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Zach, deceased

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[54] **TWO PART BOX**

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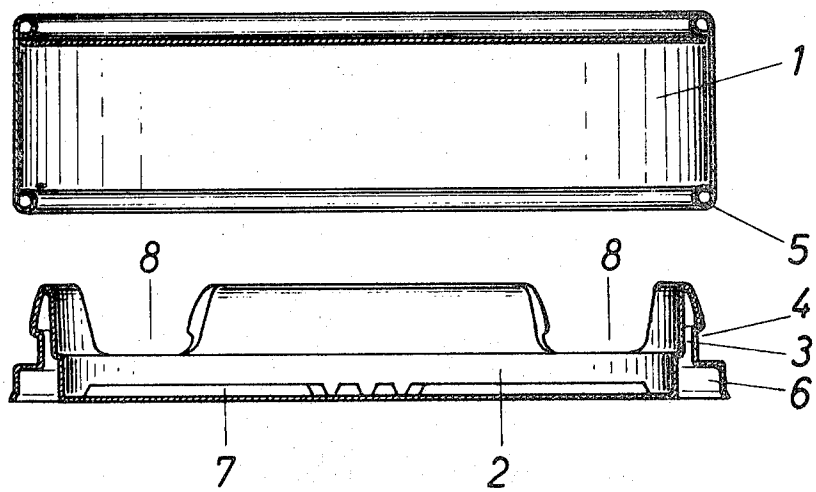
Primary Examiner—Leonard Summer

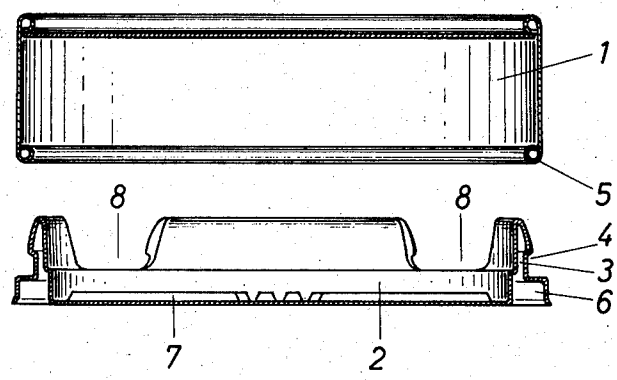
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[57] **ABSTRACT**

This invention relates to a two part box, particularly for holding cheese, comprising a base formed of a synthetic plastics material and having a bottom and a resilient peripheral side-wall, and closure means to close said base, said closure means comprising a lid formed of cardboard or like material and having a cover sheet with a stretchable wall extending therefrom, whereby the lid can be retained firmly on said base by interengagement between the wall of said lid and the sidewall of said base.

6 Claims, 1 Drawing Figure




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TWO PART BOX

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a two-part box, in particular for holding cheese.

2. Description of Prior Art

Cheese boxes which are manufactured from cardboard or like material are already known. These boxes are normally susceptible to warping and deformation and a slight amount of dampness in the air, and/or temperature variations, can lead to warping of these boxes so that they can no longer be satisfactorily closed. Furthermore, these boxes often have the additional disadvantage that when they are arranged in display stands the lids easily come off. Safe and hygienic closure of such boxes is not ensured.

To reduce costs, it has been proposed to manufacture two-part cheese boxes from synthetic plastics material in their entirety. However, synthetic plastics material cheese boxes of this type do not allow the cheese contained therein to "breathe," and the lids cannot be printed upon easily. In particular, plastics cheese boxes of this type have the disadvantage that the closure of a plastics box by a plastics lid requires an extraordinarily exact manufacture of the parts, since the friction between the plastics material parts is too low to ensure a secure hold with comparatively large tolerances.

One proposed cheese box includes a base having a side-wall made from synthetic plastics material. The lid includes a cover sheet made of cardboard and a plastics ring by which the lid is held on the edge of the peripheral side-wall of the base. It is possible to print on its cover sheet, which is made of cardboard. However, the side ring of the lid and the plastics side-wall of the base have to be made to correspond to one another very exactly as regards their diameter, in order to ensure a sufficient closure of the cheese box. In practice this is difficult to achieve.

It has also been proposed for the circumferential wall of the lid to be made of the same material as the cover sheet and to form an integral unit therewith. However, these lids are normally used only where both parts of the box are made of cardboard or plastics materials.

It is an object of this invention to provide a two-part box of simple construction which permits secure closure of the box.

It is another object of this invention to provide a two-part box which is resistant to deformation and warping and which can be mass-produced within readily achieved manufacturing tolerances during production.

It is a further object of this invention to provide a two-part box with a lid which can be printed on.

SUMMARY OF THE INVENTION

According to the invention there is provided a two-part box, particularly for holding cheese, comprising a base formed of a synthetic plastics material and having a bottom and a resilient peripheral side-wall, and closure means to close said base, said closure means comprising a lid formed of a material selected from cardboard and like material, and having a cover sheet with a stretchable side-wall extending therefrom, whereby the lid can be retained firmly on said base by interengagement between the side-wall of said lid and the side-wall of said base.

The combined effect of the resilience of the plastics material of the base with the stretching capability of the cardboard material of the lid ensures a sufficiently secure closure of the cheese box. Moreover, by using cardboard and a synthetic plastics material in association, a secure closure can be achieved without having to observe the strict tolerances which increase manufacturing costs. In addition to the advantage of its stretching capacity which leads to a secure closure, the lid also has the advantages that due to its being in one piece, it is cheap to manufacture and can be printed on as desired, adhesive can be applied thereto, and it may be stamped or impressed. Moreover, these boxes have the advantage that their plastics base is extremely resistant to deformation and insensitive to variations of dampness in the air, for example in refrigerator chests, so that the box, as a whole, has a great dimensional stability.

In an advantageous embodiment of the invention the sidewall of the base has, on its outer peripheral surface, a peripheral groove in which a corresponding bead on the inside of the box lid can sit. The groove in the sidewall of the base helps increase the security of the closure, since now the box can only be opened by overcoming a force which is produced by the elasticity of the side-wall of the base in addition to the normal friction forces.

The sidewall of the base preferably has slots extending therethrough transverse to the bottom of the base to further increase its elasticity and to make it easier for the bead on the lid to engage therein. The sidewall of the base is preferably of double-walled construction, and a space is thus enclosed by the two walls. The double-walled construction of the sidewall increases the stability of form of the base, and further increases its resilience.

The base can be manufactured by a deep drawing process and the bases, without the lids, can be stacked with the sidewalls of one base projecting into the space of another base. For this purpose, the space in the sidewall of the base is open at the end which is away from the lid when the box is assembled and is suitably widened. The resultant shape of the sidewall can increase the form-stability of the base and the elasticity of the sidewall. Also, as a result of the widening of the space the upper edge of the lid can be made to project into it to improve the stacking capacity of the closed boxes. Thus the base, the lid and the closed box are all seperately stackable. It is therefore possible to supply the base and lid individually so that, when one is packing the cheese, there is no need to open each box, as is necessary when using the closed cheese boxes which are often supplied. Since the base and the lid can each be stored in a magazine and can be conveyed separately from there to a packing machine, packing can be fully automated.

In a further embodiment of the invention the lid is coated with synthetic plastics material on its inner side. This coating of synthetic plastics material on the inner side of the lid can reduce sensitivity to variations in the temperature and/or in the dampness of the air and can thus increase resistance to deformation. Thus a substantially higher resistance to deformation can be achieved for the box. The base, because it is made of plastics material, is physiologically satisfactory, as is the lid, because of its inner coating of plastics. It is thus possible to pack the cheese without the aluminum foil

which formerly was necessary and this can result in a considerable saving on costs.

It is preferred that the bottom of the base has recess or raised positions in the form of ribs or grooves or the like. Ribs can help stiffen the base, and give the box a better resistance to deformation. Furthermore, this construction of the base, and also the insensitivity of the synthetic plastics material with respect to variations of dampness and/or temperature allow the base to be used as an underplate for not yet ripened cheeses during manufacture.

DESCRIPTION OF PREFERRED EMBODIMENT

The accompanying drawing illustrates a non-restrictive example of a two-part box according to the invention.

The box comprises a lid **1** and a base **2**, which are shown separated from one another, in part-sectional view. The example shown is a round box whose base **2** has a circumferential sidewall **3**. The sidewall **3** has a peripheral groove **4** with which a bead **5** on the box lid **1** engages when the box is in the closed condition. At its free edge, the sidewall **3** has slots **8**. The sidewall **3** is of double-walled construction and is formed by means of a deep drawing process. The sidewall **3** encloses, with its two walls, a space which is open downwardly as shown in the drawing. The space has a lower region **6**, which is widened to have an outside diameter equal to the outside diameter of the lid **1**. The bottom of the base **2** has ribs **7** formed integrally with it.

What is claimed is:

1. A two-part box, particularly for holding cheese, comprising a base formed of a synthetic plastics material and having a bottom and a resilient peripheral side wall, and closure means to close said base, said closure means comprising a lid formed of cardboard, wherein said lid comprises a cover sheet, a side wall extending from the cover sheet to overlap with and secure the side wall of the lid to the side wall of said base, and an inner peripheral laterally-extending bead disposed to be deformed by the side wall of the base when the side wall overlap, and wherein the side wall of the base is of double walled construction comprised of two webs defining therebetween a space, said side wall having slots extending therethrough which are transverse to the bottom of said base, the webs of the double-walled side wall being connected together along the sides of the slots.

2. The two-part box of claim **1**, wherein the side wall of said base has a peripheral groove on its outer surface to receive said peripheral bead, interengagement of said bead in said groove increasing the security of the closure between said lid and said base.

3. The two-part box of claim **1** wherein the side wall of the base, in the closed position of the box, is open in a direction away from the lid.

4. The two-part box of claim **1** in which the outer dimensions of the space extending peripherally round the base are substantially the same as the outer dimensions of the lid.

5. The two-part box of claim **1** in which the bottom of the base has ribs therein.

6. The two-part box of claim **1** wherein the lid is coated on its inside with a film of synthetic plastics material.

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