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(54) Container unit

(57) A container unit (1) for containing ingredients for a food or other product has a hollow lid (10), an inner container (20) containing ingredients, and an outer container (30) which is partially disposed within the inner container (20) and which is pre- or subsequently filled with ingredient. The lid (10) closes the mouths (23, 33) of both the inner and outer containers and has a cavity (14) on its inside for containing an additional ingredient which is sealed within the cavity (14) by foil so as to maintain and preserve it within the cavity (14).

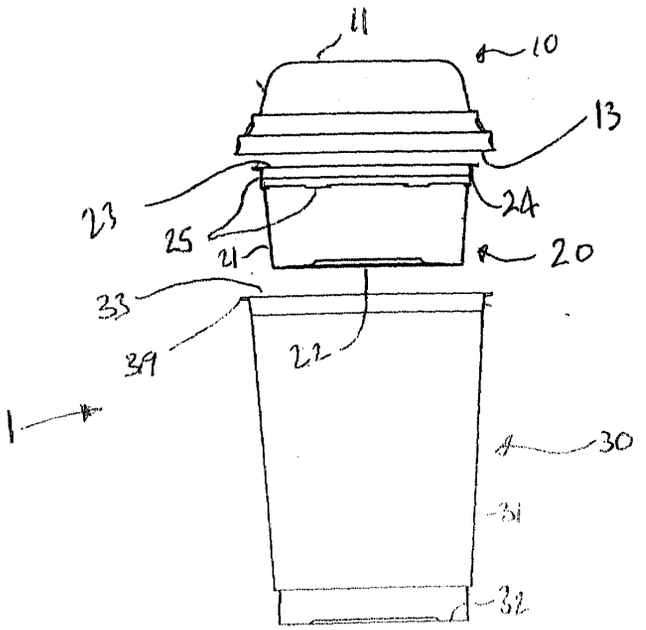

FIG. 7

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Description

[0001] The present invention relates to a container unit for containing ingredients for a food, drink or other product in separate compartments preparatory to mixing together or with another ingredient to produce the resulting product. For example, the unit may comprise a disposable drinking cup to which the ingredient(s) from the ingredient compartment(s) may be added for the purposes of preparing a preselected drink. Alternatively, the container unit may, for example, be a noodles container and the or each ingredient compartment may contain a sauce or other additive to be mixed with the noodles in the noodle container preparatory to consumption of the noodles.

[0002] The present invention consists in a container unit comprising an outer container having a mouth, a lid closing the mouth of the outer container and an inner container disposed at least partially within the mouth of the outer container and having its mouth also closed by the lid.

[0003] In use, the inner container of the unit may be filled with an ingredient and be assembled to the outer container with the lid closing the mouths of both containers. When the ingredient is to be mixed with the contents of the outer container and with which the outer container may be pre- or subsequently filled, the lid is removed from the unit and the ingredient in the inner container is poured into the outer container and mixed with the contents. The outer container may be reclosed by attaching the lid to the outer container mouth, thereby enabling the outer container to be shaken to mix the contents.

[0004] The lid may be a hollow lid having a cavity on its inside for containing a further ingredient and the open inside of the lid may be sealed with metal or plastics foil to maintain the ingredient within the cavity of the lid and preserve it until required for mixing.

[0005] Conveniently, the lid has latching means engageable with a rim about the mouth of the outer container to retain the lid in position on the unit. The lid may have secondary latching means engageable with a rim about the mouth of the inner container so that the lid supports the inner container within the outer container when fitted to the latter.

[0006] Preferably, the lid is adapted to seal the mouths of the outer and inner containers and has endless sealing surfaces which respectively engage the rims about the container mouths when the latching means are engaged. Where the lid also has a cavity for containing an ingredient, the sealing foil may be sealed about its periphery to the sealing surface which cooperates with the rim of the inner container.

[0007] Preferably, the containers and lids are formed as thin walled seamless products from sheet plastics material and they are designed so as to be separately stackable in nested relation, for storage and transportation purposes, prior to assembly of the container units. For this purpose, the containers may comprise sidewalls extending upwardly and generally outwardly from the bottom walls of the containers to the mouths at the tops of the containers. So as to reduce the risk of the stacks of the outer and inner containers being compacted and the containers wedging together, the side walls of the containers may be formed with external and internal stacking solders such that, when the containers are stacked, the external stacking shoulder of an upper container in a stack rests on the internal stacking shoulder of the next lower container in the stack in order to resist full insertion of the upper container into the lower container. In the case of the lids, the endless sealing surfaces of the lids may form stacking shoulders externally of the lids which, when the lids are stacked in nested relation, engage internal side wall or skirt portions of the adjacent lids in order to resist compaction of the stack of lids.

[0008] In one embodiment, the container unit is of circular cross section and the lid is of dome shape so as to form an ingredient cavity on the inside of the lid, which may be sealed with foil to retain an ingredient therein, before the lid is assembled to the outer and inner containers to enclose the mouths thereof.

[0009] The present invention also consists in a lid for closing the mouth of an outer container and which is adapted also to support an inner container at least partially within the mouth of the outer container when fitted to the latter. Preferably, the lid is a hollow lid having a cavity on its inside which is adapted to be sealed by metal or plastics foil in order to serve as a sealed ingredient compartment.

[0010] An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which

Figure 1 is a side view of a lid according to the invention;
Figure 2 is a top plan view of the lid of Figure 1;
Figure 3 is a side view of the lid fitted to the mouth of an inner container;
Figure 4 is a side view, partially in section, of a container unit according to the invention embodying the lid and container of Figure 3;
Figure 5 is an axial section through the container unit shown in Figure 3;
Figure 6 is an enlarged fragmentary, part sectional view of the rim area of the container unit of Figure 4;
Figure 7 is an exploded side view of the container unit; and
Figure 8 is a fragmentary section of two stacked lids.

[0011] Referring to the accompanying drawings, the container unit 1 is a disposable unit comprising an outer container 30 in the form of a cup or pot, an inner container 20 which is also a cup or pot, and a hollow lid 10. The outer and inner cups 30, 20 and the lid 10 are of circular cross section and are thermoformed from sheet

plastics material as thin walled seamless products.

[0012] The outer cup 30 has a sidewall 31 extending upwardly and outwardly from a bottom wall 32 to a mouth 33 at its top. The mouth 33 is surrounded by a rim flange 39 projecting radially outwardly from the top of the sidewall 31 of the outer cup. Moulded in the sidewall 31 adjacent the bottom wall 32 is an internal stacking shoulder formed by an upwardly facing annular shoulder 40. The peripheral edge of the bottom wall 32 serves as an external stacking shoulder.

[0013] The inner cup 20 is of a smaller diameter than the outer cup 30 and comprises a bottom wall 22 and a sidewall 21 extending upwardly and generally outwardly from the bottom wall 22 to a mouth 23 at the top of the inner cup 20. A rim flange 24 projects radially outwardly from the top of the inner cup sidewall 21 about the mouth 23 and below this rim, the sidewall 21 is formed with a narrow, annular, vertical wall section which terminates in equally spaced external stacking shoulders 25. The inner edge of the rim 24 serves as an internal stacking shoulder.

[0014] The hollow lid 10 is generally of a dome shape having a top wall 11 and a skirt joined to the top wall by a radiused section so as to form a cavity 14 on its inside for the purpose of storing ingredients. The skirt terminates in two stepped annular portions 16, 15 which define upper and lower endless sealing surfaces 34, 35 internally of the lid for cooperating respectively with the rim flanges 24, 39 of the cups 20, 30 (see Figures 6 and 8). The outwardly projecting radial shoulders of the stepped portions serve as external stacking shoulders. Between its lower edge 13 and lower sealing surface 35, the skirt portion of the lid is formed with an array of hollow protuberances 37 projecting inwardly of the skirt and serving as latching means for engaging with the rim flange 39 of the outer cup 30. Formed on the outside of the skirt, between the upper and lower sealing surfaces 34, 35, are inwardly projecting cavities 38 which serve as latching means for engaging with the rim flange 24 of the inner cup 20. Both these sets of cavities and protuberances 38, 37 enable inner and outer cups of different diameters to be individually latched to the lid 10 and also serve to strengthen the skirt.

[0015] The outer cups 30, inner cups 20 and lids 10 may be stacked separately prior to use for transportation and storage purposes. When so stacked, the external stacking shoulder 25, 32 of an upper cup engages the internal stacking shoulder 24, 40 of the next lower cup with which it is nested so as to resist insertion of the upper cup into the lower cup and avoid the cups wedging together. In the case of the lids 10, when the lids 10 are stacked in nested relation, the external stacking shoulders 34, 35 of a lower lid engages the internal protuberances 38, 37 of the next lid in order to resist compaction of the stacked lids.

[0016] The cavity 14 in the lid 10 may be filled with an ingredient, for example, suitable for preparing a drink, and the open inside may be sealed to retain and preserve the ingredient therein by heat sealing a foil made from suitable material, such as aluminum, to the first sealing surface 34 of the lid 10. The lid 10 is then clipped or snapped on to the inner cup 20, which may be filled with a further ingredient, so as to close the mouth of the inner cup 20 (see Figure 3), the protuberances 38 of the lid latching with the rim flange 24 of the inner cup 20 so as to retain the lid 10 in position on the inner cup 20, as shown in Figure 6. When the lid 10 is latched in position to close the mouth 23 of the inner cup 20, the sealing foil attached to the lid 10 seats against the top surface of the rim flange 24 of the inner cup 20 so as to provide a seal between the lid 10 and the inner cup 20 and help preserve any further ingredients in the inner cup 20. The lid 10 is then clipped or snapped on to the outer cup 30 so as to close the mouth 33 of the outer cup 30, the outer cup 30 being optionally filled with yet a further ingredient prior to assembling the lid 10 to the outer cup 30. When lid 10 is assembled to the mouth 33 of the outer cup 30, the protuberances 37 of the lid 10 clip over the rim flange 39 of the outer cup 30 so as to retain the lower sealing surface 35 of the lid 10 against the top surface of the rim flange 39 of the outer cup 30 and thereby provide a seal between the lid 10 and the outer cup 30 and retain the lid 10 in position.

[0017] When it is desired to mix ingredients stored in the inner cup 20 with the contents of the outer cup 30 which may be pre or subsequently filled, the lid 10 is removed from the mouth 33 of the outer cup 30 (Figure 7) and then from the mouth 23 of the inner cup 20 and the ingredients stored in the inner cup 20 are poured into the outer cup 30 and mixed with the contents of the outer cup 30.

[0018] It may be desirable to mix the ingredient stored in the cavity 14 of the lid 10 with the contents of the outer cup 30 either before or after adding any ingredient from the inner cup 20 to the contents of the outer cup 30. In either case, after having removed the lid 10 from the mouth 23 of the inner cup 20, the foil seal is removed from the open inside of the lid 10 and the ingredient stored in the cavity 14 of the lid 10 is poured into the outer cup 30 and mixed with the contents in the outer cup 30.

[0019] Once the ingredients from the inner cup 20 and cavity 14 of the lid 10 have been added to the contents of the outer cup 30, the lid 10 may then be refitted to the mouth 33 of the outer cup 30, whereupon the cup 30 may be shaken to mix the contents.

[0020] Whilst a particular embodiment has been described it will be understood that modifications can be made without departing from the scope of the invention as defined by the appended claims.

Claims

1. A container unit (1) for containing ingredients, comprising an outer container (30) having a mouth (33),

a lid (10) closing the mouth (33) of the outer container (30) and an inner container (20) disposed at least partially within the mouth (33) of the outer container (30) and having its mouth (23) also closed by the lid (10).

2. A container unit as claimed in claim 1, wherein the lid (10) has latching means engageable with a rim (39) about the mouth (33) of the outer container (30) to retain the lid (10) in position on the unit (1).

3. A container unit as claimed in claim 2, wherein the lid (10) has secondary latching means engageable with a rim (24) about the mouth (23) of the inner container (20) so that the lid (10) supports the inner container (20) within the outer container (30) when fitted to the outer container.

4. A container unit as claimed in claim 3, wherein the lid (10) is adapted to seal the mouths (23, 33) of the outer and inner containers (20, 30) and has endless sealing surfaces (34, 35) which respectively engage the rims (24, 39) about the container mouths (23, 33) when the latching means are engaged.

5. A container unit as claimed in any preceding claim, wherein the lid (10) is a hollow lid having a cavity (14) on its inside for containing a further ingredient.

6. A container unit as claimed in claim 5, wherein the open inside of the lid (10) is sealed with metal or plastics foil to maintain the ingredient within the cavity (14) of the lid (10) and preserve it until required for mixing.

7. A container as claimed in claim 6, wherein the sealing foil is sealed about its periphery to the sealing surface (16) which cooperates with the rim (24) of the inner container (20).

8. A container unit as claimed in any preceding claim, wherein the outer container (30) and/or inner container (20) is/are filled with an ingredient.

9. A lid for closing the mouth (33) of an outer container (30) and which is adapted also to support an inner container (20) at least partially within the mouth (33) of the outer container (30) when fitted to the outer container.

10. A lid as claimed in claim 9, wherein the lid (10) is a hollow lid having a cavity (14) on its inside which is adapted to be sealed by metal or plastics foil in order to serve as a sealed ingredient compartment.

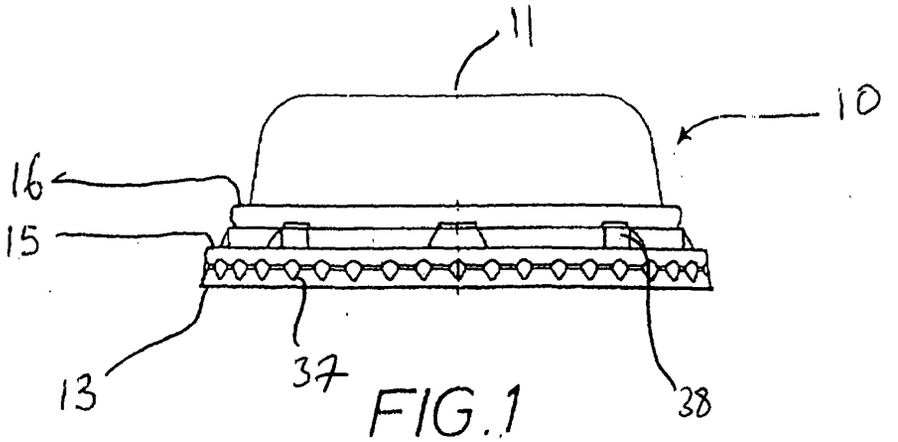

FIG. 1

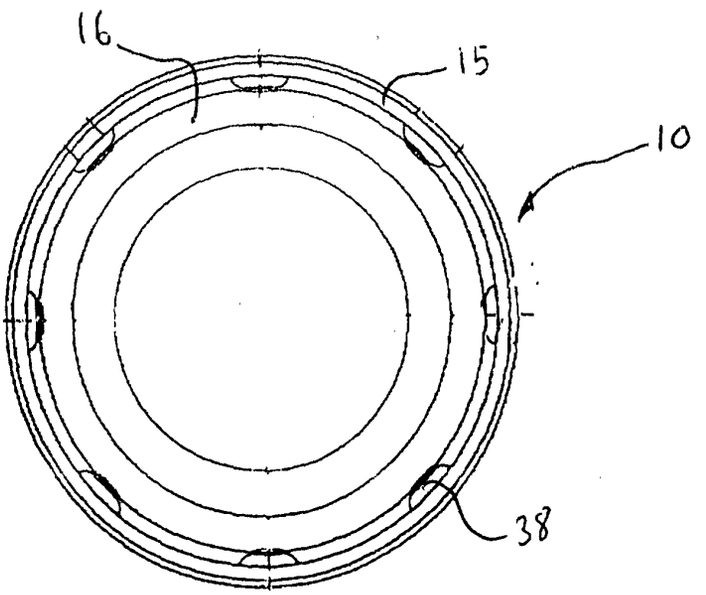

FIG. 2

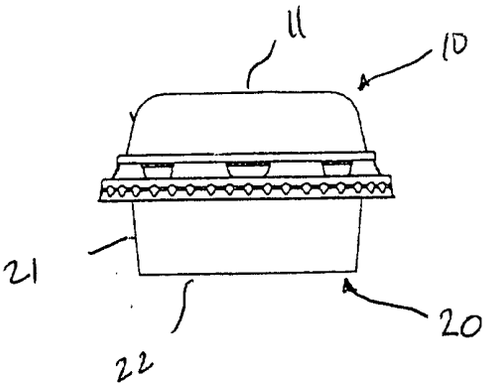

FIG. 3

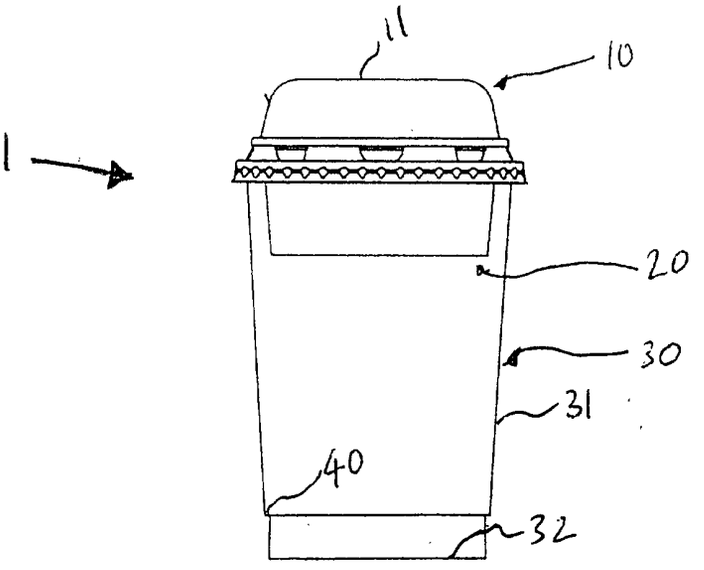

FIG. 4

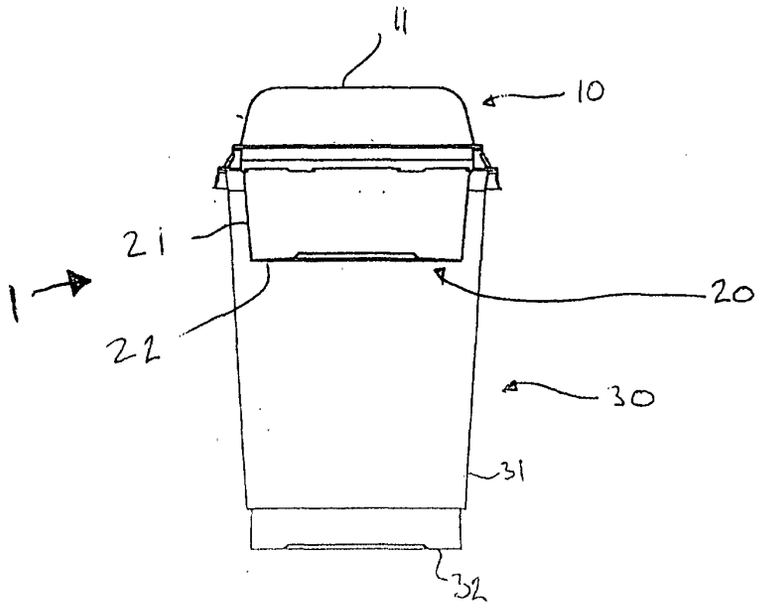

FIG. 5

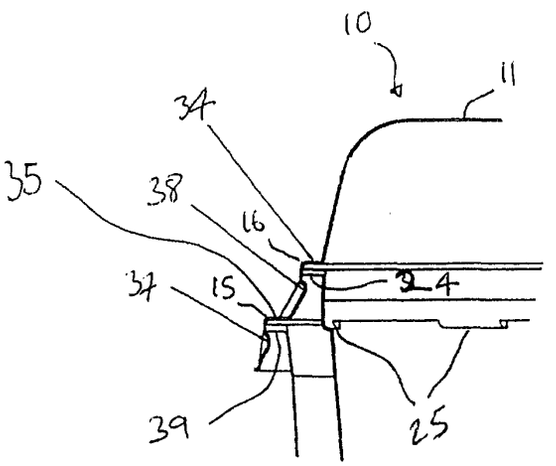

FIG. 6

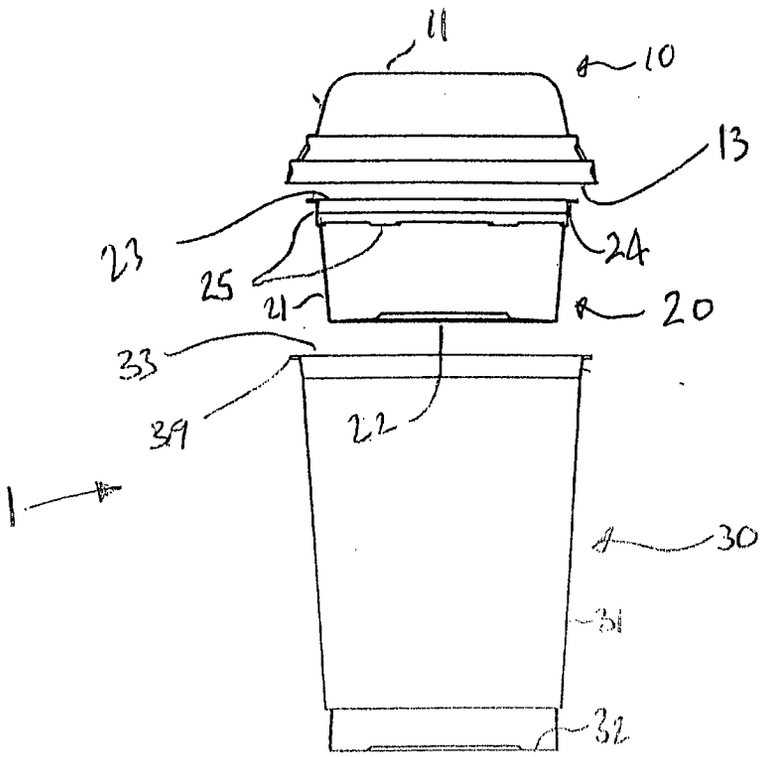

FIG. 7

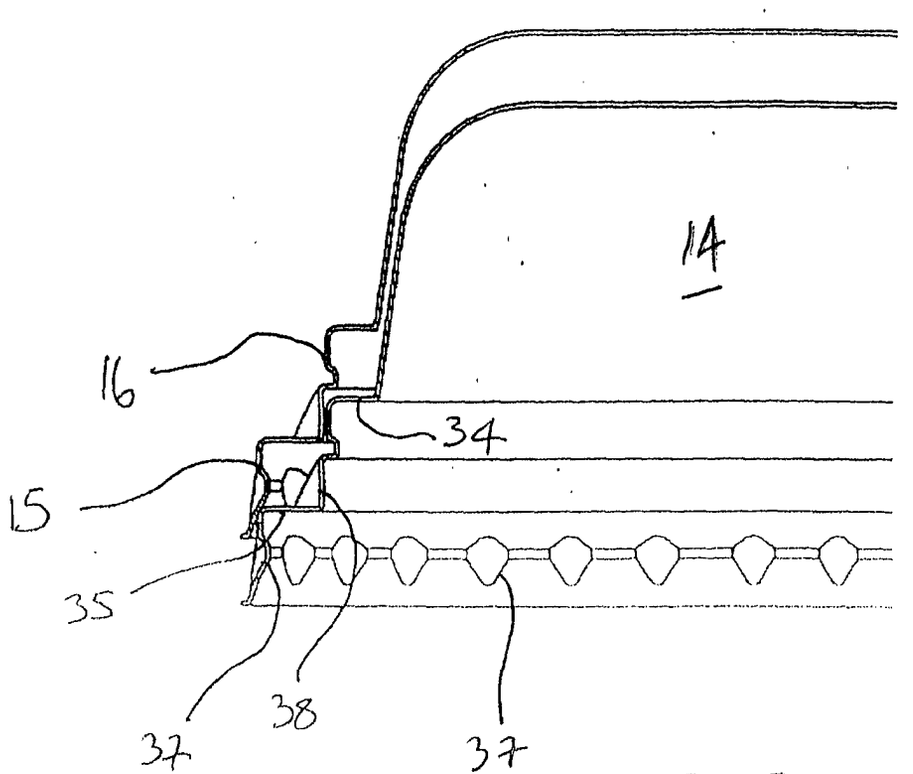

FIG. 8