

(19)



(11)

EP 2 823 743 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
09.11.2016 Bulletin 2016/45

(51) Int Cl.:
A47L 5/36 ^(2006.01) **A47L 9/00** ^(2006.01)

(21) Application number: **13197628.4**

(22) Date of filing: **17.12.2013**

(54) **Cord retainer**

Kabelhalter

Dispositif de retenue de câble

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **12.07.2013 US 201313941166**

(43) Date of publication of application:
14.01.2015 Bulletin 2015/03

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EP 2 823 743 B1

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Description

FIELD OF THE INVENTION

[0001] The present invention relates to a cord retainer and a vacuum cleaner incorporating a cord retainer.

BACKGROUND

[0002] A typical vacuum cleaner has an electric motor for operating a fan or impeller and an electrical cord extending from the electric motor for connecting to an appropriate power supply. It is customary to provide a pair of opposing retainers somewhere on the vacuum cleaner around which the electrical cord can be wrapped in a neat manner during storage.

[0003] US-A-2,713,696 discloses a tool holder for tank-type vacuum cleaners according to the preambles of independent claims 1 and 16. US-A-6,098,241 discloses an accessory holder for a vacuum cleaner having a base member for supporting a plurality of vacuum accessories.

[0004] Although functional, an operator may find the location of the retainers to be inconvenient. However, the retainers typically are permanently attached to the vacuum cleaner in preselected locations, so it is not possible for the operator to remove or reposition the retainers to a more convenient location without breaking them.

SUMMARY

[0005] According to some aspects of the present disclosure, a vacuum cleaner includes a cord retainer that has a friction fit connection with an accessory receiver. The cord retainer may be a retainer or a peg. The cord retainer is arranged to be selectively and detachably coupled to the accessory receiver. If the vacuum cleaner includes a plurality of accessory receivers at different locations, the cord retainer is preferably arranged to be selectively and detachably coupled to two or more of the accessory receivers separately.

[0006] According to the teachings of the present disclosure, a vacuum cleaner includes a tank defining an interior space, a vacuum pump arranged to draw a vacuum in the interior space, an accessory receiver arranged to selectively and detachably receive a vacuum accessory, and a cord retainer for receiving a cord. The cord retainer is arranged to be selectively and detachably coupled to the accessory receiver by a friction fit. The vacuum includes a plurality of accessory receivers, and the cord retainer is arranged to be selectively and detachably coupled to each one of the plurality of accessory receivers separately.

[0007] In another exemplary arrangement, a cord retainer to be coupled to any one of a plurality of accessory receiver of a vacuum cleaner includes a coupling portion that couples to the accessory receiver with a friction fit and a retainer portion extending from the coupling por-

tion.

[0008] In a further exemplary arrangement, a method of assembling a vacuum cleaner includes selecting an accessory receiver from a plurality of accessory receivers on the vacuum cleaner, wherein each of the plurality of accessory receivers is adapted to releasably receive a cord retainer, and coupling the cord retainer to the selected accessory receiver with friction fit.

[0009] In further accordance with any one or more of the foregoing aspects and exemplary arrangements, a vacuum cleaner, accessory receiver, and/or cord retainer according to the teachings of the present disclosure may include any one or more of the following optional forms.

[0010] In some optional forms, the cord retainer includes a retainer portion coupled with the coupling portion. The retainer portion is arranged to receive a cord. The coupling portion is arranged to detachably couple to the accessory receiver. The coupling portion may include a socket. The socket may be defined by a peripheral wall. The peripheral wall may have a crenellated rim. The retainer portion may have the form of a retainer with an arcuate back wall with a concave side that intersects with the coupling portion. A peripheral skirt may depend downwardly from a peripheral edge of the back wall. The retainer portion may have the form of a peg. The peg may have a conical or cylindrical sidewall and an end wall to form a closed top end.

[0011] In some optional forms, the accessory receiver comprises a first socket, and the cord retainer comprises a coupling portion received by the first socket. The coupling portion may have a friction fit with the accessory receiver. The accessory receiver may include a boss. The coupling portion may have a second socket that receives the boss. The coupling portion may have a friction fit with the boss. The second socket may have a peripheral wall defining an interior surface, an exterior surface, and a rim defining an opening into the socket portion. The rim may be crenellated, including one or more alternating merlons and crenels.

[0012] In some optional forms, the tank has an opening into the interior space, and a lid covers the opening. The accessory receiver may be carried by the lid. The lid may include a lid cage and a cover. The lid cage may releasably attach to the tank and carries the vacuum pump. The cover may cover the vacuum pump. The accessory receiver may be defined by the cover. The cover may form a plurality of the accessory receivers.

[0013] In some optional forms, an accessory holder is coupled to the lid. One or more accessory receivers are defined by the accessory holder. The cord retainer may be selectively and detachably coupled to one or more of the accessory holders of the accessory receiver.

[0014] Other aspects and optional forms of the vacuum, cord retainer, and accessory receiver disclosed herein will be apparent upon consideration of the following detailed description and the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015]

FIG. 1 is a rear isometric view of a vacuum cleaner with a cord retainer coupled to an accessory receiver according to an exemplary aspect of the disclosure;

FIG. 2 is a rear isometric view of the lid of the vacuum cleaner with the cord retainer detached from the accessory receiver;

FIG. 3 is a diametric cross-sectional view of the lid through the cord retainer and the accessory receiver along the line 3-3 of FIG. 1;

FIG. 3A is an enlarged detail cross-sectional view of the area 3A marked in FIG. 3 of the cord retainer and the accessory receiver;

FIG. 4 is an isometric view of the cord retainer;

FIG. 5 is a side elevational view of the cord retainer;

FIG. 6 is a front elevational view of the cord retainer;

FIG. 7 is a bottom plan view of the cord retainer; and

FIG. 8 is an isometric view of the lid with an optional accessory holder and another exemplary cord retainer according to another exemplary aspect of the disclosure.

DETAILED DESCRIPTION

[0016] Turning now to the drawings, FIG. 1 illustrates a vacuum cleaner 10 including a cord retainer 12 in accordance with the teachings of the present disclosure. The vacuum cleaner 10 includes a tank 14, a vacuum pump 16 (FIG. 3), a lid 18, and one or more accessory receivers 20. Each accessory receiver 20 is preferably adapted to receive and hold a vacuum accessory (not shown), such as a nozzle, attachment head, or other similar known vacuum accessory. The cord retainer 12 is coupled to the accessory receiver 20 by a friction fit. As used herein, the term friction fit, slip fit, and tight slip fit are used interchangeably to refer generally to a slip fit connection with a tight friction fit between two engaging surfaces at the connection that can be slidably engaged and disengaged with a force greater than the static friction force between the two surfaces. The friction fit releasably secures the cord retainer 12 to the accessory receiver 20 with static friction forces without requiring any further interlocking locking mechanisms, although in some arrangements a releasable locking mechanism could be included in addition to the friction fit. The cord retainer 12 is arranged to carry a cord, such as an electrical power cord (not shown) for the vacuum pump 16. For example,

the electrical power cord can be looped over and/or otherwise hung from the cord retainer 12 for convenient and tidy storage.

[0017] As best seen in FIG. 2, the cord retainer 12 may be selectively coupled to each of the accessory receivers 20. An operator may optionally select to couple the cord retainer 12 to any one of the accessory receivers 20 depending on the position the operator wants the cord retainer 12 to be in on the vacuum cleaner 10. The cord retainer 12 may be coupled to an accessory receiver 20 by pressing a bottom end of the cord retainer 12 into the accessory receiver 20. The cord retainer 12 may be detached from the accessory receiver 20, for example, by pulling the cord retainer 12 out of the accessory receiver 20. In addition, the operator may optionally select to remove or not couple the cord retainer 12 to the vacuum cleaner 10. Thus, the operator is able to select a preferred position at which to locate the cord retainer 12 or the operator may choose to not attach or to subsequently detach the cord retainer 12 from the vacuum cleaner 10. Thus, the cord retainer 12 provides a variety of different options to a user for placement and use of a cord retainer on the vacuum cleaner 10 that improve the use experience and have not been heretofore available.

[0018] Referring now to FIGS. 1-3, the vacuum cleaner 10 of the examples in the drawings is a tank-type vacuum cleaner, such as a typical "wet-dry" vacuum; however, the vacuum cleaner 10 may take other forms and is not limited to the exemplary tank-type vacuum cleaner 10 illustrated in the drawings. For example, the cord retainer 12 may be used on other types of vacuum cleaners and provide one or more of the functionalities of the illustrated examples. The tank 14 defines an interior space 22 for collecting dust, debris, and the like, and an opening 24 into the interior space. The opening 24 is disposed at a top of the tank 14 and supports, such as feet or casters (not shown), may be disposed at the bottom of the tank 14. The vacuum pump 16 may be any pump arrangement that would be known to a person of ordinary skill that is arranged to create a vacuum inside the tank 14. For example, the vacuum pump 16 may include a motor 16a and an air impeller 16b arranged to draw air through an inlet into the interior space 22 and exhaust air out of the interior space 22 through an outlet, such as a blower opening 26. The blower opening 26 is optionally covered with a blower cap 27, which is has a porous end wall to allow air to be exhausted out through the blower opening 26. The tank 14 is preferably made of a rigid material, such as plastic or metal, suitable for maintaining its shape and supporting the lid 18 and the vacuum pump 16 during operation of the vacuum pump 16.

[0019] The lid 18 removably covers the opening 24 into the tank 14. The lid 18 includes a lid cage 28, a motor housing 29, and a cover 30. The lid cage 28 has a peripheral edge that releasably attaches to a rim 23 of the opening 24 into tank 14. A filter cage 31 is carried by the lid cage 28. The filter cage 31 extends downwardly into the interior space 22. A cylindrical filter 33 is carried by

and surrounds the filter cage 31. A retainer 35 locks onto a bottom end of the filter cage 31 and includes a circumferential support that supports the bottom end of the cylindrical filter 33. The motor housing 29 is carried in a central region of the lid cage 28 above the filter cage 31. The motor housing 29 carries the motor 16a and the air impeller 16b of the vacuum pump 16. The cover 30 covers the vacuum pump 16. The cover 30 has the form of a convex or inverted bowl. The cover 30 is carried by the motor housing 29 and projects upwardly from and is spaced above a central portion of the lid cage 28. The cover 30 has a domed convex elongate teardrop shape formed by an outer wall 32. The outer wall 32 has a gently sloping front surface 32a and a more steeply sloped rear surface 32b. A pair of spaced apart retainers 37a and 37b are permanently disposed on the outer periphery of the lid cage 28. The electrical cord for the motor may be wrapped around the retainers 37a and 37b. The retainers 37a and 37b may optionally be omitted or used for other purposes. The cover 30 also includes various optional decorative features, a handle, latches for releasably locking the lid cage 28 to the rim of the tank 14, and other features that are not the subject of the present disclosure and are readily understood in the art. The lid cage 28, motor housing 29, and cover 30 are preferably formed of a hard thermoplastic and may be formed, for example, by molding.

[0020] As best seen in FIGS. 2 and 3A, the accessory receiver 20 is formed in the outer wall 32 of the cover 30, for example, in the rear surface 32b. The accessory receiver 20 includes a socket 34 and a boss 36. The socket 34 is recessed downwardly into rear surface 32b of the outer wall 32. The boss 36 is spaced radially inwardly from the wall of the socket 34 such that the boss 36 projects upwardly within a center of the socket 34. Together, the socket 34 and the boss 36 form a groove 38 surrounding at least a portion of the boss 36. The groove 38 may have an annular shape, such as a cylindrical or frustoconical section. Because the boss 36 and the socket 34 are formed along a sloping portion of the rear surface 32b of the outer wall 32, the socket has an open side and the groove 38 extends only partially around the boss 36. However, in other arrangements, the socket 34 and the boss 36 may be recessed completely into the outer wall 32 such that the groove 38 extends completely around the boss 36. In some arrangements, the accessory receiver 20 may include only a socket 34, for example recessed downwardly into the outer wall 32, without a boss 36. In some arrangements, the accessory receiver 20 may include only a boss 36, for example, projecting upwardly from the outer wall 32, without being surrounded by the socket 34.

[0021] With reference to FIGS. 4-7, the cord retainer 12 is illustrated in isolation. In this exemplary arrangement, the cord retainer is in the form of a retainer. As best seen in FIG. 4, the cord retainer 12 includes a retainer portion 40 and a coupling portion 42. The retainer portion 40 is in the form of a retainer that extends away

from the coupling portion 42. For example, the retainer portion 40 extends upwardly from an upper portion of the coupling portion 42. The coupling portion 42 releasably couples with the accessory receiver 20, preferably with a friction fit. The coupling portion 42 is received within the socket 34 and releasably couples to the socket 34 with a friction fit. The retainer portion 40 is arranged to engage with a cord, such as an electrical power cord for the motor of the vacuum pump 16, so that the cord will hang from the retainer portion.

[0022] As best seen in FIG. 7, the coupling portion 42 forms a hollow socket 44. The socket 44 is defined by a peripheral wall 46 that surrounds the socket 44. The peripheral wall 46 defines an interior surface 48, an exterior surface 50, and a rim 52 defining an opening into the socket 44. The peripheral wall 46 has a circular cross sectional shape at the rim 52 and preferably has a frustoconical or cylindrical shape. The peripheral wall 46 may be solid, as illustrated in the drawings, or may be perforated or intermittent, such as formed by spaced apart wall segments. In another arrangement, the coupling portion 42 may form a solid boss or pin that can be received with a friction fit by an accessory receiver 20 that does not have a boss 36.

[0023] As best seen in FIGS. 4-6, the rim 52 is crenelated, defining a plurality of alternating merlons 54 and crenels 56. Each crenel 56 forms a window or cutout between adjacent merlons 54. The merlons 54 are resiliently flexible in a radial direction. Therefore, the crenelated form of the rim 52 allows a tighter slip fit with either the boss 36 or the wall of the socket 34 to be achieved due to the resilient radial flexibility of the merlons 54. The merlons 54 are not limited to the generally rectangular shape illustrated, and other shapes of independently radially flexible resilient members may also or alternatively be used. In other arrangements, the rim 52 may be smooth and flat, for example, as shown in FIG. 8.

[0024] In some arrangements, the tight slip fit friction fit between the rim 52 and the boss 36 and/or the wall of the socket 34 may be achieved by having the sidewall of the boss 36 or the wall of the socket 34 be tapered. Such taper may be, for example, a conical or frustoconical taper. The taper may be implemented supplemental to the merlons 54 or alternative to the merlons 54. The taper may be particularly useful to ensure a tight slip fit friction fit where the rim 52 is not crenelated or include other independently radially flexible and resilient members.

[0025] The retainer portion 40 has a back wall 57 that intersects with the peripheral wall 46 of the coupling portion 42. The back wall 57 extends from a bottom edge adjacent the rim 52 on one side of the coupling portion 42 to a top edge on the opposite side of the socket. The back wall 40 is arcuate, having a concave side facing the peripheral wall 46 and a convex side opposite the peripheral wall. The concave side of the back wall 57 intersects with the peripheral wall 46. The top edge projects past the opposite side of the coupling portion 42, thereby defining a retainer for carrying the cord. A peripheral skirt

58 depends downwardly from an outer peripheral edge of the back wall 57 on the concave side. The skirt 58 includes opposite first and second side walls 58a, 58b depending downwardly from opposite side edges of the back wall and an end wall 58c depending downwardly from the top edge of the back wall. Preferably, each of the side walls 58a, 58b and the end wall 58c are orthogonal to the respective edge of the back wall 57 from which they depend. The peripheral skirt 58 in some arrangements may serve to stiffen the retainer portion so as to minimize bending or flexing of the back wall under load from a cord. However, other shapes and forms of the retainer portion 40 suitable for receiving and carrying a cord may also or alternatively be used.

[0026] The cord retainer 12 couples to the accessory receiver 20 by a friction fit slip fit without any locking mechanisms. The peripheral wall 46 slips into, that is, is received within, the groove 38 of the accessory receiver 20. In some arrangements, the outer surface 50 of the peripheral wall 46 has a tight friction fit against the wall of the socket 32. In some arrangements, the inner surface 48 of the peripheral wall 46 has a tight friction fit against the boss 36. To attach the cord retainer 12 to the vacuum cleaner 10, the operator selects any one of the accessory receivers 20 and slips the rim 52 of the peripheral wall 46 of the coupling portion 42 downwardly into the groove 38 of the accessory receiver 20 such that the boss 36 is received within the socket 44 and the coupling portion 42 is received within the socket 34. Preferably, the merlons 54 resiliently engage against either or both of the sidewall of the boss 36 and the wall of the socket 34.

[0027] Turning now to FIG. 8, the same lid 18 is shown with an optional accessory holder 60. The accessory holder 60 includes a panel 62 and one or more accessory receivers 20a and 20b formed by the panel 62. The accessory receivers 20a are in the form of apertures or openings through the panel 62. Each accessory receiver 20a forms a socket sized to receive and hold a vacuum accessory. Some of the accessory receivers 20a form a through-bore extending completely through the panel 62, and some of the accessory receivers 20a form a blind bore. The cord retainer 12 may optionally be coupled with one or more of the accessory receivers 20a or 20b, depending on the size of the individual accessory receiver. Preferably, at least one of the accessory receivers 20a is sized to receive the peripheral wall 46 of the cord retainer 12 with a friction fit. Because the accessory receivers 20a do not have a central boss portion, however, the accessory receivers 20a are also adapted to receive a cord retainer 12a. The cord retainer 12a has a coupling portion 42a and a retainer portion 40a. The coupling portion 42a has a substantially cylindrical peripheral wall 46a and may have a socket 44 or be solid or without the socket 44. The peripheral wall 46a has a smooth or flat bottom edge 52a with no merlons or crenels. The retainer portion 40a is in the form of a peg or post that extends upwardly from the coupling portion 42a. The retainer portion 40a is preferably a substantially straight and vertical post. The

retainer portion 40a has a substantially cylindrical or frustoconical wall extending upwardly from the coupling portion 42a and an end wall that forms a closed top end of the post. The accessory receiver 20b is similar to the accessory receiver 20a in that it includes a boss 36b disposed centrally within a socket 34b and forming a groove 38b. The cord retainer 12 may be coupled with the accessory receiver 20b in the same manner as with the accessory receiver 20.

INDUSTRIAL APPLICABILITY

[0028] A vacuum cleaner including an accessory receiver and a cord retainer according to the teachings of the present disclosure is useful for allowing an operator to selectively and releasably couple a cord retainer to a vacuum cleaner, and preferably, at a plurality of different locations, as described in the technical example provided herein. The accessory receiver and cord retainer may be used with other types of vacuum cleaners to provide improved user configurability for carrying various vacuum attachments.

arrangements, and forms within the scope of the appended claims are contemplated, the rights to which are expressly reserved.

Claims

1. A vacuum cleaner (1), comprising:
 - a tank (14) defining an interior space (22);
 - a vacuum pump (16) arranged to draw a vacuum in the interior space;
 - a plurality of accessory receivers (20, 20a, 20b), each accessory receiver (20, 20a, 20b) arranged to selectively and detachably receive a vacuum accessory; and
 - a cord retainer (12, 12a) for receiving a cord, **characterized in that** the cord retainer (12, 12a) is arranged to be selectively and detachably coupled to each one of the plurality of accessory receivers (20, 20a, 20b) separately by a friction fit.
2. The vacuum cleaner of claim 1, wherein the accessory receiver (20) comprises a first socket (34), and the cord retainer (12) comprises a coupling portion (42) received by the first socket, wherein the coupling portion (42) has a friction fit with the first socket (34).
3. The vacuum cleaner of claim 1 or claim 2, wherein the accessory receiver (20) comprises a boss (36), and the coupling portion (42) comprises a second socket (44) that receives the boss, wherein the coupling portion has a friction fit with the boss.
4. The vacuum cleaner of claim 3, wherein the second

- socket (44) comprises a peripheral wall (46) defining in interior surface (48), an exterior surface (50), and a rim (52) defining an opening into the second socket.
5. The vacuum cleaner of claim 4, wherein the rim (52) is crenellated. 5
 6. The vacuum cleaner of claim any one of claims 1 to 5, wherein the tank (14) comprises an opening (24) into the interior space (22), and further comprising a lid (18) covering the opening, wherein the accessory receiver (20) is carried by the lid. 10
 7. The vacuum cleaner of claim 6, the lid (18) comprising a lid cage (28) and a cover (30), wherein the lid cage (28) releasably attaches to the tank (14) and carries the vacuum pump (16), the cover (30) covers the vacuum pump (16), and the accessory receiver (20) is defined by the cover (30). 15
 8. The vacuum cleaner of claim 7, wherein the cover (30) comprises a plurality of the accessory receivers (20). 20
 9. The vacuum cleaner of any one of claims 6 to 8, further comprising an accessory holder (60) coupled to the lid (18), wherein the accessory receiver (20a, 20b) is defined by the accessory holder (60). 25
 10. The vacuum cleaner of claim 9, wherein the accessory holder (60) comprises a plurality of the accessory receivers (20a, 20b). 30
 11. The vacuum cleaner of any one of the previous claims, wherein the cord retainer (12) comprises a retainer portion (40) coupled with a coupling portion (42), wherein the retainer portion (40) is arranged to receive a cord. 35
 12. The vacuum cleaner of claim 1, wherein the cord retainer (12) comprises: 40
 - a coupling portion (42) that couples to the accessory receiver (20) with a friction fit; and
 - a retainer portion (40) extending from the coupling portion. 45
 13. The vacuum cleaner of claim 12, wherein the coupling portion (42) comprises a socket (44) that receives a boss (36) of the accessory receiver (20). 50
 14. The vacuum cleaner of claim 13, wherein the socket (44) comprises peripheral wall (46) with a rim (52), the rim being crenellated. 55
 15. The vacuum cleaner of any one of claims 12 to 14, wherein the retainer portion (40) is in the form of a hook comprising:
 - an arcuate back wall (57) having a concave side that intersects with the coupling portion (42); and
 - a peripheral skirt (58) that depends downwardly from an outer peripheral edge of the back wall (57) on the concave side.
 16. A method of assembling a vacuum cleaner, comprising:
 - selecting an accessory receiver (20, 20a, 20b) from a plurality of accessory receivers (20, 20a, 20b) on the vacuum cleaner,
 - characterized in that**
 - each of the plurality of accessory receivers (20, 20a, 20b) is adapted to releasably receive a cord retainer (12, 12a); and
 - coupling the cord retainer (12, 12a) to the selected accessory receiver (20, 20a, 20b) with friction fit.
 17. The method of claim 16, wherein the selected accessory receiver (20) comprises a first socket (34), the cord retainer (12) comprises a coupling portion (42), and the step of coupling comprises inserting the coupling portion (42) into the first socket (36).
 18. The method of claim 16 or 17, wherein the selected accessory receiver (20) comprises a boss (36), the cord retainer (12) comprises a coupling portion (42) forming a second socket (44), and the step of coupling comprises receiving the boss (36) within the second socket (44).
 19. The method of claim 16, wherein the cord retainer (12) comprises a coupling portion (42) having a crenellated rim (52), the crenellated rim resiliently engaging at least one of a socket (34) or a boss (36) of the accessory receiver (20).

Patentansprüche

1. Staubsauger (10), der umfasst:
 - einen Behälter (14), der einen inneren Raum (22) definiert;
 - eine Vakuumpumpe (16), die angeordnet ist, um ein Vakuum in den inneren Raum zu ziehen;
 - eine Mehrzahl von Zubehöraufnehmern (20, 20a, 20b), wobei jeder Zubehöraufnehmer (20, 20a, 20b) ausgelegt ist, um selektiv und lösbar ein Staubsaugerzubehörteil aufzunehmen; und
 - einen Kabelrückhalter (12, 12a) zum Aufnehmen eines Kabels,
 - dadurch gekennzeichnet, dass**
 - der Kabelrückhalter (12, 12a) ausgelegt ist, um selektiv und lösbar mit jedem von der Mehrzahl von Zubehöraufnehmern (20, 20a, 20b) separat

- mittels einer Reibungspassung gekoppelt zu werden.
2. Staubsauger nach Anspruch 1, wobei der Zubehöraufnehmer (20) eine erste Aufnahme (34) umfasst und wobei der Kabelrückhalter (12) einen Kopplungsbereich (42) umfasst aufgenommen durch die erste Aufnahme, wobei der Kopplungsbereich (42) eine Reibungspassung mit der ersten Aufnahme (34) aufweist. 5
 3. Staubsauger nach Anspruch 1 oder Anspruch 2, wobei der Zubehöraufnehmer (20) eine Erhebung (36) umfasst und wobei der Kopplungsbereich (42) eine zweite Aufnahme (44) umfasst, die die Erhebung empfängt, wobei der Kopplungsbereich eine Reibungspassung mit der Erhebung aufweist. 10
 4. Staubsauger nach Anspruch 3, wobei die zweite Aufnahme (44) eine periphere Wand (46) umfasst, die eine innere Fläche (48), eine äußere Fläche (50) und einen Rand (52) definiert, welcher eine Öffnung in die zweite Aufnahme definiert. 15
 5. Staubsauger nach Anspruch 4, wobei der Rand (52) zinnenartig ist. 20
 6. Staubsauger nach einem Anspruch von irgend einem der Ansprüche 1 bis 5, wobei der Behälter (14) eine Öffnung (24) in den inneren Raum (22) umfasst und ferner einen Deckel (18) umfasst, der die Öffnung abdeckt, wobei der Zubehöraufnehmer (20) durch den Deckel getragen ist. 25
 7. Staubsauger nach Anspruch 6, wobei der Deckel (18) einen Deckelkörper (28) und eine Abdeckung (30) umfasst, wobei der Deckelkörper (28) lösbar an dem Behälter (14) angebracht ist und die Vakuumpumpe (16) trägt, wobei die Abdeckung (30) die Vakuumpumpe (16) abdeckt und wobei der Zubehöraufnehmer (20) durch die Abdeckung (30) definiert ist. 30
 8. Staubsauger nach Anspruch 7, wobei die Abdeckung (30) eine Mehrzahl der Zubehöraufnehmer (20) umfasst. 35
 9. Staubsauger nach irgend einem der Ansprüche 6 bis 8, ferner umfassend einen Zubehörhalter (60), der an den Deckel (18) gekoppelt ist, wobei der Zubehöraufnehmer (20a, 20b) durch den Zubehörhalter (60) definiert ist. 40
 10. Staubsauger nach Anspruch 9, wobei der Zubehörhalter (60) eine Mehrzahl der Zubehöraufnehmer (20a, 20b) umfasst. 45
 11. Staubsauger nach irgend einem der vorhergehenden Ansprüche, wobei der Kabelrückhalter (12) einen Rückhaltebereich (40) umfasst, der an einen Kopplungsbereich (42) gekoppelt ist, wobei der Rückhaltebereich (40) ausgelegt ist, um ein Kabel aufzunehmen. 50
 12. Staubsauger nach Anspruch 1, wobei der Kabelrückhalter (12) umfasst:
 - einen Kopplungsbereich (42), der an den Zubehöraufnehmer (20) mittels einer Reibungspassung koppelt; und
 - einen Rückhaltebereich (40), der sich von dem Kopplungsbereich erstreckt.
 13. Staubsauger nach Anspruch 12, wobei der Kopplungsbereich (42) eine Aufnahme (44) umfasst, die eine Erhebung (36) des Zubehöraufnehmers (20) empfängt.
 14. Staubsauger nach Anspruch 13, wobei die Aufnahme (44) eine periphere Wand (46) mit einem Rand (52) umfasst, wobei der Rand zinnenartig ist.
 15. Staubsauger nach irgend einem der Ansprüche 12 bis 14, wobei der Rückhaltebereich (40) in der Form eines Hakens ist, der umfasst:
 - eine gebogene Rückwand (57), die eine konkave Seite aufweist, die mit dem Kopplungsbereich (42) schneidet; und
 - eine periphere Schürze (58), die von einer äußeren peripheren Kante der Rückwand (57) an der konkaven Seite nach unten hängt.
 16. Verfahren eines Aufbaus eines Staubsaugers, das umfasst:
 - Auswählen eines Zubehöraufnehmers (20, 20a, 20b) aus einer Mehrzahl von Zubehöraufnehmern (20, 20a, 20b) an dem Staubsauger, **dadurch gekennzeichnet, dass**
 - jeder der Mehrzahl von Zubehöraufnehmern (20, 20a, 20b) ausgelegt ist, um lösbar einen Kabelrückhalter (12, 12a) zu empfangen; und
 - Koppeln des Kabelrückhalters (12, 12a) an den ausgewählten Zubehöraufnehmer (20, 20a, 20b) mittels Reibungspassung.
 17. Verfahren nach Anspruch 16, wobei der ausgewählte Zubehöraufnehmer (20) eine erste Aufnahme (34) umfasst, wobei der Kabelrückhalter (12) einen Kopplungsbereich (42) umfasst und wobei der Schritt des Koppelns ein Einführen des Kopplungsbereichs (42) in die erste Aufnahme (36) umfasst.
 18. Verfahren nach Anspruch 16 oder 17, wobei der ausgewählte Zubehöraufnehmer (20) eine Erhebung

(36) umfasst, wobei der Kabelrückhalter (12) einen Kopplungsbereich (42) umfasst, der eine zweite Aufnahme (44) ausbildet, und wobei der Schritt des Kopplens ein Empfangen der Erhebung (36) innerhalb der zweiten Aufnahme (44) umfasst.

19. Verfahren nach Anspruch 16, wobei der Kabelrückhalter (12) einen Kopplungsbereich (42) umfasst, der einen zinnenartigen Rand (52) aufweist, wobei der zinnenartige Rand elastisch mit mindestens einem aus einer Aufnahme (34) oder einer Erhebung (36) des Zubehöraufnehmers (20) in Eingriff kommt.

Revendications

1. Aspirateur (1), comprenant :

une cuve (14) définissant un espace intérieur (22) ;
 une pompe à vide (16) agencée pour aspirer un vide dans l'espace intérieur ;
 une pluralité de récepteurs d'accessoires (20, 20a, 20b), chaque récepteur d'accessoires (20, 20a, 20b) étant agencé pour recevoir de façon sélective et amovible un accessoire d'aspiration ; et
 un dispositif de retenue de câble (12, 12a) permettant de recevoir un câble,

caractérisé en ce que

le dispositif de retenue de câble (12, 12a) est agencé pour être couplé de façon sélective et amovible à chacun de la pluralité de récepteurs d'accessoires (20, 20a, 20b) séparément par un ajustement serré.

2. Aspirateur selon la revendication 1, dans lequel le récepteur d'accessoires (20) comprend un premier logement (34), et le dispositif de retenue de câble (12) comprend une portion de couplage (42) reçue par le premier logement, la portion de couplage (42) ayant un ajustement serré avec le premier logement (34).
3. Aspirateur selon la revendication 1 ou la revendication 2, dans lequel le récepteur d'accessoires (20) comprend un bossage (36), et la portion de couplage (42) comprend un second logement (44) qui reçoit le bossage, la portion de couplage ayant un ajustement serré avec le bossage.
4. Aspirateur selon la revendication 3, dans lequel le second logement (44) comprend une paroi périphérique (46) définissant une surface intérieure (48), une surface extérieure (50), et un rebord (52) définissant une ouverture dans le second logement.
5. Aspirateur selon la revendication 4, dans lequel le

rebord (52) est crénelé.

6. Aspirateur selon l'une quelconque des revendications 1 à 5, dans lequel la cuve (14) comprend une ouverture (24) dans l'espace intérieur (22), et comprenant en outre un couvercle (18) couvrant l'ouverture, le récepteur d'accessoires (20) étant porté par le couvercle.
7. Aspirateur selon la revendication 6, le couvercle (18) comprenant une cage de couvercle (18) et un capot (30), dans lequel la cage de couvercle (18) se fixe de façon détachable à la cuve (14) et porte la pompe à vide (16), le capot (30) couvre la pompe à vide (16), et le récepteur d'accessoires (20) est défini par le capot (30).
8. Aspirateur selon la revendication 7, dans lequel le capot (30) comprend une pluralité des récepteurs d'accessoires (20).
9. Aspirateur selon l'une quelconque des revendications 6 à 8, comprenant en outre un porte-accessoires (60) couplé au couvercle (18), le récepteur d'accessoires (20a, 20b) étant défini par le porte-accessoires (60).
10. Aspirateur selon la revendication 9, dans lequel le porte-accessoires (60) comprend une pluralité des récepteurs d'accessoires (20a, 20b).
11. Aspirateur selon l'une quelconque des revendications précédentes, dans lequel le dispositif de retenue de câble (12) comprend une portion de retenue (40) couplée à une portion de couplage (42), la portion de retenue (40) étant agencée pour recevoir un câble.
12. Aspirateur selon la revendication 1, dans lequel le dispositif de retenue de câble (12) comprend :
- une portion de couplage (42) qui se couple au récepteur d'accessoires (20) avec un ajustement serré ; et
 une portion de retenue (40) partant de la portion de couplage.
13. Aspirateur selon la revendication 12, dans lequel la portion de couplage (42) comprend un logement (44) qui reçoit un bossage (36) du récepteur d'accessoires (20).
14. Aspirateur selon la revendication 13, dans lequel le logement (44) comprend une paroi périphérique (46) avec un rebord (52), le rebord étant crénelé.
15. Aspirateur selon l'une quelconque des revendications 12 à 14, dans lequel la portion de retenue (40)

est sous forme d'un crochet comprenant :

une paroi arrière arquée (57) ayant un côté concave qui se croise avec la portion de couplage (42) ; et 5
une jupe périphérique (58) qui pend vers le bas depuis un bord périphérique externe de la paroi arrière (57) sur le côté concave.

16. Procédé d'assemblage d'un aspirateur, 10
comprenant :

la sélection d'un récepteur d'accessoires (20, 20a, 20b) parmi une pluralité de récepteurs d'accessoires (20, 20a ; 20b) sur l'aspirateur, 15
caractérisé en ce que
chacun de la pluralité de récepteurs d'accessoires (20, 20a, 20b) est adapté pour recevoir de façon détachable un dispositif de retenue de câble (12, 12a) ; et 20
le couplage du dispositif de retenue de câble (12, 12a) au récepteur d'accessoires (20, 20a, 20b) sélectionné par ajustement serré.

17. Procédé selon la revendication 16, dans lequel le 25
récepteur d'accessoires (20) sélectionné comprend un premier logement (34), le dispositif de retenue de câble (12) comprend une portion de couplage (42), et l'étape de couplage comprend l'insertion de la portion de couplage (42) dans le premier logement (36). 30

18. Procédé selon la revendication 16 ou 17, dans lequel le récepteur d'accessoires (20) sélectionné comprend un bossage (36), le dispositif de retenue de câble (12) comprend une portion de couplage (42) 35
formant un second logement (44), et l'étape de couplage comprend la réception du bossage (36) au sein du second logement (44).

19. Procédé selon la revendication 16, dans lequel le 40
dispositif de retenue de câble (12) comprend une portion de couplage (42) ayant un rebord crénelé (52), le rebord crénelé enclenchant de façon résiliente au moins l'un d'un logement (34) ou d'un bossage (36) du récepteur d'accessoires (20). 45

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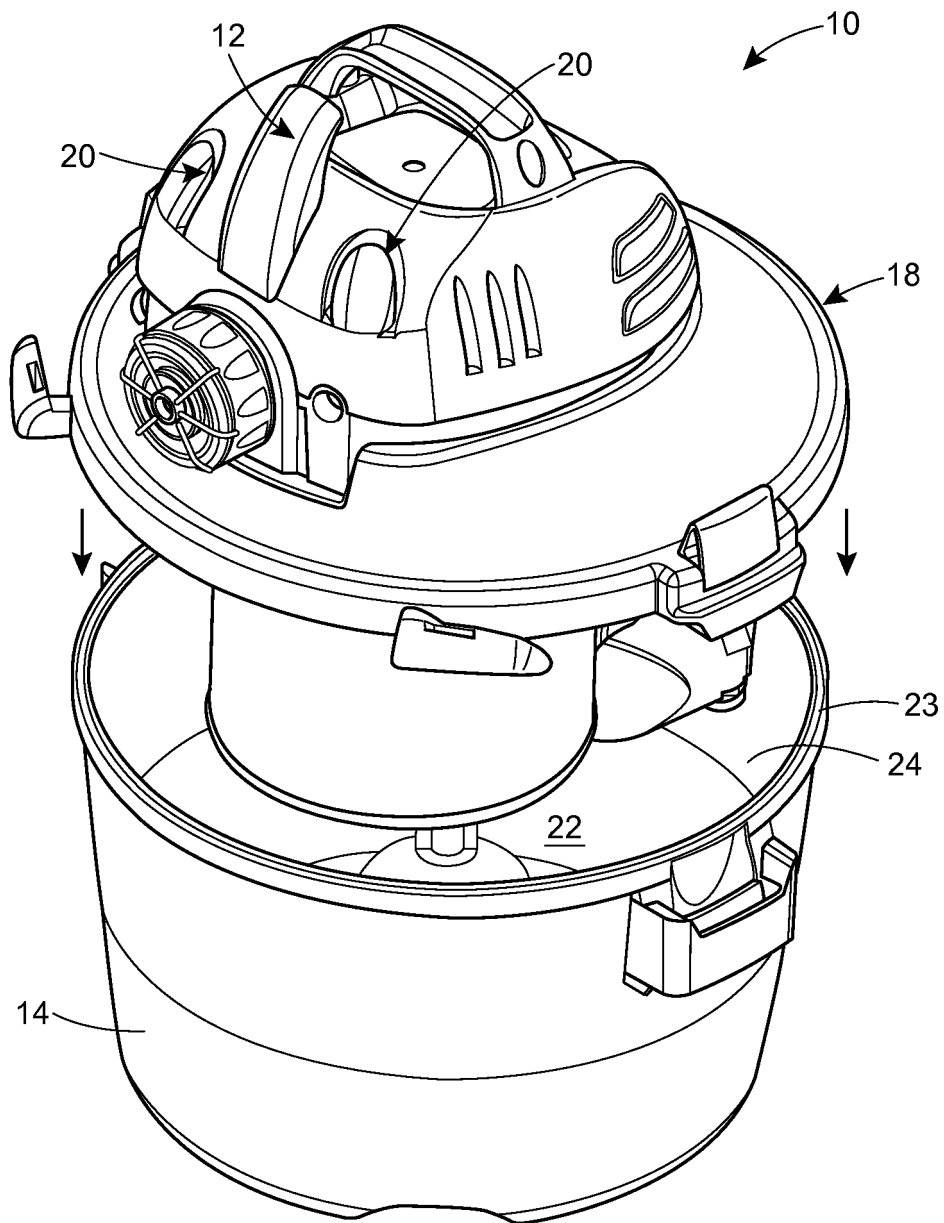


FIG. 1

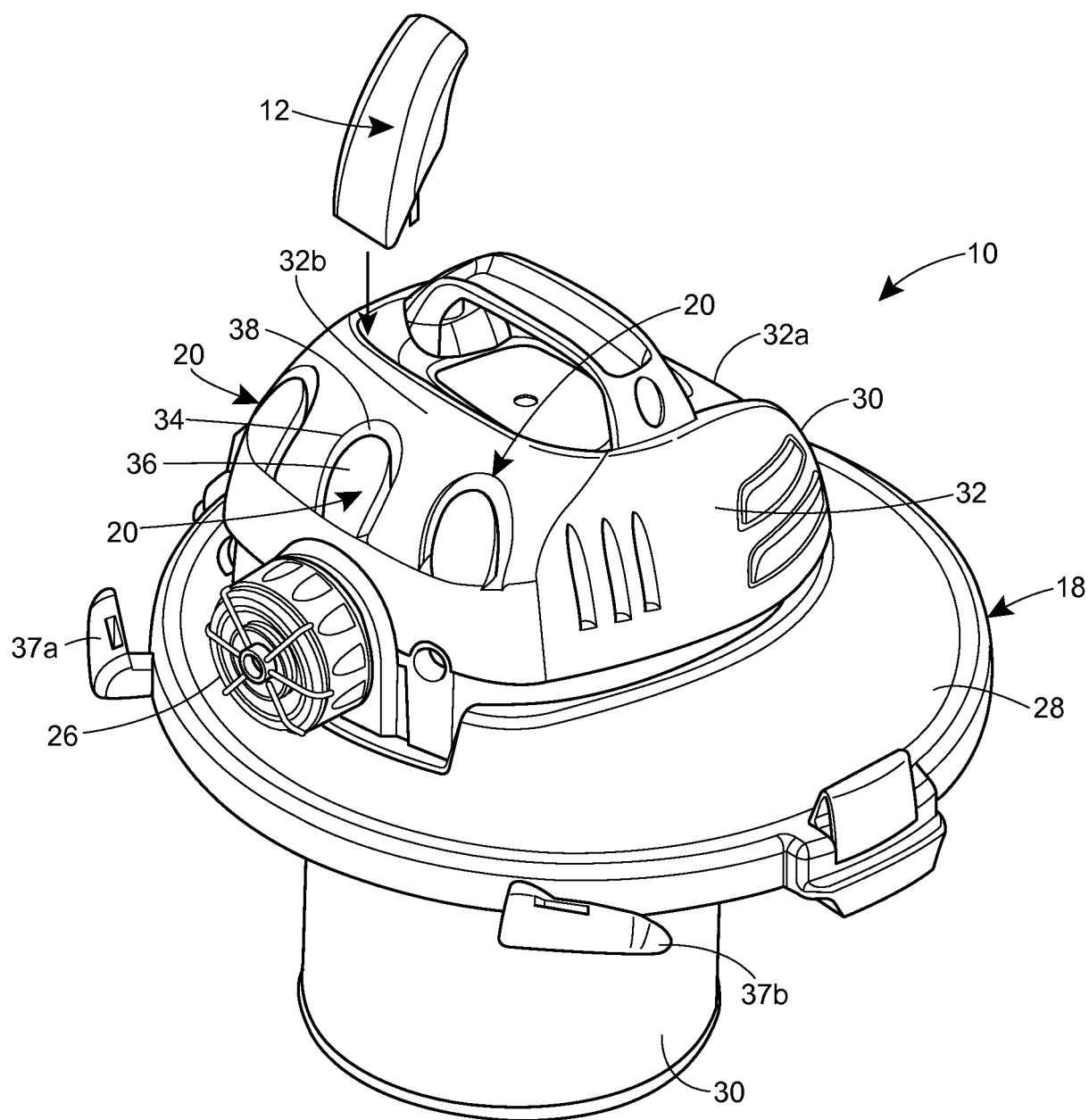


FIG. 2

FIG. 3

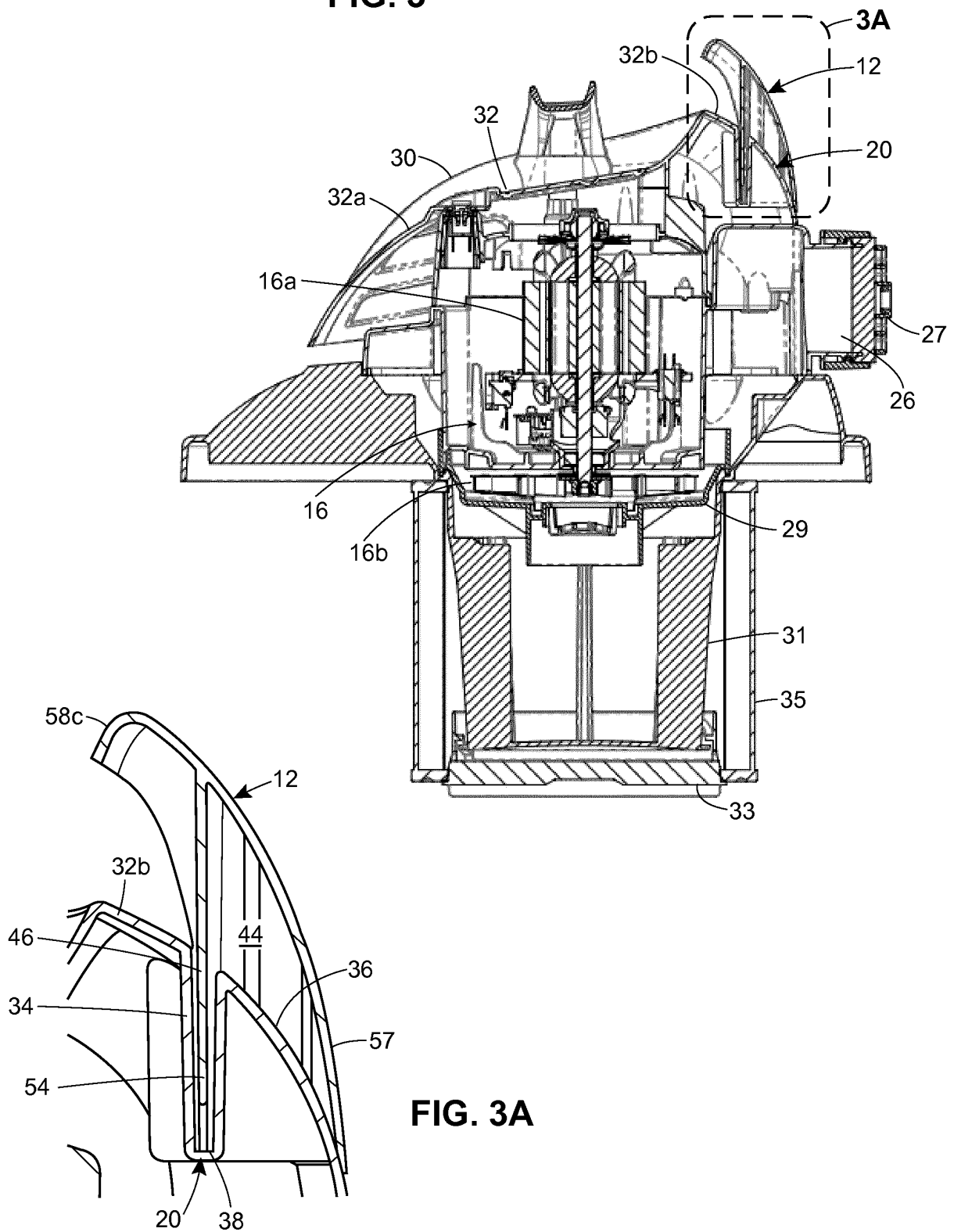


FIG. 3A

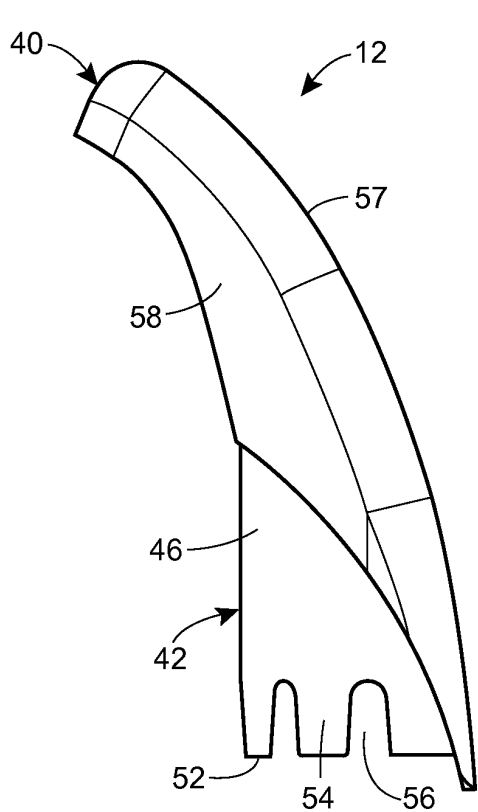


FIG. 5

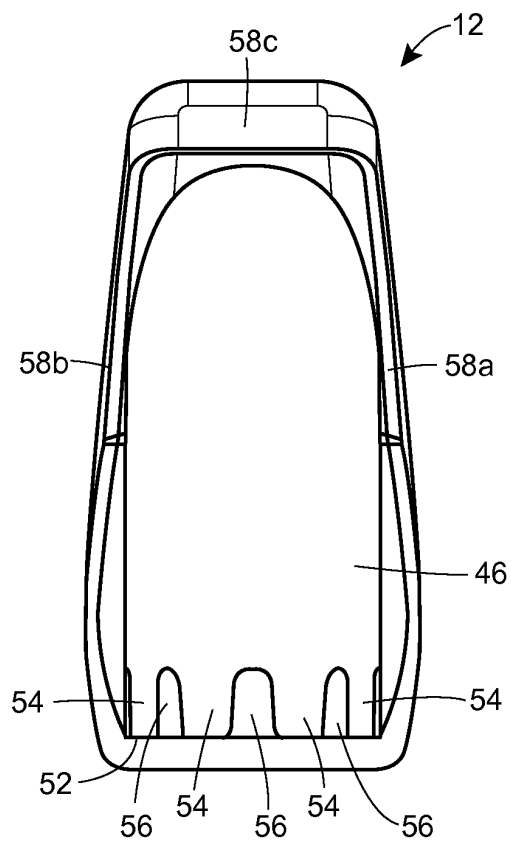


FIG. 6

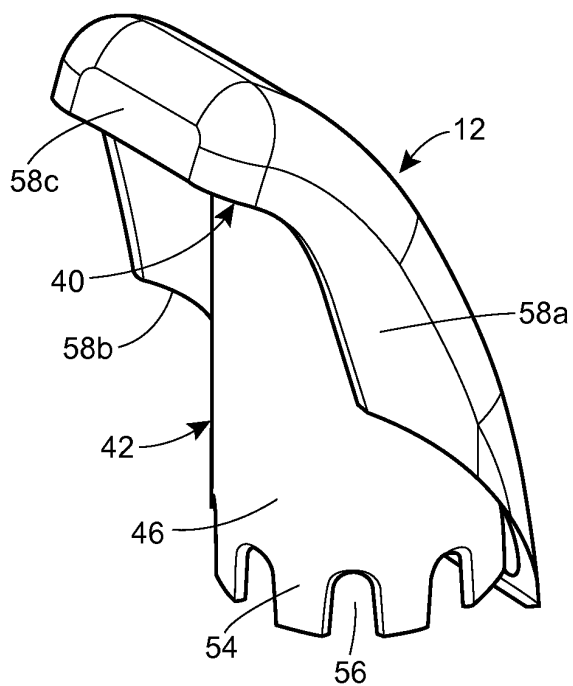


FIG. 4

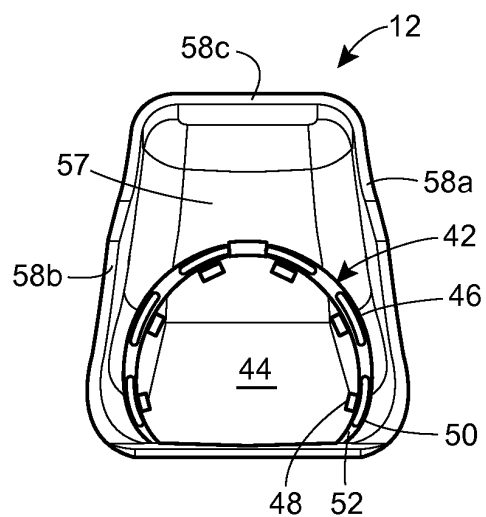


FIG. 7

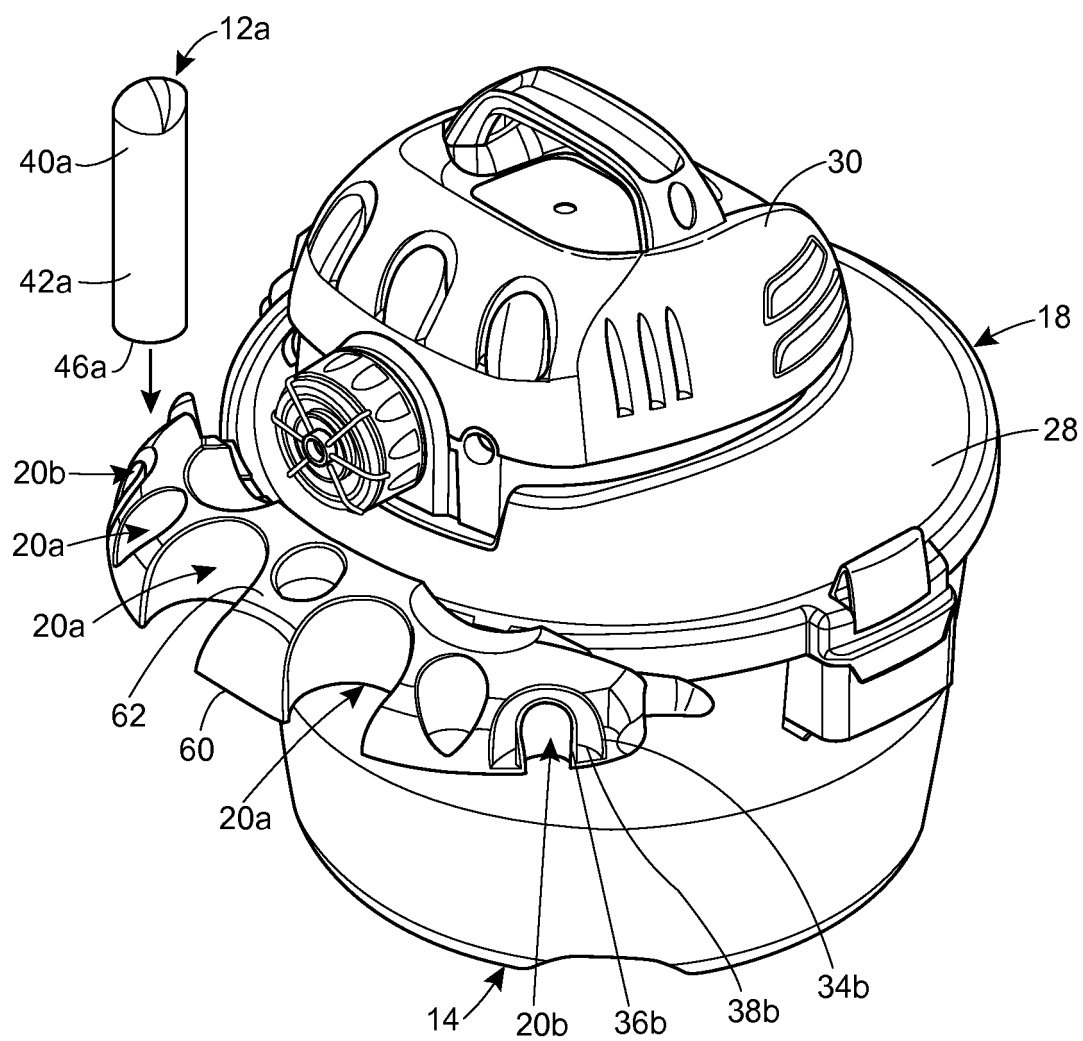


FIG. 8

REFERENCES CITED IN THE DESCRIPTION

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