

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

An improved Combined Bowl and Tray

We, REXALL DRUG AND CHEMICAL COMPANY, a Corporation existing under the Laws of the State of Delaware, United States of America, of 8480 Beverly Boulevard, Los Angeles 54, State of California, United States of America, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a combined bowl and tray which is particularly suitable for use in serving various appetizers, such as potato chips, shrimps or the like. Such appetizers are frequently served with a tomato or cheese sauce into which the appetizers are dipped prior to consumption.

The invention provides a combined tray and bowl comprising a substantially flat tray, a cylindrical opening in the tray, a cylindrical connector attached to the underside of the bowl with its axis of rotation aligned with the axis of rotation of the cylindrical opening, a radially extending internal depression in the opening and an external projection on the connector, the projection fitting in the depression and being in surface engagement therewith, and the depression and projection being sufficiently resilient so as to provide a non-rotatable connection between the bowl and the tray by snapping the projection into the depression.

The invention further provides a combined tray and bowl comprising a substantially flat tray, a cylindrical opening in the underside of the bowl, a cylindrical connector attached to the upper side of the tray with its axis of rotation aligned with the axis of rotation of the cylindrical opening, a radially extending internal depression in the opening and an external projection on the connector, the projection fitting in the depression and being in surface engagement therewith, and the depression and projection being sufficiently resilient so as to

provide a non-rotatable connection between the bowl and the tray by snapping the projection into the depression.

In one embodiment the socket is in the form of a cup shaped depression in the tray there being feet on the tray which feet extend downwardly beyond the base of the depression.

Preferably the material of the bowl or the tray around the opening engages with the material of the tray or the bowl respectively around the connector to provide further contact between the bowl and the tray to prevent relative rotation of the bowl and the tray.

In a further embodiment the opening is cup-shaped in vertical section and the connector engages with the base of the cup-shape to provide further contact between the bowl and the tray to prevent relative rotation of the bowl and the tray.

There may be an upwardly extending edge on the bowl and a lid which is engageable with the said edge to provide an air-tight seal for the bowl.

A specific example of a combined bowl and tray according to the invention will now be described with reference to the accompanying drawings in which:—

Figure 1 is a perspective view of the bowl and tray,

Figure 2 is a cross section taken on line II—II of Figure 1,

Figure 3 is an exploded side elevation view of the bowl and tray,

Figure 4 is a cross section taken on lines IV—IV on Figure 2,

Figure 5 is an enlarged vertical cross section of the connecting means between the bowl and tray; and,

Figure 6 is a view similar to Figure 5 showing a modified form of connecting means between the bowl and tray.

A substantially flat tray 10 has an upwardly directed peripheral flange 11 and downwardly directed feet 12 affixed to the underside of the

tray. The tray can be any desired configuration such as round, square, oval, rectangular, dish-shaped and with or without the peripheral flange. The feet 12 should be aesthetically appealing and sufficient in number to ensure stability to the tray when placed on a supporting surface.

A bowl generally designated 13 includes a cup-shaped vessel 14 having an open top. The vessel 14 should be impervious to fluids and can be in any desired configuration such as square, round, oval, rectangular, etc. The upper open end of the vessel 14 is closed by a sealing lid 15 of well-known construction as illustratively shown in Specification No: 662219. The lid includes a central wall 16 which covers the top opening of the vessel 14 and integral upwardly extending peripheral walls 17, a connecting wall 18 and downwardly directed outside walls 19. The walls 17, 18 and 19 form an inverted U-shaped sealing lip for the upper end of the walls of the vessel 14.

The outer surface of the vessel 14 preferably includes a peripheral flange 20 for rigidity and for use in picking up the bowl.

Preferably located in the middle of the tray 10, although it can be located elsewhere in the tray is a cylindrical opening having a side wall 21 and closed at the bottom by a bottom wall 22. The opening is cup-shaped in cross section as shown in figures 2 and 5. There is a radially extending internal depression in the lower end of the side wall 21 and the depression has a greater internal diameter than the upper portion of the side wall at the juncture of the depression with the tray 10. The side wall is integral with the tray and there is a smooth rounded joint between the tray and side wall 21.

Integral with the underside of the vessel 14 is a cylindrical connector 24. This cylindrical connector is closed at its upper end by the bottom of the vessel 14 and open at its lower end. The lower end of the connector 24 has an external projection 23 having a greater outside diameter than the outer diameter of the connector at its point of juncture with the vessel 14. As shown in figure 5 the projection 23 fits into the depression in the tray. However, as shown in figure 5 the projection does not seat in the depression, but rather bridges across the depression. The connector 24 engages the walls 21 and 22 at two spaced points 25 and 26. Each of these spaced points extends in a plane around the entire periphery of the connector 24 and thus there is provided a large surface area of contact between the connector and the opening in the tray to minimize rotation of the bowl relative to the tray. The two contact points 25 and 26 prevent rocking and tipping of the bowl relative to the tray. A squeezing action is exerted on the lower end of the connector 24 by the points 25 and 26. Since the bowl and tray are preferably fabricated from plastic such as regular

or linear polyethylene, the squeezing of the lower end of the connector 24 ensures a positive locking of the bowl to the tray in a non-rotatable, non-tipping relationship.

In figure 6 is shown a modified form of connecting means between the bowl and tray wherein the projection on the connector 24 engages the depression at point 27 and the underside of the bowl 14 engages the surface of the tray 10 at point 28. Here again, due to the material from which the articles are made, there is a squeezing action between the points 27 and 28 such that the juncture between the tray 10 and the opening tends to be compressed and distorted thereby maintaining the bowl in a non-tiltable, non-rotatable position on the tray. The two points (27 and 28) contact in the modified form shown in figure 6 functions substantially the same as described above with respect to figure 5. It is to be understood that the depression and the projection on the connector 24 need not be continuous along the respective surfaces.

The connector 24 is preferably hollow without a bottom wall enclosing the lower end of the connector. Thus the connector being made from polyethylene, is semi-flexible and yieldable, such that the connector "gives" sufficiently to permit an easy snap-in of the connector in the opening and removal therefrom.

The preferred embodiment described herein has a connector 24 on the bowl and an opening in the tray. However, the invention also encompasses the use of a connector extending upwardly from and integral with the tray and an opening in the underside of the bowl for receiving the connector. The construction of the connector and this opening would be the same as described in the preferred embodiment.

The feet 12 are sufficient in length to maintain the underside of the opening above the supporting surface on which the tray is placed. However, in the alternative form described in the preceding paragraph the feet can be reduced in length or eliminated.

WHAT WE CLAIM IS:—

1. A combined bowl and tray comprising a substantially flat tray, a cylindrical opening in the tray, a cylindrical connector attached to the underside of the bowl with its axis of rotation aligned with the axis of rotation of the cylindrical opening, a radially extending internal depression in the opening and an external projection on the connector, the projection fitting in the depression and being in surface engagement therewith, and the depression and projection being sufficiently resilient so as to provide a non-rotatable connection between the bowl and the tray by snapping the projection into the depression.

2. A combined tray and bowl comprising a substantially flat tray, a cylindrical opening in the underside of the bowl, a cylindrical connector attached to the upper side of the



tray. The tray can be any desired configuration such as round, square, oval, rectangular, dish-shaped and with or without the peripheral flange. The feet 12 should be aesthetically appealing and sufficient in number to ensure stability to the tray when placed on a supporting surface.

A bowl generally designated 13 includes a cup-shaped vessel 14 having an open top. The vessel 14 should be impervious to fluids and can be in any desired configuration such as square, round, oval, rectangular, etc. The upper open end of the vessel 14 is closed by a sealing lid 15 of well-known construction as illustratively shown in Specification No. 662219. The lid includes a central wall 16 which covers the top opening of the vessel 14 and integral upwardly extending peripheral walls 17, a connecting wall 18 and downwardly directed outside walls 19. The walls 17, 18 and 19 form an inverted U-shaped sealing lip for the upper end of the walls of the vessel 14.

The outer surface of the vessel 14 preferably includes a peripheral flange 20 for rigidity and for use in picking up the bowl.

Preferably located in the middle of the tray 10, although it can be located elsewhere in the tray is a cylindrical opening having a side wall 21 and closed at the bottom by a bottom wall 22. The opening is cup-shaped in cross section as shown in figures 2 and 5. There is a radially extending internal depression in the lower end of the side wall 21 and the depression has a greater internal diameter than the upper portion of the side wall at the juncture of the depression with the tray 10. The side wall is integral with the tray and there is a smooth rounded joint between the tray and side wall 21.

Integral with the underside of the vessel 14 is a cylindrical connector 24. This cylindrical connector is closed at its upper end by the bottom of the vessel 14 and open at its lower end. The lower end of the connector 24 has an external projection 23 having a greater outside diameter than the outer diameter of the connector at its point of juncture with the vessel 14. As shown in figure 5 the projection 23 fits into the depression in the tray. However, as shown in figure 5 the projection does not seat in the depression, but rather bridges across the depression. The connector 24 engages the walls 21 and 22 at two spaced points 25 and 26. Each of these spaced points extends in a plane around the entire periphery of the connector 24 and thus there is provided a large surface area of contact between the connector and the opening in the tray to minimize rotation of the bowl relative to the tray. The two contact points 25 and 26 prevent rocking and tipping of the bowl relative to the tray. A squeezing action is exerted on the lower end of the connector 24 by the points 25 and 26. Since the bowl and tray are preferably fabricated from plastic such as regular

or linear polyethylene, the squeezing of the lower end of the connector 24 ensures a positive locking of the bowl to the tray in a non-rotatable, non-tipping relationship.

In figure 6 is shown a modified form of connecting means between the bowl and tray wherein the projection on the connector 24 engages the depression at point 27 and the underside of the bowl 14 engages the surface of the tray 10 at point 28. Here again, due to the material from which the articles are made, there is a squeezing action between the points 27 and 28 such that the juncture between the tray 10 and the opening tends to be compressed and distorted thereby maintaining the bowl in a non-tiltable, non-rotatable position on the tray. The two points (27 and 28) contact in the modified form shown in figure 6 functions substantially the same as described above with respect to figure 5. It is to be understood that the depression and the projection on the connector 24 need not be continuous along the respective surfaces.

The connector 24 is preferably hollow without a bottom wall enclosing the lower end of the connector. Thus the connector being made from polyethylene, is semi-flexible and yieldable, such that the connector "gives" sufficiently to permit an easy snap-in of the connector in the opening and removal therefrom.

The preferred embodiment described herein has a connector 24 on the bowl and an opening in the tray. However, the invention also encompasses the use of a connector extending upwardly from and integral with the tray and an opening in the underside of the bowl for receiving the connector. The construction of the connector and this opening would be the same as described in the preferred embodiment.

The feet 12 are sufficient in length to maintain the underside of the opening above the supporting surface on which the tray is placed. However, in the alternative form described in the preceding paragraph the feet can be reduced in length or eliminated.

WHAT WE CLAIM IS:—

1. A combined bowl and tray comprising a substantially flat tray, a cylindrical opening in the tray, a cylindrical connector attached to the underside of the bowl with its axis of rotation aligned with the axis of rotation of the cylindrical opening, a radially extending internal depression in the opening and an external projection on the connector, the projection fitting in the depression and being in surface engagement therewith, and the depression and projection being sufficiently resilient so as to provide a non-rotatable connection between the bowl and the tray by snapping the projection into the depression.

2. A combined tray and bowl comprising a substantially flat tray, a cylindrical opening in the underside of the bowl, a cylindrical connector attached to the upper side of the

tray with its axis of rotation aligned with the axis of rotation of the cylindrical opening, a radially extending internal depression in the opening and an external projection on the connector, the projection fitting in the depression and being in surface engagement therewith, and the depression and projection being sufficiently resilient so as to provide a non-rotatable connection between the bowl and the tray by snapping the projection into the depression.

3. The combination as claimed in claim 1 in which the socket is in the form of a cup shaped depression in the tray there being feet on the tray which feet extend downwardly beyond the base of the depression.

4. The combination as claimed in any of claims 1 to 3 in which the material of the bowl or the tray around the opening engages with the material of the tray or the bowl respectively around the connector to provide further contact between the bowl and the tray to prevent relative rotation of the bowl and the tray.

5. The combination as claimed in any of claims 1 to 4 in which the opening is cup shaped in vertical section and the connector

engages with the base of the cup-shape to provide further contact between the bowl and the tray to prevent relative rotation of the bowl and the tray.

6. The combination as claimed in any of claims 1 to 5 in which the bowl and tray are both of resilient material.

7. The combination as claimed in any of the preceding claims in which the bowl and the tray are circular in horizontal cross-section.

8. The combination as claimed in claim 7 in which the bowl is connected to the centre of the tray.

9. The combination as claimed in any of the preceding claims in which there is an upwardly extending edge on the bowl and a lid which is engageable with the said edge to provide an air-tight seal for the bowl.

10. The combination of a bowl and tray substantially as herein described with reference to Figures 1 to 4 and Figure 5 or Figure 6 of the accompanying drawings.

BOULT, WADE & TENNANT,

111 & 112, Hatton Garden, London, E.C.1.

Chartered Patent Agents,
Agents for the Applicants.

