

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) COLLECTING BOWL

(71) We, DART INDUSTRIES INC., a Corporation organised and existing under the Laws of the State of Delaware, United States of America, of 8480 Beverly Boulevard, Los Angeles, State of California, 90054, 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 collecting bowls.

The invention is also concerned with a food grater which is made of plastics materials. The grater has a plastics bowl which may be of any suitable plastics material and a grater element which is preferably manufactured from ABS and which snaps on to the bowl in a manner which prevents rotation of the grater element on the bowl. The plastics grating areas which may be substantially planar do not readily stick to the materials which are grated and are therefore easily cleaned. The bowl has at least one outwardly extending handle portion which in conjunction with at least one flattened portion of the bowl permits the bowl and grater element to be tilted in a relatively stable position which prevents the bowl from rolling on the working surface. The handle can also rest on the working surface with the bowl below the edge of the surface which permits the bowl to be stably held against the edge of the working surface.

The grater element may have a plurality of grating or cutting areas which may be in different planes or may face in opposing directions. The use of grating areas which are in separate planes or which face in opposing directions permits the areas to be separated to minimise scrapes and cuts on the fingers which result from accidentally scraping against other grating areas.

The grater has a slicer blade and grater blades which are made entirely of plastics materials and are preferably ABS. The plastics slicer blade has an edge in the shape

of a sinusoidal curve which permits good slices of food to be obtained and which permits long wear.

The invention provides sidewall and an integral bottom wall, said sidewall being provided with at least one outwardly extending handle portion proximate the upper edge of said sidewall, the outermost extent of said at least one handle portion being at least two points which are substantially equidistant from said sidewall, said sidewall being provided with at least one planar surface, said at least one planar surface being in a mathematical plane passing through said at least two points in said at least one handle portion.

Preferably said at least one handle portion is an integral part of a continuous outwardly extending peripheral flange.

The invention includes a combination of a collecting bowl as specified in the two preceding paragraphs and a reversible food grater element engaged with the open end of the collecting bowl, the food grater element comprising at least first and second grating walls in substantially parallel planes, which planes are also substantially parallel with that plane which is formed by the open end of the bowl, said first grating wall being elevated with respect to said second grating wall, said grating walls being connected by at least one supporting sidewall so that when said food grater element is inverted, said second wall is elevated with respect to said first wall.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:—

Figure 1 is an exploded top perspective view showing a bowl and grater element;

Figure 2 is a top perspective view showing the grater element assembled upon the bowl;

Figure 3 is a bottom plan view of the bowl;

Figure 4 is a cross-sectional view taken on line 4—4 of Figure 2;

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Figure 5 is a cross-sectional view taken on line 5—5 of Figure 2;

Figure 6 is a perspective view of the food grater as it might appear during use;

5 Figure 7 is an exploded bottom plan view of the slicer blade;

Figure 8 is a cross-sectional view of the slicer blade along line 8—8 of Figure 7; and

10 Figure 9 is a view of the edge of the slicer taken along line 9—9 of Figure 7.

Referring now to the drawings and particularly Figures 1, 2, 3, 4 and 5, a food grater 9 has a bowl 15 and a mating reversible grater element 10. Materials which are grated will pass through element 10 and be collected in bowl 15.

Grater element 10 includes first, second, and third separate grating walls 11, 12 and 13. First wall 11 is in a different mathematical plane, than the remaining walls 12 and 13. First and second walls 11 and 12 are connected by a supporting sidewall 18a and first and third walls 11 and 13 are connected by a supporting sidewall 18b.

Grating walls 11, 12 and 13 have grating surfaces 62, 63 and 64 respectively.

The grater blades 14 on each grating surface project outwardly with respect to the surface, and when blades 14 on surface 62 of wall 11 project upwardly, blades 14 on walls 12 and 13 project downwardly, so that if food grater element 10 is inverted the plane of walls 12 and 13 is elevated with respect to the plane of wall 11, and grater blades 14 on walls 12 and 13 project upwardly. Two features help to prevent the fingers of a user from being scratched or cut upon nearby grating or cutting areas. Since the grating areas are in different planes, the fingers will not easily contact another grating wall and even if another grating wall is contacted, the chance of being cut or scraped is minimised since the grating areas face in opposing directions. Thus the relatively smooth side of the grating wall rather than the grating or cutting portion of the grating wall is likely to be contacted.

Reversible food grater element 10 is defined by an annular outwardly extending flange 19 and a sidewall 20 which downwardly extends from the inner edge 58 of flange 19. Grating walls 12 and 13 are integral with sidewall 20 and except for grater blades 14 are substantially planar and may be circular segments. Each wall 12 and 13 has a defining edge 21 which may be the cord of a circle, which cord is shorter than the diameter of element 10 if element 10 is circular and which defining edge is substantially parallel to and spaced from the defining edge of the remaining wall 12 or 13.

In the preferred embodiment, the outwardly extending flange 19 of the grater element has undercut projections 45 and 46,

and undercut projections 55 and 56 which extend in a direction opposed to the direction of extension of projections 45 and 46. The projections 55 and 56 are adapted to snap over a peripheral rim on the bowl, each within one of the spaces 51, 52, 53 and 54 provided on the bowl and projections 45 and 46 are likewise adapted to snap over rim 40 within one of the spaces 51, 52, 53 and 54 when grater element 10 is inverted. The advantage of this structure is that grater element 10 is securely held to bowl 15 and is not permitted to rotate on the bowl. In addition, element 10 may be removed, rotated and secured to the bowl in a different position by snapping the projections into different spaces to obtain a more advantageous grating angle in relation to the bowl for the particular material being grated and for the particular working surface upon which the bowl rests.

The bowl 15 comprises a bottom wall 24 and an integral circular sidewall 23. It will be appreciated that alternatively, three or more linear sidewalls may serve the function of circular sidewall 23. In the preferred embodiment, sidewall 23 has an outwardly flared upwardly extending peripheral rim 40 proximate top edge 26 of sidewall 23. The sidewall may further have an integral outwardly extending peripheral flange 25 proximate top edge 26 but below rim 40, to facilitate the use of the rim to engage grater element 10. Flange 25 has a plurality of integral spaced angular members 41, 42, 43 100 and 44 which are also integral with rim 40. The ends of the angular members define the aforesaid plurality of spaces 51, 52, 53 and 54.

Peripheral flange 25 of bowl 15 forms two handle portions 27 and 28 which (as shown) are preferably opposed. Each handle portion is provided with an outermost extent 29 and 30 respectively, each outermost extent being at least two points which are equidistant from sidewall 23. Sidewall 23 has two planar surfaces 31 and 32, one of the outermost extents of one of the handles being in the same mathematical plane as one of the planar surfaces. The other outermost extent of the other handle is in the same mathematical plane as the other planar surface. One of the mathematical planes is represented as working surface 33 as seen in Figure 6,

Having the outermost extent of a handle in the same plane as one of the planar surfaces 31 and 32 permits the grater to be held at an angle as shown in Figure 6, while the grater is being used so that the bowl and grater do not roll upon the working surface.

In the preferred embodiment, as best seen in Figure 5, first grating wall 11 has a slight central peak 16 which divides wall 11 into two sections 59 and 60. The separation of

wall 11 by peak 16 reduces the likelihood that the fingers will be scraped upon a section that is not being used. A reinforcing wall 57 is integral with sections 59 and 60 at peak 16 and helps to support the sections.

As seen in Figures 1 and 5, grating element 10 has a plastics slicer 34 which is preferably on one of the sections 59 and 60, at an angle of from about 60° to about 85° to the longitudinal axis of the section. The angle increases slicing efficiency as does the slight upward angle of the slicer 34 from about 5° to 20° to the surface of the section. Plastics slicer 34 has a cutting edge 17 and a supporting portion 35. As best seen in Figure 7, cutting edge portion 17 is substantially in the shape of a sinusoidal curve having maximum amplitudes 36 and minimum amplitudes 37.

As seen in Figure 8, the supporting portion 35 has upper and lower surfaces 38 and 39 respectively which are joined by edge 17. Upper surface 38 is substantially planar and lower surface 39 slants toward upper surface 38. The slant of the lower surface 39 begins at a substantially straight line 61, seen in Figure 7, and terminates at the sinusoidal cutting edge 17 best seen in Figures 7, 8 and 9. Lower surface 39 slants toward upper surface 38 from line 61 at a lesser angle to upper surface 38 where lower surface 39 is directed toward a portion of cutting edge 17 having a larger amplitude, and slants at a greater angle to upper surface 38 where lower surface 39 is directed toward a portion of the cutting edge having lesser amplitude. The resulting lower surface 39 has a scalloped wavy appearance as it slants toward sinusoidal cutting edge 17.

The resulting plastics cutting edge operates effectively and efficiently for a longer period than some metal edges. The resulting plastics edge efficiently cuts carrots, cheese, potatoes and other foods. It was discovered by the applicants that a long wearing efficient plastics blade resulted when the edge was given a definite thickness of from about 0.005 to 0.02 of an inch. The

edge in the preferred embodiment is about 0.01 of an inch thick.

WHAT WE CLAIM IS:—

1. A collecting bowl comprising a sidewall and an integral bottom wall, said sidewall being provided with at least one outwardly extending handle portion proximate the upper edge of said sidewall, the outermost extent of said at least one handle portion being at least two points which are substantially equidistant from said sidewall, said sidewall being provided with at least one planar surface, said at least one planar surface being in a mathematical plane passing through said at least two points in said at least one handle portion.

2. The collecting bowl as claimed in claim 1 wherein said at least one handle portion is an integral part of a continuous outwardly extending peripheral flange.

3. A combination of a collecting bowl as claimed in claim 1 or claim 2 and a reversible food grater element engaged with the open end of the collecting bowl, the food grater element comprising at least first and second grating walls in substantially parallel planes, which planes are also substantially parallel with that plane which is formed by the open end of the bowl, said first grating wall being elevated with respect to said second grating wall, said grating walls being connected by at least one supporting sidewall so that when said food grater element is inverted, said second wall is elevated with respect to said first wall.

4. A collecting bowl substantially as hereinbefore described with reference to and as shown in Figures 1 to 6 of the accompanying drawings.

5. A combination of a collecting bowl and food grater element substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.

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2. The collecting bowl as claimed in claim 1 wherein said at least one handle portion is an integral part of a continuous outwardly extending peripheral flange.

3. A combination of a collecting bowl as claimed in claim 1 or claim 2 and a reversible food grater element engaged with the open end of the collecting bowl, the food grater element comprising at least first and second grating walls in substantially parallel planes, which planes are also substantially parallel with that plane which is formed by the open end of the bowl, said first grating wall being elevated with respect to said second grating wall, said grating walls being connected by at least one supporting sidewall so that when said food grater element is inverted, said second wall is elevated with respect to said first wall.

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