

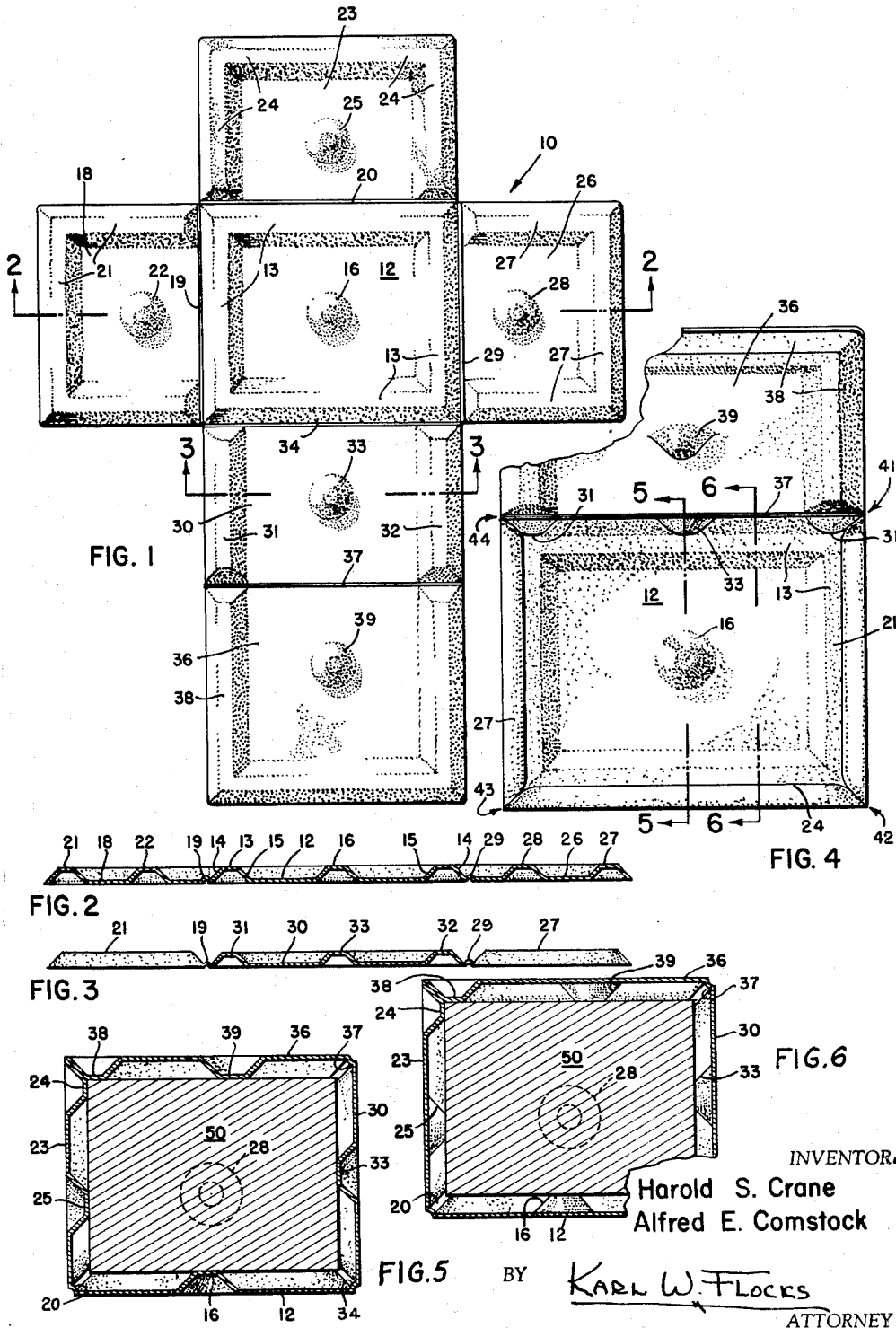
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H. S. CRANE ET AL

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MOLDED PULP CONTAINER

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INVENTORS

Harold S. Crane
Alfred E. Comstock

BY

KARL W. FLOCKS

ATTORNEY

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MOLDED PULP CONTAINER

Harold S. Crane, Palmer, Mass., and Alfred E. Comstock, Belvedere, Calif., assignors to Diamond National Corporation, a corporation of Delaware

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The present invention relates to a molded pulp set-up insulating container, and more particularly to a molded pulp set-up insulating container in which six integrally joined sections have rims disposed thereon to give locking contact where free section edges meet.

Prior art containers are known which are made of molded pulp, and which are used as insulating containers for such products as ice cream. In one such prior art container, however, the construction was such that a large area of molded pulp came into contact with the material held in the container, so that there was a considerable amount of heat conducted through the pulp and into the contained product, and this was true even though molded pulp has a very low heat transfer coefficient. Also, this known construction contemplated that the entire package would be inserted within yet another container in order to trap insulating air between the walls of the outer and inner containers. Thus, this known construction necessitated in effect the use of two containers in order to obtain the desired insulating characteristics.

In another form of molded pulp set-up carton or container, there was provided a molded pulp box blank having integrally molded lugs on the various sections of the blank. This construction failed to provide a nestable blank, and also failed to provide a set-up box which would adequately support a brick or carton of ice cream, and still permit maximum utilization of the interior space of the box, and therefore of the material of which the blank is made.

It is an object of the present invention to provide a molded pulp set-up insulating container having great insulative value.

It is yet another object of the present invention to provide a molded pulp set-up insulating container having as little pulp as possible in contact with the goods held in the container.

It is still a further object of the present invention to provide a molded pulp set-up insulating container which will support goods therein and will also entrap a blanket of insulating air around the goods.

It is a further object of the present invention to provide a molded pulp set-up insulating container made of a nestable blank.

Yet another object of the present invention is the provision of a molded pulp set-up insulating container made from an integral sheet of molded pulp and which will have maximum rigidity when set up.

A further object of the present invention is to provide a molded pulp set-up insulating container that is not only nestable and highly insulative, but that also provides a relatively rigid container.

A still further object of the present invention is to provide a molded pulp set-up insulating container in which the sections of the blank of which the container is made have mating anti-shift walls.

Another object of the present invention is to provide a molded pulp set-up insulating container which uses a

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minimum amount of molded pulp to encompass a given volume of goods.

Other objects and the nature and advantages of the instant invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a plan view of a blank in accordance with the present invention;

Fig. 2 is a sectional view taken on the line 2-2 of Fig. 1;

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

Fig. 4 is a plan view of a box set-up from the blank of Fig. 1, but with the top section thereof folded back;

Fig. 5 is a sectional view on the line 5-5 of Fig. 4, but with the top section in the closed position; and

Fig. 6 is a sectional view taken on the line 6-6 of Fig. 4, also with the top section in the closed position.

Referring now to the drawings, there is shown in Fig. 1 a box blank or sheet 10 of molded pulp having a bottom section 12 which is generally rectangular. Bottom section 12 has a raised rim 13 extending along the four sides thereof, rim 13 being continuous as shown. As best seen in Fig. 2, rim 13 has sloping exterior walls 14; the interior walls 15 of rim 13 also are sloped for convenience of molding. Centrally of the bottom section 12 is an upstanding button 16 which extends to approximately the same height as the rim 13.

A first generally rectangular side section 18 is joined to the bottom section 12 along one wall thereof and separated therefrom by a score line or fold 19. Section 18 has a raised arm 21 extending along the three free sides thereof; rim 21 is shaped in cross-section in the same manner as is rim 13. Side section 18 has an upstanding button 22 centrally thereof. A second side section 23 having a continuous rim 24 along the three free sides thereof and a centrally upstanding button 25 extends from another of the sides of bottom section 12, and a third side section 26 extends from another side of the bottom section 12 and has a continuous rim 27 extending along the three free sides and a central upstanding button 28. A score 20 is provided at the junction of side section 23 and bottom section 12, and a score 29 is provided at the junction of side section 26 and bottom section 12. It will be apparent that the three side sections 18, 23 and 26 are substantially identical.

A fourth side section 30 is integrally joined to the fourth side of the bottom section 12, and has raised rims 31 and 32 extending along the two sides thereof that lie perpendicularly to the fourth side of the bottom section 12. Centrally of the fourth side section 30 is an upstanding button 33 and a score 34 is provided at the junction of side section 30 and bottom section 12.

A top section 36 is integrally joined at one side thereof to the side of the fourth section 30 that is opposite to the side of fourth section 30 that is joined to bottom section 12. Top section 36 has a score mark 37 at the junction thereof with the side section 30, and has a raised rim 38 extending along the three free sides thereof. Top section 36 is provided with a central upstanding button 39.

Referring now to Fig. 4, it may be seen that when the box blank or sheet of Fig. 1 is folded up so that the free sides of the four side sections 18, 23, 26 and 30 meet and mate with each other, a substantial surface engagement is obtained between the sloping exterior walls of the upstanding rims of each of these side sections, this being clearly shown at the four corners of the box. These mating corners are designated 41, 42, 43 and 44, and provide strength and rigidity to the set-up box. It will be noted that this construction provides for an absence

of mating of exterior rim walls where two sections are integrally joined and separated from each other by score lines or marks. Thus, where sections are integrally joined, there are no mating exterior rim walls and this serves purposes of both economy and insulation value.

In Fig. 5, there is shown a cross-sectional view of the set-up container, it being clear that the buttons and the rims of the various sections serve to support the goods 50, such as ice cream, carried in the container with a minimum of contact between the molded pulp and the goods 50, and with entrapment of air between the container and the goods carried therein. Referring, for example, to Figs. 1 and 5, it may be seen that the top 36 has contact with the top of the goods 50 only at the button 39 and at the rim 38; it may be readily seen from a consideration of these two figures, that in the area between the rim 38 and button 39 there is a volume of insulating air which is trapped and which effectively insulates and retards the melting of the goods 50. The buttons have been provided to help the goods 50 retain its shape for a longer period of time in the event it should begin to melt. Also, in Fig. 5, there may be seen the absence of mating rim walls where integral sides of the sections are folded toward each other, as side section 23 to bottom section 12, bottom section 12 to side section 30, and side section 30 to top section 36; however, where the free edge of top section 36 joins the free edge of side section 23, there are provided mating exterior walls, which are preferably at 45° to the plane of the unfolded blank 10.

Fig. 6 is a section similar to that of Fig. 5 but shows even more clearly the volume and extent of the insulating air that is entrapped between the container and the goods 50 carried therein.

It will be understood by those skilled in the art that applicant has provided a nestable, economical blank having high insulating qualities and forming a set-up container which is adequately rigid for its intended purposes.

When set up, the container may be held in the desired position by any known means, such as rubber bands, a cellophane girdle wrap, metal clips, etc.

It will be obvious to those skilled in the art that various changes may be made without departing from the spirit of the invention and therefore the invention is not limited to what is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. A nestable molded pulp set-up box comprising a molded pulp sheet having a general plane, said sheet having a first generally rectangular bottom section, said bottom section having a raised narrow rim extending out of the general plane thereof along and adjacent all four of the sides thereof, the rim having sloping exterior walls, three generally rectangular side sections each integrally and hingedly joined to said bottom section along one side thereof, each of said three side sections having a raised narrow rim extending along and adjacent the three free sides thereof, said rims of said three side sections having sloping exterior walls and sloping ends extending toward the sloping exterior walls of the bottom rims, a fourth generally rectangular side section hingedly and integrally joined to the bottom section along the fourth side thereof, said fourth side section having raised narrow rims extending along adjacent the two sides thereof lying perpendicularly to the fourth side of said bottom section, said rims having sloping exterior walls and sloping ends extending toward said bottom rims, a generally rectangular top section hingedly and integrally joined at one side thereof to the side of said fourth side section that is opposite the side of said fourth side section that is joined to said bottom section, said top section having a raised narrow rim extending along and adjacent the three free sides thereof, said rim having sloping exterior walls and sloping end portions, and an upstanding button centrally disposed in each of said sections.

2. The box of claim 1, said exterior walls sloping at approximately a 45° angle to the plane of said sheet.

3. The box of claim 1, said buttons and rims all being substantially of the same height out of the general plane.

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