Office de la Propriété Intellectuelle du Canada
Un organisme d'Industrie Canada

Canadian Intellectual Property Office
An agency of Industry Canada

CA 2576120 A1 2006/02/09

(21) 2 576 120

(12) DEMANDE DE BREVET CANADIEN
CANADIAN PATENT APPLICATION

(13) A1

(86) Date de dépôt PCT/PCT Filing Date: 2005/08/02
(87) Date publication PCT/PCT Publication Date: 2006/02/09
(85) Entrée phase nationale/National Entry: 2007/02/05
(86) N° demande PCT/PCT Application No.: IL 2005/000826
(87) N° publication PCT/PCT Publication No.: 2006/013562
(30) Priorité/Priority: 2004/08/05 (IL163363)

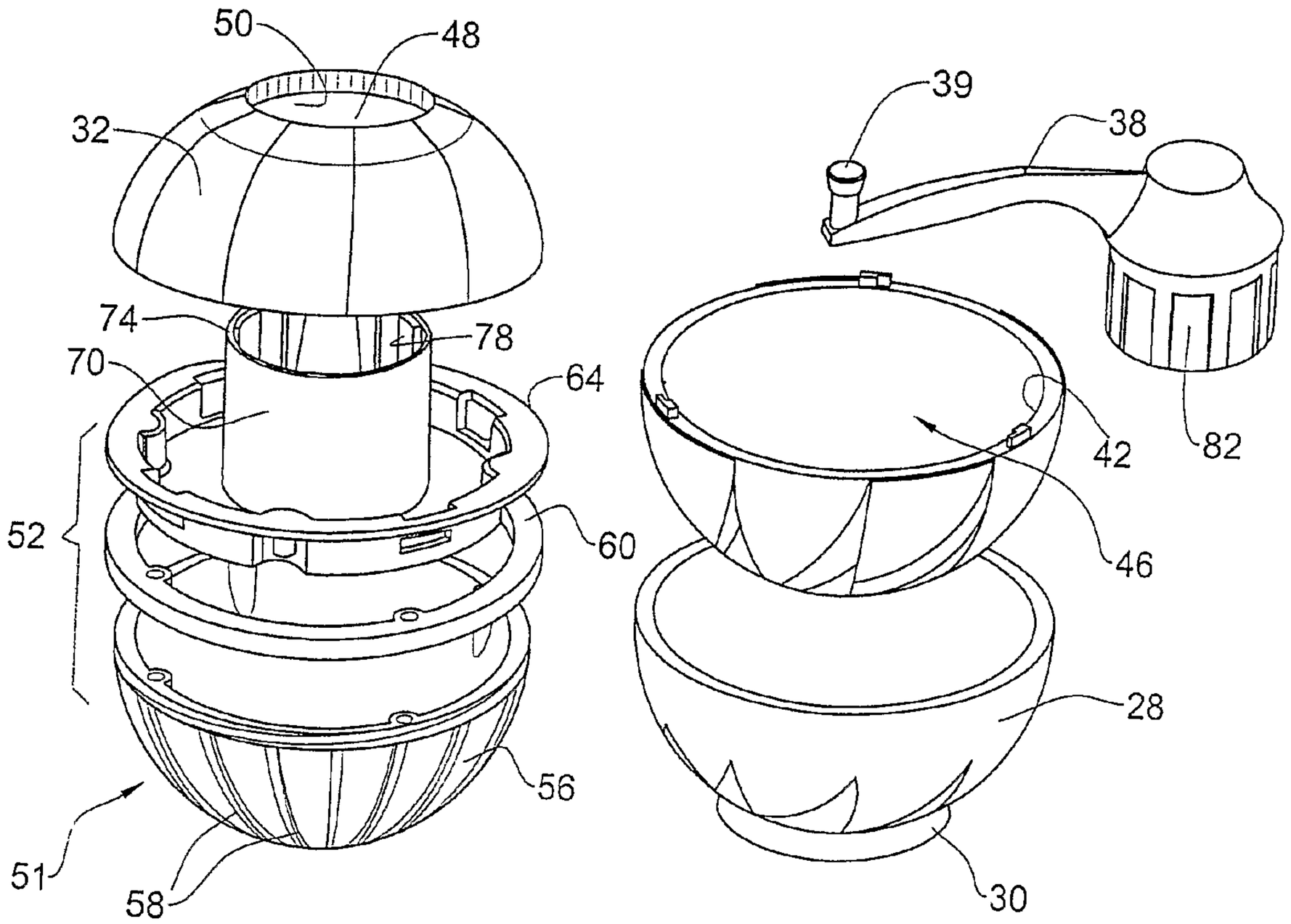
(51) Cl.Int./Int.Cl. *A23L 1/00* (2006.01)

(71) Demandeur/Applicant:
TICHKUM DISTRIBUTION OF ADVANCED CONSUMER PRODUCTS LTD., IL

(72) Inventeurs/Inventors:
HAIMOFF, SIMON, IL;
HAIMOV, OFER, IL

(74) Agent: TEITELBAUM & MACLEAN

(54) Titre : EPLUCHEUR D'AIL
(54) Title: GARLIC PEELER



(57) Abrégé/Abstract:
The present invention provides an appliance for peeling certain fruits and vegetables having fine skin, and especially garlic, without abrading or breaking the garlic clove and without beating or scratching it, thus avoiding or minimizing damage to the garlic clove, so as to avoid or reduce dispersion of the typical garlic smell and to retain aesthetic and nutritive values thereof. It is provided a garlic clove peeler (20) comprising a housing (22) formed with a clove receiving compartment (46) formed with a friction wall (42) and a complimentary peeling element (51) formed with a peeler surface (56) extending adjacent the friction wall (42); and a displacement mechanism for displacing one or both of the friction wall and the peeling element.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 February 2006 (09.02.2006)

PCT

(10) International Publication Number
WO 2006/013562 A3

(51) International Patent Classification:
A23L 1/00 (2006.01)

(21) International Application Number:
PCT/IL2005/000826

(22) International Filing Date: 2 August 2005 (02.08.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
163363 5 August 2004 (05.08.2004) IL

(71) Applicant *(for all designated States except US)*: **SMART DISTRIBUTION OF ADVANCED CONSUMER PRODUCTS LTD** [IL/IL]; 56 Hameginim Boulevard, Haifa (IL).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **HAIMOFF, Simon** [IL/IL]; 10, Igal Alon st., 97241 Jerusalem (IL). **HAIMOV, Ofer** [IL/IL]; 12, Harabi Melubavitch, 75750 Rishon Le Zion (IL).

(74) Agent: **GOLD - PATENTS & FINANCIAL SERVICES LTD.**; 43, Rubinstein st., 34987 Haifa (IL).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

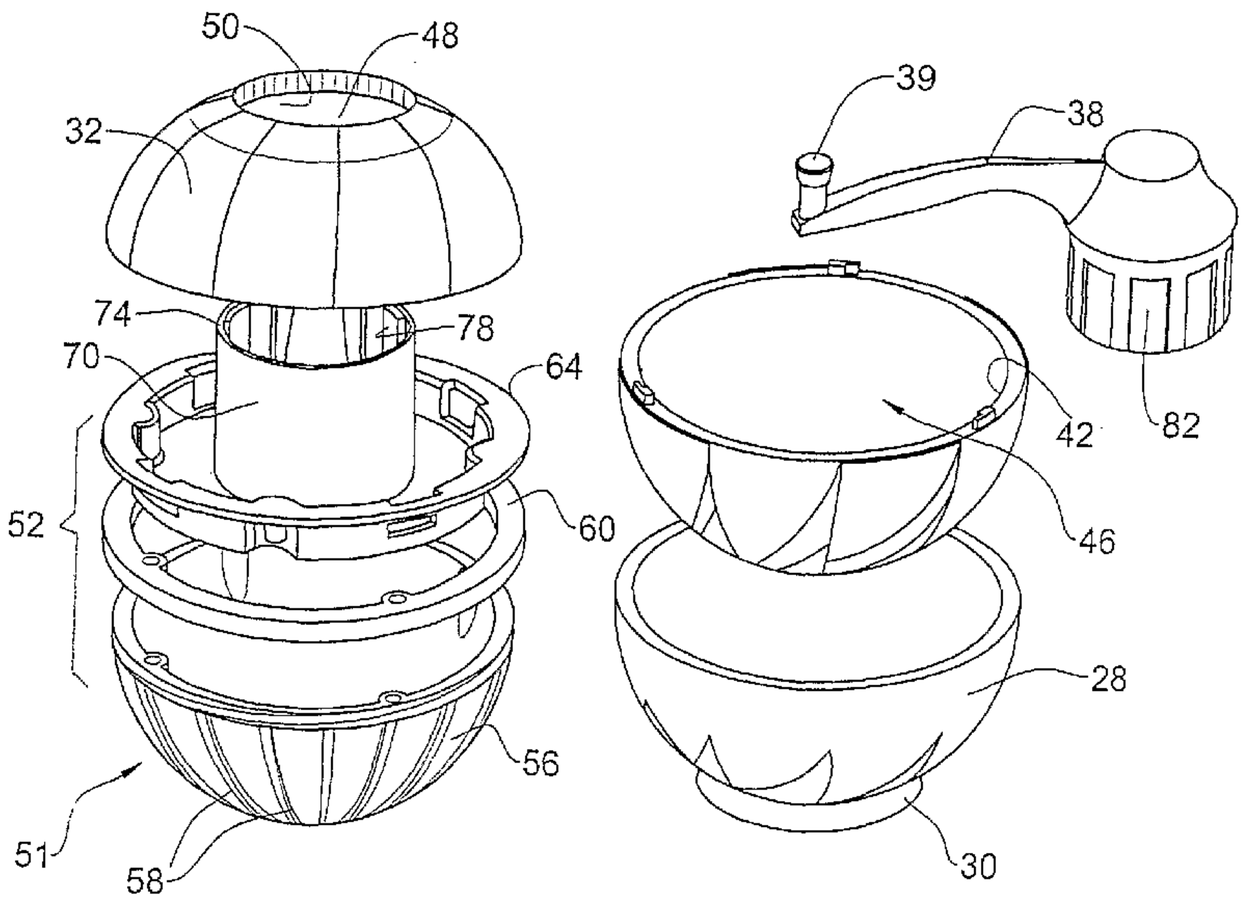
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
22 June 2006

[Continued on next page]

(54) Title: GARLIC PEELER



(57) Abstract: The present invention provides an appliance for peeling certain fruits and vegetables having fine skin, and especially garlic, without abrading or breaking the garlic clove and without beating or scratching it, thus avoiding or minimizing damage to the garlic clove, so as to avoid or reduce dispersion of the typical garlic smell and to retain aesthetic and nutritive values thereof. It is provided a garlic clove peeler (20) comprising a housing (22) formed with a clove receiving compartment (46) formed with a friction wall (42) and a complimentary peeling element (51) formed with a peeler surface (56) extending adjacent the friction wall (42); and a displacement mechanism for displacing one or both of the friction wall and the peeling element.

WO 2006/013562 A3

WO 2006/013562 A3

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

GARLIC PEELER

FIELD OF THE INVENTION

The present invention relates to fruit and vegetable peelers and more particularly to a peeler suited for peeling a fine peel/skin from garlic and other fruits and vegetables such as dried union, different dried nuts such as peanuts, almonds, etc.

BACKGROUND OF THE INVENTION

Often the skin of a fruit or a vegetable is dry though in some cases it is not completely dry and is adhered to the fruit or vegetable. In some cases there is only one peel/skin layer (e.g. as in the case of different nuts), and in other cases there are several peels/skins, some of which at dry state and one or more layer which may be in damp state and inner most of which may still be adhered to the fruit or vegetable (e.g. as in the case of garlic, unions and the like).

For sake of simplicity, herein the specification and claims, all such fruits and vegetables are collectively referred to as *garlic*, though it is to be appreciated that the appliance according to the present invention may be used for peeling a selection of different fruits and vegetables. Furthermore, the terms *'skin'* and *'peel'* are collectively referred to hereinafter as *'skin'*.

Garlic is a member of the onion family, which has been cultivated for thousands of years and is widely used for both its culinary and medicinal attributes, resulting in an ever growing popularity of this crop. Garlic is already mentioned in the old testimony, where it reads: *"We remember the fish which we did eat in Egypt for nothing, the cucumbers*

and the melons and the leeks and the onions and the garlic" (*Numbers* 11:5).

The increase in consumption of this popular herb raises a need for peeling methods and devices, in particular in light of the strong smell it leaves if it is hand peeled. Thus, several garlic peeling apparatuses have been introduced throughout the years.

A first type of garlic peeler is disclosed GB Patent 2315990 (Beveridge) directed to a non-mechanical gadget in the form of a tube made of resilient material and sized for accommodating a one or more garlic cloves, where an inside surface of the tube is roughened or knurled. Garlic cloves are peeled by introducing them into the tube and manually compressing and rolling the tube over a flat surface.

Another type of garlic peelers is concerned with mechanical or electromechanical apparatuses, as disclosed for example in the following publications:

US Patent 5,996,483 (Yip) discloses a peeler for garlic and/or peanuts including a housing having an open top end and a cylindrical friction wall surface on which four ribs having respective surfaces are formed, and a lid for closing the housing top end. The peeler includes a central beater surrounded by the wall surface and supported for rotation about an axis. A handle is provided for rotating the beater so the garlic and/or peanut pieces strike the rib surfaces at a steep angle, whereby the skin of the garlic and/or peanut pieces is cracked open through continued movement by the beater for subsequent peeling.

US Patent 4,768,429 (Federighi) discloses a rotary attachment disposed within the bowl of a food processing appliance in engagement with the drive shaft of the appliance and has a horizontal rotating disk with an abrasive upper surface which quickly removes the dry and brittle outer covering of garlic cloves or similar food ingredients.

US Patent Application US20020153440 (Holcomb et al) discloses a hand-held hand-powered food processor having a pull cord motor for rotating a spindle that carries an arm. The arm can be a cutter blade or an elastomeric flexible peeler arm having a durometer of preferable between Shore 80A and Shore 82A. The arm is driven by the spindle, and there is a stop block formed on a sidewall near the end of the arm. Rotating the spindle causes it to rub against the skin of food in the processor for peeling the food. The cover of the processor has a flat outer periphery so the cover can be used as a storage unit for the contents of the processor.

It is well known that undamaged garlic cloves hardly disperse any odor, however, the typical smell of garlic results due to a chemical reaction that takes place whenever cells are broken, i.e. upon cutting, slicing, grinding etc.

It is an object of the present invention to provide a mechanic peeler for garlic (as well as other fruits and vegetables having a fine skin/peel), though in a non-abrasive fashion, leaving the garlic clove aesthetic and undamaged. The peeler according to the present invention is a simple, easy to operate and clean/wash after use.

SUMMARY OF THE INVENTION

A primary object of the present invention is to provide an appliance for peeling certain fruits and vegetables (which are collectively referred to herein as *garlic*) having a fine skin, however without abrading or breaking the garlic clove and without beating or scratching it, thus avoiding or minimizing damage to the garlic clove, so as to avoid or reduce dispersion of the typical garlic smell and to retain aesthetics and nutritive values thereof.

According to the present invention there is provided a garlic clove peeler comprising a clove receiving compartment formed with a friction

wall and a complimentary peeling element formed with a peeler surface which at an assembled position extends adjacent the friction wall; and a displacement mechanism for displacing one or both of sad friction wall and said peeler surface, and wherein at least one of the friction wall and the peeler surface are made of a resilient material.

The arrangement is such that one or more garlic cloves, placed within a gap extending between the friction wall and the peeler surface are peeled off due to friction with the rotatable friction wall and/or the peeler surface, where the peel/skin is brushed/rubbed off without affecting the garlic clove itself.

According to one embodiment, of the present invention, there is provided a housing comprising a base member made of rigid material and constituting the clove receiving compartment with an inside wall thereof constituting the friction wall, and with a resilient balloon-like peeler member being rotatably supported within the housing such that a gap extends between the inner wall of the housing and said peeler element.

According to a modification of the present invention, the compartment of the clove receiving compartment is coated with or fitted with an inner liner constituting the friction wall; and a top cover made of a rigid material, fittable over the base member and supporting the peeling element, with the displacing mechanism articulated to the top cover or to the base member for rotating the peeler element respective to said friction wall.

According to a broad concept of the present invention, there is provided a garlic peeling appliance comprising a housing with a base member and cover member defining a garlic clove receiving compartment extending between a peeler surface of the cover member and an friction wall surface of the base member, wherein said surfaces are spaced apart retaining a small gap there between and where at least one of said

surfaces is made of a resilient material. Displacement of one of the surfaces respective to the other entails peeling/brushing off the skin from a garlic clove received within said gap.

According to one particular design of the garlic peeler according to the present invention, at least one of the friction wall and the peeling element are deformable, e.g. under presence of a garlic clove there between. By one specific embodiment, the peeling element extends at a short distance from the friction wall, leaving a gap therebetween.

The peeler according to the present invention may further comprise one or more of the following features:

- The displacement mechanism is a rotary mechanism for rotating the friction wall surface and/or the peeling element with respect to one another, wherein either one of the friction wall and the peeling element rotate or both, though at reverse directions;
- One or both of the friction wall and the peeler surface of the peeling element are formed with resilient projections such as ribs or bulges, or bristles;
- The friction wall and the peeler surface of the peeling element are evenly spaced from one another, giving rise to a homogeneous gap therebetween;
- The gap between surfaces is typically between about 5-10 mm.
- The peeling element is resiliently biased in direction facing the friction wall surface;
- All components of the peeler are easily disassembled for maintenance and washing thereof. According to a specific design, all components of the appliance are dishwasher proof;

- The displacement mechanism is manually operated (e.g. by a so called 'hand-crank' or direct rotation of the top cover or base member) or electrically driven;
- One or both of the friction wall and the peeling element are replaceable/changeable by other such components having a different parameters, e.g. different shape, different surface contour or other resiliency properties, for use with different types of fruits or vegetables;
- The friction wall surface may be integral with or fixedly attached to a rigid housing comprising the clove receiving compartment;
- One or both of the friction wall and the peeling element are typically made of rubber material such as silicone rubber;
- The rotary mechanism may be articulated to either one of the base member or the top cover;
- Either one of the friction wall and the peeling element may be of a generally concave shape and the other of the friction wall and the peeling element be generally convex, in a matching fashion;
- Behind one or both of the friction wall and the peeling element there is a clear space to tolerate deformation thereof at the presence of a fruit within the gap there between;
- The housing including the base member and the top cover are stationary during rotation of the peeling element;
- Components of the apparatus are coaxially assembled;

According to one specific design, the devise is a part of a food processor comprising several accessories e.g. chopper, grinder, mixer, slicer, mincer etc. as well as a garlic peeler. Such a device typically comprises a receiving compartment (bowl-like), a cover and an accessory

mountable on a shaft articulated to a power unit, either manual or electric, wherein the accessories are easily replaceable.

According to this embodiment, the receiving compartment (bowl) is made of a rigid material with a cover fitable there over with a peeler member in the form of a balloon made of resilient material rotatably retained within the bowl with a gap extending there between.

The bowl may be fitted with inwardly projecting protuberances and the gap between the inside surface of the receiving compartment (bowl) and the peeler element may differ along its couture between a tighter gap at a bottom portion thereof and a broader gap at an upper end thereof. Rotation of the peeler element is imparted by a power unit fitted at the cover or at the base member with an axle extending there from and supporting the peeler element.

Thus, according to another aspect of the present invention there is also provided a peeler element for use in conjunction with a food processor.

According to a broad concept of the present invention, there is provided a garlic peeling appliance comprising a housing with a base member and cover member defining a garlic clove receiving compartment extending between a peeler surface of the cover member and an friction wall surface of the base member, wherein said surfaces are spaced apart retaining a small gap therebetween and where at least one of said surfaces is made of a resilient material. Displacement of one of the surfaces respective to the other entails peeling/brushing off the skin from a garlic clove received within said gap.

According to another aspect of the present invention the appliance is an add-on type for utilizing with a conventional mixer, wherein there is provided a housing in the form of a bowl formed with a hemispheric bottom portion and a peeling element with at least a bottom hemispheric

portion made of a resilient material and sized and shaped to fit into said bowl; said peeling element further comprising a shank fitted for coupling to the mixer's chuck for rotation thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

In order to understand the invention and to see how it may be carried out in practice, some embodiments will now be described, by way of non-limiting examples only, with reference to the accompanying drawings, in which:

Fig. 1 is an isometric view of a manually operable garlic peeler according to an embodiment of the present invention;

Fig. 2 is top isometric exploded view of the garlic peeler seen in Fig. a;

Fig. 3 is a top isometric view of a base member of the garlic peeler seen in Fig. 1;

Fig. 4 is a bottom isometric view of a top cover of the garlic peeler seen in Fig. 1;

Fig. 5 is a side view of a peeling assembly articulated to a rotation handle of the garlic peeler seen in Fig.1;

Fig. 6A is a top isometric view of a coupling member of a peeling assembly according to an embodiment of the present invention;

Fig. 6B is a peeling member of a peeling assembly according to an embodiment of the present invention;

Fig. 7A is a longitudinal section of a peeler according to the invention, with garlic cloves received in the clove receiving compartment;

Fig. 7B is an enlargement of the portion marked VII in Fig. 7A;

Fig. 8A is a bottom isometric view of a peeling member according to an embodiment of the present invention;

Fig. 8B is atop isometric view of a base member according to an embodiment of the present invention;

Fig. 9 is an isometric view of an electrical garlic peeler according to an embodiment of the present invention;

Fig. 10 is a longitudinal section of a garlic peeler according to a modification thereof;

Fig. 11 is a longitudinal section of a garlic peeler according to another modification thereof;

Fig. 12 is an exploded isometric view of a garlic peeler according to a different embodiment of the present invention;

Fig. 13 is a longitudinal section through a garlic peeler according to the embodiment of Fig. 12, fitted on a mixer in an operable state

Fig. 14 is an exploded isometric view of a food processor device fitted with a peeling accessory according to the present invention;

Fig 15 is a side view of the food processor of Fig. 14, assembled in its peeler configuration; and

Figs. 16A and 16B are top and side vies, respectively of the peeler element received within the bowl of the device of Fig. 14.

DETAILED DESCRIPTION OF THE INVENTION

Referring first to Figs. 1 and 2 of the drawings there is illustrated a garlic peeler in accordance with the present invention and generally designated **20** comprising a housing **22** having the general appearance of a sphere in the shape of garlic with an ornamental design resembling garlic cloves at **24**. The housing **22** comprises a base member **28** formed with a flat support base **30** and a complementary top cover **32**, the detailed construction of both will become apparent hereinafter with reference to Figs. 3 and 4. The top cover **32** is lockingly engageable with

the base member **28**. A manually operated hand crank **38** is provided, operation of which will become apparent hereinafter as well.

As can best be seen in Figs. 2 and 3, the base member **28** is in the form of a rigid hemisphere snugly accommodating a liner **42** made of resilient material, e.g. silicone rubber, and constituting a frication surface. In accordance with a particular embodiment of the invention the liner **42** is integrally molded into the base member **28** to thus impart the colorful, multilayered appearance as illustrated in Figs. 1, 3, 8B and 9. However, it is apparent that the liner **42** may be packed in the base **28** and fixedly received, e.g. by a snap-type arrangement, a fixation ring, etc. (not shown).

Base member **28** with the friction wall (liner) **42** give rise to a clove receiving compartment **46** (see also Fig. 7A).

The top cover **32** is in the form of a rigid hemisphere complementary with the base member **28** and formed at its top with an aperture **48** (Fig. 2) from which downwardly extends a cylindrical wall portion **50** having both ends opened. A peeling assembly generally designated **52** (Figs. 2, 5, 6A and 6B) comprises a peeling element **51** formed with a peeler surface **56** in the form of an inverted hemisphere made of a resilient material (such as silicon rubber). The peeling element **51** is formed at its outer surface with a plurality of radial ribs **58**. The peeler element **51** is supported by a retention ring **60** made of rigid material (e.g. plastic material) articulated to the peeler element **51** either by screws at **62** or by integrally molding thereof, or by other means, e.g. adhering, etc. The rigid retention ring **60** is snappingly but detachably articulated to a rotation support disk **64** by means of inward projecting radial tabs **68** of retention ring **60** snappingly engaged into corresponding recesses **70** formed in support disk **64**.

Support disk **64** is formed with an upwardly extending cylindrical neck portion **74** with a smooth external surface **76** sized for snugly though free rotation within cylinder **50** of the top cover **32**, whilst its inner surface is formed with a plurality of axially extending radial ribs **78** fitted for snap engagement with a cogged shank portion **82** of the hand crank **38** fitted for rotary engagement thereof as in the position of Figs. 1, 5 and 7A.

As already mentioned above, and with particular reference to Figs. 3, 4, 7A and 7B, the top cover **32** is fitted for locking engagement with the base member **28**. For that purpose, base member **28** is formed at its upper edge **88** with a circumferential rim **90** whilst the top cover **32** is formed with a circumferential inner groove **92** and further, base member **28** is formed with several locking lugs **94** engageable with corresponding recesses **96** formed in the top cover **32**. In this fashion, the top cover **92** is lockingly engageable with the base member **28** to thereby prevent unintentional opening of the utensil while in use.

As can best be seen in Fig. 7A, at the assembled position the peeling element **51** forms a gap **46** from the liner **42**, said gap typically being in the range of about 5 to 10 mm which in average is smaller than the size of a garlic clove (**100** in Fig. 7A) such that at the assembled position the peeling element **51** deforms to ensure engagement and friction contact over the garlic cloves **100**. Rotation of hand crank **38** by knob **39** entails corresponding rotation of the peeler elemnt **51**, resulting in peeling/brushing off the skin of the garlic cloves **100** placed within the gap **46**, however without causing any damage to the garlic cloves, i.e. without abrading, scratching, smashing, or any other damage. In this way, an eye-pleasing peeled garlic clove is obtained, whilst retaining all its nutritive values and even more so substantially without disbursing of the typical garlic smell.

Whilst the description here in the specification and claims makes reference to garlic, it is to be appreciated that the appliance may just as well be used for peeling other vegetables or fruits, e.g. onions, different types of nuts (almonds, peanuts, etc.) and others. Accordingly, the size of the gap, namely the distance between the friction wall (liner) **42** of the base member **28** and the peeler surface **56** of peeling element **51** may be differ according to the size of the vegetable or fruit under consideration. According to a particular design, not shown, the gap may be regulated by displacement of the peeling element or replacing it.

It is further appreciated that the appliance is easily assembled and disassembled for cleaning and maintenance, and is easily washable, even by dishwashing machines. Typically, all components of the appliance are made of plastic and elastomeric materials which are easily washable and which do not absorb any odors or color.

Turning now to Fig. 8A, there is illustrated a peeling element **112** fitted with a retention ring **60** as in the previous embodiment. However, in the embodiment of Fig. A, the peeler surface of the peeler element **112** is formed with a plurality of bulges **114** for increasing friction contact with the garlic clove received within the clove receiving compartment.

In the embodiment of Fig. 8B, the inner surface of friction wall **120** of the base member **122** is fitted with a plurality of resilient bristles **124** also for the purpose of increasing friction engagement with a garlic clove received within the clove receiving compartment. It is appreciated that either or both of the friction wall (liner of the base member) and the peeler surface of the peeling element may be either smooth or fitted with projections such as bulges or ribs, etc. or with bristles or with a combination thereof.

It is further appreciated that the same housing may be used, however, with a replaceable peeler element for adjusting for different fruits and vegetables.

In the embodiment of Fig. 9, the garlic peeler **130** is fitted with an electric motor **132**, in replacement of the manual hand crank **38** in the previous embodiments. The electric motor **132** is fitted with an *on/off* switch **134** and the motor and batteries may be received within the space of the cylindric portion extending downwards from the top cover **138**.

In the embodiment of Fig. 10, there is illustrated a garlic peeler in accordance with still another embodiment of the present invention, generally designated **150**. In this embodiment, the housing is a complete rigid housing **152** formed with a vertically extending cylindrical friction wall **156** made of resilient material substantially coaxially within the housing **152**. A rotary hand crank **158** is engageable with a rigid core **160** which at the assembled position is rotatably supported at its lower end **162** by an axial projection **164** projecting from a base **166** of housing **152**. The core **160** is coated with a resilient sleeve **170** constituting a peeler surface, whereby a clove receiving gap **174** extends between the resilient sleeve **170** and the liner **156**. The clove receiving gap **174** is typically narrower than the size of an average garlic clove **178** whereupon rotation of the hand crank **158** entails peeling the garlic clove **178**.

It is appreciated that other embodiments as mentioned in connection with previous applications are possible as well, e.g. forming the peeler surface of the sleeve and/or friction wall **156** with projections or bristles, etc.

In the embodiment of Fig. 11, there is illustrated a garlic peeler according to a modification of the invention and generally designated **180** wherein a base member **182** is formed with a resilient peeling element **184** in the form of a diaphragm tensioned about its periphery whilst the

top cover **186** supports the rotary hand crank **188** which in turn supports a disk **190**, coated by a friction surface **191** made of a resilient material, giving rise to a clove receiving gap **192** extending between the peeler surface **184** and the friction surface **191**, said gap **192** constituting the clove receiving compartment.

The arrangement is such that rotation of handle **188** entails corresponding rotation of the disk **190**, resulting in peeling/brushing off the peel off a garlic clove **196** received within the clove receiving gap **192**.

With further reference now made to figures 12 and 13 there is illustrated a garlic clove peeler generally designated **200** adapted for use with a mixer, e.g. a domestic kitchen mixer **204** as in Fig. 13. The garlic peeler **200** comprises bowl **206** formed with a hemispheric bottom portion **208** , which according to one particular design at least the hemispheric bottom portion **208** is fitted or coated with a resilient liner **210** serving as a friction wall (Fig. 13). The bowl is a replacement bowl for the mixer and thus is provided with a base **212** for securing to the mixer's support table **216** (Fig. 13). A peeling element **220** comprising a balloon **222,** at least a bottom hemispheric portion thereof **226** made of a resilient material and sized and shaped to fit into said bowl **206.** The peeling element **220** further comprises a shank **230** fitted for coupling to the mixer's chuck **236** for rotational coupling thereof.

According to this embodiment, the garlic peeler **200** is an add-on type for utilizing with a conventional mixer, wherein the bowl **206** may serve also for other purposes used in conjunction with the mixer **204,** as known *per se*. The arrangement is such that rotary motion is imparted to the peeling element from the motor of mixer **204.** In this case, the size of the gap **239** between the bowl and the peeling element **220** may be adjusted by lowering or raising the mixer's arm **241** and further, the rotation speed is governed by a controller **245**.

The shank **20** may be a specially design element, as in the figures, or it may be any one of a conventional mixing utensils used in conjunction with a mixer, wherein the peeling element is articulated thereto.

With further reference made to Figs. 14 to 16, a modification of the invention is illustrated. Accordingly, there is provided a food processor generally designated **50** comprising a housing constituted of a food receiving member **252** in the form of a bowl supported over an integral base member **254** and a top member **258** fitted for locking engagement over the bowl **252** via an adaptor cover member **260**. Integrated within the top member **258** there is an electric motor (not seen) connectable to the power supply by an electric cord **262** and operable by an electric switch **264**, as known *per se*.

A plurality of replaceable accessories are provided, of which only two are shown in the present embodiment. Such embodiments are, for example, a chopper, a grinder, a slicer, mincer, mixer, etc. In Fig. 14 there is illustrated a chopper accessory **266** which is connectable to a shank **268** extending from the motor. Another accessory is the garlic peeler **270** comprising a resilient balloon-like peeling element **272** extending from a support shank **274** adapted for articulation to shank **268** so that at the assembled position (Fig. 15) the peeler element **272** extends within the bowl **252** with a bottom end **278** of the peeler element rotatably supported by a bearing member **280** fitted within the bowl **252**.

It is further noticed that the bowl **252** is formed with a plurality of inwardly extending depressions **284** and that the gap extending between the inside surface of the receiving compartment (bowl **252**) and the balloon-like peeling element **272** differs along its longitudinal contour between a tighter gap at a bottom portion thereof and a broader gap at an upper portion thereof.

The balloon-like peeling element **272** may be a homogenous solid unit made of resilient material or may be a sealed balloon retaining its shape. However, in accordance with a modification thereof, the balloon may be aired and may further be removable from shank **274**, e.g. for purposes of cleaning.

In use, dry garlic cloves are placed in the bowl **252** and then the device is closed by placing the cover member **260** and the top cover **258**. Upon starting the electric motor by switch **264**, the peeler element **274** is rotated within the bowl causing the garlic cloves to displace within the receiving compartment whereby friction between the peeler element **272** and the inner surface **273** of bowl **252** results in peeling the garlic clove.

It is appreciated that the above descriptions are intended only to serve as examples and that many other embodiments are possible, all of which fall within the spirit and the scope of the present invention.

CLAIMS:

1. A garlic clove peeler comprising a housing formed with a clove receiving compartment formed with a friction wall and a complimentary peeling element formed with a peeler surface extending adjacent the friction wall; and a displacement mechanism for displacing one or both of said friction wall and said peeling element.

2. A garlic clove peeler according to claim 1, wherein one or both of the friction wall and the peeler surface of the peeling element are fitted with or made of a resilient material.

3. A garlic clove peeler according to claim 1, wherein a gap extends between the peeling element and the friction wall surface.

4. A garlic clove peeler according to claim 2, wherein the gap is uniform.

5. A garlic clove peeler according to claim 2, wherein the gap is sized so as to snugly receive one or more garlic cloves.

6. A garlic clove peeler according to claim 2, wherein the size of the gap is adjustable to comply with different fruit/vegetable size.

7. A garlic clove peeler according to claim 1, wherein the displacement mechanism is a manually operated hand-crank.

8. A garlic clove peeler according to claim 1, wherein the displacement mechanism is an electric motor, substantially accommodated within the housing.

9. A garlic clove peeler according to claim 1, wherein substantially all components thereof are made of plastic material.

10. A garlic clove peeler according to claim 1, wherein one or both of the friction wall and the peeling element are fitted with projection.

11. A garlic clove peeler according to claim 9, wherein the projections are in the form of bulges or ridges.

12. A garlic clove peeler according to claim 1, wherein one or both of the friction wall and the peeling element are fitted with resilient bristles.

13. A garlic clove peeler according to claim 1, wherein the housing comprises a top cover fitable over a base member, both made of a rigid material, said top cover supporting the peeling element projecting towards the friction wall.

14. A garlic clove peeler according to claim 12, wherein the displacement mechanism is articulated to the top cover for rotating the peeling element respective to said friction wall.

15. A garlic clove peeler according to claim 12, wherein the base member and the top cover are in the shape of complimentary hemispheres.

16. A garlic clove peeler according to claim 1, wherein friction wall is an inner liner of the base member.

17. A garlic clove peeler according to claim 15, wherein the friction wall is articulated to the base member.

18. A garlic clove peeler according to claim 16, wherein the friction wall is integrally molded with the base member.

19. A garlic clove peeler according to claim 1, wherein the peeling element is retained by a retention ring articulated to the top cover.

20. A garlic clove peeler according to claim 18, wherein the peeling element is detachable from the top cover.

21. A garlic clove peeler according to claim 1, wherein one or both of the friction surface the peeling element are deformable to snugly receive a garlic clove there between.

22. A garlic clove peeler according to claim 1, wherein the housing is in the shape of garlic.

23. A garlic clove peeler according to claim 1, wherein the clove receiving compartment extends between a cylindrically extending friction wall and a coaxial peeling element.

24. A garlic clove peeler according to claim 22, wherein the friction wall is fixedly retained within the housing and the peeling element is rotatably secured to a cover engageable with the hosing.

25. A garlic clove peeler according to claim 1, wherein the rotation element is a hand-crank articulated to the peeling element.

26. A garlic clove peeler according to claim 1, wherein where both the friction wall and the peeling element rotate, thy rotate in opposed directions.

27. A garlic clove peeler according to claim 1, wherein the gap between surfaces is between about 5-10 mm.

28. A garlic clove peeler according to claim 1, wherein the peeling element is resiliently biased in direction facing the friction wall surface.

29. A garlic clove peeler according to claim 1, wherein the size of gap of the clove receiving compartment is adjustable so as to comply with different fruit/vegetable sizes.

30. A garlic clove peeler according to claim 28, wherein one or both of the friction wall and the peeling element are replaceable.

31. A garlic clove peeler according to claim 1, wherein one or both of the friction wall and the peeling element are made of silicone rubber.

32. A garlic clove peeler according to claim 1, wherein the friction wall and the peeling element are in the shape of matching hemispheric portions.

33. A garlic clove peeler according to claim 12, wherein the base member and the top cover are stationary during rotation of the peeling element.

34. A garlic clove peeler according to claim 1, wherein the friction wall and the peeling element are coaxial.

35. A garlic clove peeler according to claim 1, wherein comprising a bowl formed with a hemispheric bottom portion serving as a friction wall, and a peeling element with at least a bottom hemispheric portion made of a resilient material and sized and shaped to fit into said bowl; said peeling element further comprising a shank fitted for coupling to a mixer's chuck for rotation thereof.

36. A garlic clove peeler according to claim 33, wherein at least the hemispheric bottom portion of the bowl is fitted or coated with a resilient liner.

37. A garlic clove peeler according to claim 33, wherein the peeling element is in the form of a balloon articulated to the shank.

38. A garlic clove peeler according to claim 35, wherein the balloon is detachable from the shank.

39. A garlic clove peeler according to claim35, wherein the shank is one of a conventional mixer utensils.

40. A garlic clove peeler comprising a housing formed with a clove receiving compartment formed with an inner friction wall and a complimentary peeling element rotatably supported within the clove receiving compartment, and a power mechanism for rotating said peeling element.

41. A garlic clove peeler according to claim 40, wherein one or both of the friction wall and the peeling element are fitted with or made of a resilient material.

42. A garlic clove peeler according to claim 40, wherein the peeler element is made of a flexible material.

43. A garlic clove peeler according to claim 40, wherein the peeler element is balloon-like.

44. A garlic clove peeler according to claim 40, wherein the peeler element is made of a flexible material.

45. A garlic clove peeler according to claim 44, wherein the peeler element is rotatably retained within the clove receiving compartment with a gap extending there between.

46. A garlic clove peeler according to claim 40, wherein the clove receiving compartment is fitted with inwardly projecting protuberances.

47. A garlic clove peeler according to claim 45, wherein the gap between an inside surface of the receiving compartment and the peeler element differs along its couture between a tighter gap at a bottom portion thereof and a broader gap at an upper end thereof.

48. A garlic clove peeler according to claim 40, wherein rotation of the peeler element is imparted by a power unit fitted at the cover or at the base member with an axle extending there from and supporting the peeler element.

49. A food processor comprising a housing formed with a clove receiving compartment formed with an inner friction wall and a complimentary peeling element rotatably supported within the clove receiving compartment, and a power mechanism for rotating said peeling element.

50. A food processor according to claim 49, wherein one or both of the friction wall and the peeling element are fitted with or made of a resilient material.

51. A food processor according to claim 49, wherein the peeler element is made of a flexible material.

52. A food processor according to claim 49, wherein the peeler element is balloon-like.

53. A food processor according to claim 49, wherein the peeler element is rotatably retained within the clove receiving compartment with a gap extending there between.

54. A food processor according to claim 49, wherein the clove receiving compartment is fitted with inwardly projecting protuberances

55. A food processor according to claim 49, wherein the gap between an inside surface of the receiving compartment and the peeler element differs along its couture between a tighter gap at a bottom portion thereof and a broader gap at an upper end thereof

56. A food processor according to claim 49, wherein rotation of the peeler element is imparted by a power unit fitted at the cover or at the base member with an axle extending there from and supporting the peeler element.

57. A garlic clove peeling accessory for a food processor comprising a housing formed with a clove receiving compartment having an inner friction wall and a power mechanism, said peeling accessory fitted for rotation within the clove receiving compartment.

58. A garlic clove peeling accessory according to claim 57, made of a flexible material.

59. A garlic clove peeling accessory according to claim 57, being balloon-like

60. A garlic clove peeler substantially as herein described and illustrated.

61. A garlic clove peeler substantially as herein claimed.

62. A food processor substantially as herein described and illustrated.

63. A food processor substantially as herein claimed.

64. A garlic clove for a food processor substantially as herein described and illustrated.

65. A garlic clove for a food processor substantially as herein claimed.

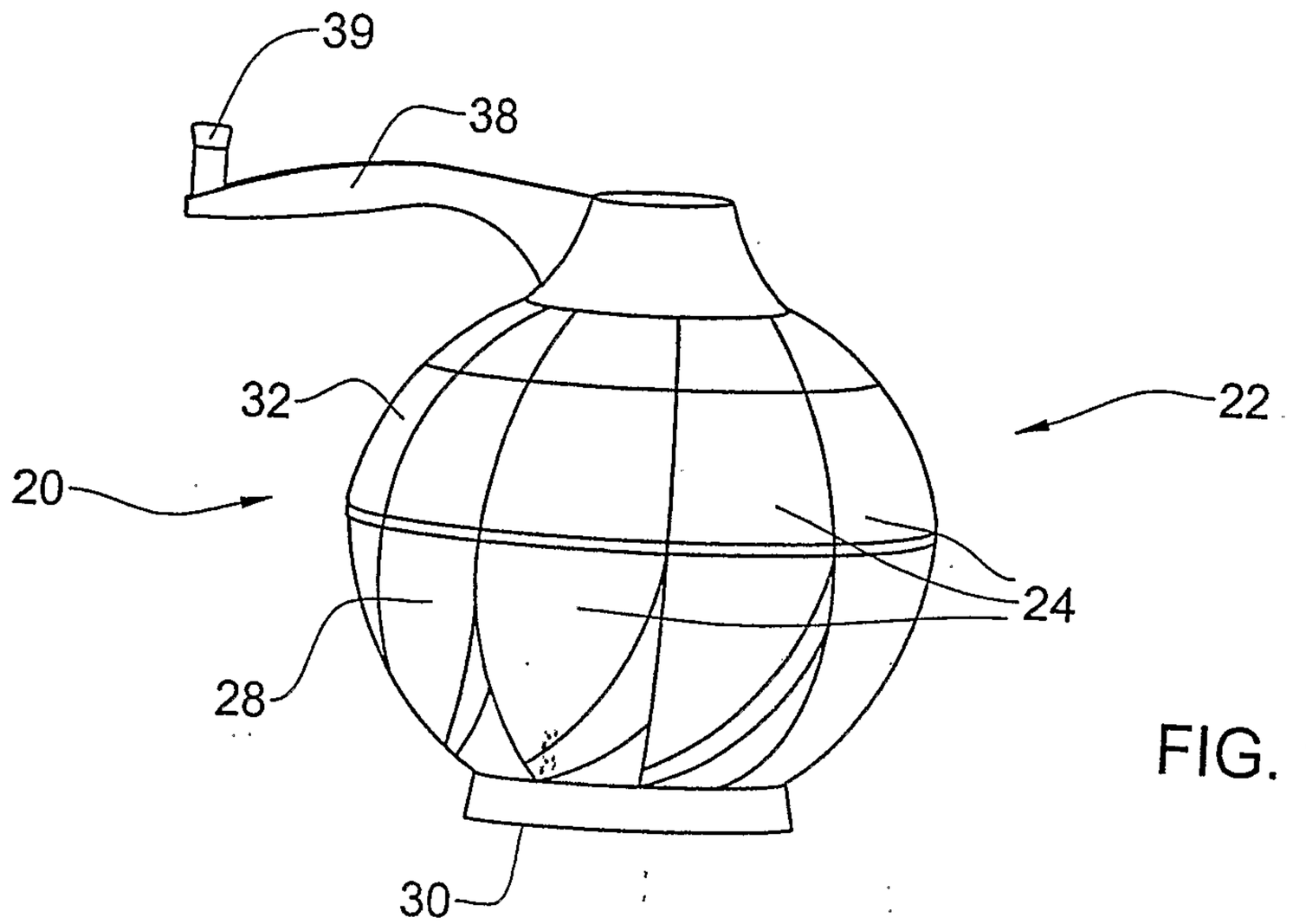

39
38
32
22
20
24
28
30

FIG. 1

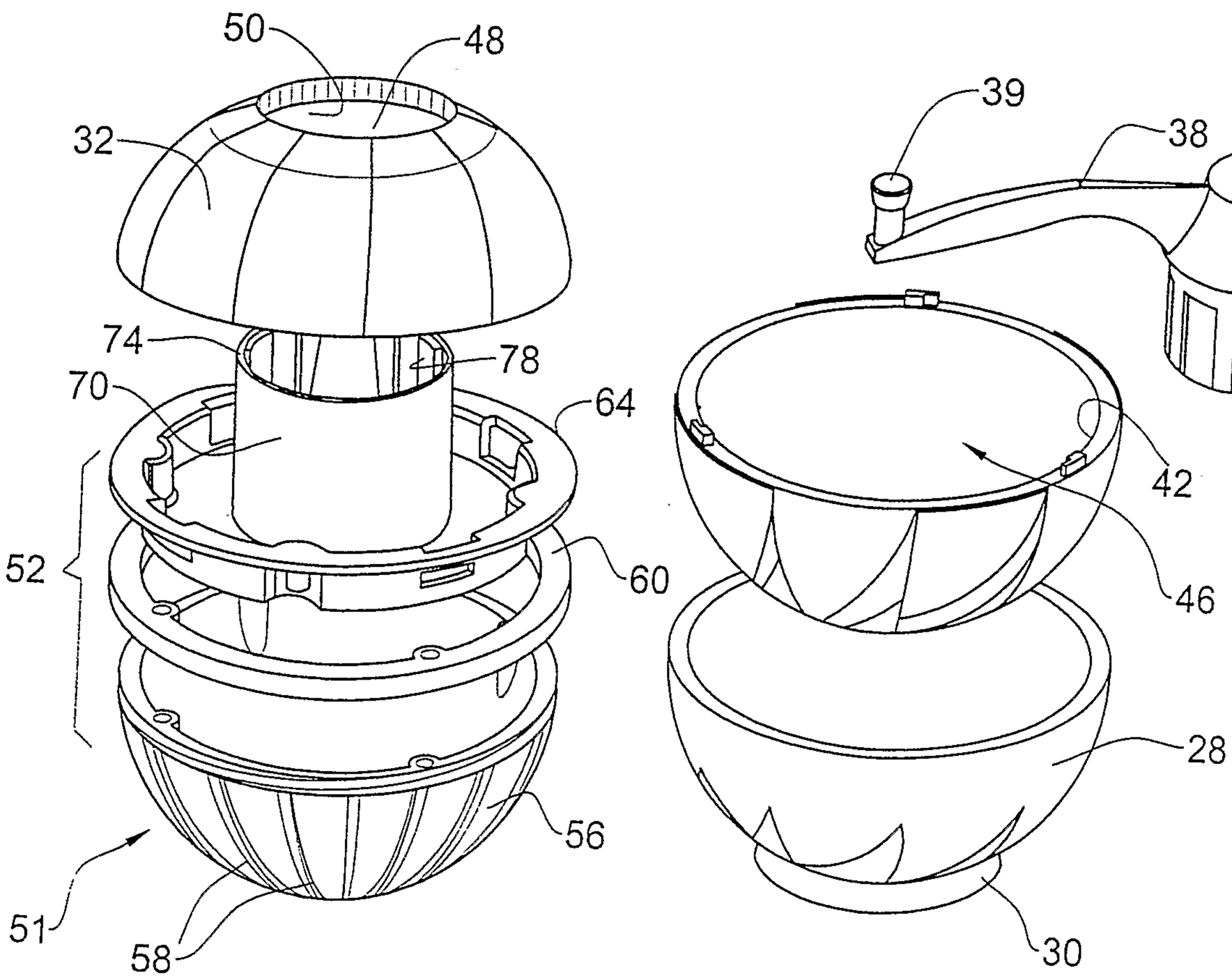

50
48
32
39
38
74
78
70
64
42
82
52
60
46
28
56
51
58
30

FIG. 2

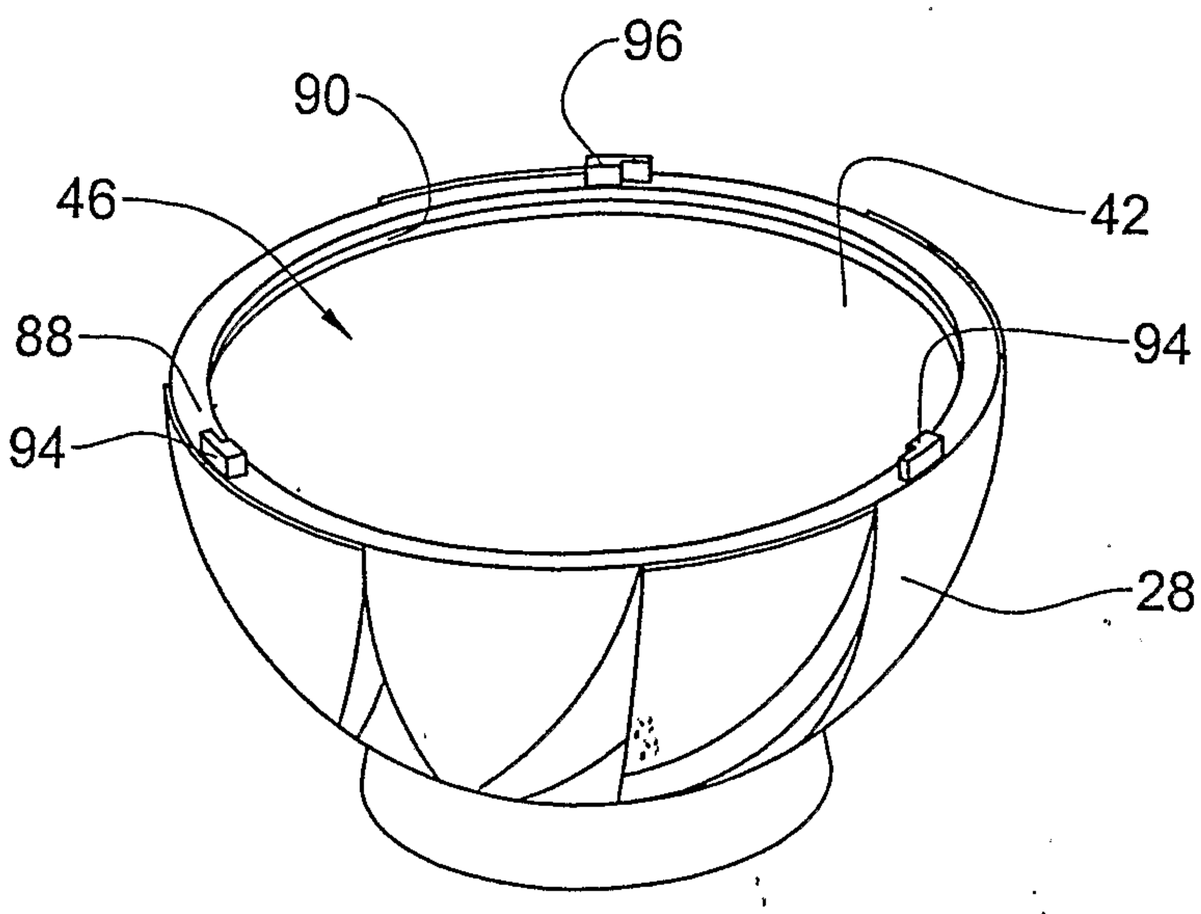


FIG. 3

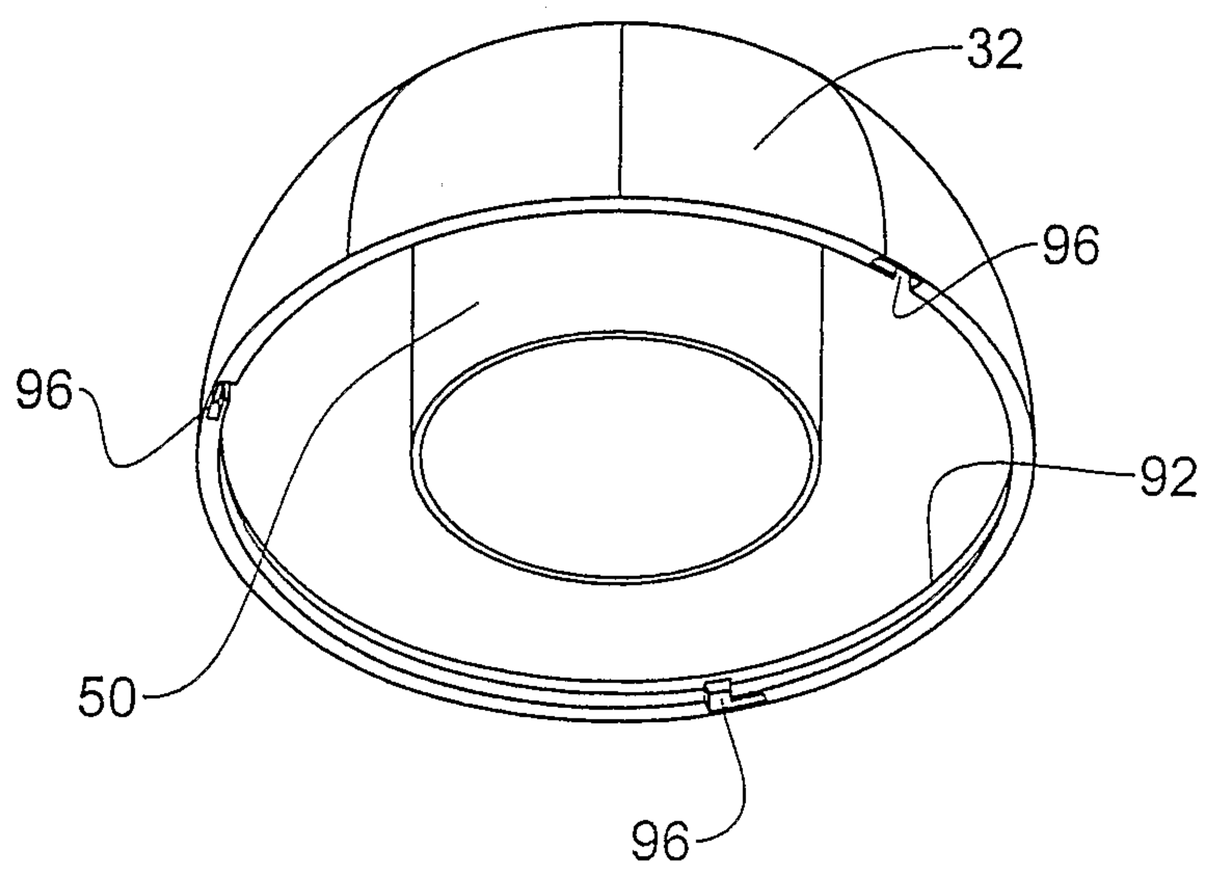


FIG. 4

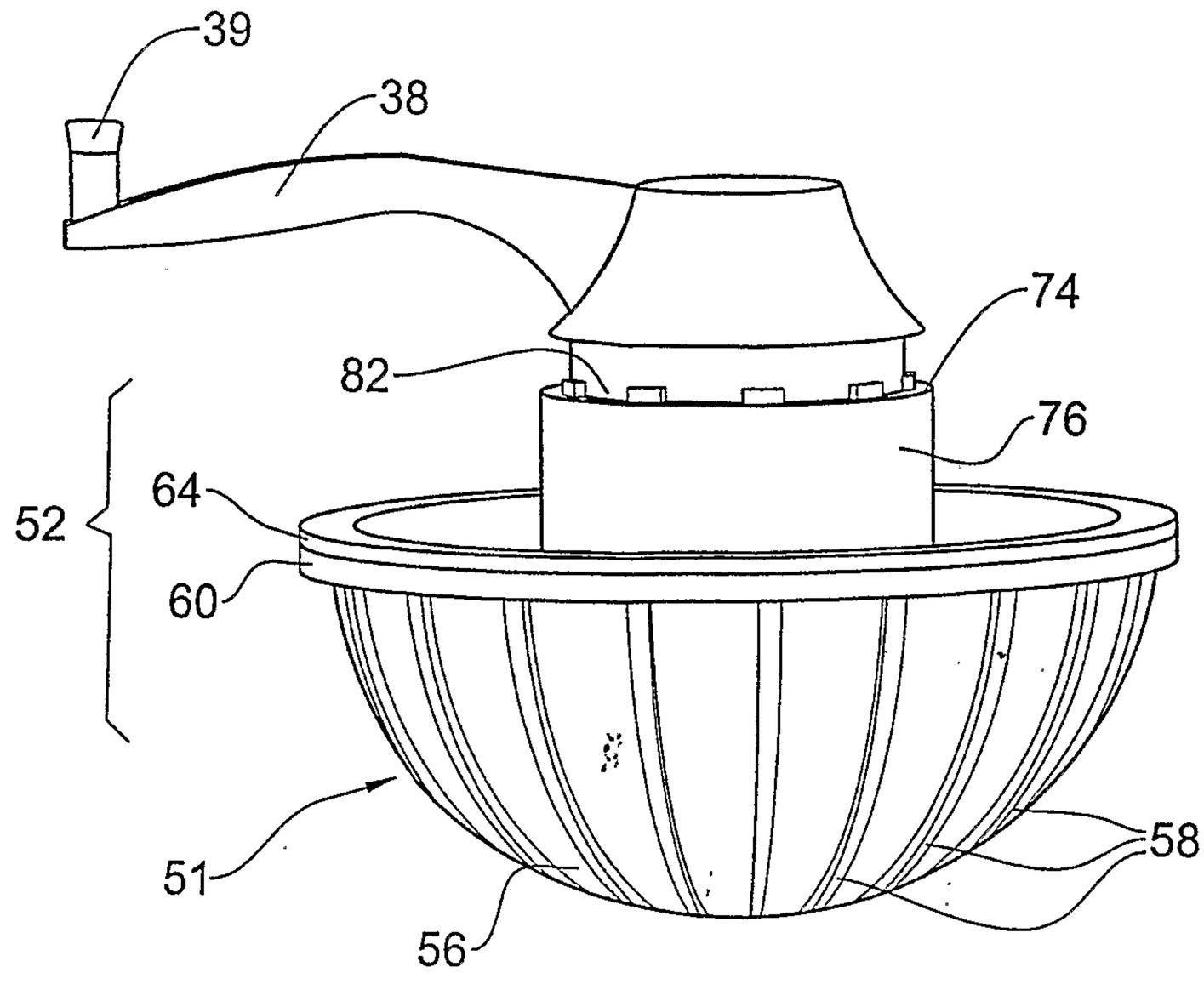


FIG. 5

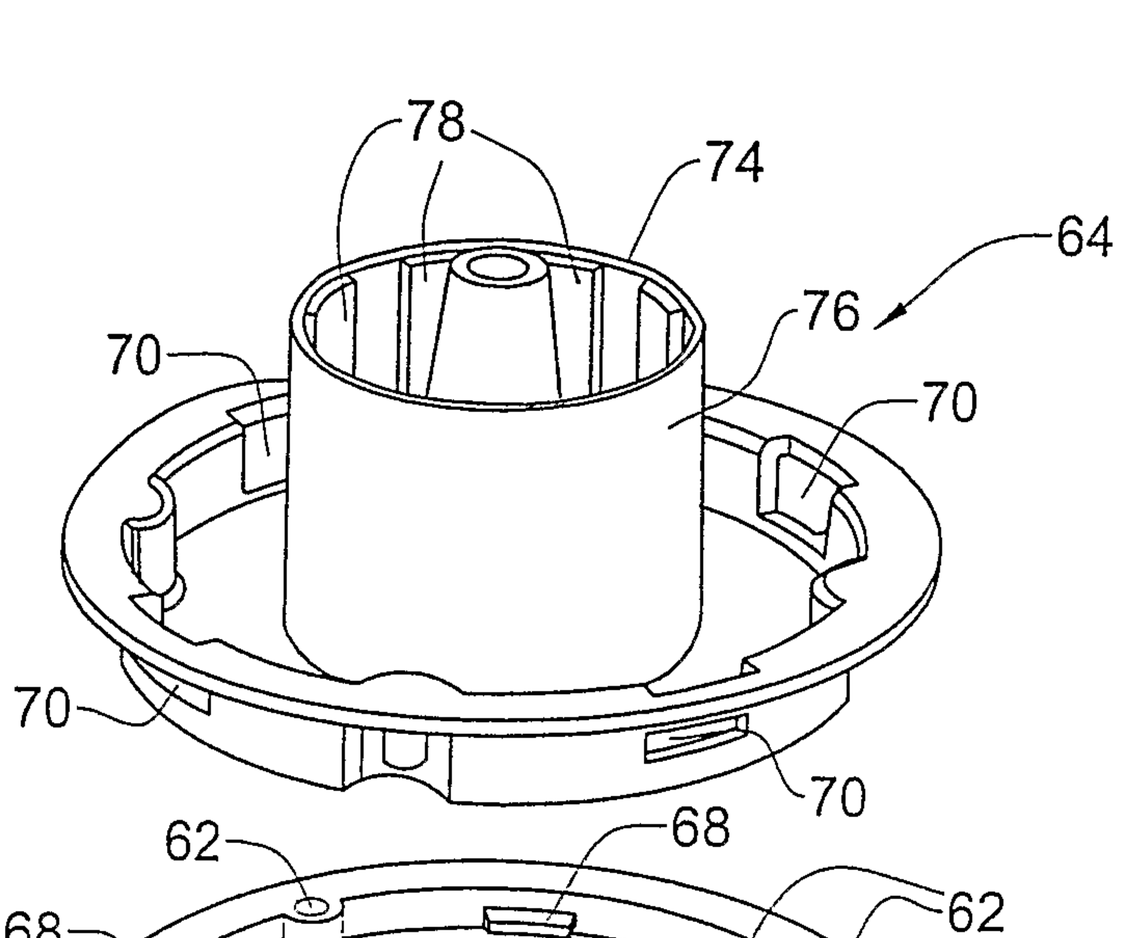


FIG. 6A

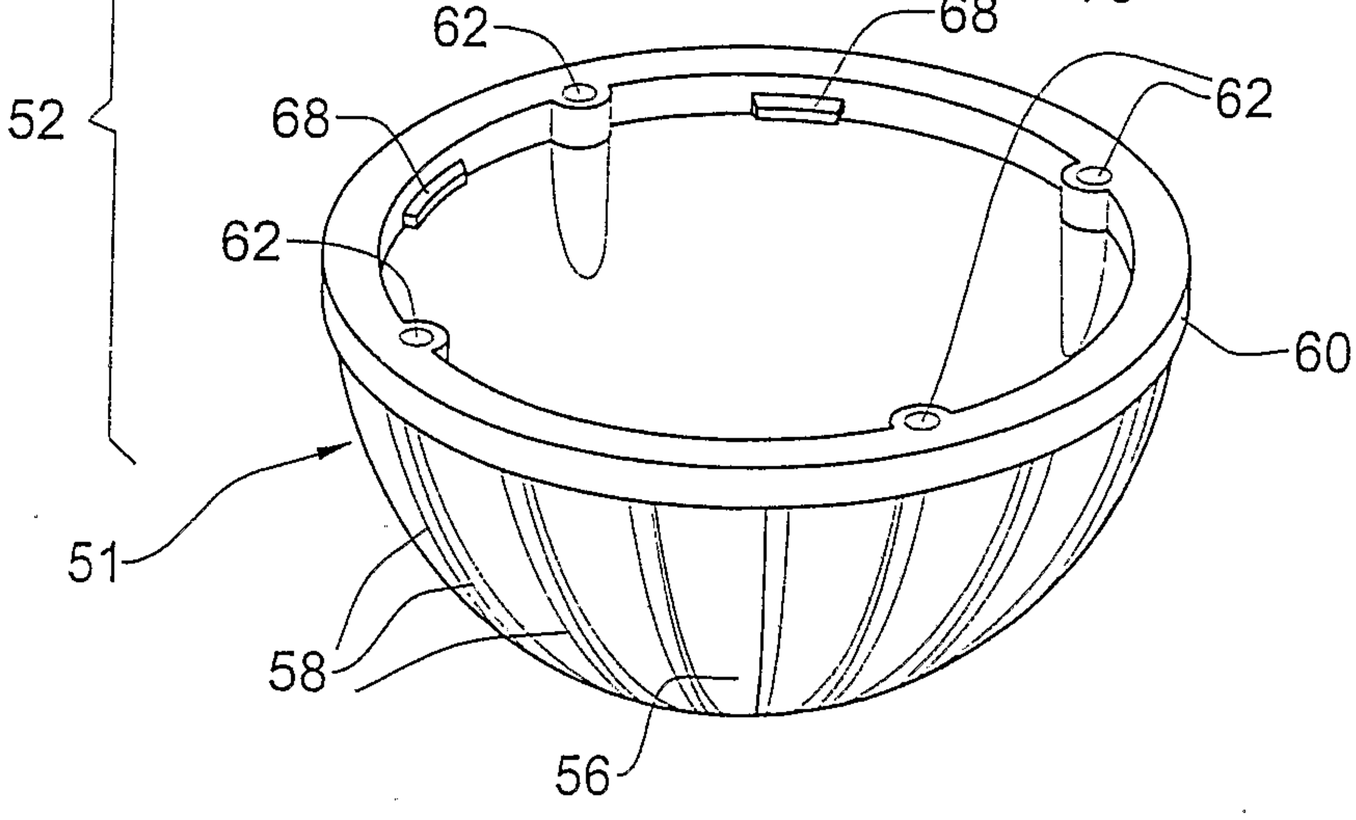


FIG. 6B

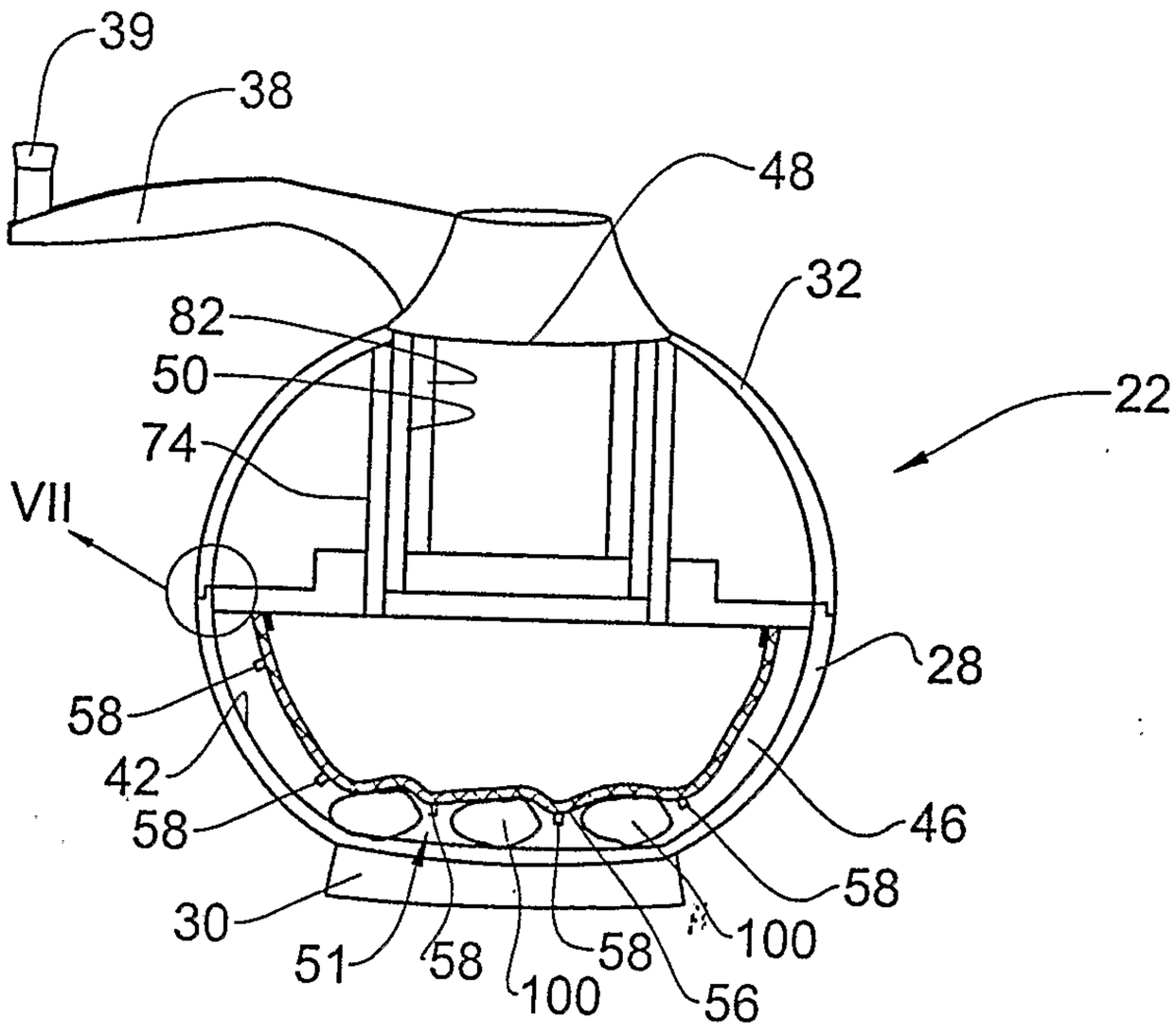


FIG. 7A

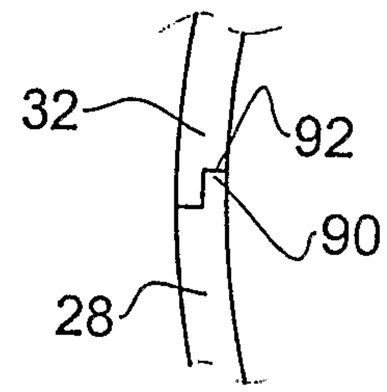


FIG. 7B

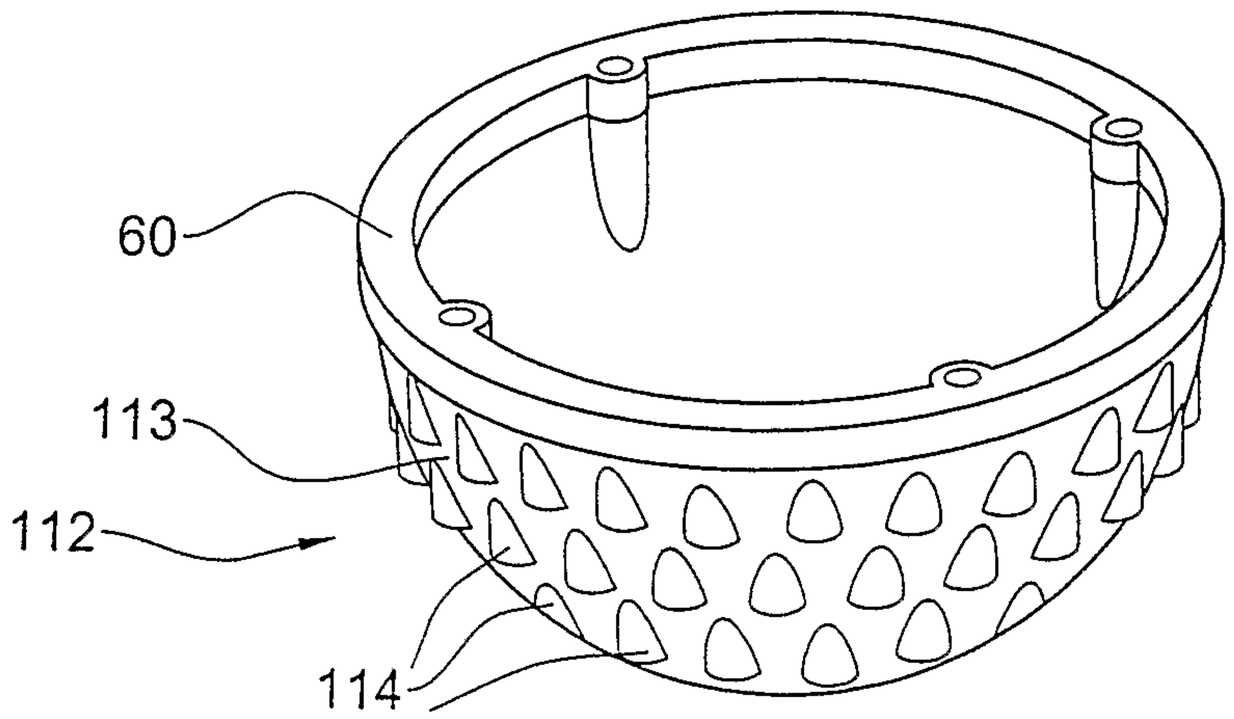


FIG. 8A

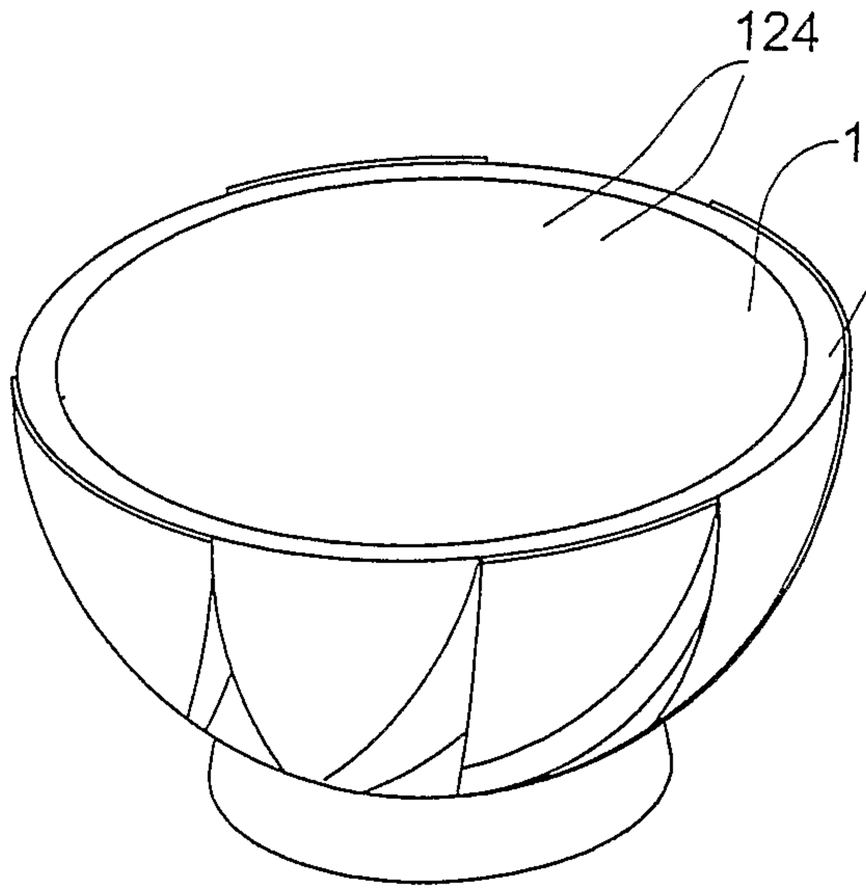


FIG. 8B

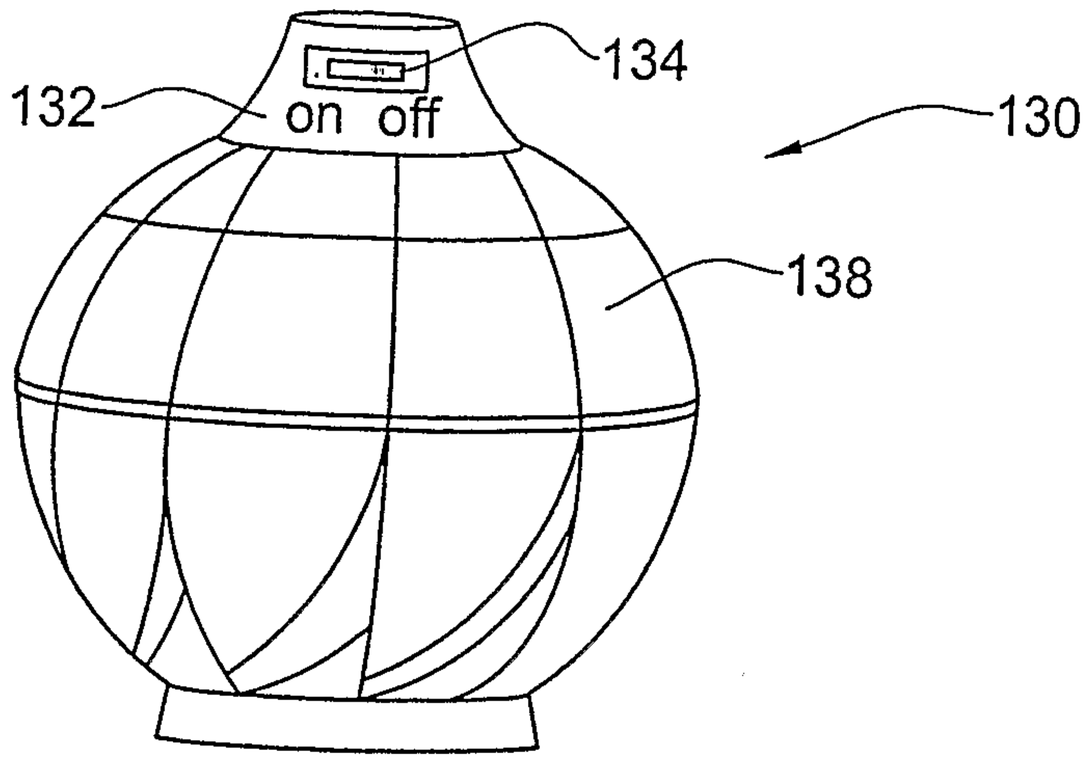


FIG. 9

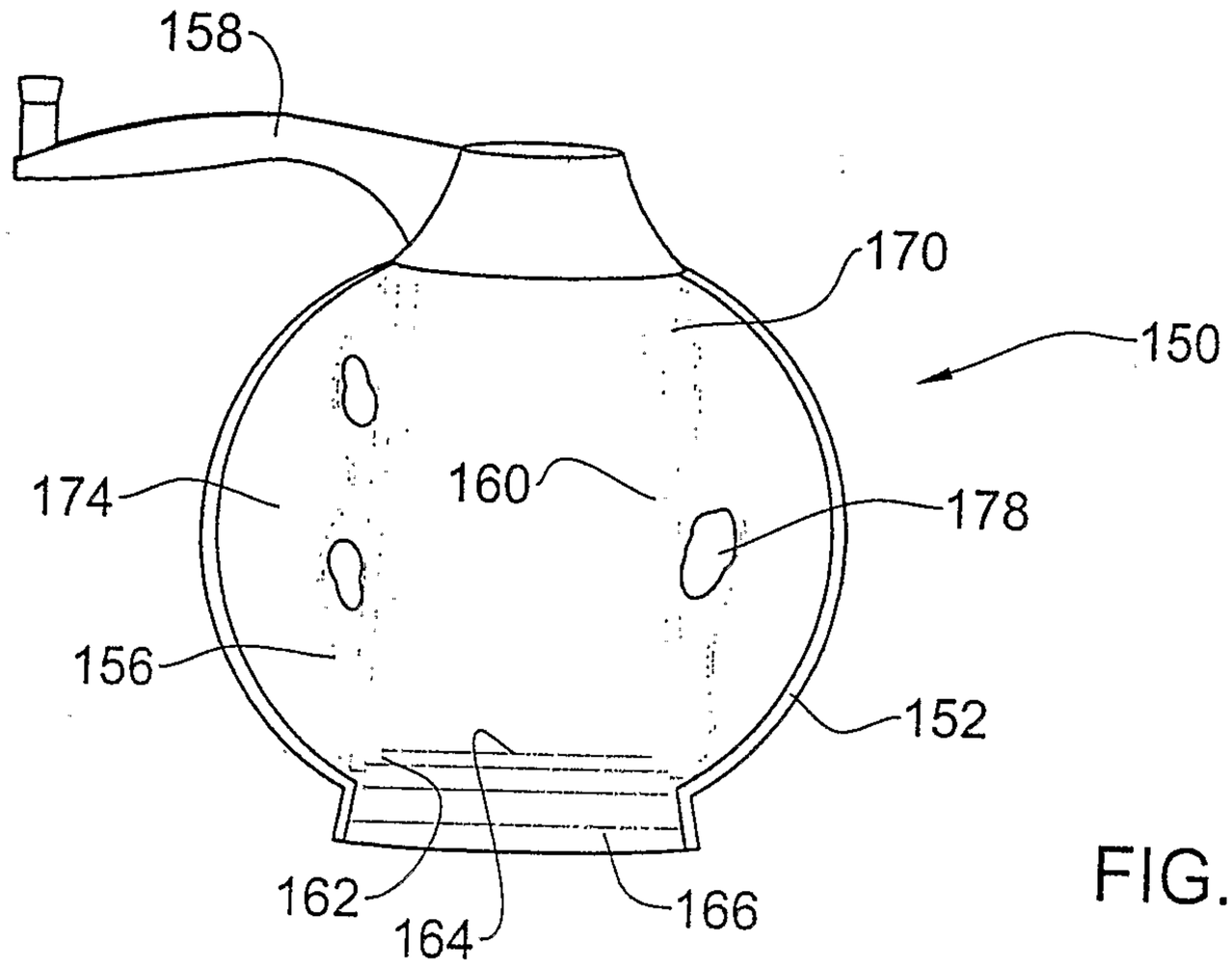


FIG. 10

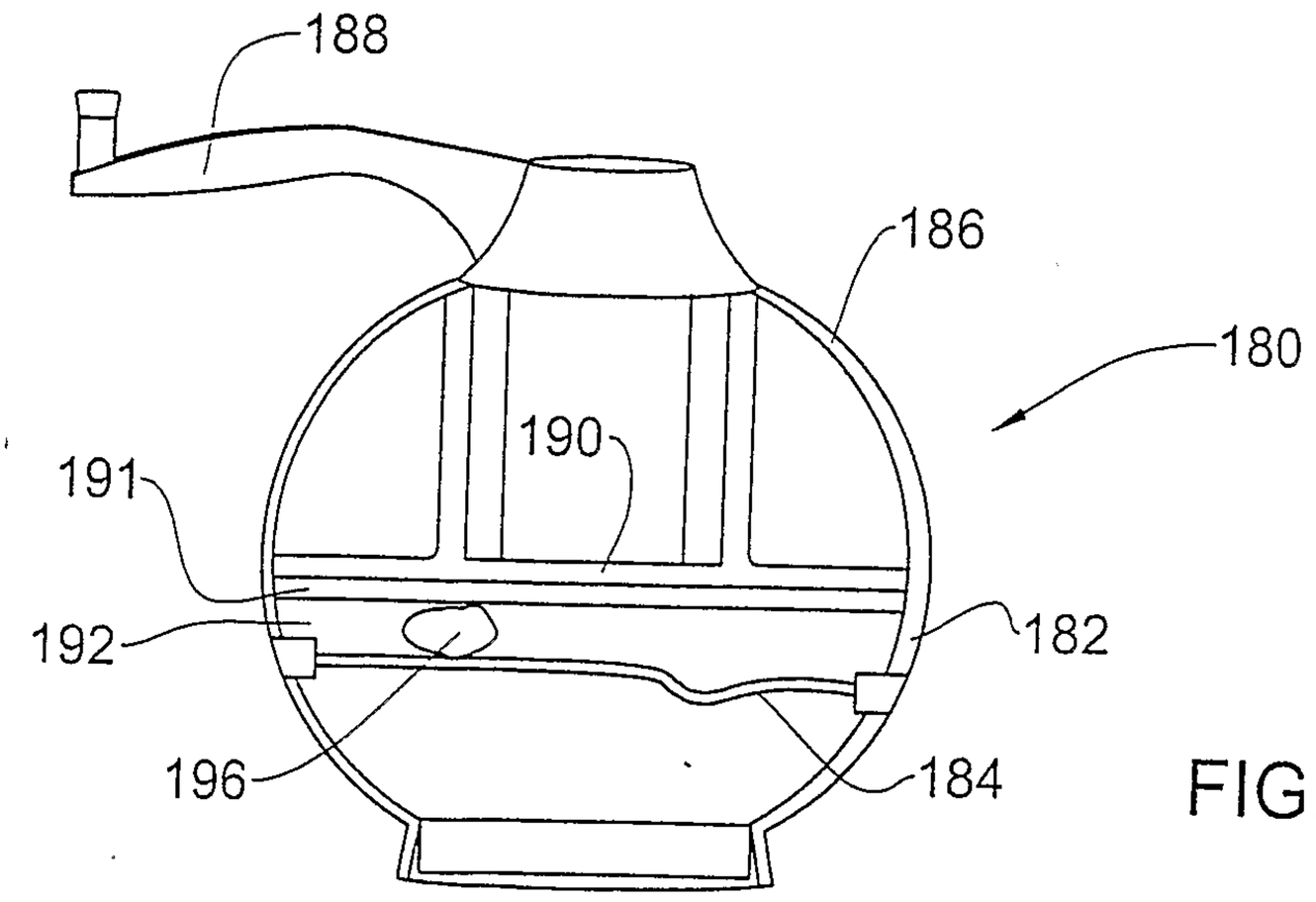


FIG. 11

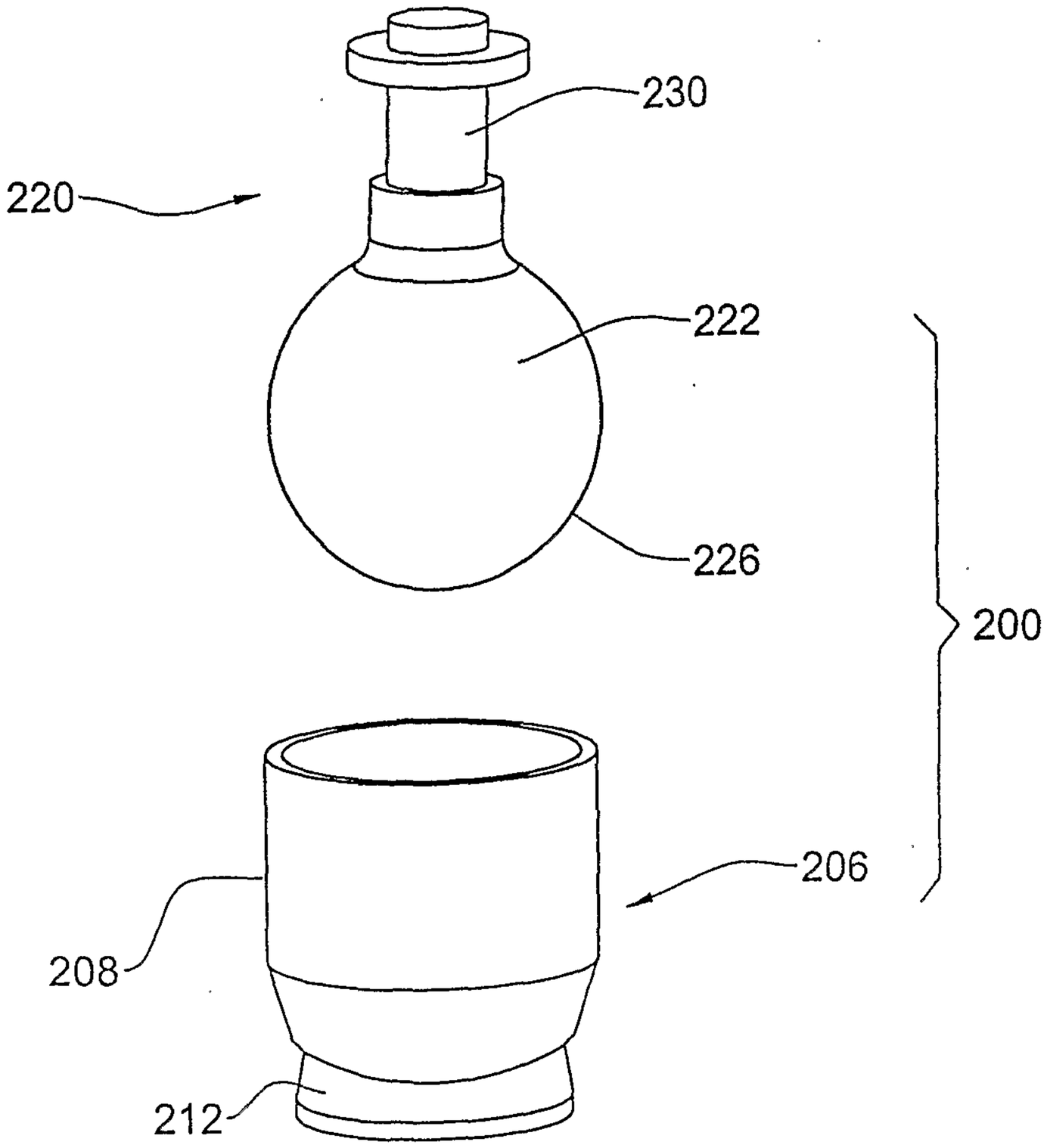

230
220
222
226
200
206
208
212

FIG. 12

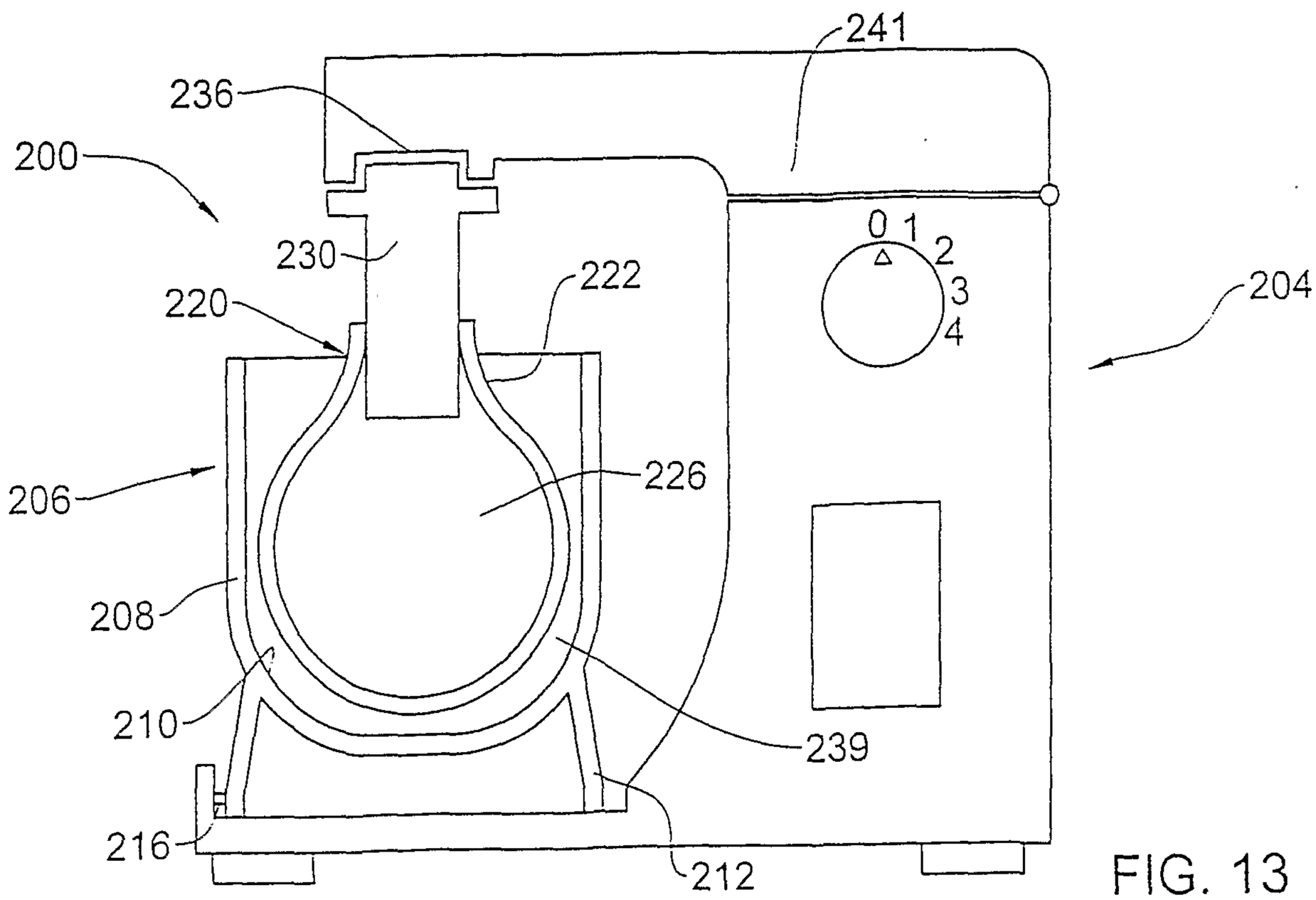

241
236
200
230
220
222
0 1 2 3 4
204
206
226
208
210
239
216
212

FIG. 13

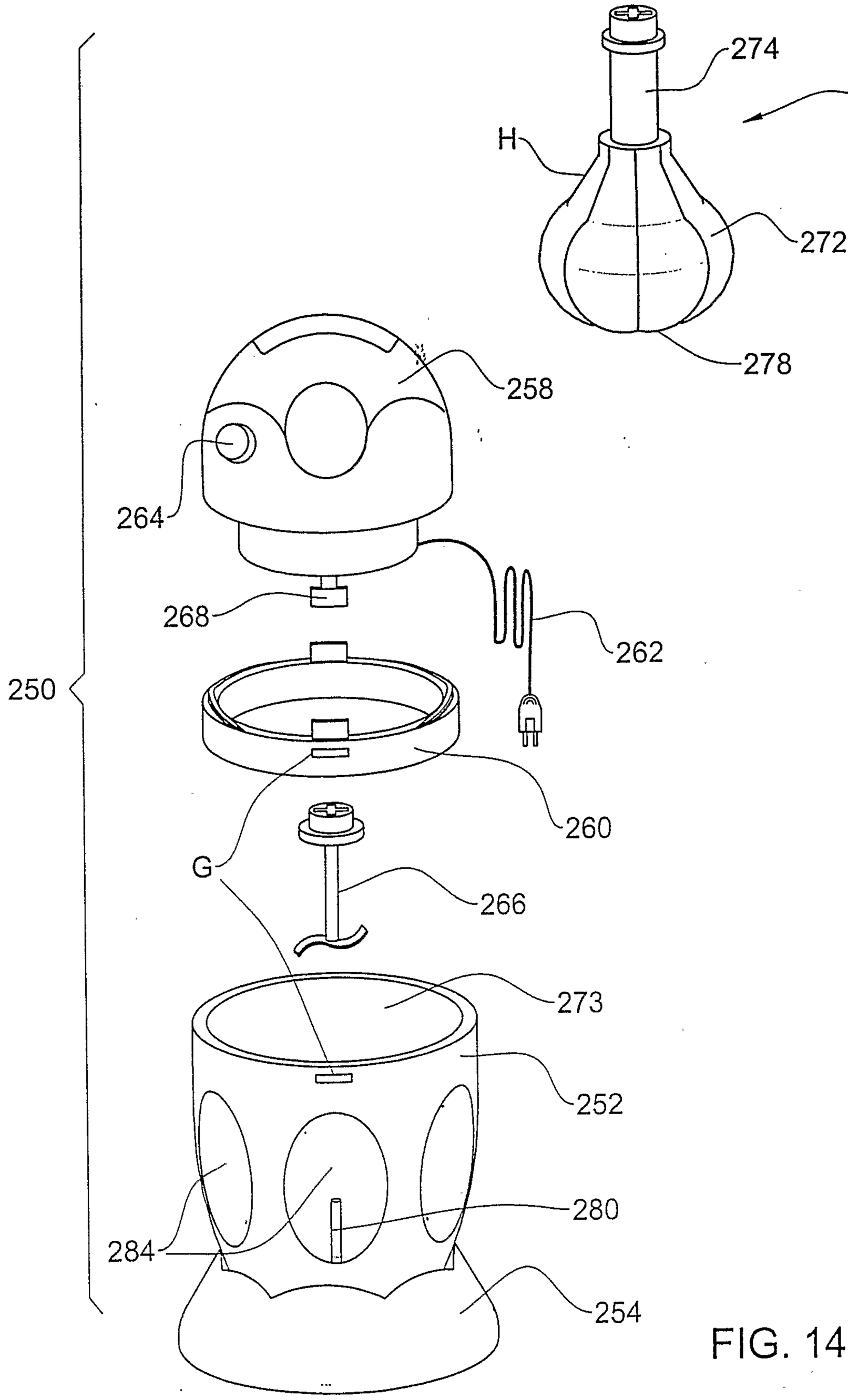

274
270
H
272
278
258
264
268
262
250
260
G
266
273
252
280
284
254

FIG. 14

FIG. 15

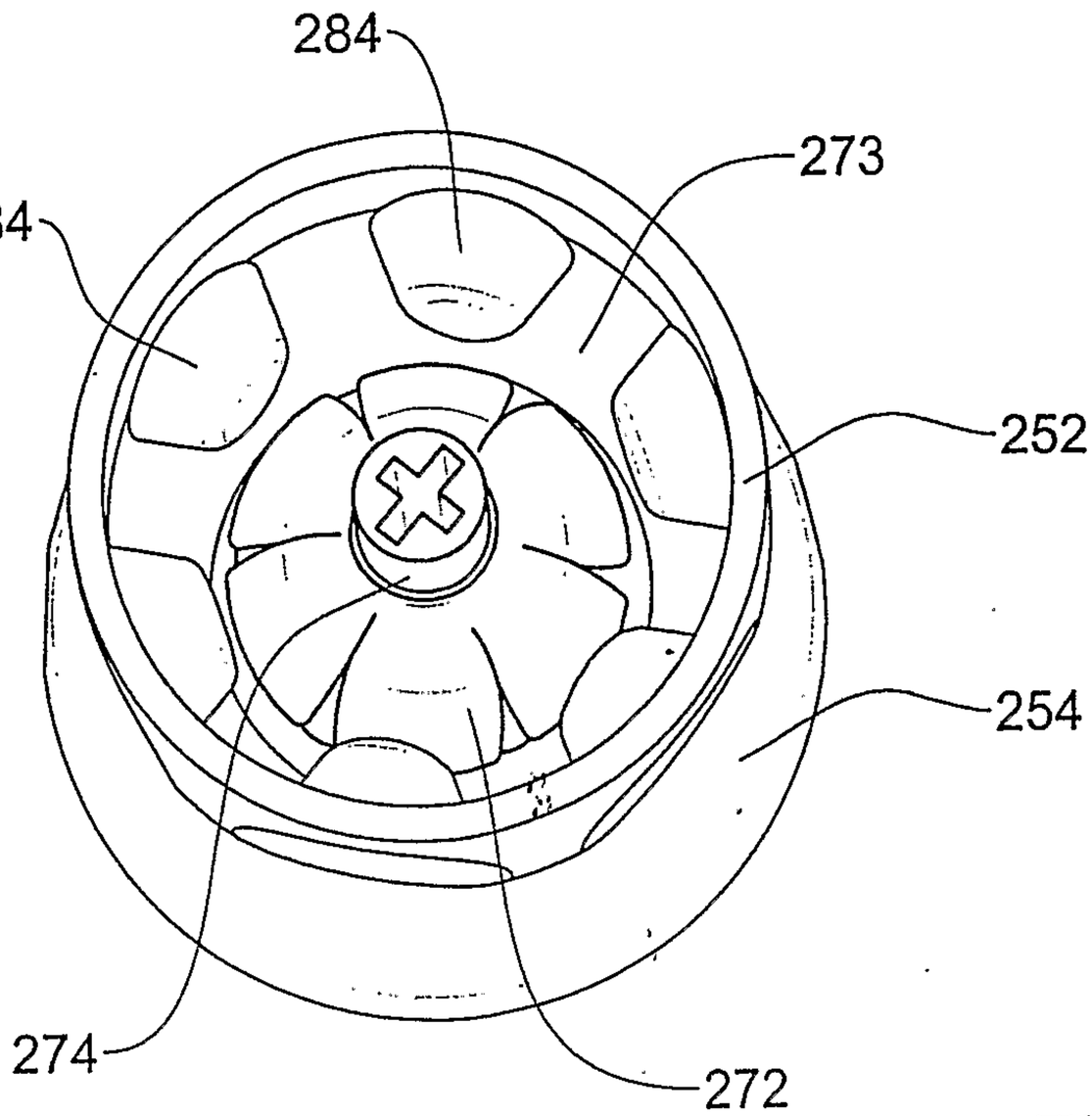


FIG. 16A

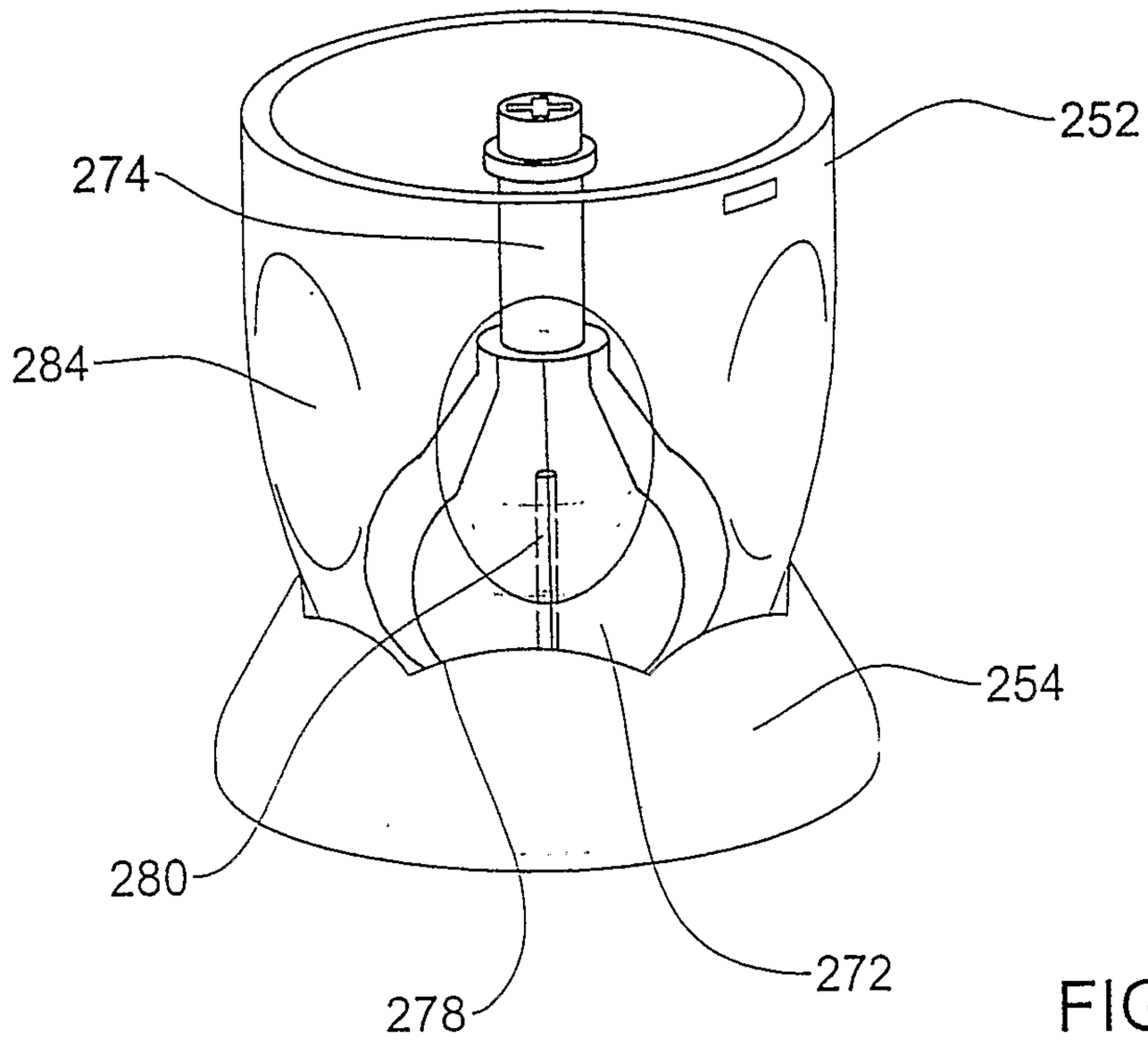
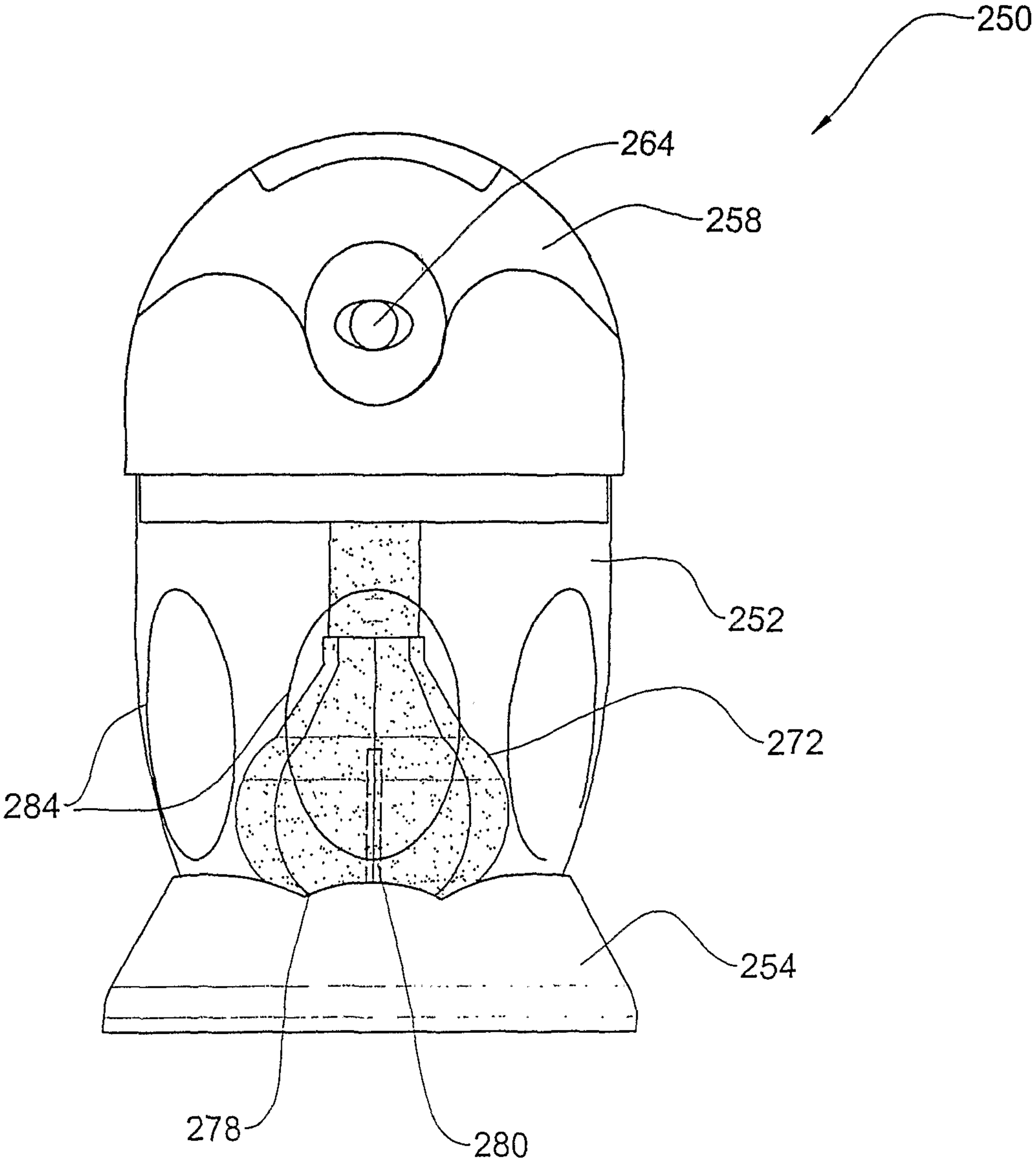


FIG. 16B


250
264
258
252
272
284
254
278
280