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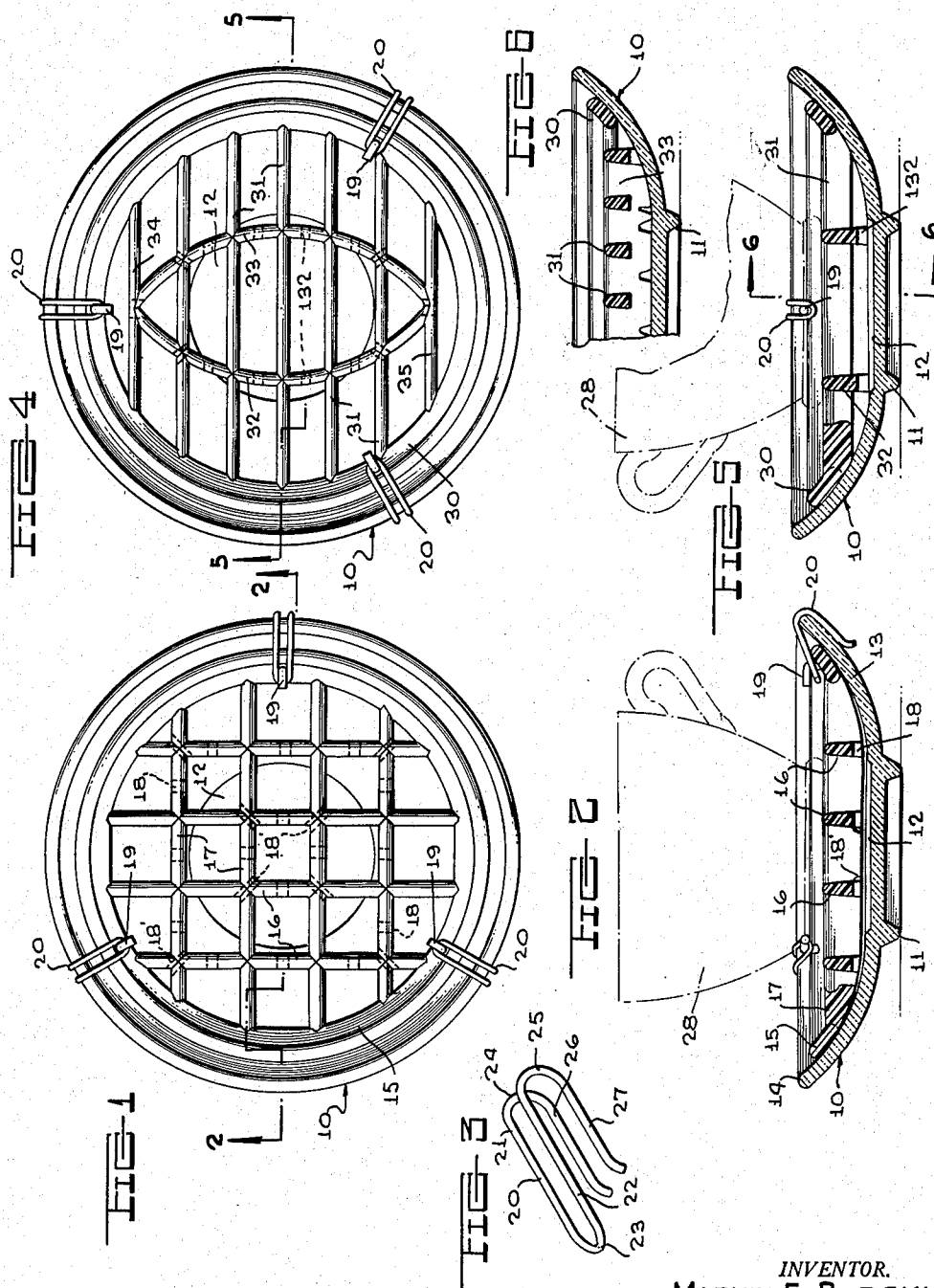
M. F. BABSKI

2,660,040

SAUCER GRID

Filed Feb. 9, 1951

2 Sheets-Sheet 1



INVENTOR.
MARTIN F. BABSKI

BY

McMorrow, Berman & Davidson
ATTORNEYS

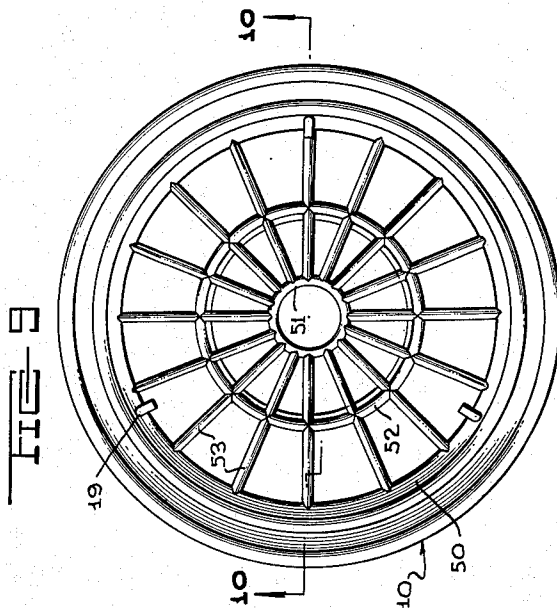
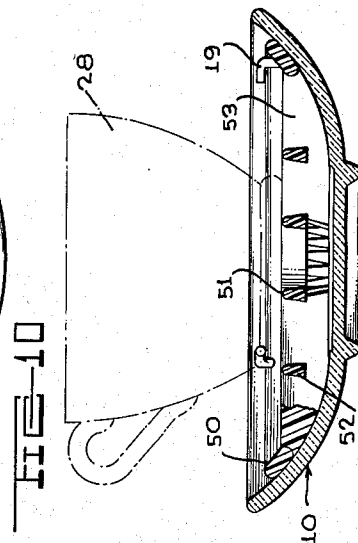
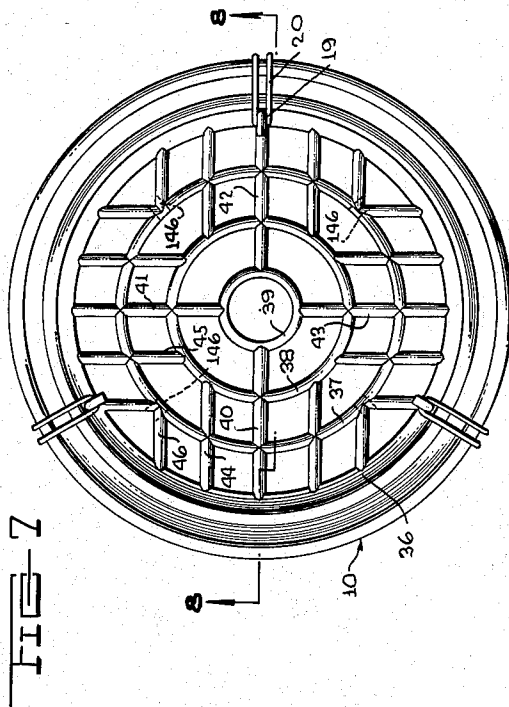
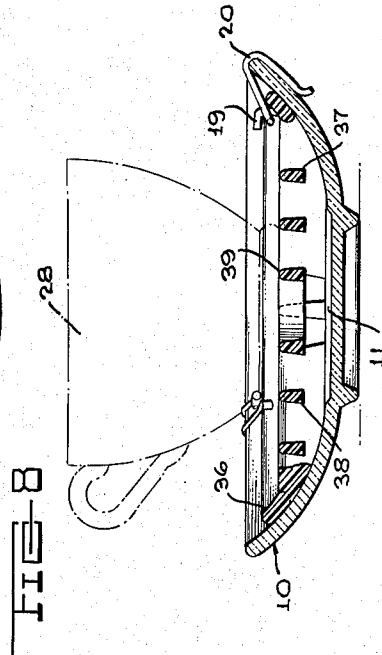
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2 Sheets-Sheet 2



INVENTOR.
MARTIN F. BABSKI

BY

McMorrow, Berman + Davidson
ATTORNEYS

UNITED STATES PATENT OFFICE

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SAUCER GRID

Martin F. Babski, Pittsburgh, Pa.

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4 Claims. (Cl. 65-53)

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This invention relates to saucer grids, and more particularly to a grid detachably mounted in a saucer to support a drinking cup out of contact with liquid in the saucer.

It is among the objects of the invention to provide an openwork grid or grille which can be placed in a saucer to support a drinking cup out of contact with the saucer and above any liquid which may have been accidentally spilled in the saucer; which will fit into a conventional saucer and may be detachably secured therein; which provides for the free flow of spilled liquid from the outer portions of the saucer to the center portion thereof; which may be provided in various designs of ribs and rings; and which is simple and durable in construction, economical to manufacture and neat and attractive in appearance.

Other objects and advantages will become apparent from a consideration of the following description and appended claims in conjunction with the accompanying drawings, wherein:

Figure 1 is a top plan view of a saucer with a saucer grid illustrative of the invention operatively mounted therein;

Figure 2 is a cross-sectional view on the line 2-2 of Figure 1, with a drinking cup shown in broken lines supported on the saucer grid;

Figure 3 is a perspective view of a spring clip used to releasably secure the grid in the saucer;

Figure 4 is a top plan view similar to Figure 1, showing a somewhat modified form of saucer grid;

Figure 5 is a cross-sectional view similar to Figure 2 taken on the line 5-5 of Figure 4;

Figure 6 is a fragmentary cross-sectional view of the saucer and grid illustrated in Figure 4 taken on the line 6-6 of Figure 5;

Figure 7 is a top plan view similar to Figures 1 and 4, showing a still further form of saucer grid;

Figure 8 is a cross-sectional view on the line 8-8 of Figure 7, with a drinking cup shown in broken lines supported on the grid;

Figure 9 is a top plan view of a saucer with another modified form of saucer grid; and

Figure 10 is a cross-sectional view on the line 10-10 of Figure 9.

With continued reference to the drawings, the saucer generally indicated at 10, is the same in all the forms of the invention and is of known or conventional construction, being concave on its upper side and convex on its lower or bottom side, and having a circular supporting rib or bead 11 concentrically disposed on its bottom, convex side

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and projecting outwardly therefrom. Within the area encompassed by the bead 11 the top, concave side of the saucer is provided with a drip catching depression 12, and outwardly of the circular bead 11 the annular rim portion 13 of the saucer is curved upwardly and outwardly and may have a peripheral bead 14 around its edge.

The grid illustrated in Figure 1 comprises an outer circular ring or rib 15 and a plurality of straight ribs 16 and 17 extending across the area encompassed by the circular outer rib 15. The straight ribs 16 are substantially parallel to each other and spaced apart at substantially equal intervals along a diameter of the circular rib 15 and the straight ribs 17 are disposed substantially perpendicular to the ribs 16 and are substantially parallel to each other and spaced apart at substantially equal intervals along a diameter of the circular rib 15 perpendicular to the diameter along which the ribs are spaced. This arrangement provides an openwork mat having intersecting ribs providing square openings therebetween and portions of square openings between the circular outer rib and the adjacent straight ribs.

The top or upper surface of the grid is flat except that the outer portion of the circular rib 15 projects somewhat above the top surfaces of the straight ribs and the under or bottom surface of the mat is convex and shaped to closely fit the concave upper surface of the saucer 10.

The grid has a diameter less than the diameter of the saucer, so that the periphery of the outer circular rib 15 is disposed inwardly of the edge or periphery of the saucer, a difference in diameter of the grid and the saucer approximately one-half inch having been found to provide a satisfactory result in use.

The circular rib 15 has a width greater than its height, as is clearly illustrated in Figure 2, but the straight ribs have a height materially greater than their maximum width. Straight ribs having cross-sectional dimensions comprising a height of approximately one-quarter of an inch, a width at the base of one-eighth of an inch and a width at the top of one-sixteenth of an inch have been found to provide adequate strength and a neat and attractive appearance for the grid.

Notches 18 are provided in the straight ribs and notches 18' at the outer and inner intersections of the straight ribs to provide passageways between the top surface of the saucer and the bottom edges of the ribs for the passage of liquid from the outer portion to the center portion of the saucer.

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Lugs 19 are provided on the circular rib or ring 15 at substantially equal spaced intervals therearound, three lugs being shown in the drawings and each being in the form of an inwardly directed hook, and clips, as indicated at 20 and particularly illustrated in Figure 3, are engaged one with each of the lugs 19 and over the rim of the saucer at locations adjacent the corresponding lugs.

Each of the clips 20 is a spring clip comprising a length of resilient wire bent first to a U or hair-pin shape to provide spaced apart and substantially parallel legs 21 and 22 connected at corresponding ends by a curved bight portion 23, and these legs are recurved intermediate their length through arcs of approximately 180°, as indicated at 24 and 25, for the legs 21 and 22, respectively, to provide auxiliary legs 26 and 27 spaced from and substantially parallel to the portions of the legs connected to the bight 23. The ends of the auxiliary legs 26 and 27 are curved outwardly away from the bight connected leg portions to facilitate placing the clips on a saucer.

In using the clips, the bight portions of the clips are hooked over corresponding lugs 19, and the auxiliary leg portions 26 and 27 of each clip are then forced under the rim of the saucer at a location adjacent the corresponding lug, so that each clip receives the rim portion of the saucer between its bight connected leg portions and auxiliary legs, as clearly illustrated in Figure 2, and with its bight portion hooked around the corresponding lug 19. These clips are loose or slack, so that they are easy to apply and do not hold the grid away from the bottom of the saucer.

This arrangement secures the grid in the saucer, so that the grid will not slip in the saucer during use, but permits the grid to drop to the bottom of the saucer and to be removed from the saucer for washing of the saucer and grid or for use of the saucer without the grid if such use is desired. The grid may be formed of a resiliently flexible material, such as vulcanized natural or synthetic rubber which will facilitate the connection of the spring clips between the lugs of the grid and the rim of the saucer, or may be formed of other material, such as synthetic resin plastics, metal or glass.

As shown in Figure 2, a cup 28 will be supported on the top surface of the grid, that is, on the upper edges of the straight ribs 16 and 17 spaced from the upper surface of the saucer and above any liquid which may be spilled in the saucer. This keeps the bottom of the cup dry, so that, in drinking from the cup, no liquid will drip from the cup onto the table linen or the clothing of the person using the cup. This factor is of particular importance in such establishments as restaurants and cafeterias, where it is almost impossible to carry a cup of beverage, such as coffee, to a table without spilling some of the coffee from the cup into the saucer.

In the form of the invention illustrated in Figures 4, 5 and 6, the saucer 10 is the same as that illustrated in Figures 1 and 2 and described above, and the clips 20 are the same as those described in connection with Figure 3. The grid illustrated in Figures 4, 5 and 6 is somewhat different, however, from that shown in Figures 1 and 2, and comprises a circular outer rib or ring 30 and a plurality of straight ribs 31 extending across the space encompassed by the circular rib 30 substantially parallel to each other and spaced at substantially equal intervals along a diameter

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of the circular rib 30 perpendicular to the straight ribs 31. Two arcuate ribs 32 and 33 extend transversely of the straight ribs at the respectively opposite sides of the above-mentioned diameter of the circular rib 30 perpendicular to the straight ribs, and these arcuate ribs have their ends coinciding at the mid-length locations of the outer straight ribs 34 and 35 to provide within the grid a somewhat elliptical or lemon-shaped figure symmetrical with the diameter of the circular outer rib 30 of the grid disposed perpendicular to the straight ribs 31.

In this modified arrangement, the circular rib 30 has substantially the same shape and size as the rib 15 of the form illustrated in Figures 1 and 2 and described above. The straight ribs 31, however, have straight upper and lower edges and a width materially less than the maximum depth of the space within the saucer in which the grid is disposed, so that the straight bottom edges of the straight ribs 31 are spaced well above the upper surface of the saucer, as is particularly illustrated in Figures 5 and 6.

The arcuate ribs 32 and 33, however, have a width at their mid-length locations substantially equal to the full depth of the portion of the saucer in which the grid is mounted, and taper in width at their upper ends to fit the upwardly curved annular rim portion of the saucer. These arcuate ribs are provided in their lower edges with notches 32 which provide passages for the flow of liquid from the outer portion to the center portion of the saucer. The upper edges of the straight ribs 31 and arcuate ribs 32 and 33 lie in a flat surface or plane to support the drinking cup 28 spaced from the upper surface of the saucer and above any liquid which may be spilled into the saucer.

The circular outer rib 30 of the grid is provided with lugs 19 spaced at substantially equal angular intervals therearound to receive clips 20 by means of which the grid is releasably secured in a saucer in the manner described above.

In the form of the invention illustrated in Figures 7 and 8, the saucer, lugs and clips are the same as those described above, and the grid comprises an outer circular ring or rib 36 and concentric circular intermediate and inner rings 37, 38 and 39 circumferentially spaced at substantially equal distances from each other. This grid also comprises four straight ribs 40, 41, 42 and 43 extending from the outer ring to the inner ring diametrically of the rings and spaced apart at angular intervals of approximately 90° in the order named. Each quarter of the grid also includes four chordwise extending, straight ribs 44, 45, 46 and 47 parallel to each other and to the corresponding diametrically extending ribs and spaced apart substantially equal distances. The ribs 44 and 45 are disposed substantially at right angles to each other and extend from the outer circular rib 36 to the intermediate circular rib 38 nearest the inner circular rib or ring 39, and the straight ribs 46 and 47 are also disposed at right angles to each other and extend from the outer ring 36 to the intermediate ring 37 nearest the outer ring. The diametrically or radially extending straight ribs 40, 41, 42 and 43 have a width substantially equal to the depth of the portion of the saucer in which the grid is disposed, but the inner circular ribs 37, 38 and 39 have a width materially less than the width of the ribs 40 to 43, inclusive, and have their lower edges spaced above the lower edges of these last-mentioned ribs. Notches 146 are provided in the

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bottom edges of the ribs 46 and 47 at their intersection with each other and the circular rib 37 to provide passages for the flow of spilled liquid to the center portion of the saucer. The upper edges of all of the ribs except the outer rib or ring 36 lie in a common flat surface or plane to firmly support the cup 28 and no ribs extend across the interior of the inner ring 39. The outer ring or rib 36 is of approximately the same size and shape as the outer ring 15 described in connection with Figures 1 and 2, and projects above the top plane of the straight and intermediate circular ribs of the grid.

This grid is releasably secured in the saucer by the lugs 19 and spring clips 20 in the manner described above.

In the additional modified form of the invention illustrated in Figures 9 and 10, the saucer, lugs and spring clips are the same as those described above, and the grid comprises an outer, circular rib or ring 50 similar in size and shape to the outer ring 15 of Figures 1 and 2, as described above. This modified grid also comprises an inner circular rib or ring 51 concentric with the outer circular rib 50 and an intermediate circular rib 52 concentric with the circular ribs 50 and 51 and circumferentially disposed substantially midway between the outer and inner rings.

A plurality of straight ribs 53 extend radially in spoke-like fashion from the outer ring to the inner ring across the intermediate ring and are spaced apart at substantially equal angular intervals around the concentric rings. While the number of straight ribs 53 may be varied without in any way exceeding the scope of the invention, it has been found that 16 radially directed ribs spaced apart at angular intervals of $22\frac{1}{2}^\circ$ provide a grid which is entirely satisfactory in use.

In this arrangement the radially disposed straight ribs have a width substantially equal to the depth of the space within the saucer in which the grid is disposed, but the circular ribs 51 and 52 have a width materially less than the width of the straight ribs, so that the bottom edges of the circular ribs are spaced from the bottom edges of the straight ribs toward the top edges of the ribs, as is clearly illustrated in Figure 10. All of the ribs except the outer circular rib 50 have their top edges in a common flat surface or plane, and the straight ribs terminate at the inner ring 50 and do not extend across this inner ring.

In both forms of the invention as illustrated in Figures 7 and 8 and 9 and 10, the spacing of the lower edges of the circular ribs from the bottom surface of the grid provides passageways for the free flow of liquid spilled into the saucer from the outer annular portion of the saucer to the center portion thereof, where the liquid can be collected in depression 11.

The above-suggested materials of which the grids may be formed are readily moldable materials, and it is contemplated that each grid will be molded or cast as a one-piece or integral structure in which the ribs are integrally joined together at the locations at which they intersect. All of the grids are provided with generally convex bottom surfaces fitting the concave upper surface of a conventional saucer and with flat, cup supporting upper surfaces and may be provided in various colors as may be desired, or otherwise ornamented to enhance their appearance. The grids may be provided either with or without the clips 20 and lugs 19, as may be desired.

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The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are, therefore, intended to be embraced therein.

What is claimed is:

1. In combination with a saucer having a substantially circular rim and an inner concave surface of spheroidal shape within said rim, a cup supporting grid removably mounted in said saucer and comprising an open work structure including a circular outer ring disposed against the inner surface of said saucer and spaced from said saucer rim, and ribs disposed within said ring and integrally joined to said ring and to each other, said ribs all having their surfaces remote from the inner surface of said saucer disposed substantially in a common plane parallel to the surface portion of said ring nearest the rim of said saucer and at least some of said ribs having their inner surfaces at least in part convexly congruent to the inner concave surface of said saucer and each rib having a length dimension parallel to said plane, a width dimension perpendicular to said plane and less than said length dimension and a thickness dimension parallel to said plane and perpendicular to said length dimension and less than said width dimension.

2. In combination with a saucer having a substantially circular rim and an inner concave surface of spheroidal shape within said rim, a cup supporting grid removably mounted in said saucer and comprising an open work structure including a circular outer ring disposed against the inner surface of said saucer and spaced from said saucer rim, and ribs disposed within said ring and integrally joined to said ring and to each other, said ribs all having their surfaces remote from the inner surface of said saucer disposed substantially in a common plane parallel to the surface portion of said ring nearest the rim of said saucer and at least some of said ribs having their inner surfaces at least in part convexly congruent to the inner concave surface of said saucer and each rib having a length dimension parallel to said plane, a width dimension perpendicular to said plane and less than said length dimension and a thickness dimension parallel to said plane and perpendicular to said length dimension and less than said width dimension, and means connected between said ring and the rim of said saucer detachably securing said grid in said saucer.

3. In combination with a saucer having a substantially circular rim and an inner concave surface of spheroidal shape within said rim, a cup supporting grid removably mounted in said saucer and comprising an open work structure including a circular outer ring disposed against the inner surface of said saucer and spaced from said saucer rim, and ribs disposed within said ring and integrally joined to said ring and to each other, said ribs having their surfaces remote from the inner surface of said saucer disposed substantially in a plane parallel to and spaced from the surface of said ring nearest the rim of said saucer in a direction away from the rim of said saucer and at least some of said ribs

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having their inner surfaces at least in part convexly congruent to the inner concave surface of said saucer, at least some of said ribs having portions of their surfaces adjacent the inner surface of said saucer spaced from the inner surface of said saucer to provide passages for the flow of liquid from the outer portion toward the center of the inner surface of said saucer, and each of said ribs having a length dimension parallel to said plane, a width dimension perpendicular to said plane and less than said length dimension and a thickness dimension parallel to said plane and perpendicular to said length dimension and less than said width dimension.

4. In combination with a saucer having a substantially circular rim and an inner concave surface of spheroidal shape within said rim, a cup supporting grid removably mounted in said saucer and comprising an open work structure including a circular outer ring disposed against the inner surface of said saucer in spaced relationship to said saucer rim, and ribs having a substantially rectangular cross sectional shape the major dimension of which extends in a direction from the rim to the center of said saucer, and other ribs disposed within said ring and integrally joined to said ring and to said first named ribs and having their surfaces remote from the inner surface of said saucer disposed substantially in a plane parallel to and spaced from the surface portion of said ring nearest the rim of said saucer in a direction away from said saucer rim, at least some of said ribs having their inner surfaces at least in part convexly congruent to the inner concave surface of said saucer and each of said ribs having a length di-

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mension parallel to said plane, a width dimension perpendicular to said plane and less than said length dimension and a thickness dimension parallel to said plane and perpendicular to said length dimension and less than said width dimension.

MARTIN F. BABSKI.

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