A lid (10) for a container. The lid including a main body portion (11) and a peripheral sealing lip (12) configured, in use, to detachably engage the upper peripheral edge of an associated bowl, and tab members (17) extending laterally from said sealing lip of the lid, with the tab members being of a semi-circular shape with their periphery substantially aligned with the remainder (18) of the periphery of the lip of the lid. The main body (11) of the lid has inwardly extending strengthening ribs (19) aligned with the tab members (17) of the sealing lip and which are to be finger gripped when removing the lid from the associated bowl. The exterior of the base of the bowl with which the lid is associated is configured to mate with the inwardly extending strengthening ribs on the lid of an underlining container, whereby to locate (nest) any adjacent containers relative to each other when in a stacked relationship.
CONTAINER LID AND LID AND BOWL COMBINATION

TECHNICAL FIELD

This invention relates to a container lid and container lid and container bowl combination such as may be used for storing and carrying materials such as food, and which may be used for use with microwave ovens for reheating food. Such containers conventionally include a bowl and a detachable lid and are formed from plastics material sufficiently robust to withstand temperatures ranging from those in a freezer cabinet to those in a microwave oven.

BACKGROUND ART

One such known, but not necessarily commonly known, container is disclosed in U.S. Pat. No. 6,032,837 and being a square container, and also in US design Pat. No. 411,714, and being a circular container. Both specifications disclose the use of a laterally extending tab member with can be finger gripped to assist in removing (disengaging) the lid from the bowl.

However, one problem with containers of the above type is the laterally extending lid tab which extends beyond the periphery of the container and which increases the overall width of the container. This requires more storage space for the container particularly when a number of such containers are to be stored side-by-side in a storage compartment such as a cupboard or freezer compartment in a refrigerator or freezer.

It is therefore an object of a first aspect of the present invention to provide a container lid for a container which minimises, if not eliminates, the above problem with containers of the type having a lid with a tab to be finger gripped to assist in removing (disengaging) the lid from the associated bowl.

DISCLOSURE OF THE INVENTION

In accordance with this first aspect of the present invention there is provided a lid for a container, said lid including a main body portion and a peripheral sealing lip configured, in use, to detachably engage the upper peripheral edge of an associated bowl, at least one tab member extending laterally from said sealing lip of said lid, and wherein said tab member is of a semi-circular shape with its periphery on, or within, the remainder of the periphery of the lip of the lid, whereby when two containers with such lids are placed side by side the outermost points of the remainders of the peripheries of the lips of the lids abut each other.

Preferably, in the case of a lid of square or rectangular shape, for a bowl of corresponding shape, at least one of the corners of the lid is semi-circular and the semi-circular tab member is integrally formed with the corner whereby its periphery is aligned with or within the adjacent straight sides of the remainder of the periphery of the lid.

Preferably, each of the four corners are semi-circular and a tab member is provided at each of the four corners.

Preferably, in the case of a lid of circular or oval shape, at least two semi-circular tab members are provided, the outer most points of which are on, or within, an imaginary line tangential with the outer most points of curvature of the periphery of the lid between the tab members.

One other problem with containers of the aforementioned US patent specifications, having lids with laterally extending tab members, is that the material of the lid adjacent the tab member, when the tab member is finger gripping to disengage the lid from its associated bowl, is subject to high flexing forces and can weaken or even fracture, particularly with continuous use of the container and thus frequent flexing of the lid.

It is therefore an object of a second aspect of the invention to provide a container lid for a container which minimises, if not eliminates, the above problems with containers of the type having a lid the periphery of which is to be finger gripped, or having a tab member which is to be finger gripped to assist in removing the lid from an associated bowl.

In accordance with this second aspect of the invention there provided a lid for a container, said lid including a main body portion and a peripheral sealing lip configured, in use, to detachably engage the upper peripheral edge of an associated bowl, wherein the main body of said lid has at least one strengthening rib extending at least from the centre of the lid and aligned with that part of the periphery of the sealing lip which is to be finger gripped when removing the lid from the associated bowl.

Preferably the strengthening rib is a portion of the lid formed by moulding that portion outside the plane of the remainder of the main body of the lid and of a material thickness substantially the same as the material thickness of the remainder of the main body.

Preferably a plurality of strengthening ribs are provided.

Preferably the peripheral sealing lip has at least one tab member extending laterally therefrom and said strengthening rib is aligned with said tab member.

Preferably the peripheral sealing lip has a plurality of said tab members extending laterally therefrom with each of the tab members having a respective strengthening rib aligned therewith.

Preferably the exterior of the base of the bowl with which the lid is associated is configured to mate with the, or each, inwardly extending strengthening rib on the lid of an underlining container, whereby to locate (nest) any adjacent containers relative to each other when in a stacked relationship.

There is also envisaged a lid for a container incorporating both the first and second aspects of the invention, and the preferred forms thereof, as defined above.

There is also envisaged a container having a bowl in combination with a detachable lid as defined above.

BRIEF DESCRIPTION OF THE DRAWINGS

Two preferred embodiments, incorporating both the first and second aspects of the invention, will now be described with reference to the accompanying drawings, in which;
[0020] FIG. 1 are plan, side cross-sectional, and upper perspective, views of a container lid of the first preferred embodiment of the invention,

[0021] FIG. 2 are plan and upper perspective, views of a container bowl with which the lid of the first preferred embodiment of the invention is associated,

[0022] FIG. 3 is an exploded perspective view of a container lid and bowl combination incorporating the lid of the first preferred embodiment,

[0023] FIG. 4 is an exploded perspective view of a container lid and bowl combination of a second preferred embodiment of the invention,

[0024] FIG. 5 is a perspective view of the container lid and bowl combination of FIG. 4,

[0025] FIG. 6 is a plan view of the lid of the combination of FIGS. 4 and 5, and

[0026] FIG. 7 is an enlarged cross-sectional view of the interrelationship between the edges of the lid and bowl of the preferred embodiments of the invention.

BEST MODES FOR CARRYING OUT THE INVENTION

[0027] With reference to FIGS. 1 and 3 of the drawings, there is shown a container lid in accordance with the first preferred embodiment of the invention, and of square shape, and consisting of a main body 11 having a peripheral sealing lip 12 and a groove 13 formed around the periphery of the lid inwardly of, and adjacent, the lip 12 whereby to detachably receive the upper peripheral edge 14 of the associated bowl shown in FIGS. 2 and 3.

[0028] In accordance with the first aspect of the invention, the four corners 15 of the lid of this preferred embodiment of the invention, as well as the four corners 16 of the associated bowl, are semi-circular and the corners 15 have formed integrally therewith tab members 17 of semi-circular shape, with their peripheries in substantial alignment with the adjacent straight sides 18 of the remainder of the periphery of the lid, whereby the tab members do not extend laterally any further than the maximum distance between the opposing sides 18 of the lid.

[0029] In accordance with the second aspect of the invention, the lid of this preferred embodiment is formed with four inwardly extending upstanding tabs 19 aligned with each of the corners and forming a cross-shaped configuration as shown in the drawings, and whereby to strengthen the lid adjacent each of its corners and irrespective of which of the four tabs is finger gripped when removing (detaching) the lid from the associated bowl.

[0030] In this preferred embodiment the upstanding ribs 19 are formed by moulding the required portions of the main body of the lid outside the plane of the remaider of the main body and whereby they are of a material thickness substantially the same as the material thickness of the remainder of the main body of the lid.

[0031] Referring to FIG. 2 of the drawings, the associated bowl 20 has the upper peripheral edge 14, referred to previously, side walls 21, and a base 22, whilst the exterior of the base is configured to have a cross-shaped depression 23 to mate with the cross-shaped upstanding strengthening ribs configuration on the lid to locate (nest) the bowl bases and lids of adjacent containers relative to each other when a plurality of containers are in a stacked relationship.

[0032] Referring to FIGS. 4, 5 and 6 of the drawings, there is shown a circular container, generally indicated as 24, and having a lid 25 in accordance with the second preferred embodiment of the invention, and consisting of a main body 26 having a peripheral sealing lip 27 adapted to detachably engage the upper peripheral edge 28 of an associated bowl 29.

[0033] In accordance with the first aspect of the invention, two pairs diametrically opposed tab members 30 of semi-circular shape are formed integrally with the periphery of the lid, and which are within a line tangential with the outermost point of curvature of the peripheral portions 31 of the lid between the tab members, whereby the tab members do not extend laterally any further than the diameter between the diametrically opposed portions 31 of the lid.

[0034] In accordance with the second aspect of the invention, the lid is formed with four diametrically opposed radially inwardly extending upstanding ribs 32 aligned with each of the tab members and forming a cross-shaped configuration as shown in the drawings, and whereby to strengthen the lid adjacent each of the tab members and irrespective of which of the tab members is finger gripped when removing (detaching) the lid from the associated bowl. Once again, in this preferred embodiment of the invention, the upstanding ribs 32 are formed by moulding the required portions of the main body of the lid outside the plane of the remainder of the main body, and whereby they are of a material thickness substantially the same as the material thickness of the remainder of the main body of the lid.

[0035] The associated bowl 29 has the upper peripheral edge 28, a cylindrical side wall 33, and a base 34, whilst the exterior of the base 34 is configured to have a cross-sectional depression (not shown) which mates with the cross-shaped upstanding strengthening ribs configuration on the lid to locate (nest) the bowl bases and lids of adjacent containers relative to each other when a plurality of containers are in a stacked relationship.

[0036] In the case of both embodiments of the invention, a depression 35 is provided between the peripheral lip and the cross-shaped upstanding strengthening rib configurations, whilst a mating rib is provided around the exterior of the bases of the bowls of the containers to further assist in locating (nesting) the bowl bases and lids of adjacent containers relative to each other when a plurality of containers are in a stacked relationship.

[0037] As shown in FIGS. 3 and 4 of the drawings, the upper peripheral edges of the bowls of the containers may have circular, outwardly extending, tab members 37 and 38 respectively formed integrally therewith, whilst the tab members 17 and 30 formed on the peripheries of the associated lids 10 and 25 have hollow undersides with inner deeper semi-circular depression which receive the respective tab members 37 and 38 on the bowls, and outer shallow semi-circular depressions which are finger gripped when removing (detaching) the lids from the bowls. Apart from assisting in locating the lids on the bowl the interengagement of the depressions with their respective associated tab members 37 and 38 may be configured such as to result in
an audible sound, such as a clicking sound, to indicate that
the lid has been securely engaged with the upper edge of the
associated bowl. This is best shown in FIG. 7 of the
drawings where the skirt of the tab members 17 of the lid at
the corners 15 in the embodiment of FIGS. 1 to 3, and the
skirt of the tab members 30 of the lid in the embodiment of
FIGS. 4 to 6 have inwardly turned ribs 40 which engage
beneath the free edges 41 of the skirts of the respective tab
members 37 and 38 on the bowls in a snap fitting action
which when fitting the lid to the bowl there is simultaneously
produced the audible (clicking) sound.

[0038] Since modifications within the spirit and scope of
the invention may readily be effected by persons skilled
within the art, it is to be understood that this invention is not
limited to the particular embodiment described by way of
example hereinabove.

1. A lid for a container, said lid including a main body
portion and a peripheral sealing lip configured, in use, to
detachably engage the upper peripheral edge of an associ-
ated bowl, at least one tab member extending laterally from
said sealing lip of said lid, and wherein said tab member is
of a semi-circular shape with its periphery on, or within,
the remainder of the periphery of the lip of the lid, whereby
when two containers with such lids are placed side by side
the outermost points of the remains of the peripheries of
the lips of the lids abut each other.

2. A lid as claimed in claim 1, wherein for a lid of square
or rectangular shape, for a bowl of corresponding shape, at
least one of the corners of the lid is semicircular and the
semi-circular tab member is integrally formed with the
corner whereby its periphery is on, or within, aligned with
or within the adjacent straight sides of the remainder of the
periphery of the lid.

3. A lid as claimed in claim 2, wherein each of the four
corners are semi-circular and a tab member is provided
at each of the four corners.

4. A lid as claimed in claim 1, wherein for a lid of circular
or oval shape, at least two semi-circular tab members are
provided, the outer most points of which are on, or within,
an imaginary line tangential with the outer most points of
curvature of the periphery of the lid between the tab mem-
bers.

5. A lid for a container, said lid including a main body
portion and a peripheral sealing lip configured, in use, to
detachably engage the upper peripheral edge of an associ-
ated bowl, wherein the main body of said lid has at least one
strengthening rib extending at least from the centre of the lid
and aligned with that part of the periphery of the sealing lip
which is to be finger gripped when removing the lid from the
associated bowl.

6. A lid as claimed in claim 5, wherein the strengthening
rib is a portion of the lid formed by moulding that portion
outside the plane of the remainder of the main body of the
lid and of a material thickness substantially the same as the
material thickness of the remainder of the main body.

7. A lid as claimed in claim 5, wherein a plurality of
strengthening ribs are provided.

8. A lid as claimed in claim 5, wherein the peripheral
sealing lip has at least one tab member extending laterally
therefrom and said strengthening rib is aligned with said tab
member.

9. A lid as claimed in claim 5, wherein the peripheral
sealing lip has a plurality of said tab members extending
laterally therefrom with each of the tab members having a
respective strengthening rib aligned therewith.

10. A lid as claimed in claim 5 and associated with a bowl,
wherein the exterior of the base of the bowl with which the
lid is associated is configured to mate with the, or each,
inwardly extending strengthening rib on the lid of an under-
lying container, whereby to locate (nest) any adjacent
containers relative to each other when in a stacked relation-
ship.

11. A lid for a container as claimed in claim 1, wherein
the main body of said lid has at least one strengthening rib
extending at least from the centre of the lid and aligned with
that part of the periphery of the sealing lip which is to be
finger gripped when removing the lid from the associated
bowl.

12. A container having a bowl in combination with a
detachable lid as claimed in claim 1.

13. (canceled)

14. (canceled)

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