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(54) **A method for eliminating excess carbon dioxide from alcoholic drinks**

Verfahren zum Entfernen überschüssigen Kohlendioxids aus alkoholischen Getränken

Procédé d'élimination du dioxyde de carbone en excès dans des boissons alcoolisées

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(56) References cited:
EP-A- 1 210 890 WO-A-00/41602
GB-A- 1 251 595 US-A- 2 352 205
US-A- 3 194 468 US-A- 3 495 736
US-A- 3 934 725 US-A- 3 944 124
US-A1- 2002 159 328

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Description

Technical Field

[0001] The present invention relates to a method for eliminating excess carbon dioxide in alcoholic drinks rich in carbon dioxide, for example, beer.

[0002] In the case of wine, as is known, it is appropriate that consumption of such a drink is preceded by a mechanical treatment, rotating and/or oscillating the glass, to allow the liquid to absorb a certain quantity of air and as a result of oxygen.

[0003] It is known from documents EP 1210890 A1 or WO 00/41602 that the oxygenation of wine, obtained by such mechanical treatment of rotating the glass, is favoured by the presence of ribs or hollows, placed inside the glass.

[0004] This oxygen absorption enhances particular qualities of the wine such as its aromas and flavours.

[0005] This treatment, as well as the above-mentioned oxygenation, in some cases is also intended to reduce the level of carbon dioxide, whose presence, if at an excessive level, can cause unwanted and harmful effects in alcoholic drinks.

[0006] Firstly, it increases the human body's capacity for absorption of alcoholic products, constituting an effective vehicle for alcohol.

[0007] Secondly, the gas has properties which anaesthetise the taste buds and so cancel out the consumer's capacity for taste.

Background Art

[0008] As is known, the above-mentioned treatment consists of predetermined pouring out techniques and, as indicated above, an operation for rotation and oscillation of the glasses during and after filling.

[0009] However, such techniques do not allow either oxygenation able to suitably enhance the aromas and flavours, or an appreciable reduction in the level of carbon dioxide.

[0010] As is known, in the case of beer, carbon dioxide is spontaneously produced during fermentation. More carbon dioxide is then added artificially at the moment of bottling, to allow the product to be preserved for longer.

[0011] Therefore, it is evident than in the case of beer, the need to reduce the level of carbon dioxide dissolved in the drink is even stronger and more predominant than with wine.

[0012] In conclusion, for both wine and beer there is a strong need to achieve good oxygenation together with the need to reduce the level of excess carbon dioxide contained in the drinks, so as to obtain the beneficial effects described above, that is to say, limitation of the human body's capacity to absorb alcoholic products and enhancement of the aromas and flavours of the drinks.

Disclosure of the Invention

[0013] The aim of the present invention is, therefore, to overcome the above-mentioned disadvantages by providing a method for eliminating excess carbon dioxide from alcoholic drinks, like beer, as described in the first claim herein.

Brief Description of the Drawings

[0014] The technical characteristics of the invention, with reference to the above aims, are clearly described in the claims below and its advantages are apparent from the detailed description which follows, with reference to the accompanying drawings which illustrate a preferred embodiment of the invention provided merely by way of example without restricting the scope of the inventive concept, and in which:

Figures 1 to 3 and 5 to 9 are perspective front views of several embodiments of the glass adapted for carrying out the claimed method;

Figure 4 is a plan view of the glass illustrated in Figure 1;

Figures 10 to 13 are enlarged perspective views of four alternative embodiments of a detail of the tankards illustrated in Figures 1 to 9.

Detailed Description of the Preferred Embodiments of the Invention

[0015] With reference to the accompanying drawings, the numeral 1 denotes generically a glass or tankard for consuming and tasting drinks such as wine and beer.

[0016] In particular Figures 1 to 5 illustrate, respectively labelled 2, 3, 4 and 5, conical column glasses with a wide opening 6 in particular used for tasting beer, whilst Figures 6 to 9 illustrate, respectively labelled 7, 8, 9 and 10, goblet-shaped glasses, that is to say having the shape of a spherical cup and with a stem 11 and a base 12.

[0017] According to the present invention the internal surface 13 of the glasses 1 has a plurality of raised ribs 14, evenly distributed and extending from the bottom 15 towards the opening 6 of the glasses 1.

[0018] In the glass 2, illustrated in Figures 1 and 4, said ribs 14 are substantially parallel with one another, whilst in the glasses 3 and 4 the ribs 14 extend from the bottom 15 towards the opening 6 of the glass 1 with a helical or spiral path, respectively clockwise and anti-clockwise.

[0019] In the glass 5 illustrated in Figure 5 the ribs 14 are distributed in a first and a second set with opposite helical or spiral paths.

[0020] The glass 7 in Figure 6 has, on the internal surface 13 of the respective cup, a plurality of ribs 14 extending radially from the bottom 15 towards the opening 6.

[0021] In the glasses 8 and 9 the ribs 14 extend from the bottom 15 towards the opening 6 of the glass 1 with a helical or spiral path, respectively anti-clockwise and clockwise.

[0022] Finally, in the glass 10 in Figure 9 the ribs 14 are distributed in a first and a second set with opposite helical or spiral paths.

[0023] As illustrated in particular in Figures 10 and 12, the ribs 14 in cross-section have a rounded shape and differing thicknesses.

[0024] In Figures 11 and 13 the ribs 14 in cross-section respectively have a sharp-edged triangular shape and a polygonal shape forming two sharp edges.

[0025] In practice, in cross-section the size of the ribs 14 is between 0.5 and 3.5 mm.

[0026] In operation, in the case of beer, using any of the glasses 1 illustrated, while filling, the consumer holds the glass 1 at an angle so that the flow of liquid is diverted by the ribs 14 with a whirling motion, which conveys the carbon dioxide upwards.

[0027] At the same time and at the end of filling, the consumer makes the glass perform a series of rotations so as to generate, again thanks to the ribs 14, a turbulent movement of the beer which causes the elimination of excess carbon dioxide. However, this rotary movement does not alter the properties of the beer and instead enhances its aromatic qualities and flavours.

[0028] If the consumer is right- or left-handed, it may be a good idea to choose the appropriate glass 1 amongst those illustrated in Figures 2, 3, 7 and 8, or in Figures 5 and 9 for right- and left-handed people.

[0029] In the case of wine, in particular using a glass 1 illustrated in one of the Figures from 6 to 9, once the cup has been filled, the consumer makes the glass 1 perform rotary movements so that the respective ribs 14 cause a turbulent movement with the aim of making a certain quantity of air and consequently oxygen absorbable in the liquid.

[0030] Said oxygen absorption enhances particular qualities of the wine, such as its aromas and flavours.

[0031] Said oxygenation therefore allows the organoleptic attributes of the wine to be enhanced and partial elimination of the carbon dioxide contained in it, which also helps to enhance the perfumes.

[0032] Finally, it should be noticed that a further effect of the shape of the glasses 1 with said ribs 14, is, also in the case of wine, a slight reduction in the level of alcohol, since part of the alcohol tends to be liberated from the drink as a result of its whirling motion. Moreover, the movement of the wine in a glass 1 made in accordance with the present invention generates pleasant musical notes.

[0033] The invention described is suitable for evident industrial applications. It may also be subject to numerous modifications and variations without thereby departing from the scope of the inventive concept. Moreover, all details may be substituted with technically equivalent elements, for example it is obvious that the glasses 1

may be made with any shape and of any material.

Claims

1. A method for eliminating excess carbon dioxide from alcoholic drinks, **characterised in that** it comprises the steps of taking a glass (1) having a plurality of raised ribs (14) evenly distributed inside it and extending from the bottom (15) towards the opening (6) of the glass (1), making the glass (1) rotate during and/or after filling, and positioning the glass (1) at an angle during filling and rotation, allowing the ribs (14) to generate whirling and/or turbulent motions of the alcoholic drink, thereby reducing the level of carbon dioxide which increases the human body's capacity to absorb alcoholic products.
2. The method according to claim 1, **characterised in that** said alcoholic drink is beer.
3. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) extending radially from the bottom (15) towards the opening of the glass (1).
4. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) extending with a helical or spiral path from the bottom (15) to the opening (6) of the glass (1).
5. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) distributed in a first and a second set with opposite paths.
6. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) having at least one sharp edge in cross-section.
7. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) having a triangular or polygonal shape in cross-section.
8. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) having a rounded shape in cross-section.
9. The method according to claim 1, **characterised in that** the whirling and/or turbulent motions of the alcoholic drink are obtained by the ribs (14) having a size substantially between 0.5 and 3.5 mm.

Patentansprüche

1. Verfahren zum Entfernen überschüssigen Kohlendioxids aus alkoholischen Getränken, **dadurch gekennzeichnet, dass** es folgende Schritte beinhaltet: Nehmen eines Glases (1) mit mehreren erhöhten Rippen (14), die gleichmäßig darin verteilt sind und sich vom Boden (15) zur Öffnung (6) des Glases (1) hin erstrecken; Drehen des Glases (1) während und/oder nach dem Füllen; sowie Positionieren des Glases (1) in einem bestimmten Winkel, während der Füllung und Drehung, die es erlaubt, dass die Rippen (14) wirbelnde und/oder turbulente Bewegungen des alkoholischen Getränks erzeugen, und somit den Gehalt an Kohlendioxid senken, welches die Aufnahmefähigkeit des menschlichen Körpers für alkoholische Erzeugnisse erhöht.
2. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** das genannte alkoholische Getränk Bier ist.
3. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die sich radial vom Boden (15) zur Öffnung des Glases (1) hin erstrecken.
4. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die sich mit wendel- oder spiralförmigem Verlauf vom Boden (15) zur Öffnung (6) des Glases (1) hin erstrecken.
5. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die über einen ersten und einen zweiten Rippensatz mit einander entgegengesetztem Verlauf verteilt sind.
6. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die im Querschnitt mindestens eine scharfe Kante aufweisen.
7. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die im Querschnitt eine dreieckige oder vieleckige Form aufweisen.
8. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, die im Querschnitt eine

abgerundete Form aufweisen.

9. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die wirbelnden und/oder turbulenten Bewegungen des alkoholischen Getränks durch die Rippen (14) erhalten werden, deren Größe im Wesentlichen zwischen 0,5 und 3,5 mm beträgt.

Revendications

1. Un procédé d'élimination du dioxyde de carbone en excès dans des boissons alcoolisées, **caractérisé en ce qu'il** comprend les phases consistant à prendre un verre (1) présentant une pluralité de nervures en relief (14) uniformément réparties à l'intérieur dudit verre et s'étendant depuis le fond (15) vers l'ouverture (6) du verre (1), à faire tourner le verre (1) pendant et/ou après son remplissage, et à incliner le verre (1) pendant son remplissage et sa rotation, permettant ainsi aux nervures (14) de générer des tourbillons et/ou turbulences dans la boisson alcoolisée, ce qui réduit le niveau de dioxyde de carbone et augmente donc la capacité du corps humain à absorber des produits alcoolisés.
2. Le procédé selon la revendication 1, **caractérisé en ce que** ladite boisson alcoolisée est de la bière.
3. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui s'étendent radialement depuis le fond (15) vers l'ouverture du verre (1).
4. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui s'étendent selon une trajectoire en hélice ou en spirale depuis le fond (15) vers l'ouverture (6) du verre (1).
5. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui sont réparties selon un premier et un deuxième ensembles ayant des trajectoires opposées.
6. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui présentent, en coupe transversale, au moins une arête vive.
7. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui ont, en coupe transversale, une forme triangu-

laire ou polygonale.

8. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui ont, en coupe transversale, une forme arrondie. 5
9. Le procédé selon la revendication 1, **caractérisé en ce que** les tourbillons et/ou turbulences de la boisson alcoolisée sont obtenus par les nervures (14) qui ont une taille essentiellement comprise entre 0,5 et 3,5 mm. 10

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FIG.1

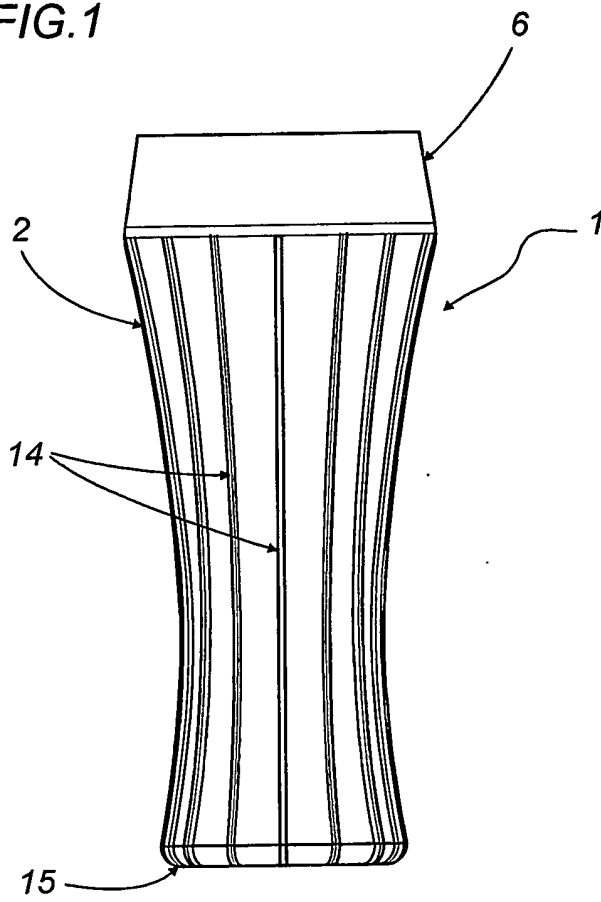


FIG.2

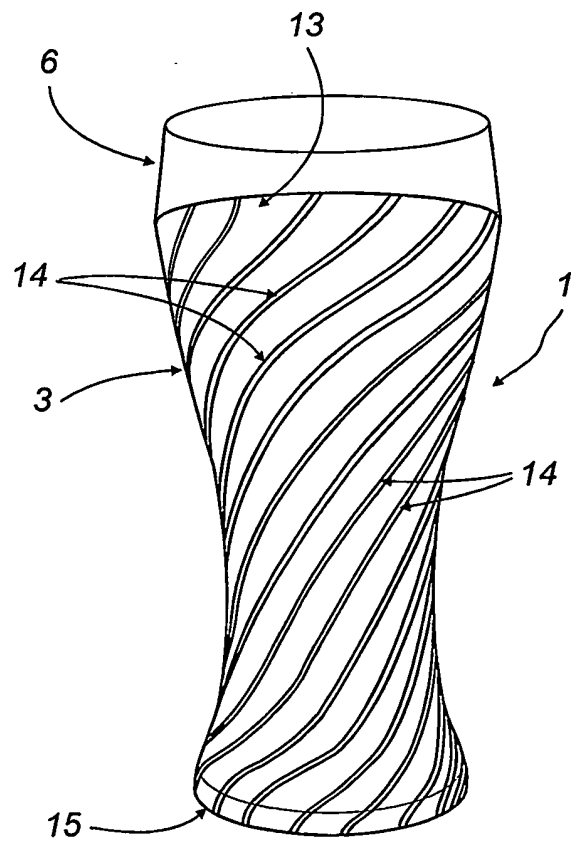


FIG.3

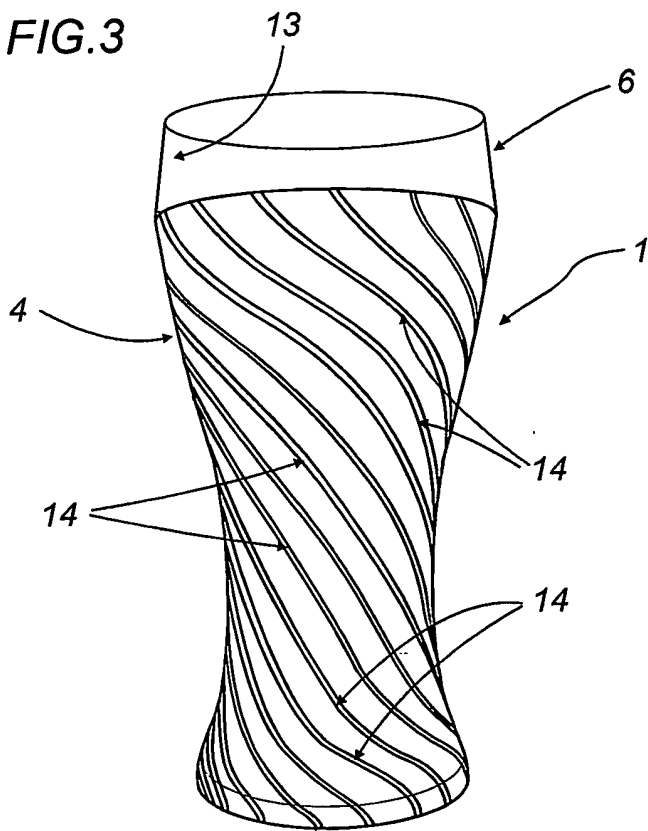


FIG.4

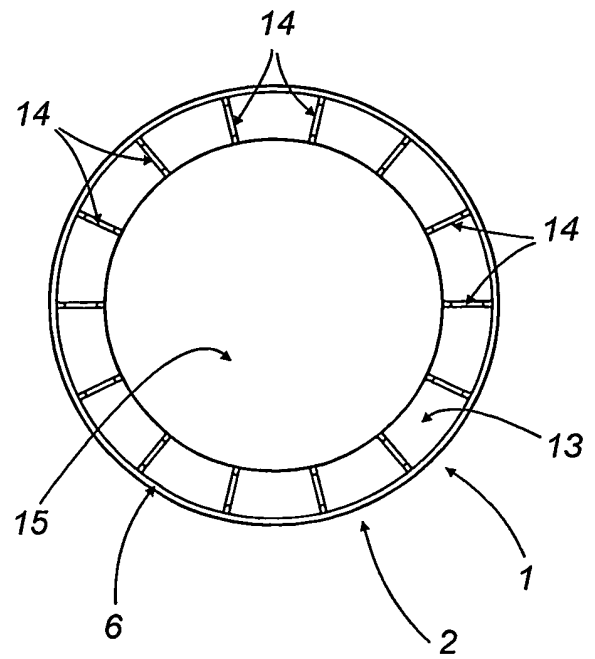


FIG.5

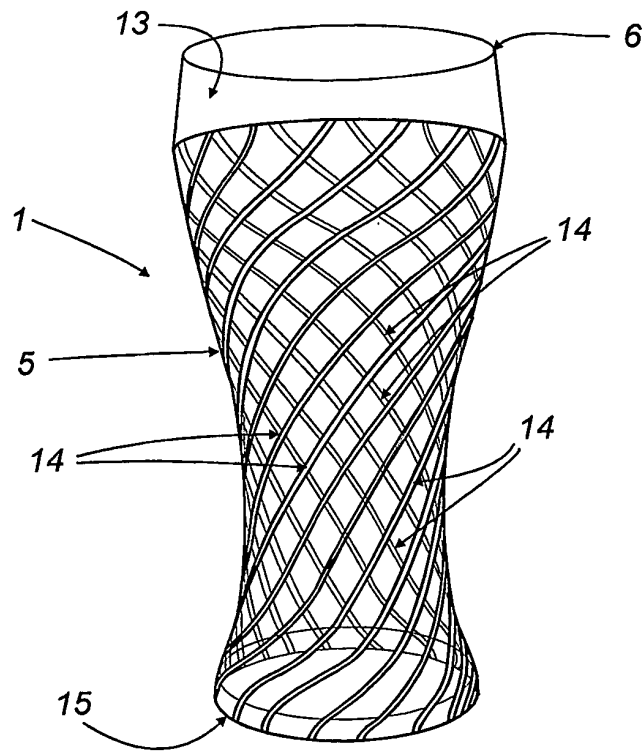
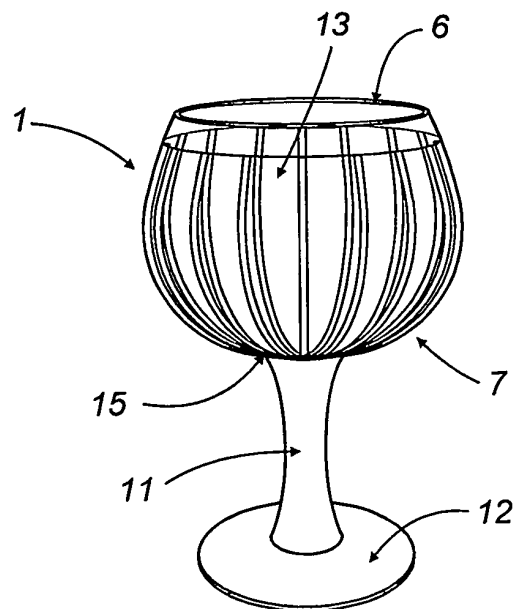
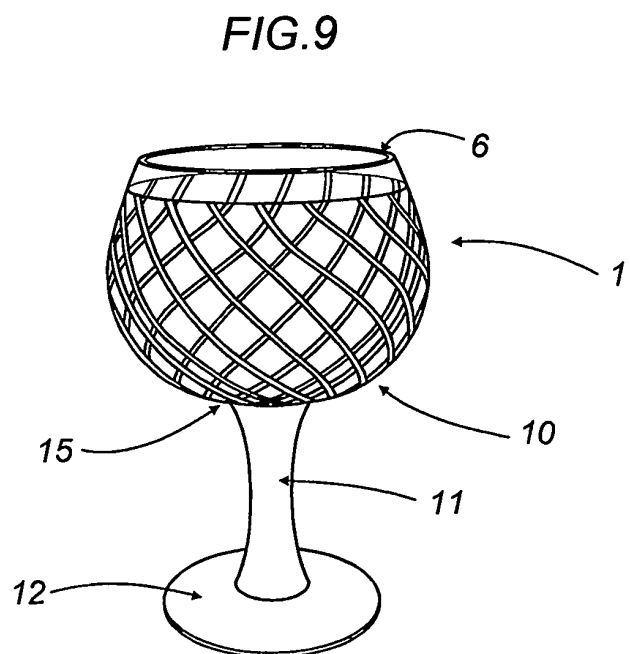
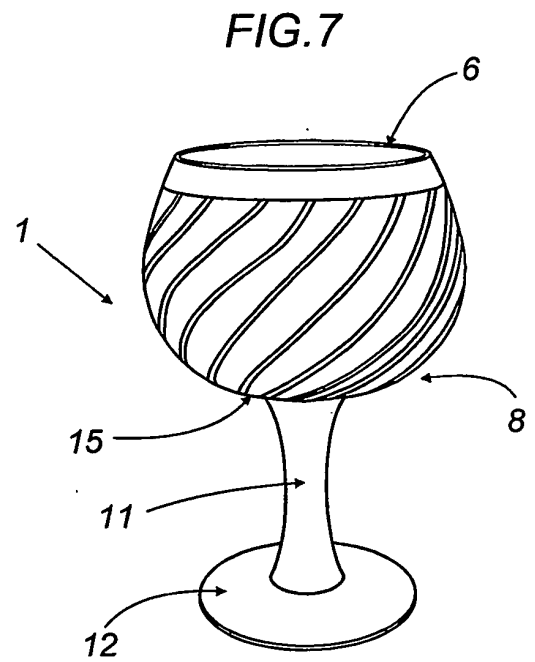
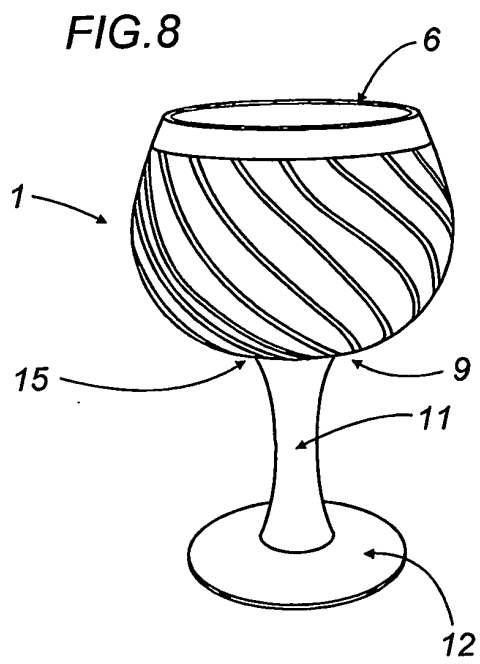


FIG.6





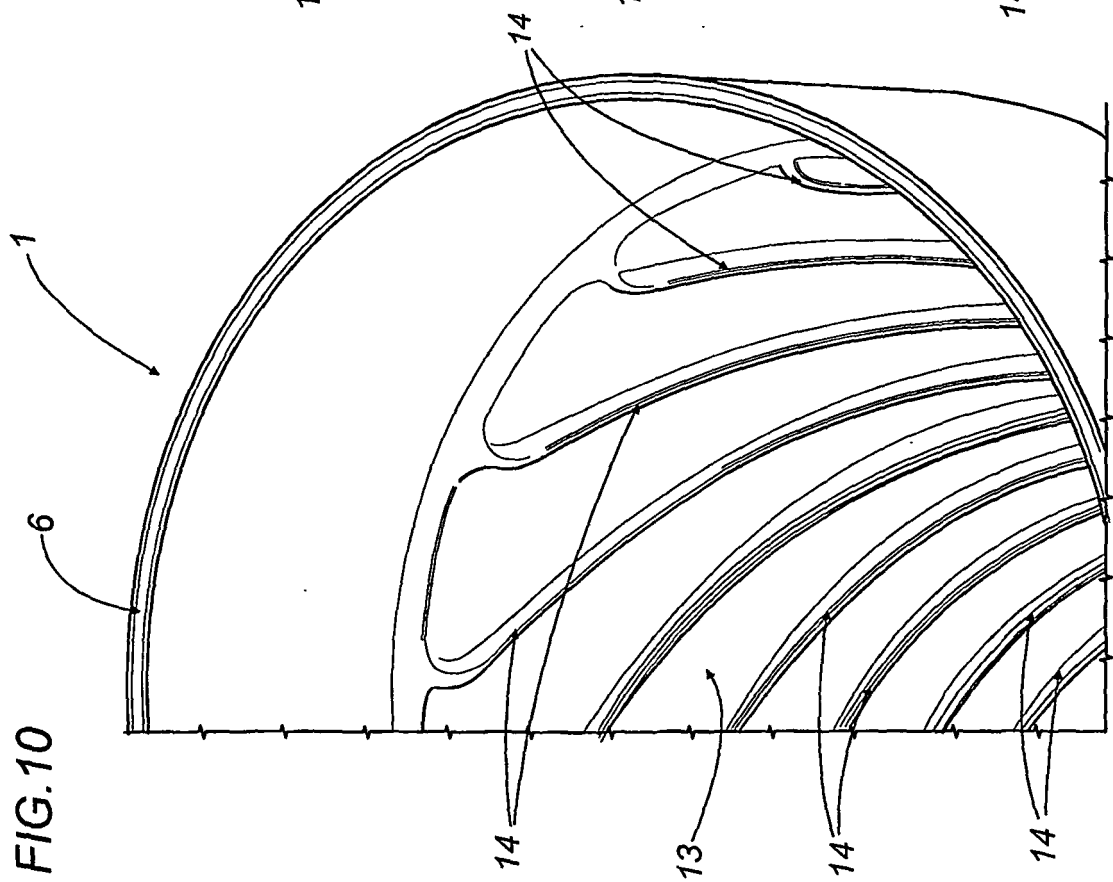
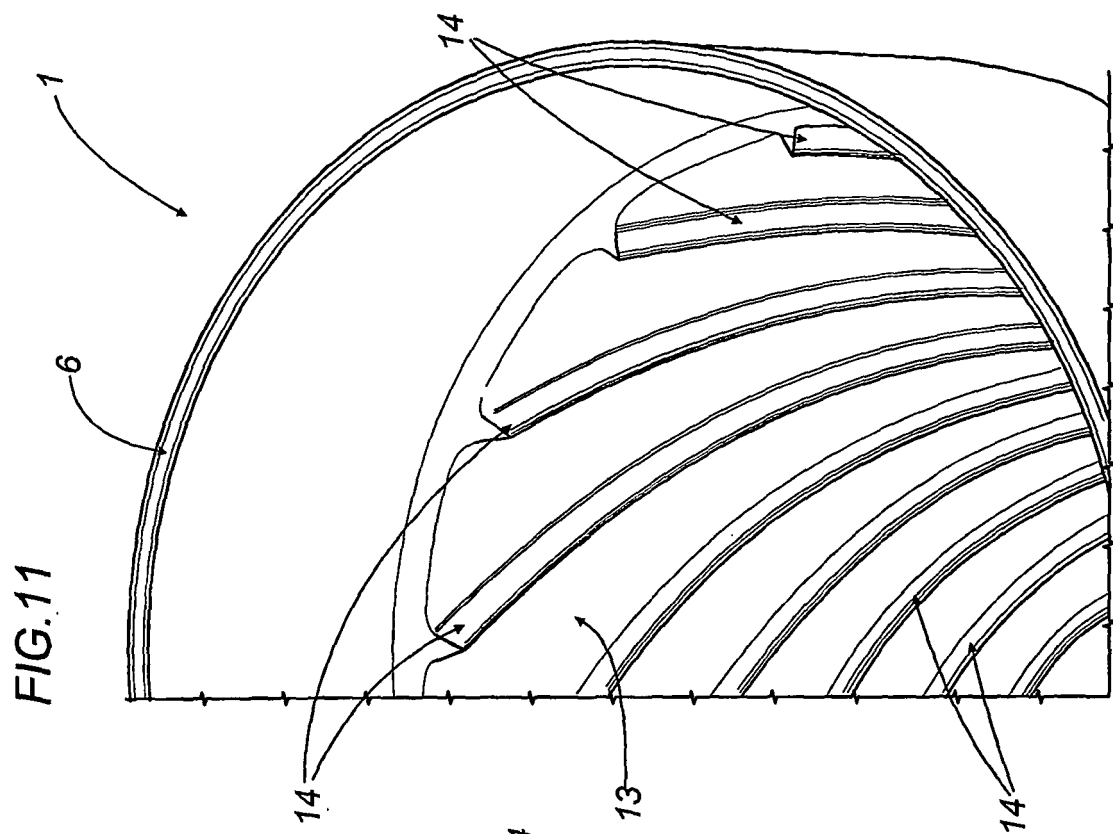


FIG.13

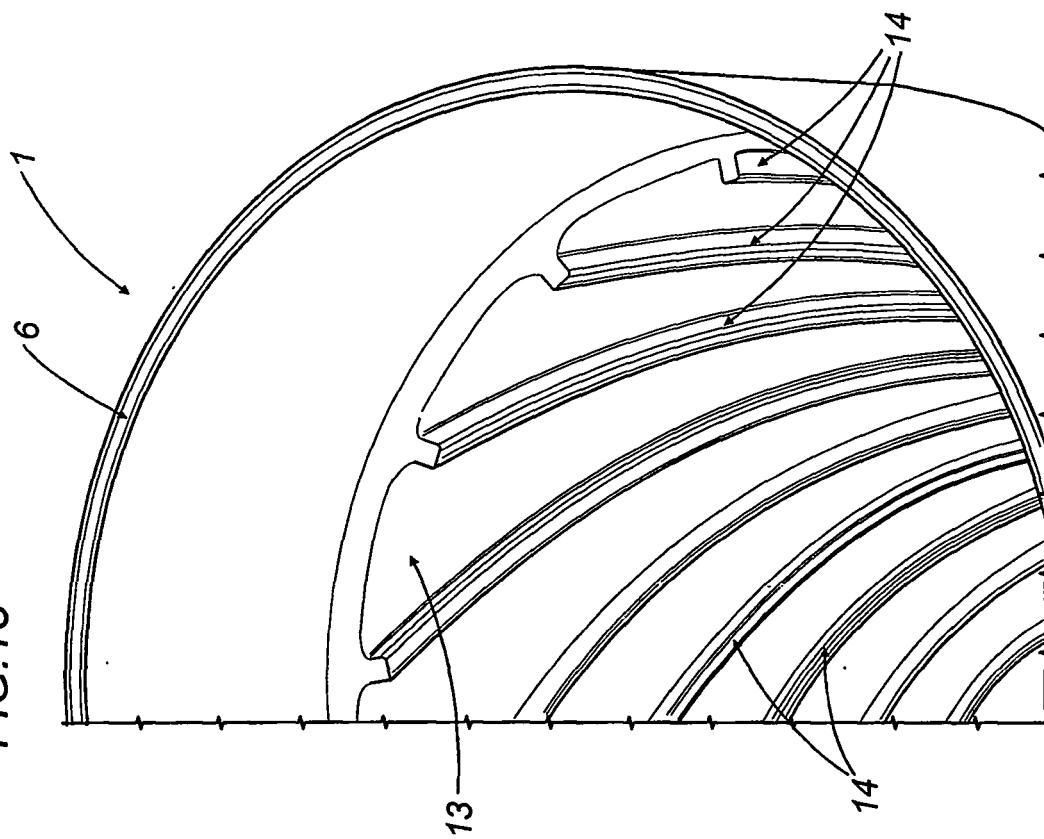


FIG.12

