an outer container, the inner container being closed at one end in a position free from the outer container and providing an air space between the covers, the inner and outer container at the other end having flaps, said flaps being closed in adjacent pairs, comprising a flap of the outer and a flap of the inner container whereby the outer and inner container are locked in position relative to one another.

RALPH L. BANGS.