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54 Eating plate for use by the manually impaired.

57 An eating plate (2) for use by the manually impaired has an inclined section (9) leading from the inner bottom (4) of the plate to a curved inner wall (8). The curved inner wall terminates in an inner lip (10) and the inner lip terminates in an outwardly extending inclined section (12) forming the ledge of the plate. The inclined sections, the curved inner wall and the inner lip are optimally formed to cooperate in assisting a user in bringing the food to the edge of the plate with an eating utensil while preventing spills, and thus making eating a more enjoyable and satisfying experience for those who have need for such plates.

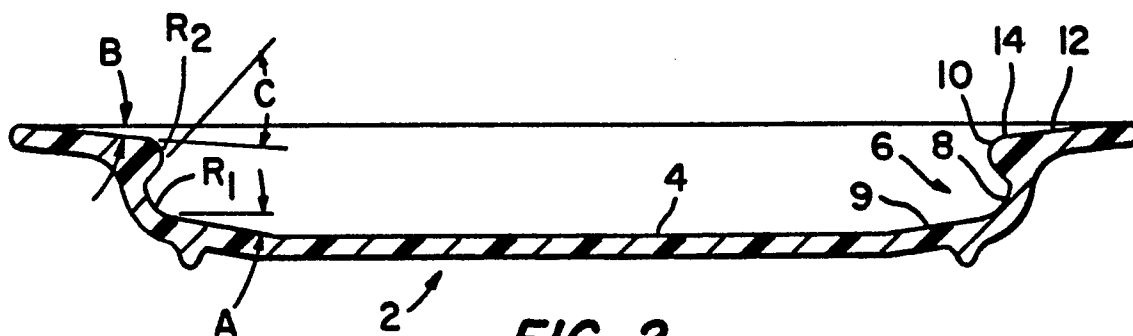


FIG. 2

EP 0 282 654 A1

EATING PLATE FOR USE BY THE MANUALLY IMPAIRED

BACKGROUND OF THE INVENTION

Eating plates having contoured inner walls are designed for use by the manually impaired as an aid in self-feeding. The inner walls of such plates are designed to act as an extra implement against which the user can trap particles of food. The inner wall acts to hold the food particles on the plate while the user brings an eating utensil such as a fork, spoon or the like, toward the plate edge, and thereby prevents spills and makes eating a much more enjoyable experience for those who have need for such plates.

It has been found that the inner wall must be contoured so as to assist the user in depositing food directly onto the eating utensil without the user having fine motor control of the hand as would otherwise be necessary. Further, the inner wall contour must obviate the necessity for complex muscle control patterns for accomplishing the eating function. That is to say, the contour must be such that food can be pushed sideways in one plane of movement and be deposited on the spoon or other eating utensil. Otherwise complex secondary sideways and twisting motions would be necessary to accomplish the eating task, with said complex motions, while being within the capabilities of those with normal manual dexterity, not being within the capabilities of those having need for the plate herein described.

Prior to the present invention attempts have been made to provide plates having curved inner walls to satisfy the above requirements. One such plate is described in U.S. Design Patent 226,674 issued to Nicholas J. Bruno on April 10, 1973, and assigned to Maddak, Inc., assignee of the present invention. However, the plate of the aforementioned design only generally addresses the problem to be solved and does not teach or suggest the particular structural arrangement disclosed herein.

Accordingly, it is the object of the present invention to provide an eating plate for use by the manually impaired, having an inner wall of a particular contoured configuration so as to render said plate useful to those with less than fine manual motor control and who are incapable of performing normal motion patterns necessary to accomplish an eating task.

SUMMARY OF THE INVENTION

This invention contemplates an eating plate for use by the manually impaired, having a concavely curved inner wall extending around the circumference of the plate. The inner bottom of the plate has an angularly extending section which meets the bottom of the curved inner wall. The top of the curved inner wall terminates in an inwardly extending lip. The inwardly extending lip terminates in an angularly extending section which forms a plate ledge. The arrangement is such that the angularly extending sections extend at predetermined optimal angles to provide maximum assistance to the user of the plate in depositing food on an eating utensil. The radii of the curved inner wall and inwardly extending lip are optimally predetermined to effectively accomplish the eating task.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 is a top plan view of a plate according to the invention.

Figure 2 is a sectional view taken along line 2-2 in Figure 1.

DETAILED DESCRIPTION OF THE INVENTION

With reference to the drawing, an eating plate which may be of a molded plastic such as polypropylene is designated generally by the numeral 2. Plate 2 has an inner bottom 4 and an inner wall designated generally by the numeral 6. Inner wall 6 has a concavely curved portion 8 extending around the circumference thereof and terminating at its bottom in a section 9 which extends angularly upward from inner bottom 4. The top of concavely curved portion 8 terminates in an inner lip 10. Inner lip 10 terminates in a ledge section 12 extending angularly upward therefrom.

It will be understood that when using the disclosed plate as intended, as an aid for the manually impaired in self-feeding, curved portion 8 of inner wall 6, angularly extending section 9, inner lip 10 and ledge section 12 help to keep the food on the plate when the user brings food toward the edge 14 of the plate via an eating utensil. Spilling of food from the utensil is thereby avoided and easier access thereto is provided. In effect, curved portion 8, sections 9 and 12 and lip 10 function as an extra utensil to accomplish the purposes intended.

Angularly extending section 9 extends upward

from plate bottom 4 by an angle A which is optimally ten degrees. It has been found that this configuration assists the user in pushing food up inner wall 6 of the plate. A larger angle would result in sliding of the food toward bottom 4 of the plate to avoid the purpose of the invention as will now be understood.

It has also been found that the radius R_1 of curved inner portion 8 is optimally between one-quarter and nine thirty-seconds of an inch. A smaller radius would not impart the necessary lift to the food to deposit it in or on the eating utensil, as the case may be, while a larger radius would create, in effect, a wall for blocking food and trapping it in one location, and thereby avoiding the purpose of the invention.

Ledge section 12 extends upwardly by an angle B which is optimally at least five degrees. It has been found that a smaller angle would result in food being deposited on the ledge to likewise avoid the purpose of the invention.

Inner lip 10 extends inwardly from the top of concavely curved portion 8 by an angle C which is optimally forty-five degrees. The inner lip has a radius R_2 which is optimally nine sixty-fourths of an inch. It has been found that this configuration effectively assists the user in bringing food up inner wall 6 of plate 2 to edge 14 of the plate to facilitate the eating process as aforementioned.

In summary, the plate herein disclosed is configured so as to be of assistance for use by the manually impaired as a aid in self-feeding. Section 9 is optimally inclined to assist the user in pushing food up from the bottom of the plate and radius R_1 is optimally formed to provide the lift to deposit food on an eating utensil without acting as a blocking wall and trapping food in one location on the plate. Radius R_2 helps to facilitate the eating process as aforementioned. Section 12 is optimally inclined to prevent food from being deposited on the plate ledge as is undesirable.

With the aforementioned description of the invention in mind reference is made to the claims appended hereto for a definition of the scope of the invention.

Claims

1. An eating plate (2) for use by the manually impaired, comprising:

an inner bottom (4);

a (8) concavely curved, circumferentially extending inner wall;

a circumferentially extending first section (9) extending upward from the inner bottom (4) of the plate (2) to the bottom of the concavely curved inner wall (8);

said concavely curved inner wall (8) terminat-

ing at its top in a circumferentially and inwardly extending lip (10);

the inwardly extending lip (4) terminating in a circumferentially extending second section forming a plate edge (12), said second section extending outward to provide a plate ledge; and

the concavely curved inner wall (18), the first and second sections (9,12) and the inwardly extending lip (10) cooperating to assist a user in bringing food from the bottom (4) of the plate (2) to the plate edge (12) to facilitate the eating process for the user.

2. An eating plate (2) as described by claim 1 wherein:

the concavely curved, circumferentially extending inner wall (8) has a radius which is optimally between one-quarter and nine thirty-seconds of an inch.

3. An eating plate (2) as described by claim 1, wherein:

the first section (9) extends angularly upward from the inner bottom (4) of the plate (2) at an angle of optimally ten degrees.

4. An eating plate (2) as described by claim 1, wherein:

the inwardly extending inner lip (10) extends at an angle of optimally forty-five degrees from the top of the concavely curved inner wall (8); and

said inner lip (10) lip has a radius of optimally nine sixty-fourths of an inch.

5. An eating plate (2) as described by claim 1, wherein:

the second section (12) extends outward and angularly upward at an angle of optimally at least five degrees to provide the plate ledge.

6. An eating plate (2) for use by the manually impaired, comprising:

an inner bottom (4);

a concavely curved, circumferentially extending inner wall (8) having a predetermined optimum radius;

a circumferentially extending first section (9) extending upward at a predetermined optimum angle from the inner bottom (4) to the beginning of the concavely curved inner wall (8);

said concavely curved inner wall (8) terminating in a circumferentially and inwardly extending lip (10) extending at a predetermined optimum angle from said wall (8) having a predetermined optimum radius;

the inwardly extending lip (10) terminating in a circumferentially extending second section (12) forming plate edge, said second section extending outward and upward at a predetermined optimum angle to provide a plate ledge; and

the concavely curved inner wall (8), the first and second sections (9,12) and the inwardly extending lip (10) cooperating to assist a user in

bringing food from the bottom (4) of the plate to the plate edge (12) to facilitate the eating process for the user.

7. An eating plate (2) for use by the manually impaired, comprising:

an inner bottom (4);

a concavely curved, circumferentially extending inner wall (8) having a radius optimally between one-quarter and nine thirty-seconds of an inch;

a circumferentially extending first section (9) extending angularly upward at an angle of optimally ten degrees from the inner bottom (4) of the plate (2) to the bottom of the concavely curved inner wall (8);

said concavely curved inner wall (8) terminating at its top in a circumferentially and inwardly extending lip (10) extending at an angle of optimally forty-five degrees from the concavely curved inner wall (8) and having a radius of optimally nine sixty-fourths of an inch;

the inwardly extending lip (10) terminating in a circumferentially extending second section (12) to form a plate edge, said second section extending outward and angularly upward at an angle of optimally at least five degrees to provide a plate ledge; and

the concavely curved inner wall (8), the first and second sections (9,12) and the inwardly extending lip (10) cooperating to assist a user in bringing food from the bottom (4) of the plate (2) to the plate edge (12) to facilitate the eating process for the user.

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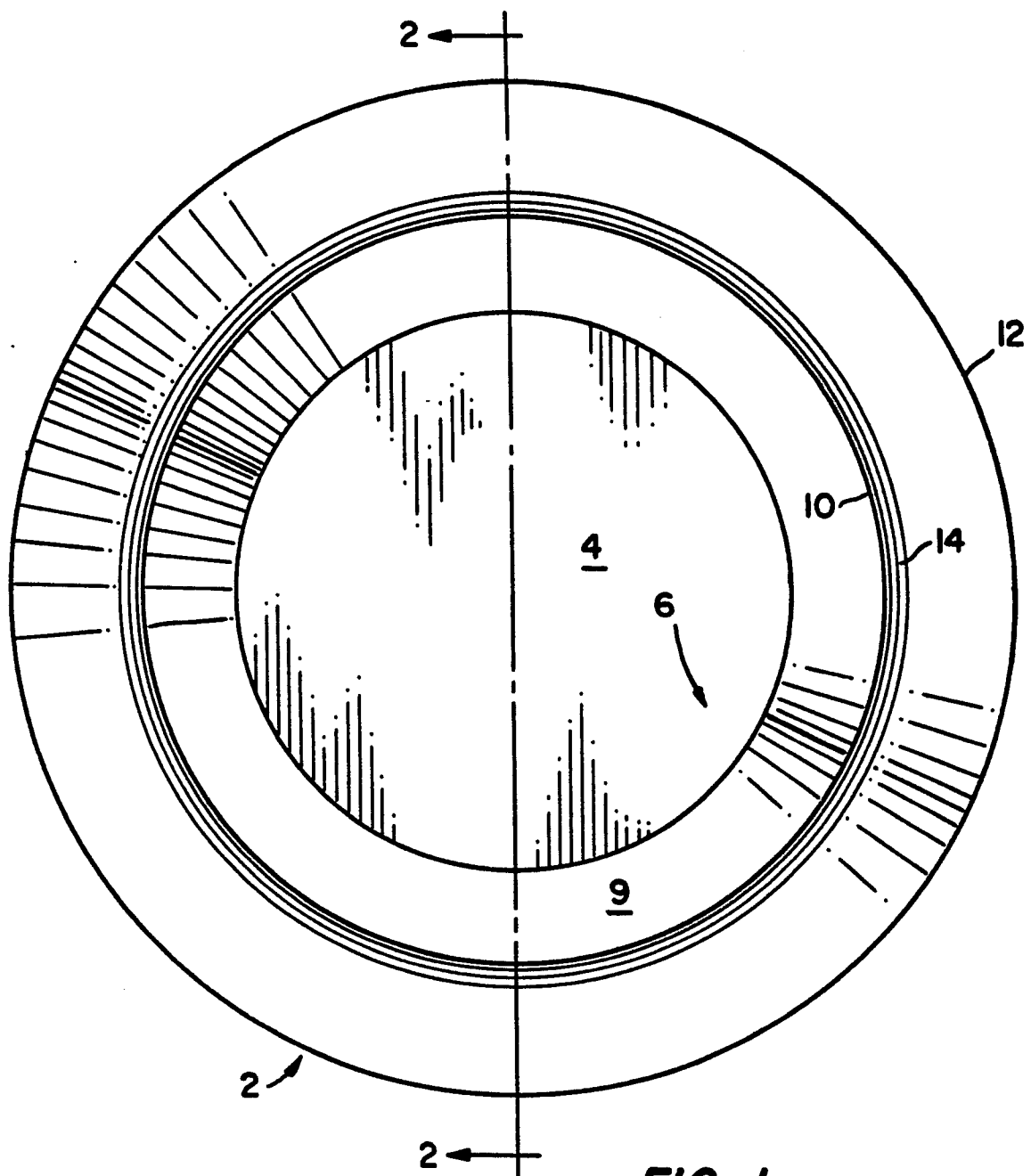


FIG. 1

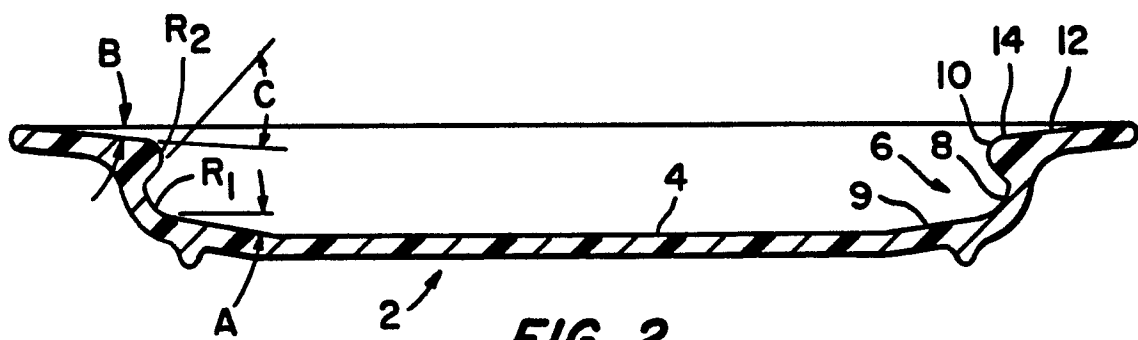


FIG. 2



DOCUMENTS CONSIDERED TO BE RELEVANT															
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)												
X,P	EP-A-0 222 418 (LANDSBERGER) * Page 2, lines 18-29 *	1-4	A 47 G 19/02												
A	---	6,7													
A	CH-A- 176 879 (WÖHREL) * Figure 2 *	1,2,4-7													
A	---														
A	GB-A-1 206 541 (MANOY) * Figure 3 *	1-7													
A	---														
A	FR-A-2 177 443 (DE VOOGD) * Page 2, lines 13-22 *	1,6,7													

			TECHNICAL FIELDS SEARCHED (Int. Cl.4)												
			A 47 G												
The present search report has been drawn up for all claims															
Place of search THE HAGUE		Date of completion of the search 23-06-1988	Examiner BEUGELING G.L.H.												
<table border="0"><tr><td>CATEGORY OF CITED DOCUMENTS</td><td></td></tr><tr><td>X : particularly relevant if taken alone</td><td>T : theory or principle underlying the invention</td></tr><tr><td>Y : particularly relevant if combined with another document of the same category</td><td>E : earlier patent document, but published on, or after the filing date</td></tr><tr><td>A : technological background</td><td>D : document cited in the application</td></tr><tr><td>O : non-written disclosure</td><td>L : document cited for other reasons</td></tr><tr><td>P : intermediate document</td><td>& : member of the same patent family, corresponding document</td></tr></table>				CATEGORY OF CITED DOCUMENTS		X : particularly relevant if taken alone	T : theory or principle underlying the invention	Y : particularly relevant if combined with another document of the same category	E : earlier patent document, but published on, or after the filing date	A : technological background	D : document cited in the application	O : non-written disclosure	L : document cited for other reasons	P : intermediate document	& : member of the same patent family, corresponding document
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