



(51) International Patent Classification:
A47J 43/07 (2006.01)

(21) International Application Number:
PCT/EP2013/074539

(22) International Filing Date:
25 November 2013 (25.11.2013)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant: AKTIEBOLAGET ELECTROLUX
[SE/SE]; S:t Göransgatan 143, S-105 45 Stockholm (SE).

(72) Inventor: HOLM, Henrik; S:t Göransgatan 143, S-105 45 Stockholm (SE).

(74) Agent: WRETBLAD, Eva; Aktiebolaget Electrolux, S:t Göransgatan 143, S-105 45 Stockholm (SE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: LID ARRANGEMENT, CONTAINER AND HOUSEHOLD MIXING APPLIANCE

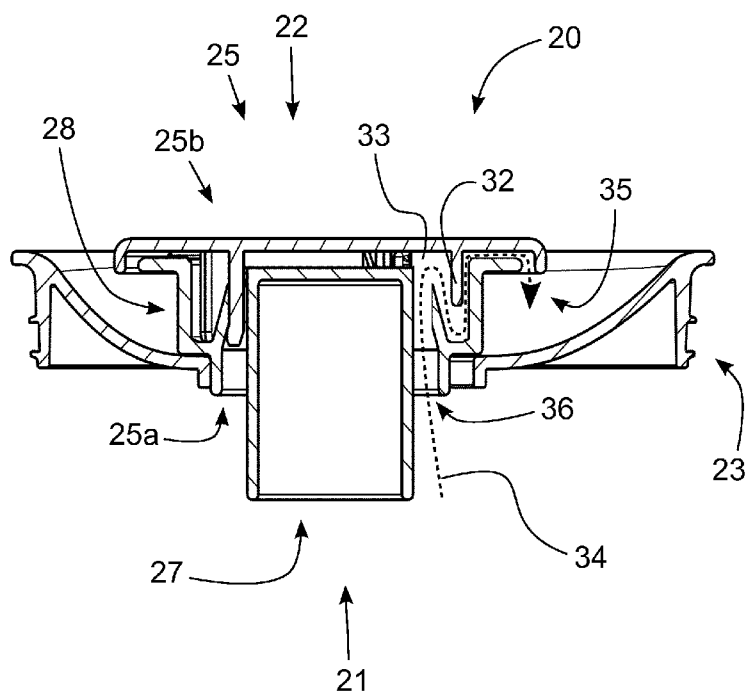


Fig. 3

(57) Abstract: A lid arrangement (20), a container (3) and a household mixing appliance (1) for mixing foodstuff are provided. The lid arrangement (20) is arranged to close a household appliance mixing container (3), and comprises a first lid portion (23) arranged to seal against said household appliance mixing container (3) and a second lid portion (25), engageable with said first lid portion (23). The lid arrangement (20) has an inner surface (21) and an outer surface (22), and one or more tortuous ventilation passages (33) are arranged between said inner surface (21) and said outer surface (22) for passage of air (34) through the lid arrangement (20).

LID ARRANGEMENT, CONTAINER AND HOUSEHOLD MIXING APPLIANCE

TECHNICAL FIELD

Embodiments herein relate to a lid arrangement. Embodiments herein further relate to a
5 container for a household mixing appliance and to a household mixing appliance.

BACKGROUND

A household mixing appliance, e.g. for mixing, blending and/or cutting foodstuff
commonly comprises two units; a container and a base unit comprising an electric motor.
10 The base unit often forms a support for the container and a mixer rotor arranged in the
container. Such appliances may be referred to under different names such as mixer,
food mixer, blender or food blender.

Sometimes the household mixing arrangement comprises a lid arrangement which is
15 used to, at least partially, close an opening of the container, such that foodstuff is
retained in the container during activation of the mixer rotor. Such a lid arrangement may
comprise one single lid portion or two or more separate lid portions which together forms
the lid arrangement.

20 During operation of the household mixing appliance it sometimes happens that the
temperature and/or the volume of air in the container increases. This may be the case if
hot foodstuff and/or beverage is poured into the container. The temperature and/or the
volume of the air in the container may also increase due to activation of the mixer rotor.
A rise in temperature may cause the air and other contents in the container to expand
25 resulting in a force acting on an inner surface of the lid arrangement and causing the lid
arrangement to come loose from the container. Foodstuff may then splash out from the
container.

In KR200283309Y1 a mixer lid arrangement is disclosed, comprising two lid parts. A
30 smaller, centrally arranged lid part may be engaged to a larger lid part which is attached
to an upper part of a mixer container. Air may escape from the container through inner
vertically arranged apertures formed between the smaller and larger lid parts, and outer
upward-outward directed apertures. Although the arrangement alleviates the problem of

an inner pressure in the container causing the lid to fall off during operation of the mixer there remains a risk that the air escape apertures become clogged by the contents in the container and/or that foodstuff escapes from the container when running the mixer. Clogging of the air escape-apertures may result in that the entire lid arrangement comes loose from the container whereby foodstuff may splash out.

Accordingly, there remains a need for an improved and fail-proof lid arrangement with a reduced risk that the lid arrangement comes loose from a container during operation of a household mixing appliance.

SUMMARY

The lid arrangement as set out herein eliminates or at least reduces the problems and/or drawbacks associated with previously known lid arrangements.

According to an embodiment, this is provided by a lid arrangement, which is arranged to close a household appliance mixing container, the lid arrangement comprising a first lid portion which is arranged to seal against the household appliance mixing container and a second lid portion, which is engageable with the first lid portion, the lid arrangement having an inner surface and an outer surface, wherein one or more tortuous ventilation passages are arranged between the inner surface and the outer surface for passage of air through the lid arrangement.

Since one or more tortuous ventilation passages are arranged between said inner surface and said outer surface, when the lid arrangement is placed on a mixing container, surplus air inside the container is allowed to pass through the lid arrangement instead of causing the pressure inside the container to rise and act with a force on the inner surface of the lid arrangement. Accordingly, the force acting on the inner surface of the lid arrangement during operation of a household mixing appliance may be considerably reduced or even completely eliminated.

The tortuous shape of the one or more ventilation passages is advantageous, since air may escape through the lid arrangement, while foodstuff cannot pass to the outer surface of the lid arrangement. The tortuous passage forms a smooth passage, through

which air easily can flow. Foodstuff which splashes up towards the inner surface of the lid arrangement, e.g. due to mixer rotor activation, can drip back into a container which the lid arrangement is closing, or can be caught inside the one or more passages of the lid arrangement. Since the one or more ventilation passages are tortuous-shaped, the passages can be designed with a relatively large inner volume allowing a small amount of foodstuff to be temporarily held inside the passages without completely blocking the passage. Hereby any foodstuff temporarily caught in the one or more tortuous ventilation passages will not clog the one or more passages, and air may still escape via the passages. In addition, the tortuous shape of the one or more ventilation passages is advantageous since it due to its shape it may dampen sound originating from a mixer rotor arranged in the container. The tortuous ventilation passages comprises turns, in which a direction of air flowing through the tortuous ventilation passage is changed. The tortuous ventilation passages may comprise e.g. two, three or four turns between an entrance and an exit of the passage.

Thus, hereby is provided an improved and fail-safe lid arrangement, arranged to close a household mixing container, eliminating or at least reducing the problems and/or drawbacks associated with previously known lid arrangements.

According to some embodiments, the one or more tortuous ventilation passages may be arranged in the first lid portion.

Since the one or more tortuous ventilation passages are arranged in the first lid portion, the one or more tortuous ventilation passages may be arranged close to a container which the lid arrangement is arranged to close.

According to some embodiments, the one or more tortuous ventilation passages may be arranged in the second lid portion.

Since the one or more tortuous ventilation passages are arranged in the second lid portion, the passages may be arranged with a distance to any container walls. The one or more tortuous ventilation passage may be arranged in a central part of the lid arrangement. Embodiments wherein the one or more tortuous ventilation passages are arranged in the second lid portion may be advantageous since foodstuff splashing up

against the lid arrangement during activation of a household mixing arrangement may hit more peripheral parts of the inner lid surface instead of the second lid portion. Hereby the risk of clogging of the passageways may be further reduced. In addition, since the one or more tortuous ventilation passages are arranged in the second lid portion, the
5 second portion of the lid may be arranged to be compatible with and/or retrofitted to existing lid arrangements.

According to some embodiments, the one or more tortuous ventilation passages are arranged between the first and second lid portions.

10

Since the one or more tortuous ventilation passages are formed between the first and second lid portions, the passages may be opened by separating the first and second lid parts from each other. Hereby cleaning of the one or more tortuous ventilation passages is facilitated.

15

According to some embodiments, the second lid portion comprises a first part and a second part.

Since the second lid portion comprising a first part and a second part, the geometry of
20 the second lid portion may be selected more freely.

According to some embodiments, the first part and the second part may be separable.

Since the first part and the second part are separable, the two different parts of the
25 second lid portion may be taken apart, e.g. for cleaning purposes.

According to some embodiments, the one or more tortuous ventilation passages are formed between the first part and the second part of the second lid portion.

30 Since the one or more tortuous ventilation passages are formed between the first part and the second part of the second lid portion, any foodstuff or dirt left in the one or more tortuous ventilation passages may easily be removed by separation of the parts and cleaning of the one or more ventilation passages.

According to some embodiments, the first part and the second part of the second lid portion are attachable to each other via any type of attachment arrangement as known in the art such as one or more of a press-fit, a snap connection, a bayonet coupling, threads and/or magnets.

5

Since the first part and the second part of the second lid portion are attachable to each other via e.g. one or more of a press-fit, a snap connection, a bayonet coupling, threads and/or magnets, the different parts may be readily attached to each other in a reliable and economically efficient manner.

10

According to some embodiments, the lid arrangement has an axial direction and a radial direction and the first lid portion may be arranged radially outward of the second lid portion such that the first lid portion partially or completely surrounds the second lid portion.

15

Since the first lid portion is arranged radially outward of the second lid portion and partially or completely surrounding the second lid portion, the second lid portion may be positioned radially inward of the first lid portion in a central part of the lid arrangement. Hereby the first lid portion may act as a funnel for foodstuff poured into a container connected to the lid arrangement if the second lid portion is temporarily removed.

20

According to some embodiments, the first part of the second lid portion is formed as a measuring cup and may have a curved perforated flange arranged radially outward of the measuring cup.

25

Since the first part of the second lid portion is formed as a measuring cup, optionally with a curved perforated flange arranged radially outward of the measuring cup, the second lid portion facilitates for a user that would like to add a desired amount of foodstuff to a container for a household mixing appliance. The user may disengage the second lid portion from the first lid portion, measure foodstuff with the measuring cup and then pour the selected amount of foodstuff into the container, e.g. via an opening in the first lid portion. The perforated flange may engage and/or position the second lid portion relatively the first lid portion such that the first and second lid portions together hinder foodstuff from splashing up between the portions.

30

According to some embodiments, the second part of the second lid portion has a main extension in the radial direction, and further one or more projections extending in the axial direction towards the flange of the first part.

5

Since the second part of the second lid portion has a main extension in the radial direction, and further one or more projections extending in the axial direction towards the flange of the second part, the second lid portion is arranged to cover an opening or slits in the first lid portion while being positioned relatively the first part of the second lid

10

According to some embodiments, the perforations in the flange, together with a surface of the curved flange and at least one surface of the projections form the one or more tortuous ventilation passages.

15

Since the perforations in the flange, together with a surface of the curved flange and at least one surface of the projections form the one or more tortuous ventilation passages, the one or more ventilation passages may be formed into any desired tortuous shape and may include one or more inner cavities or spaces for catching foodstuff splashing against the inner surface of the lid arrangement. Air may then be ventilated first through the perforations in the flange, then through the part of the one or more passage formed between the flange and the projections. In addition, foodstuff may be retained in the curved flange without splashing out to the upper surface of the lid arrangement or to surrounding persons and/or objects.

20

25

The tortuous ventilation passages may comprises at least two turns, which turns are arranged to change direction of air flowing through the tortuous ventilation passages.

30

A tortuous ventilation passages which comprises at least two turns allows air to easily escape through the passage and may effectively hinder any foodstuff from passing through the passage. Alternatively, the tortuous ventilation passages may comprise at least three turns.

Embodiments herein aim to provide a container for a mixing household appliance, eliminating or at least reducing the problems and/or drawbacks associated with prior art containers.

- 5 According to an embodiment, this is provided by a container for a household mixing appliance, wherein the container comprises a lid arrangement according to embodiments described herein.

- 10 Since the container comprises a lid arrangement according to embodiments as described herein, foodstuff may be kept in the container while air may be ventilated through the lid arrangement without clogging the one or more ventilation passages.

- 15 Thus, hereby is provided a container for a household mixing appliance, eliminating or at least considerably reducing the problems and/or drawbacks associated with prior art containers.

- 20 Embodiments herein aim to provide a mixing household appliance for mixing foodstuff, eliminating or at least considerably reducing the problems and/or drawbacks associated with prior art mixing household appliances.

According to an embodiment, this is provided by a household mixing appliance for mixing foodstuff, wherein the appliance comprises a lid arrangement as described herein.

- 25 Since the household mixing appliance for mixing foodstuff comprises a lid arrangement according to embodiments herein, the household mixing appliance can be used for mixing foodstuff while air is ventilated out through the lid arrangement without clogging the one or more ventilation passages.

- 30 Thus, hereby is provided a household mixing appliance for mixing foodstuff, eliminating or at least reducing the problems and/or drawbacks associated with prior art household mixing appliances.

Further features of, and advantages with, the embodiments herein will become apparent when studying the appended claims and the following detailed description. Those skilled in the art will realize that different features of the embodiments herein may be combined to create embodiments other than those described in the following, without departing
5 from the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

The various aspects of embodiments herein, including its particular features and advantages, will be readily understood from the following detailed description and the
10 accompanying drawings, in which:

Fig. 1a illustrates a lid arrangement, a household mixing appliance and a container for a household mixing appliance according to some embodiments.

15 Fig. 1b illustrates a cross-section of a lid arrangement, a household mixing appliance and a container for a household mixing appliance according to some embodiments.

Fig. 2a illustrates a lid arrangement according to some embodiments.

20 Fig. 2b illustrates a lid arrangement according to some further embodiments.

Fig. 3 illustrates a cross-section of a lid arrangement according to some embodiments.

DETAILED DESCRIPTION

25 Embodiments herein will now be described more fully with reference to the accompanying drawings, in which example embodiments are shown. However, this application should not be construed as limited to the embodiments set forth herein. Disclosed features of example embodiments may be combined as readily understood by one of ordinary skill in the art to which this application belongs. Like numbers refer to like
30 elements throughout.

Well-known functions or constructions will not necessarily be described in detail for brevity and/or clarity.

Fig. 1a illustrates a household mixing appliance **1** for mixing foodstuff. The household mixing appliance **1** may also be referred to as e.g. a mixer, a food mixer, a blender or a food blender.

5

The household mixing appliance **1** may comprise a base unit **2**. The household mixing appliance **1** illustrated in Fig. 1a may also comprise a household appliance mixing container **3** arranged for keeping foodstuff, which container is attachable to the base unit **2**. The container may comprise a handle **4** which may be used for handling of the container **3**. The container **3** may further comprise a spout **5**, arranged to facilitate pouring of foodstuff from the container.

10

In Fig. 1a also a lid arrangement **20** is illustrated, which lid arrangement **20** is arranged to at least partially cover an opening of the container **2**. An axial direction **14** of the lid arrangement **20** is illustrated in Fig. 1a.

15

Fig. 1b generally corresponds to Fig. 1a, and illustrates a cross-section of the household mixing appliance **1**, the container **3** and the lid arrangement **20**.

The base unit **2** may comprise an electric motor **6** connected to a control arrangement **7**. The base unit **2** may form a support for the household appliance mixing container **3** and/or for a mixer rotor **8** arranged in the container **3**. The mixer rotor **8** may be connected to and/or driven by the electric motor **6** and controlled by the control arrangement **7**. As illustrated in Fig. 1b, the mixer rotor **8** may be arranged in or connected to the container **3**, such as in a lower part of the container **3**.

20
25

The base unit **2** may be made e.g. of a plastic material, metal or a combination thereof. The container **3**, such as walls of the container **3**, a bottom of the container **3** and/or the handle **4** may be made e.g. of glass, ceramics, plastic, metal or a combination thereof.

30

The mixer rotor **8** may be made e.g. of metal or ceramics.

The container **3** may be temporarily attached to the base unit **2** by any suitable connection arrangement, e.g. by press-fit, a snap connection, a bayonet coupling, threads and/or magnets. The base unit **2** and the container **3** may comprise coupling

members, and a motion of a part comprised in the base unit 2 caused by the electric motor may be transferred to the mixer rotor via the coupling members.

5 The lid arrangement 20, which is arranged to close the household appliance mixing container 3, is illustrated in Fig. 1b. The lid arrangement 20 may be arranged to close the container 3 partly or completely. The lid arrangement 20 comprises an inner surface **21** and an outer surface **22**. The inner surface 21 is the surface that is arranged to face towards the interior of the container 3 i.e. towards an inner surface of the container. The inner surface of the container 3 may together with the inner surface 21 of the lid
10 arrangement form a container compartment 13. The lid arrangement 20 may be made e.g. of plastics, rubber, glass or metal.

The outer surface 22 may face away from the container 3 and/or the household mixing arrangement 1. In the household mixing arrangement 1 shown in Fig. 1b, the outer
15 surface 22 of the lid arrangement 20 is directed upwards when the lid arrangement 20 is arranged over the opening in the container 3 to at least partially close the container 3 by covering the opening in the container 3.

Fig 2a illustrates a perspective view from above the lid arrangement 20 and **Fig. 2b**
20 illustrates a perspective view from below the lid arrangement 20. Fig. 2a and 2b illustrates an exploded view of the lid arrangement 20, wherein parts and details are shown separated from each other.

According to the embodiment illustrated in Fig 2a, the lid arrangement 20 comprises a
25 first lid portion **23**. The first lid portion 23 is arranged such that it may seal against the household appliance mixing container 3 when the lid arrangement is attached to the container 3. According to the embodiment illustrated in Fig. 2a, the first lid portion 23 is arranged to seal against an upper part of an inner surface of the container 13 (not illustrated). A sealing arrangement may be accomplished by any means as known in the
30 art, such as adapting the shape of an edge portion of the first lid portion 23 to the shape of the rim of the container 13, providing the edge portion of the first lid portion 23 with a sealing flange, by arranging sealing members such as gasketing members or cooperating sealing members on the rim of the container 13 and/or on the rim of the lid portion 23, etc.

Accordingly, a peripheral part or surface of the first lid portion 23 may be provided with a sealing arrangement **24**. The sealing arrangement 24 may extend partially or completely around the peripheral part or surface of the first lid portion 23, such that a tight seal
5 against a container may be achieved. The sealing arrangement 24 may be made of an elastically compressible material, and may prevent foodstuff from escaping from the container 3 through any gap between the first lid portion and the container 3.

The lid arrangement 20 further comprises a second lid portion **25**. The second lid portion
10 25 is engageable with said first lid portion 23. The second lid portion 25 and the first lid portion 23 may be engaged to each other via e.g. one or more of a press-fit, a snap connection, a bayonet coupling, threads and/or magnets. According to the embodiment illustrated in Fig. 2b, a first bayonet member **26a** of the second lid portion 25 is arranged to engage with a second bayonet member **26b** of the first lid portion 23.

15 The second lid portion 25 may be made as one single part. In the Fig. 2a and 2b embodiments, the second lid portion 25 comprises a first part **25a** and a second part **25b**. The first part 25a and the second part 25b may be separable from each other. The first part 25a and the second part 25b may be attached to each other via e.g. one or
20 more of a press-fit, a snap connection, a bayonet coupling, threads and/or magnets. Alternatively the second part 25b may rest on and/or be positioned by the first part 25a due to its own weight and/or shape.

The lid arrangement 20 may have an axial direction **14** and a radial direction. The first lid
25 portion 23 may be arranged radially outward of the second lid portion 25 and partially or completely surrounding the second lid portion 25. The second lid portion 25 may be arranged in an opening **30** of the first lid portion 23. The first lid portion 23 may comprise an attachment part or attachment surface in the vicinity of the opening 30. According to the Fig 2b embodiment, the first lid portion 23 comprises one or more second bayonet
30 members 26b.

The first part 25a of the second lid portion 25 may be formed as a measuring cup **27** with a curved flange **28** arranged radially outward of the measuring cup 27. The curved flange 28 may comprise one or more apertures or perforations **29**. The second part 25b

of the second lid portion 25 may have a main extension in the radial direction, and further one or more projections **32** extending in the axial direction 14 towards the flange 28 of the first part 25a.

- 5 **Fig. 3** illustrates an embodiment wherein the first lid portion 23 and the second lid portion 25 of the lid arrangement 20 are attached or coupled to each other.

The first lid portion 23 is arranged to seal against said household appliance mixing container 3 (not illustrated) and the second lid portion 25 is engageable with said first lid
10 portion 23 as described herein.

As mentioned, the lid arrangement 20 has an inner surface 21 and an outer surface 22. One or more tortuous ventilation passages **33** is/are arranged between said inner surface 21 and said outer surface 22 for passage of air through the lid arrangement 20.
15 The air passing through the one or more tortuous ventilation passage 33 is illustrated with a dashed arrow **34**.

The outer surface 22 may extend from a peripheral part of an outer side of the first lid portion 23 (illustrated as facing upwards in Fig. 3) towards one or more outer exits **35** of
20 the one or more tortuous ventilation passages 33. The outer surface 22 may also extend between the one or more outer exits 35 of the one or more tortuous ventilation passages 33, on an outer side of the second part 25b of the second lid portion 25.

The inner surface may extend from a peripheral part of an inner side of the first lid
25 portion 23 (illustrated as facing downwards in Fig. 3) towards one or more inner entrances **36** of the one or more tortuous ventilation passages 33. The inner surface 21 may also extend between the one or more inner entrances 36 of the one or more tortuous ventilation passages 33, on an inner side of the first part 25a of the second lid portion 25.

30 Due to the provision of the tortuous ventilation passages 33, air may flow from the one or more inner entrances 36 of the one or more tortuous ventilation passages 33 towards the one or more outer exits 35 of the one or more tortuous ventilation passages 33, or in

the opposite direction, from the one or more outer exits 35 towards the one or more inner entrances 36.

Although the lid arrangement is shown herein with multiple ventilation passages 33,
5 optionally only one single tortuous ventilation passage 33 may be arranged between said inner surface 21 and said outer surface 22 for passage of air through the lid arrangement 20. The tortuous ventilation passages 33 may comprise one or more apertures 29 (illustrated in Fig. 2a) arranged in the flange 28 of the first part 25a.

10 According to the embodiment illustrated in Fig. 3, several tortuous ventilation passages 33 are formed between the first lid portion 23 and the second lid portion 25, which tortuous ventilation passages 33 are arranged peripherally of the measuring cup 27.

The tortuous ventilation passages 33 according to Fig. 3 are formed by perforations 29
15 in the flange (illustrated in Fig. 2a), together with a surface of the curved flange 28 and at least one surface of the one or more projections 32.

According to an embodiment illustrated in Fig. 3, air 34 may flow upwards from a container via one or more entrances 36 towards an inner surface of the second part 25b
20 of the second lid portion 25 via one or more apertures or perforations in the flange 28. The air 34 may then change direction, and may follow an inner upper surface of the curved flange 28 in a direction towards the container. The air 34 may then change direction again, and may flow upwards between a middle upper surface of the curved flange 28 and one or more surface portions of the projections 32 of the second lid
25 portion 25. The air 34 may then continue to follow a surface of the first part 25a of the second lid portion 25 in a radial direction and exit the tortuous ventilation passages 33 by flowing through the one or more exits 35. Some of the air 34 may pass between two projections 32 during the passage through the lid arrangement.

30 Air 34 passing through the one or more tortuous ventilation passages 33 may change direction in turns of the tortuous ventilation passages 33 at least two times. According to some embodiments, the air 34 may change direction in turns of the tortuous ventilation passages 33 at least three times, and according to some other embodiments, the air 34 may change direction in turns of the tortuous ventilation passages 33 at least four or

more times. A turn may be a change in a flow direction which is more than e.g. 80 degrees, more than 100 degrees or more than 120 degrees. The tortuous ventilation passage may also be referred to as a winding ventilation passage.

5 According to some embodiments, the one or more tortuous ventilation passages 33 are arranged in the first lid portion 23. The first lid portion 23 may comprise one or more inner entrances 36 and one or more outer exits 35 of the one or more tortuous ventilation passages 33. The one or more inner entrance 36 may be arranged on the inner surface 21, and the one or more exits 35 may be arranged on the outer surface 22.

10

According to some embodiments, one tortuous ventilation passage 33 may comprise two or more inner entrances 36 and/or two or more outer exits 35.

15 According to some other embodiments, the one or more tortuous ventilation passages 33 are arranged at the interface between the first and second lid portions. The one or more inner entrances 36 and one or more outer exits 35 of the one or more tortuous ventilation passages 33 may be arranged between the first portion 23 and the second portion 25 of the lid arrangement 20. The one or more inner entrance 36 may be arranged on the inner surface 21, and the one or more exits 35 may be arranged on the outer surface 22.

20

Although the aspects of the invention have been described with reference to example embodiments, many different alterations, modifications and the like will become apparent to those skilled in the art. Therefore, it is to be understood that the foregoing is illustrative of various example embodiments and the scope of the appended claims is not to be limited to the specific embodiments disclosed and that modifications to the disclosed embodiments, combinations of features of disclosed embodiments as well as other embodiments are intended to be included within the scope of the appended claims.

25

30 As used herein, the term "comprising" or "comprises" is open-ended, and includes one or more stated features, elements, steps, components or functions but does not preclude the presence or addition of one or more other features, elements, steps, components, functions or groups thereof.

CLAIMS

1. A lid arrangement (20), arranged to close a household appliance mixing container (3), said lid arrangement (20) comprising
- 5 - a first lid portion (23) arranged to seal against said household appliance mixing container (3) and
- a second lid portion (25), engageable with said first lid portion (23), said lid arrangement (20) having an inner surface (21) and an outer surface (22), **characterized in** that one or more tortuous ventilation passages (33) are arranged between said inner surface (21) and said outer surface (22) for passage
- 10 of air (34) through the lid arrangement (20).
2. The lid arrangement (20) according to claim 1, **characterized in** that the one or more tortuous ventilation passages (33) are arranged in the first lid portion (23).
- 15 3. The lid arrangement (20) according to claim 1, **characterized in** that the one or more tortuous ventilation passages (33) are arranged in the second lid portion (25).
- 20 4. The lid arrangement (20) according to claim 1, **characterized in** that the one or more tortuous ventilation passages (33) are arranged between the first (23) and second (25) lid portions.
- 25 5. The lid arrangement (20) according to claim 3, **characterized in** that the second lid portion (25) comprises a first part (25a) and a second part (25b).
6. The lid arrangement (20) according to claim 5, **characterized in** that the first part (25a) and the second part (25b) are separable.
- 30 7. The lid arrangement (20) according to claim 5 or 6, **characterized in** that the one or more tortuous ventilation passages (33) are formed between the first part (25a) and the second part (25b) of the second lid portion (25).

8. The lid arrangement (20) according to claim 6 or 7, **characterized in** that the first part (25a) and the second part (25b) of the second lid portion (25) are attachable to each other via one or more of a press-fit, a snap connection, a bayonet coupling, threads and/or magnets.

5

9. The lid arrangement (20) according to any preceding claims, **characterized in** that the lid arrangement (20) has an axial direction (14) and a radial direction with the first lid portion (23) being arranged radially outward of the second lid portion (25) and partially or completely surrounding the second lid portion (25).

10

10. The lid arrangement (20) according to any one of claims 5 - 8, **characterized in** that the first part (25a) of the second lid portion (25) is formed as a measuring cup (27) with a curved perforated flange (28) arranged radially outward of the measuring cup (27).

15

11. The lid arrangement (20) according to any one of claims 5 - 8 or 10, **characterized in** that the second part (25b) of the second lid portion (25) has a main extension in the radial direction, and further one or more projections (32) extending in the axial direction (14) towards the flange (28) of the first part (25a).

20

12. The lid arrangement (20) according to claim 10 and 11, **characterized in** that the perforations (28) in the flange, together with a surface of the curved flange (28) and at least one surface of the projections (32) form the one or more tortuous ventilation passages (33).

25

13. The lid arrangement (20) according to any preceding claims, **characterized in** that the tortuous ventilation passages (33) comprises at least two turns, which turns are arranged to change direction of air (34) flowing through the tortuous ventilation passages (33).

30

14. A container (3) for a household mixing appliance (1), **characterized in** that the container (3) comprises a lid arrangement (20) according to any one of the preceding claims.

15. A household mixing appliance (1) for mixing foodstuff, **characterized in** that the appliance (1) comprises a lid arrangement (20) according to any one of claims 1 - 13.

1/3

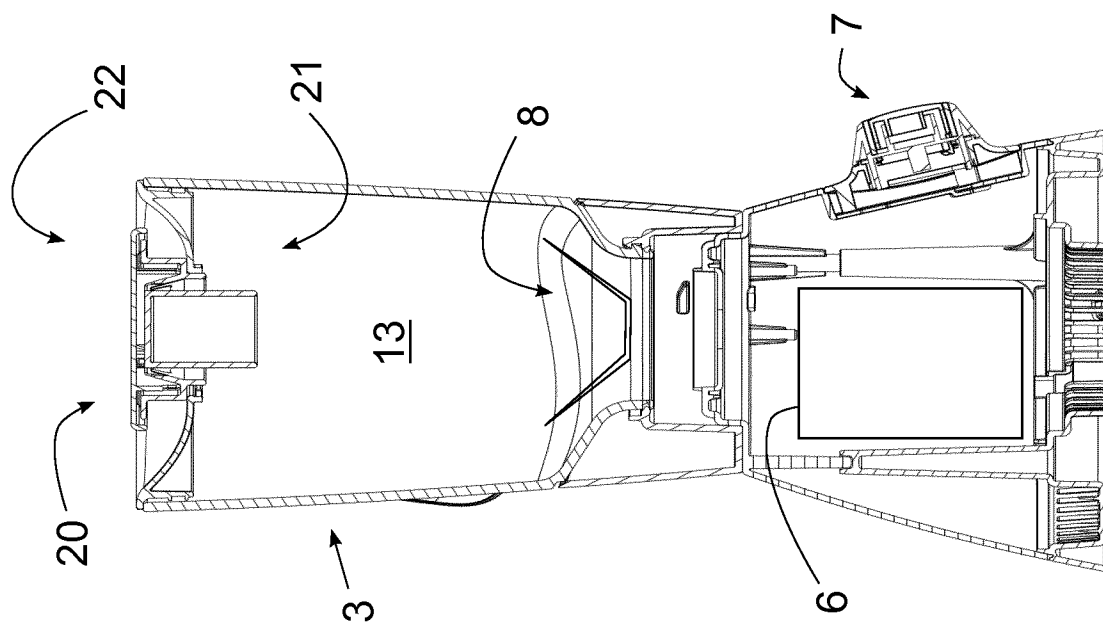


Fig. 1b

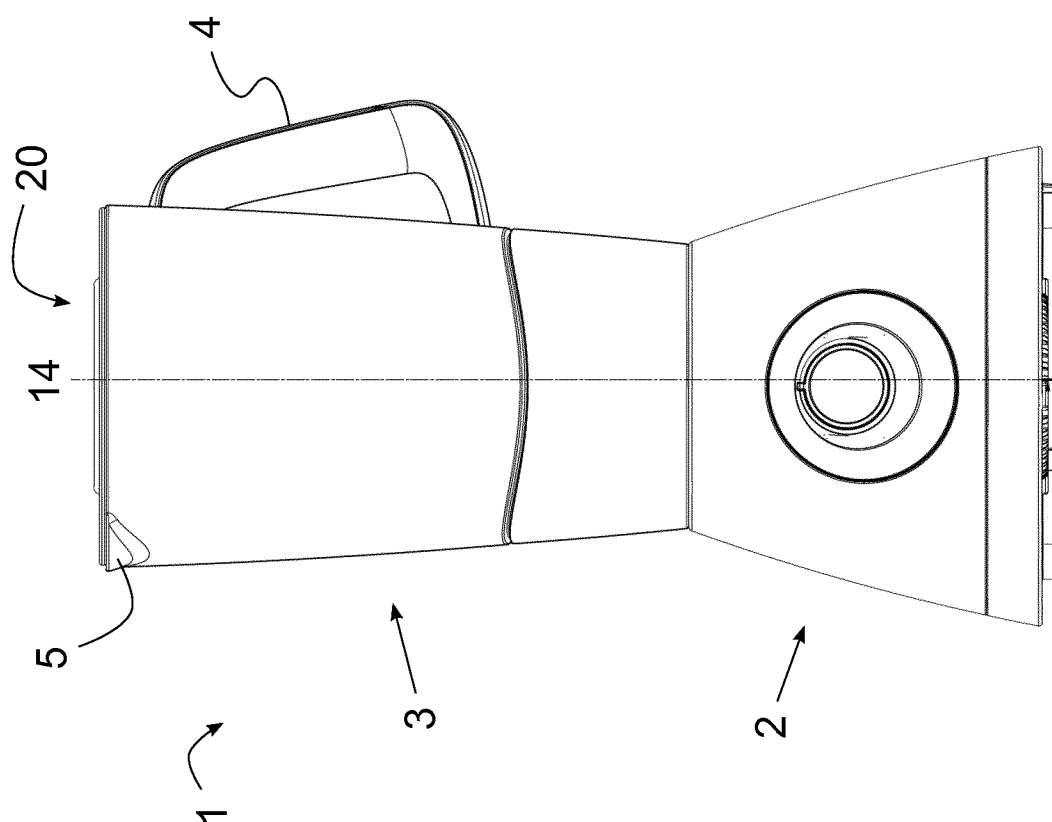


Fig. 1a

2/3

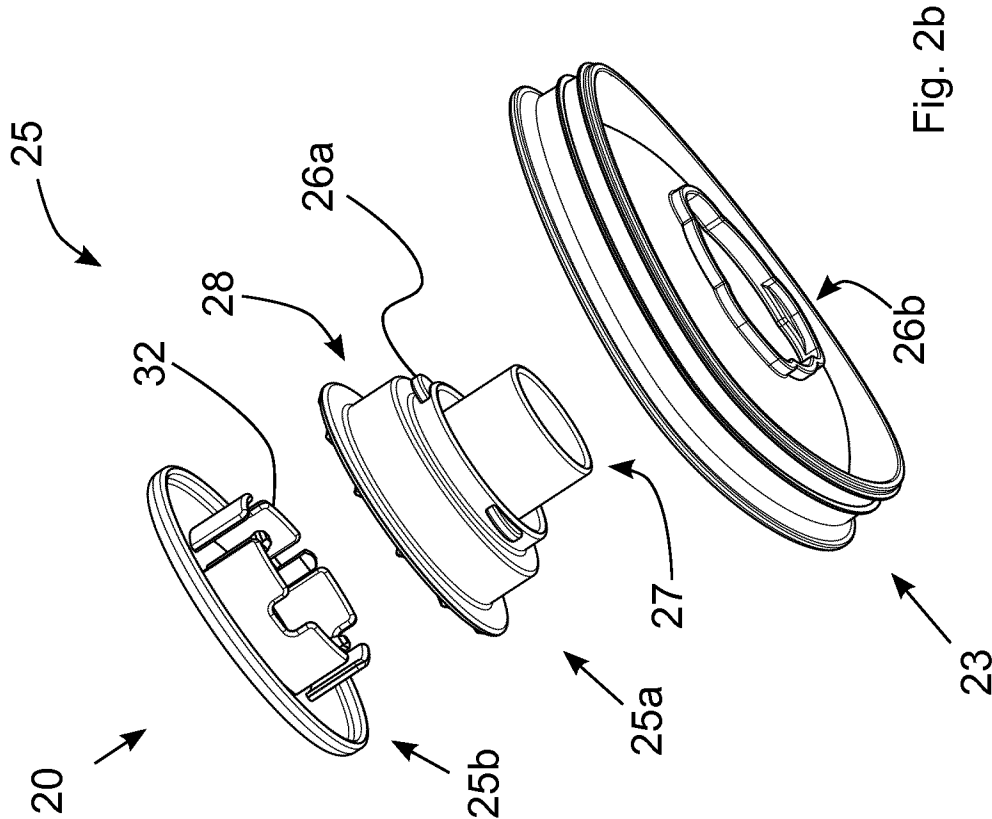
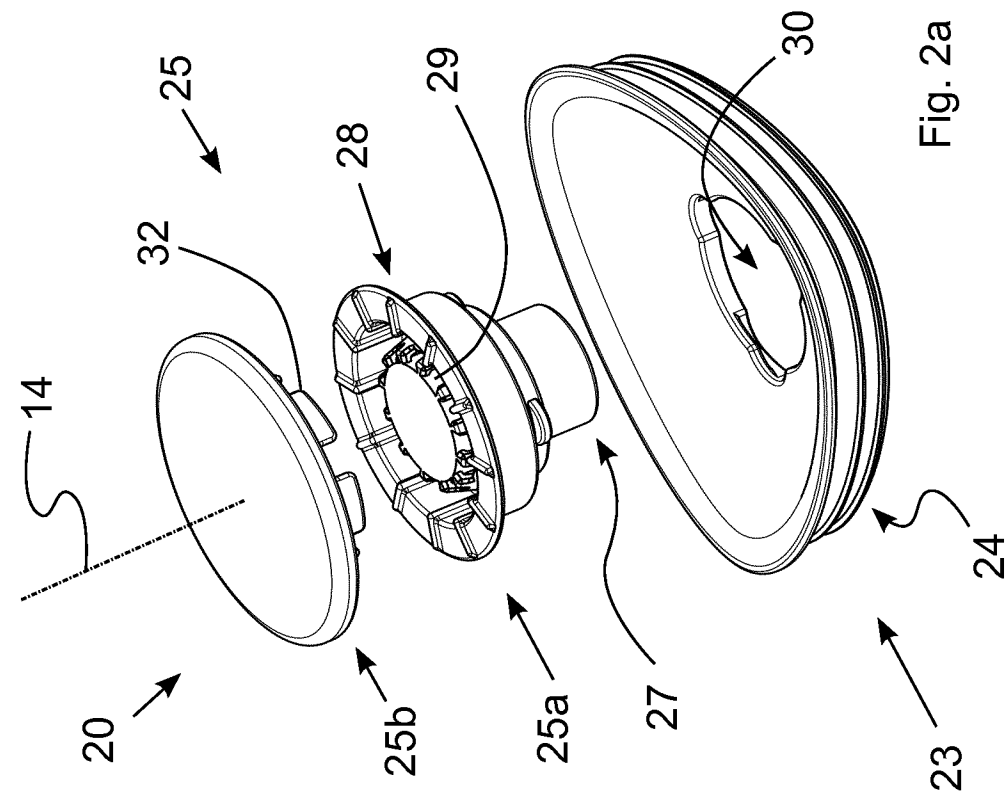


Fig. 2a



3/3

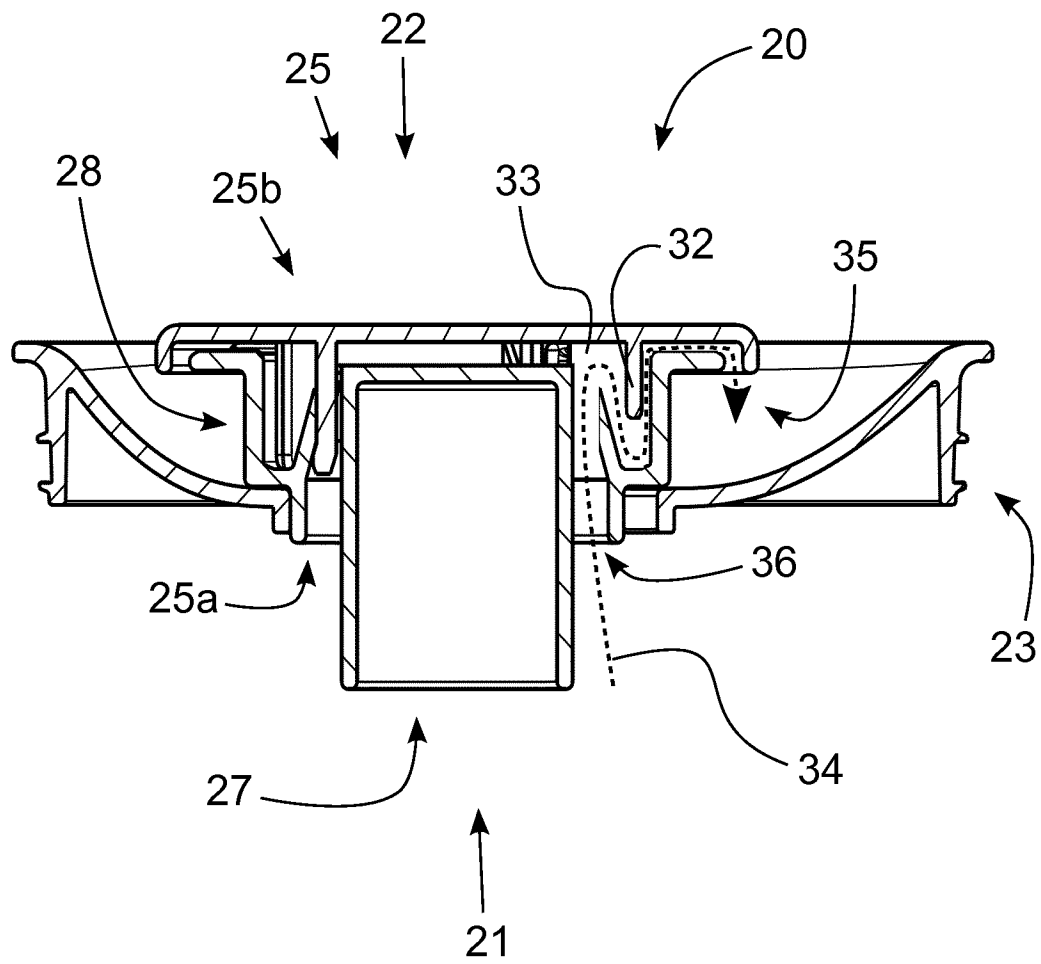


Fig. 3

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2013/074539

A. CLASSIFICATION OF SUBJECT MATTER
INV. A47J43/07
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A47J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 10 2010 017387 A1 (VORWERK CO INTERHOLDING [DE]) 22 December 2011 (2011-12-22)	1-5,7, 9-15
Y	paragraph [0037] - paragraph [0076]; figures 1-15	6,8
X	WO 2011/154647 A1 (SEB SA [FR]; LANDEMAINE EVELYNE [FR]; DESHAYES JEAN-LOUIS [FR]; GERARD) 15 December 2011 (2011-12-15)	1-6,8,9, 11,13-15
Y	page 4, line 27 - page 9, line 17; figures 1-10	6,8 7,10,12
X	EP 2 526 842 A1 (SEB SA [FR]) 28 November 2012 (2012-11-28)	1-6,8,9, 11,13-15
Y	paragraph [0024] - paragraph [0036]; figures 1-4	6,8 7,10,12



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

1 July 2014

Date of mailing of the international search report

09/07/2014

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Authorized officer

Klintebäck, Daniel

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2013/074539

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 102010017387 A1	22-12-2011	NONE	

WO 2011154647 A1	15-12-2011	CN 102933128 A	13-02-2013
		EP 2579756 A1	17-04-2013
		FR 2960758 A1	09-12-2011
		WO 2011154647 A1	15-12-2011

EP 2526842 A1	28-11-2012	CN 102793487 A	28-11-2012
		EP 2526842 A1	28-11-2012
		FR 2975579 A1	30-11-2012
		RU 2012120587 A	27-11-2013
