

July 2, 1935.

R. L. BANGS

2,006,705

CONTAINER

Filed Oct. 24, 1932

2 Sheets-Sheet 1

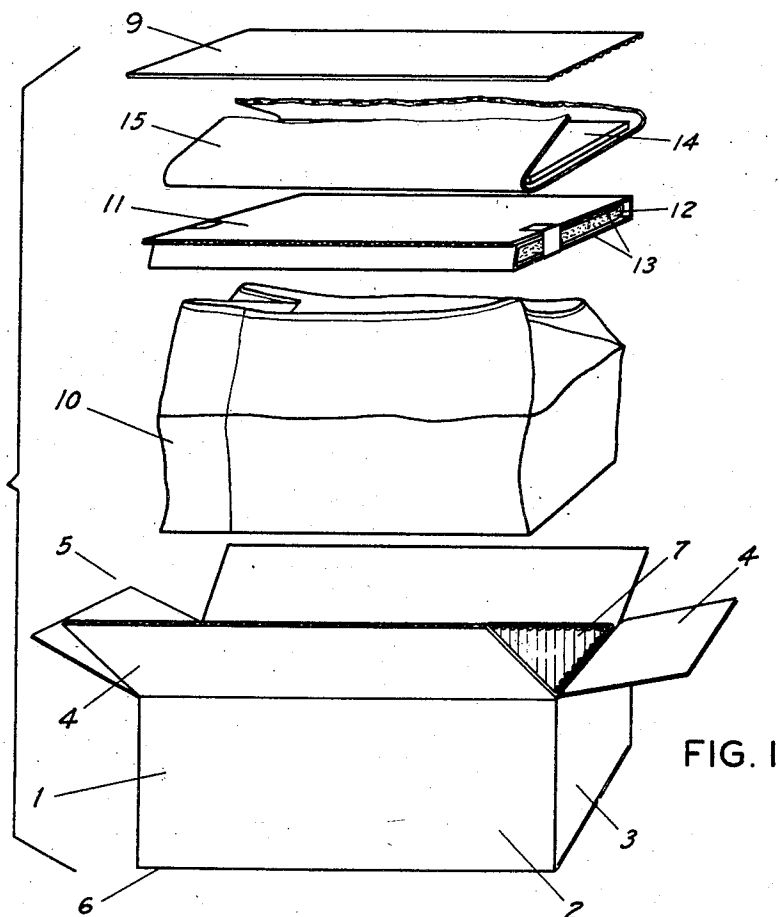


FIG. 1

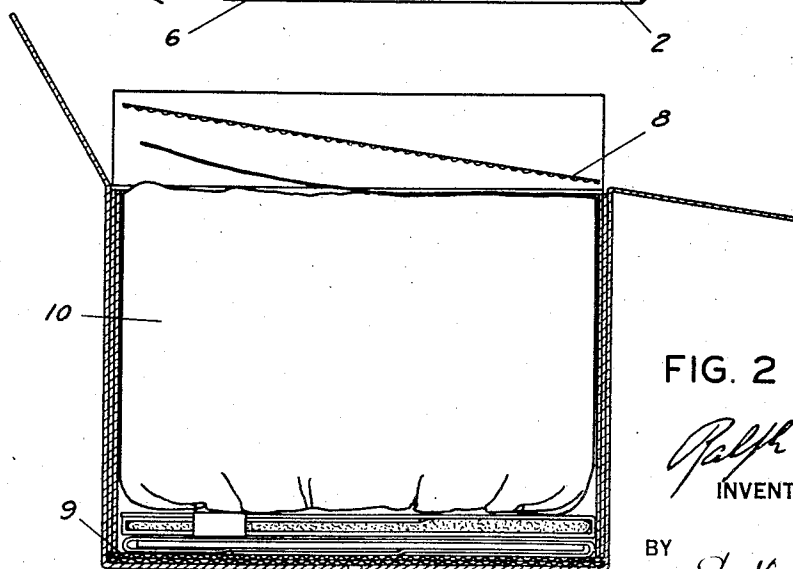


FIG. 2

Ralph L. Bangs
INVENTOR

BY *Ezekiel Wolf*
ATTORNEY

July 2, 1935.

R. L. BANGS

2,006,705

CONTAINER

Filed Oct. 24, 1932

2 Sheets-Sheet 2

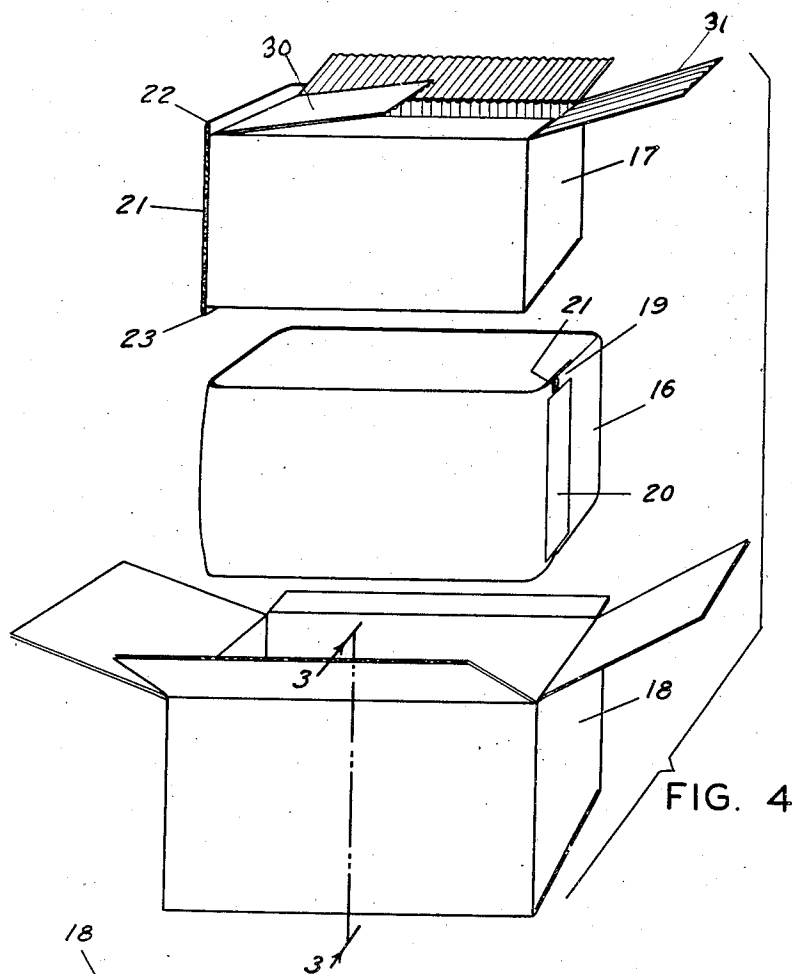


FIG. 4

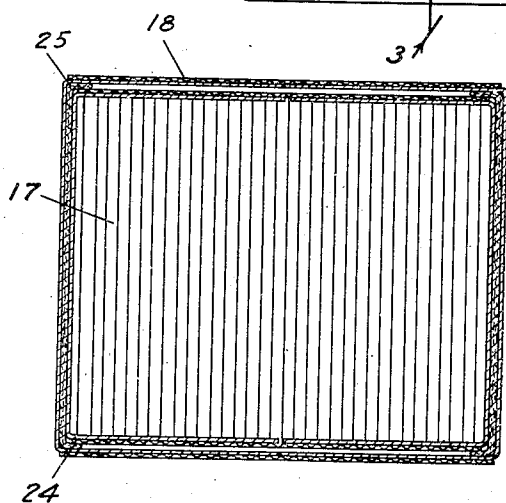


FIG. 3

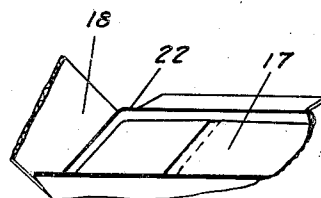


FIG. 5

Ralph L. Bangs
INVENTOR

BY *Ezekiel Wolf*
ATTORNEY

UNITED STATES PATENT OFFICE

2,006,705

CONTAINER

Ralph L. Bangs, Wakefield, Mass., assignor to
Forest Wadding Company, Boston, Mass.

Application October 24, 1932, Serial No. 639,265

3 Claims. (Cl. 229—14)

This invention relates to containers, and more particularly to containers for perishable products as foods which must be kept at a constant cool temperature to prevent spoiling.

5 In packing or preserving foods with a refrigerant, great care must be maintained, as the use of too much refrigerant or its too close proximity to the food causes the food to become too stiff and to need prolonged thawing, and the use of too little refrigerant, or the improper packing causes the food to spoil. It is thus essential that it be properly placed and that the container be securely constructed.

15 An object of my invention is to construct a refrigerant container for packing and preserving foods to maintain a constant cold temperature therein and eliminate any danger of the spoiling of its contents.

20 An object of my invention is to construct a refrigerant container in which all the food or material in the container is maintained at approximately the same temperature.

25 Another object of my invention is to provide a container having an air insulating layer protecting the top and bottom of the packed material without weakening the construction of the package.

30 A further object is to provide an insulated container which can be opened easily and the packed material exposed without the trouble of removing numerous layers of insulating materials.

35 In the present invention the food to be shipped in the container, such as fresh fish, or vegetables which are perishable are packed in the container or box with an insulating layer above the food and the refrigerant above that, so that a slow uniform cool circulation is obtained while the food is sealed in the container. When, however, the container is opened and the food exposed for sale, the container is opened at what was the bottom, and the top with the refrigerant is therefore beneath the food and helps to preserve it. If the container were opened at the top the refrigerant would likely be thrown away.

45 Without enumerating other advantages of the present device, it will now be described in more detail in connection with the drawings, in which:

50 Figure 1 shows in perspective the elements of the container in successive positions of assembly.

Figure 2 shows a vertical section through an opened inverted container.

55 Figure 3 is a section through the assembled box in the direction indicated by the arrows associated with the line 3—3 of Figure 4.

Figure 4 shows a modification of the invention shown in Figure 1, and

Figure 5 shows a detail.

A container 1 is built in the usual manner with sides 2 and end pieces 3. The top and bottom of the container, are constructed in the usual manner by bending covering flaps 4, extending in either direction from the sides and ends to a horizontal position and then sealing the bent flaps together. One side of the container 6 is sealed as the bottom, the top 5 being left open for packing.

15 The sides of the container are lined by the vertically corrugated or fluted piece 7, extending completely around the inside of the container, and the bottom and top of this container are protected and made strong by the corrugated pieces 8 and 9 respectively.

20 Above the piece 8, resting on the bottom of the container is placed a flexible waterproof liner or container 10, used to hold the material being packed or preserved securely and either dry or moist as the case may be.

To further protect the packed material, there is above and resting on the container 10 an insulating pad 11, or folder, having a wadding element 12 packed between leaves 13 of a stiff material. The wadding 12 may be a fleece material made of a combination of cotton and jute, cellulose or a batt or mass of ground wood pulp. This partially insulates the packed material from the refrigerant above so as to prevent excessive cold reaching parts of the packed material, and together with the fluted piece 7 which provides vertical air passages, uniformly distribute the cold causing an even temperature throughout the packed material.

35 Resting on the pad 11 is the refrigerant 14 encased in a folder 15 or sheath for easy handling and to prevent a too quick dissipation of the refrigerant. Above the refrigerant is the top stiff corrugated piece 9, which helps to prevent the loss of cold, and adds strength to the container, 1, when sealed.

45 The container 1 is now sealed by bending over the side and end flaps 4 to a horizontal position and sealing the bent flaps together.

Thus the refrigerant is encased and protected from quick dissipation by the top of the container and the piece 9 on top and the packed material is protected by the water-proof liner 10, and the pad 11 from the refrigerant.

55 Now, by inverting the container 1, the refrigerant rests below the packed material, and the cold dissipating from the refrigerant passes upward and through the packed material retaining

it at an even cool temperature. When the packed material is to be taken from the container, the part of the container 6, formerly the bottom, but which on inverting, becomes the top, is opened, the same dissipation of cold upward through the packed material, takes place, and the packed material gets the full benefit of the refrigerant with a minimum of loss of refrigerant and retains a constant uniform temperature.

10 In Figure 4, a modification of my invention is shown, in that the container 1, consists of an insulated wrapping 16 covering the sides of an inner corrugated container 17 and a slightly larger outer container 18 fitting over and enclosing the container 17 and wrapper 16.

15 The inner container 17 and the outer container 18 are built in the customary manner and provided with flaps for forming the top and bottom parts.

20 Around the sides of the inner container 17, and glued to them, if desired, is the wrapper 16, which extends completely around the container 17. The ends of the wrapper lap as at 19 and are sealed together by gluing the piece 20 over the end, thus preventing any loss of insulating material 21 in the wrapper. The wrapper 16 is wider than the inner container, is tall, and extends beyond the sides of the inner container to the top and bottom, forming the extended pieces 22 and 23 respectively, as shown in the fragmental portion in the upper element in Figure 4.

30 When the inner container is firmly seated in the outer container, the extended piece 23 of the wrapper becomes bent over into a lap 24 which extends inward for a short distance under the bottom of the inner container all around its edge, and forms a rim on which the inner container rests. Thus the bottom of the inner container is raised above and separated from the outer container and an air pocket is created between them except for the narrow marginal rim of the wrapper.

40 As the inner container is only slightly smaller than the outer container, the closing of the top of the outer container, forces the piece 22 of

45

the wrapper to bend over and form a lap 25 which performs the same function as the lap 24, and creates an air pocket between the tops of the inner and outer container.

To give a better insulator, the wrapper 16 is constructed of paper or like material folded over providing room between the folds for the layer 21 of felt, cotton or cellulose fibre. In this way the inner container 17 is insulated completely from the outer container, on the top and bottom by the air pocket and on the sides by the insulated wrapper.

Having now described my invention, I claim:

1. A container for holding and preserving foods, comprising a corrugated outer box, a corrugated inner box, and insulating material secured to the sides of the inner box and extending a short distance above and below said sides, and which is folded over the inner box when placed within the outer box, forming a rim of insulating material and an insulating air space between the boxes above and below the inner box.

2. A container for holding and preserving foods, comprising an outer box of paper material, a similar inner box, insulating material formed as a liner spacing the inner from the outer box, extending all around the sides of the inner box and carried up on both ends beyond the ends of the inner box, said outer box having hinged end covers sealing at the hinges the portions extending beyond the ends of the inner box over the edges of the inner box at the top and bottom ends.

3. A container for holding and preserving foods comprising an outer box of paper material, a similar inner box, insulating material formed as a liner spacing the inner from the outer box, extending all around the sides of the inner box and carried up on both ends beyond the ends of the inner box, the outer and the inner box forming parallel flutings on both sides of the liner, both outer and inner boxes having hinged end covers sealing at the hinges the portions extending beyond the ends of the inner box over the edges of the inner box at the top and bottom ends.

RALPH L. BANGS. 45