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(54) ARRANGEMENT FOR MOUNTING A DUST BAG TO A VACUUM CLEANER

ANORDNUNG ZUR ANBRINGUNG EINES STAUBBEUTELS AN EINEM STAUBSAUGER

DISPOSITIF POUR MONTER UN SAC À POUSSIÈRE SUR UN ASPIRATEUR

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Description

FIELD OF THE INVENTION

[0001] The invention relates to an arrangement for mounting a dust bag to a vacuum cleaner.

BACKGROUND OF THE INVENTION

[0002] Traditionally, the dust bag of a vacuum cleaner is supported on the vacuum cleaner with a mounting plate, which is a plate glued onto the dust bag and normally made of cardboard. Mounting and inserting the plate into a slot of a corresponding size in the vacuum cleaner is easy and simple.

[0003] The document US-A-2 945 558 describes an arrangement for mounting a dust bag to a vacuum cleaner according to the preamble of claim 1.

[0004] However, presently the use of different kinds of universal dust bags which comprise an adhesive surface around the opening of the bag has become more and more common. A cardboard plate taken from a used dust bag can be attached onto the adhesive surface in order to then mount it to the vacuum cleaner.

[0005] However, fixations between the dust bag and the mounting flange are often problematic. Mounting the cardboard plate to the adhesive surface is difficult especially when the plate has been used multiple times. The surface of the cardboard plate is torn, fuzzy or dirty, so the adhesive surface will not grip properly. Most often the grip of the adhesive surface exhibits fatigue due to low pressure, whereupon dust messes the entire interior of the vacuum cleaner. Especially when using universal dust bags which come only in a few sizes, low pressure usually tears off the cardboard plate that has been used multiple times from the dust bag before it has become full, because the dust bag does not fully correspond in size and shape to the space provided for the bag in the vacuum cleaner. Overall, the entire process of handling, mounting and releasing the bag as a whole is too technical and complex for most vacuum cleaner users.

OBJECTIVE OF THE INVENTION

[0006] The objective of the invention is to eliminate the drawbacks referred to above. One specific objective of the invention is to disclose a new type of mounting and releasing arrangement for the dust bag of a vacuum cleaner, enabling easy and simple handling of the dust bag and ensuring that the dust bag is properly mounted and placed in the vacuum cleaner at all times and remains leak-proof during suction as well as when the dust bag is filled to the limit.

SUMMARY OF THE INVENTION

[0007] The arrangement for mounting a dust bag to a vacuum cleaner in accordance with the invention is characterized by what has been presented in claim 1.

[0008] The arrangement for mounting a dust bag to a vacuum cleaner in accordance with the invention comprises a cylindrical mounting collar coupled to the dust bag and a cylindrical ring flange supported on the vacuum cleaner and corresponding to the mounting collar. The mounting collar and the ring flange comprise cylindrical mounting surfaces that can be placed against each other for locking the mounting collar and the ring flange together so that one is within the other. In accordance with the invention, the cylindrical mounting surfaces of the mounting collar and the ring flange are divided for their entire circumference into an even number of equally long surface portions. Every other surface portion on the mounting collar and the ring flange forms a locking zone, and the surface portions between the locking zones form a free zone. In this manner, when the locking zones are placed in alignment with each other, the mounting collar and the ring flange can be pressed against each other into a locked position. On the other hand, when rotated from the locked position for the length of a surface portion, the locking zone of one portion becomes aligned with the free zone of another portion, this applying to each zone of the surface portions, so that the portions are thus entirely free from being locked to each other and are detached from each other.

[0009] Preferably, the locking zones of the mounting collar and the ring flange comprise a locking shoulder and a counter shoulder which extend to each other in a locked position, i.e. they contact each other. Thus, as the mounting collar and the ring flange are pressed against each other so that one is within the other, they form together, when in contact with each other, a snap-joint between the mounting collar and the ring flange. In other words, a locking shoulder and a counter shoulder snappingly slide over each other due to flexibility of the material used therein, locking said portions against each other sufficiently tightly and thereby forming a dustproof unity.

[0010] In one embodiment of the invention, it is possible that the locking shoulder and the counter shoulder are both ridges which extend substantially over the entire length of a locking zone and slip over each other when being locked. It is also possible that they are suitable shorter nodules or the like. As a locking shoulder is uniform and long, a counter shoulder may only be a projection comprising just one or more separate point-like plugs or nodules.

[0011] In a preferred embodiment of the invention, the locking zones and the free zones are separated from each other by a rotary stop which a locking shoulder or a counter shoulder is arranged to hit when the mounting collar and the ring flange are rotated relative to each other in the position where they are mounted together. In this manner, a suitable rotary stop separates the locking zones and the free zones from each other, i.e. forms barriers between them. The rotary stop is thus preferably formed by a round-shaped nodule, protrusion or ridge

over which a locking shoulder or a counter shoulder can be rotated with sufficient force. The rotary stop consequently functions as a locking means preventing the mounting collar and the ring flange from rotating relative to each other spontaneously or accidentally.

[0012] In the system in accordance with the invention, it is important that the cylindrical mounting surfaces of the mounting collar and the ring flange are equally long in the direction of the perimeter and that they are divided into an even number of surface portions. Preferably, they are divided into four, six or eight equally long surface portions, these numbers providing an angle of rotation for the release which is optimal for the movements of the hand and wrist. In other words, the angle of rotation is sufficiently large to be managed and sensed, but at the same time sufficiently small to be realized in a single rotary motion by the joints of the hand.

[0013] In one embodiment of the invention, the locking zones are formed on the inner surface of the mounting collar and the outer surface of the ring flange, in which case the mounting collar can be mounted around the ring flange. In another embodiment of the invention, the locking zones are formed on the outer surface of the mounting collar and the inner surface of the ring flange, in which case the mounting collar can be mounted inside the ring flange.

[0014] Preferably, arranged in conjunction with the mounting collar and the ring flange are locking indicators which indicate the locked position between the mounting collar and the ring flange when placed in alignment with each other. The indicators may comprise projections, protrusions, recesses or openings of different shapes, these shapes corresponding to each other, such that the user immediately understands the meaning of placing them in alignment with each other.

[0015] In one embodiment of the invention, the ring flange is formed as an integral piece uniform with the mounting plate of a specific vacuum cleaner model. In this case, the dust bag can be joined to the vacuum cleaner such that the dust bag provided with the mounting collar is tightly mounted to the ring flange on the mounting plate by pressing the plastic parts together into a tight snap-joint. The dust bag can then be mounted to the vacuum cleaner in the manner known per se by means of the mounting plate.

[0016] When the mounting plate comprises exact indicators which show the position in which the dust bag provided with the mounting collar can be pressed directly against the mounting plate into the locked position, it preferably also comprises guide marks indicating the release direction of the dust bag. The release direction most suitably comprises both directions from the locked position, so that the release process is as easy and quick as possible, and it is not even necessary to see the guide marks.

[0017] A separate seal ring can be used between the mounting collar and the ring flange for joining the dust bag tightly to the vacuum cleaner. In another embodiment, the mounting collar or the ring flange comprises as an integral part a ring-shaped seal which ensures tightness of the joint. When a seal ring that is separate from the locking operation is used for the joint, whether as detached or as part of the collar or the flange, the actual locking between the mounting collar and the ring flange can be realized as a relatively loose structure, so that it can be pressed into locked position or rotated into release position without considerable efforts. In this manner, the use is easy and there is not any risk of tearing the dust bag during mounting or release.

[0018] In another embodiment of the invention, the ring flange is a substantial and integral part of the vacuum cleaner, i.e. the vacuum cleaner comprises a fixed ring flange made either form metal or plastic. In this case, the mounting collar provided with the dust bag is mounted directly to the vacuum cleaner.

[0019] The arrangement for mounting a dust bag to a vacuum cleaner in accordance with the invention has considerable advantages compared to the prior art. Thanks to the invention, mounting and releasing the dust bag is simple and secure. The user is always informed of how the dust bag is mounted and how it is released. This prevents the dust bag from breaking during handling.

LIST OF FIGURES

[0020] In the following section, the invention will be described in detail by means of examples of its embodiments and with reference to the accompanying drawings, in which

Fig. 1 shows a first arrangement in accordance with the invention,
Fig. 2 shows a second arrangement in accordance with the invention and
Fig. 3 shows a third arrangement in accordance with the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0021] Fig. 1 shows one arrangement for mounting a dust bag to a vacuum cleaner in accordance with the invention. The arrangement comprises a ring-shaped mounting collar 1 with a cylindrical mounting surface 3 on the inner surface. The mounting surface is divided into six arcs of 60 degrees, in which every other one forms a locking zone 5 and the ones between them are free zones 7. The free zones 7 are smooth and even arched surfaces, but the lower edges of the locking zones 5 comprise locking shoulders 9, i.e. ridges, which extend substantially over the entire length of the arc in that zone and inwards toward the center of the mounting collar.

[0022] The other end of the mounting collar 1 comprises a planar support ring 18 to which the dust bag, not shown in the figure, can be mounted for example by glue or adhesive surface. Flexibility gaps 19 have been arranged onto the support ring 18 in alignment with each

locking shoulder 9. These gaps ensure sufficient flexibility for the zones comprising the locking shoulders.

[0023] In Fig. 1, operating as a counterpart for the mounting collar 1 is a round and cylindrical ring flange 2 with a cylindrical mounting surface 4 on the outer surface. The ring flange 2 is an integral part of a mounting plate 14 which is specific for each vacuum cleaner model and can be supported on and inserted into the mounting slot of a vacuum cleaner in a manner known per se. The outer surface, i.e. the mounting surface 4, of the ring flange 2 is correspondingly divided into six arcs of 60 degrees, in which every other one forms a locking zone 6 and the spaces between them form free zones 8. The free zones 8 are smooth and even arched surfaces, while the locking zones 6 comprise counter shoulders 10 extending over the entire length of the arc in that zone. The locking zones 6 and the free zones 8 are separated from each other by rotary stops 11, i.e. shoulders or ridges, that are transverse relative to the direction of the arc and extend from the arched surfaces substantially to a height that is equal to that of the counter shoulders 10.

[0024] In this manner, when the mounting collar 1 is placed over the ring flange 2 such that their free zones 7 and 8 are in alignment and their locking zones 5 and 6 are correspondingly in alignment, the mounting collar 1 can simply be pressed against the ring flange 2 and around it. The locking shoulders 9 and the counter shoulders 10 of the locking zones thus slide over each other snappingly, such that the locking shoulders 9 become locked behind the counter shoulders 10 and between the rotary stops 11. With suitable flexibility and sizing of the structures, the joint becomes appropriately leak-proof and tight. In this manner, the dust bag coupled to the mounting collar 1 can be joined to the mounting plate 14 which can then be mounted to the vacuum cleaner in a manner known per se.

[0025] When the dust bag is released from the mounting plate 14 there is no need to try and drag it off from the ring flange 2 in the direction opposite to the mounting; instead, the rotary stops 11 are so dimensioned in size that the locking shoulders 9 of the mounting collar 1 can be relatively easily rotated over the rotary stops so that they become aligned with the free zones 8 of the ring flange 2. Thus at the same, the counter shoulders of the ring flange 2 are rotated so that they become aligned with the free zones 7 of the mounting collar 1, such that the smooth free zones no longer hold the mounting collar and the ring flange together; instead, they are completely detached from each other.

[0026] When the locking zones 5 and 6 and the free zones 7 and 8 alternate at even intervals for the entire length of the perimeter of the mounting collar 1 and the ring flange 2, the parts can be released from each other as described above by a rotary motion in either direction, which makes the release operation considerably simpler. To make the use of the arrangement simpler and clearer, arrow guide marks 15 and images of a closed and open lock are depicted on the mounting plate 14, so that the open position can be reached through rotation in either direction from the closed position.

[0027] To ensure that the mounting collar 1 and the ring flange 2 are locked together in a proper position, i.e. such that the locking shoulders 9 and the counter shoulders 10 are in alignment, a locking indicator 12, i.e. a round-shaped protrusion, has been arranged on the outer perimeter of the mounting collar, extending outwards therefrom. A corresponding shape in the corresponding position on the mounting plate 14 is realized by an open-shaped indicator 13. Thus, by placing the indicators 12 and 13 of the mounting collar 1 and the ring flange 2 in alignment, the mounting collar and the ring flange can be pressed against each other into a secure locking. Furthermore, the ring flange 2 comprises a ring-shaped seal 17 which extends inwards and ensures tightness of the joint.

[0028] Fig. 2 shows a second embodiment of the invention, which corresponds in structure and operation to the embodiment of Fig. 1. The sole differences therein are another shape of the mounting plate 14, i.e. compatibility with another vacuum cleaner model, and another solution for sealing the joint. In this embodiment, sealing between the mounting collar 1 and the ring flange 2 has been realized with a separate seal ring 16. The seal ring 16 made for example from rubber or flexible plastic is arranged to seal the joint when the parts are pressed against each other.

[0029] Fig. 3 shows a third embodiment of the invention, wherein the parts corresponding to the other figures are indicated with the same reference numbers. The difference in this embodiment is a simpler mounting collar 1 having a lighter structure, in which a thin cylindrical jacket and a narrow support ring 18 for the dust bag form a sufficiently flexible ring which yields to provide the desired locking between the locking shoulders 9 and the counter shoulders 10. Furthermore, sealing between parts 1 and 2 that are to be joined together has been realized with a thin ring-shaped seal 17 which extends outwards from the cylindrical ring flange 2 against the inner edge of the support ring 18 on the mounting collar 1.

[0030] The invention is not limited merely to the exemplary embodiments referred to above; instead many variations are possible within the scope of the inventive idea defined by the claims.

Claims

1. An arrangement for mounting a dust bag to a vacuum cleaner, the arrangement comprising a cylindrical mounting collar (1) coupled to the dust bag, and a cylindrical ring flange (2) supported on the vacuum cleaner and corresponding to the mounting collar, both comprising cylindrical mounting surfaces (3,4) that can be placed against each other for locking the mounting collar and the ring flange together so that one is within the other, **characterized in that** the

cylindrical mounting surfaces (3,4) of the mounting collar (1) and the ring flange (2) are divided for their entire circumference into an even number of equally long surface portions, in which every other surface portion forms a locking zone (5,6) and the surface portions between the locking zones form a free zone (7,8), so that when the locking zones of the mounting collar and the ring flange are placed in alignment with each other, the mounting collar and the ring flange can be pressed against each other into a locked position, and when rotated from the locked position for the length of a surface portion, they become free from the locked position.

2. The arrangement in accordance with claim 1, **characterized in that** the locking zones (5, 6) aligned with each other in the locked position comprise a locking shoulder (9) and a counter shoulder (10) which form together a snap-joint between the mounting collar (1) and the ring flange (2) when brought into contact with each other.

3. The arrangement in accordance with claim 2, **characterized in that** the locking shoulder (9) and the counter shoulder (10) are ridges or nodules which extend substantially over the entire length of the locking zone (5,6).

4. The arrangement in accordance with claim 2 or 3, **characterized in that** the locking zones (5 , 6) and the free zones (7,8) are separated from each other with a rotary stop (11) which the locking shoulder (9) or the counter shoulder (10) has been arranged to hit when the mounting collar and the ring flange are rotated relative to each other when they are in the mounted position.

5. The arrangement in accordance with claim 4, **characterized in that** the rotary stop (11) is formed by a round-shaped nodule or protrusion over which the locking shoulder or the counter shoulder can be rotated with sufficient force.

6. The arrangement in accordance with any one of claims 1 to 5 , **characterized in that** the cylindrical mounting surfaces of the mounting collar (1) and the ring flange (2) are divided into four, six or eight equally long surface portions.

7. The arrangement in accordance with any one of claims 1 to 6, **characterized in that** the locking zones (5,6) are formed on the inner surface of the mounting collar and on the outer surface of the ring flange, so that the mounting collar can be mounted around the ring flange.

8. The arrangement in accordance with any one of claims 1 to 6, **characterized in that** the locking zones are formed on the outer surface of the mounting collar and on the inner surface of the ring flange, so that the mounting collar can be mounted inside the ring flange.

9. The arrangement in accordance with any one of claims 1 to 8, **characterized in that** arranged in conjunction with the mounting collar (1) and the ring flange (2) are locking indicators (12,13) which, when placed in alignment with each other, indicate the locked position between the mounting collar and the ring flange.

10. The arrangement in accordance with any one of claims 1 to 9, **characterized in that** the ring flange (2) is formed as a uniform and integral part of a mounting plate (14) which is specific for each vacuum cleaner model, so that the dust bag can be joined to the vacuum cleaner by mounting the mounting plate provided with the dust bag to the vacuum cleaner.

11. The arrangement in accordance with claim 10, **characterized in that** the locking indicator (12) of the ring flange (2) is arranged into a protrusion, recess or opening on the mounting plate.

12. The arrangement in accordance with claim 10 or 11, **characterized in that** the mounting plate comprises guide marks (15) for indicating the release direction for the dust bag.

13. The arrangement in accordance with any one of claims 1 to 12, **characterized in that** there is a separate seal ring (16) between the mounting collar (1) and the ring flange (2) for joining the dust bag tightly to the vacuum cleaner.

14. The arrangement in accordance with any one of claims 1 to 12, **characterized in that** the mounting collar (1) or the ring flange (2) comprises as an integral part a ring-shaped seal (17) for joining the dust bag tightly to the vacuum cleaner.

15. The arrangement in accordance with any one claims 1 to 9, **characterized in that** the ring flange is a substantial and integral part of the vacuum cleaner, in which case the mounting collar provided with the dust bag is mounted directly to the vacuum cleaner.

Patentansprüche

1. Anordnung zum Anbringen eines Staubbeutels an einem Staubsauger, wobei die Anordnung einen zylindrischen Anbringungskranz (1), der mit dem Staubbeutel gekoppelt ist, und einen zylindrischen Ringflansch (2), der am Staubsauger unterstützt ist

und dem Anbringungskranz entspricht, umfasst, wobei beide zylindrische Anbringungsoberflächen (3, 4) aufweisen, die einander gegenüber liegend angeordnet werden können, um den Anbringungskranz und den Ringflansch miteinander zu verriegeln, so dass sich der Eine im Anderen befindet, **dadurch gekennzeichnet, dass** die zylindrischen Anbringungsoberflächen (3, 4) des Anbringungskranzes (1) und des Ringflansches (2) auf ihrem gesamten Umfang in eine gerade Anzahl gleich langer Oberflächenabschnitte unterteilt sind, in denen jeder andere Oberflächenabschnitt eine Verriegelungszone (5, 6) bildet, und die Oberflächenabschnitte zwischen den Verriegelungszonen eine freie Zone (7, 8) bilden, so dass dann, wenn die Verriegelungszonen des Anbringungskranzes und des Ringflansches aufeinander ausgerichtet angeordnet sind, der Anbringungskranz und der Ringflansch in eine verriegelte Position gegeneinander gedrückt werden können, und wobei sie dann, wenn sie über die Länge eines Oberflächenabschnitts aus der verriegelten Position gedreht sind, aus der verriegelten Position freikommen.

2. Anordnung nach Anspruch 1, **dadurch gekennzeichnet, dass** die Verriegelungszonen (5, 6), die in der verriegelten Position aufeinander ausgerichtet sind, eine Verriegelungsschulter (9) und eine Gegenschulter (10) umfassen, die miteinander zwischen dem Anbringungskranz (1) und dem Ringflansch (2) eine Schnappverbindung bilden, wenn sie in gegenseitigen Kontakt gebracht sind.

3. Anordnung nach Anspruch 2, **dadurch gekennzeichnet, dass** die Verriegelungsschulter (9) und die Gegenschulter (10) Stege oder Wulste sind, die sich im Wesentlichen über die gesamte Länge der Verriegelungszone (5, 6) erstrecken.

4. Anordnung nach Anspruch 2 oder 3, **dadurch gekennzeichnet, dass** die Verriegelungszonen (5, 6) und die freien Zonen (7, 8) voneinander getrennt sind, wobei ein Drehanschlag (11) vorgesehen ist und wobei die Verriegelungsschulter (9) oder die Gegenschulter (10) dazu ausgelegt ist, auf diesen zu treffen, wenn der Anbringungskranz und der Ringflansch relativ zueinander gedreht werden, wenn sie in der angebrachten Position sind.

5. Anordnung nach Anspruch 4, **dadurch gekennzeichnet**, der Drehanschlag (11) durch einen rund geformten Wulst oder einen Vorsprung gebildet ist, über den die Verriegelungsschulter oder die Gegenschulter mit einer ausreichenden Kraft hinweg gedreht werden kann.

6. Anordnung nach einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet, dass** die zylindrischen Anbringungsoberflächen des Anbringungskranzes (1) und des Ringflansches (2) in vier, sechs oder acht gleich lange Oberflächenabschnitte unterteilt sind.

7. Anordnung nach einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** die Verriegelungszonen (5, 6) auf der inneren Oberfläche des Anbringungskranzes und auf der äußeren Oberfläche des Ringflansches ausgebildet sind, so dass der Anbringungskranz um den Ringflansch angebracht werden kann.

8. Anordnung nach einem der Ansprüche 1 bis 6, **dadurch gekennzeichnet, dass** die Verriegelungszonen auf der äußeren Oberfläche des Anbringungskranzes und auf der inneren Oberfläche des Ringflansches ausgebildet sind, so dass der Anbringungskranz in den Ringflansch angebracht werden kann.

9. Anordnung nach einem der Ansprüche 1 bis 8, **dadurch gekennzeichnet, dass** zusammen mit dem Anbringungskranz (1) und dem Ringflansch (2) Verriegelungsindikatoren (12, 13) angeordnet sind, die dann, wenn sie aufeinander ausgerichtet angeordnet sind, die verriegelte Position zwischen dem Anbringungskranz und dem Ringflansch angeben.

10. Anordnung nach einem der Ansprüche 1 bis 9, **dadurch gekennzeichnet, dass** der Ringflansch (2) als ein gleichmäßiger und einteiliger Abschnitt einer Anbringungsplatte (14) gebildet ist, der für jedes Staubsaugermodell spezifisch ist, so dass der Staubbeutel durch Anbringen der an dem Staubbeutel vorgesehenen Anbringungsplatte an dem Staubsauger mit dem Staubsauger verbunden werden kann.

11. Anordnung nach Anspruch 10, **dadurch gekennzeichnet, dass** der Verriegelungsindikator (12) des Ringflansches (2) als ein Vorsprung, eine Aussparung oder eine Öffnung an bzw. in der Anbringungsplatte ausgebildet ist.

12. Anordnung nach Anspruch 10 oder 11, **dadurch gekennzeichnet, dass** die Anbringungsplatte Führungsmarkierungen (15) aufweist, um die Freigaberichtung für den Staubsaugerbeutel anzugeben.

13. Anordnung nach einem der Ansprüche 1 bis 12, **dadurch gekennzeichnet, dass** ein getrennter Dichtungsring (16) zwischen dem Anbringungskranz (1) und dem Ringflansch (2) vorgesehen ist, um den Staubbeutel dicht mit dem Staubsauger zu verbinden.

14. Anordnung nach einem der Ansprüche 1 bis 12, **dadurch gekennzeichnet, dass** der Anbringungs-

kranz (1) oder der Ringflansch (2) als einen einteiligen Abschnitt eine ringförmige Dichtung (17) aufweist, um den Staubbeutel dicht mit dem Staubsauger zu verbinden.

15. Anordnung nach einem der Ansprüche 1 bis 9, **dadurch gekennzeichnet, dass** der Ringflansch ein wesentlicher und einteiliger Abschnitt des Staubsaugers ist, wobei in diesem Fall der Anbringungskranz, der mit dem Staubbeutel versehen ist, direkt am Staubsauger angebracht wird.

Revendications

1. Dispositif pour monter un sac à poussière sur un aspirateur, le dispositif comprenant un collier de montage cylindrique (1) couplé au sac à poussière, et une bride annulaire cylindrique (2) supportée sur l'aspirateur et correspondant au collier de montage, les deux comprenant des surfaces de montage cylindriques (3, 4) qui peuvent être placées l'une contre l'autre pour verrouiller le collier de montage et la bride annulaire ensemble de sorte que l'un soit dans l'autre, **caractérisé en ce que** les surfaces de montage cylindriques (3, 4) du collier de montage (1) et de la bride annulaire (2) sont divisées sur leur circonférence entière en un nombre paire de parties de surfaces de même longueur, dans lesquelles chaque autre partie de surface forme une zone de verrouillage (5, 6) et les parties de surface entre les zones de verrouillage forment une zone libre (7, 8) de sorte que lorsque les zones de verrouillage du collier de montage et de la bride annulaire sont alignées l'une avec l'autre, le collier de montage et la bride annulaire puissent être pressés l'un contre l'autre dans une position verrouillée, et lors de la rotation depuis la position verrouillée sur la longueur d'une partie de surface, ils se libèrent de la position verrouillée.

2. Dispositif selon la revendication 1, **caractérisé en ce que** les zones de verrouillage (5, 6) alignées l'une avec l'autre dans la position verrouillée comprennent un épaulement de verrouillage (9) et un contre-épaulement (10) formant ensemble un joint à pression entre le collier de montage (1) et la bride annulaire (2) lorsqu'ils sont amenés en contact l'un avec l'autre.

3. Dispositif selon la revendication 2, **caractérisé en ce que** l'épaulement de verrouillage (9) et le contre-épaulement (10) sont des moulures ou nodules s'étendant substantiellement sur toute la longueur de la zone de verrouillage (5, 6).

4. Dispositif selon la revendication 2 ou 3, **caractérisé en ce que** les zones de verrouillage (5, 6) et les zones libres (7, 8) sont séparées l'une de l'autre par une butée rotative (11) que l'épaulement de verrouillage (9) ou le contre-épaulement (10) heurte lorsque le collier de montage et la bride annulaire sont tournés l'un par rapport à l'autre lorsqu'ils sont en position montée.

5. Dispositif selon la revendication 4, **caractérisé en ce que** la butée rotative (11) est formée par un nodule ou une saillie ronde, sur laquelle l'épaulement de verrouillage ou le contre-épaulement peut être tourné avec suffisamment de force.

6. Dispositif selon l'une quelconque des revendications 1 à 5, **caractérisé en ce que** les surfaces de montage cylindriques du collier de montage (1) et de la bride annulaire (2) sont divisées en quatre, six ou huit parties de surface de même longueur.

7. Dispositif selon l'une quelconque des revendications 1 à 6, **caractérisé en ce que** les zones de verrouillage (5, 6) sont formées sur la surface intérieure du collier de montage et sur la surface extérieure de la bride annulaire de sorte que le collier de montage puisse être monté sur la bride annulaire.

8. Dispositif selon l'une quelconque des revendications 1 à 6, **caractérisé en ce que** les zones de verrouillage sont formées sur la surface extérieure du collier de montage et sur la surface intérieure de la bride annulaire de sorte que le collier de montage puisse être monté dans la bride annulaire.

9. Dispositif selon l'une quelconque des revendications 1 à 8, **caractérisé en ce que** des indicateurs de verrouillage (12, 13) sont disposés conjointement avec le collier de montage (1) et la bride annulaire (2), lesquels indiquent la position verrouillée entre le collier de montage et la bride annulaire, lorsqu'ils sont placés en alignement l'un avec l'autre.

10. Dispositif selon l'une quelconque des revendications 1 à 9, **caractérisé en ce que** la bride annulaire (2) est formée comme une partie uniforme et intégrante d'une plaque de montage (14) spécifique à chaque modèle d'aspirateur de sorte que le sac à poussière puisse être assemblé à l'aspirateur en montant la plaque de montage dotée du sac à poussière sur l'aspirateur.

11. Dispositif selon la revendication 10, **caractérisé en ce que** l'indicateur de verrouillage (12) de la bride annulaire (2) est disposé dans une saillie, un évidement ou une ouverture sur la plaque de montage.

12. Dispositif selon la revendication 10 ou 11, **caractérisé en ce que** la plaque de montage comprend des marques de guidage (15) pour indiquer la direction

de libération du sac à poussière.

13. Dispositif selon l'une quelconque des revendications 1 à 12, **caractérisé en ce qu'**un anneau d'étanchéité séparé (16) se situe entre le collier de montage (1) et la bride annulaire (2) pour bien assembler le sac à poussière à l'aspirateur.

14. Dispositif selon l'une quelconque des revendications 1 à 12, **caractérisé en ce que** le collier de montage (1) ou la bride annulaire (2) comprend comme partie intégrante une garniture en forme d'anneau (17) pour bien assembler le sac à poussière à l' aspirateur.

15. Dispositif selon l'une quelconque des revendications 1 à 9, **caractérisé en ce que** la bride annulaire est une partie substantielle et intégrante de l'aspirateur, auquel cas le collier de montage doté du sac à poussière est monté directement sur l'aspirateur.

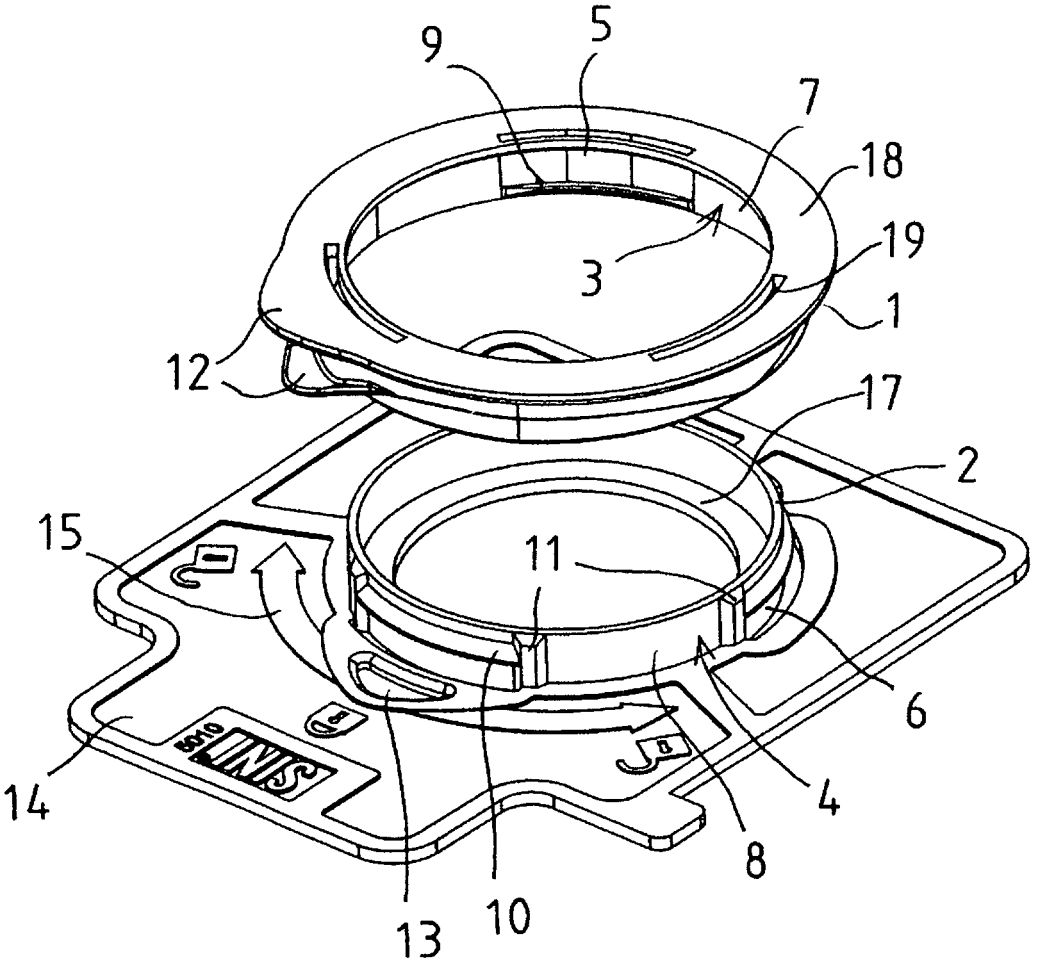

Fig 1

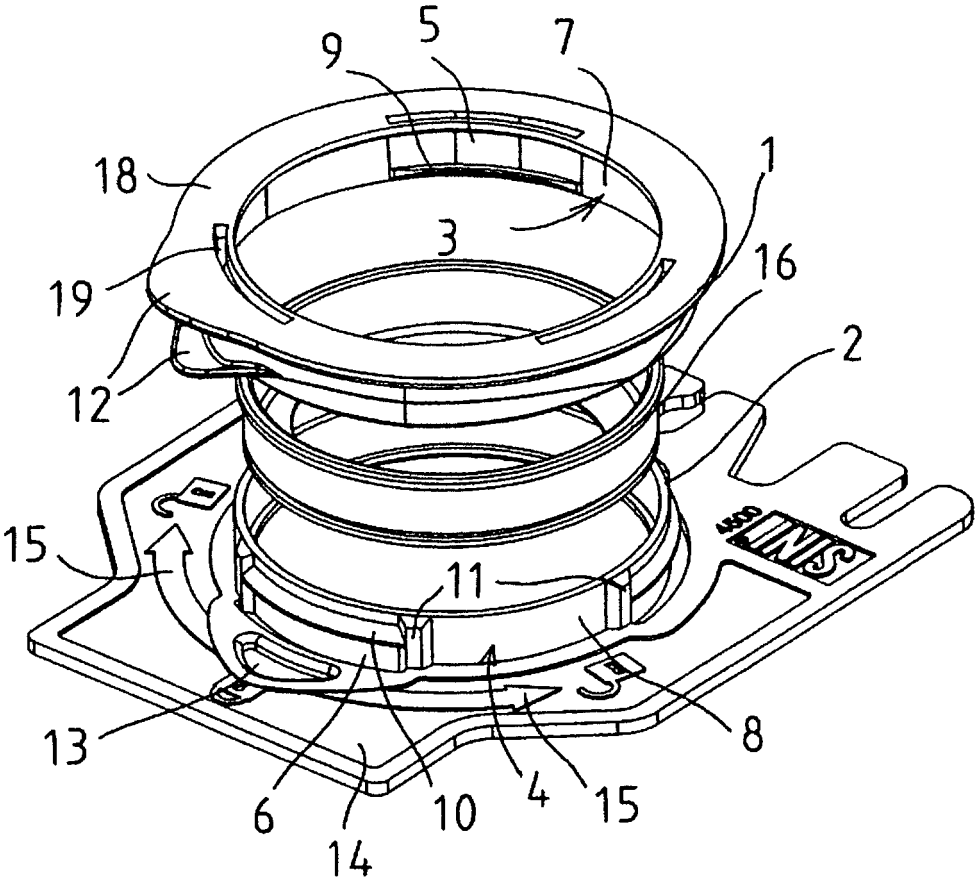

Fig 2

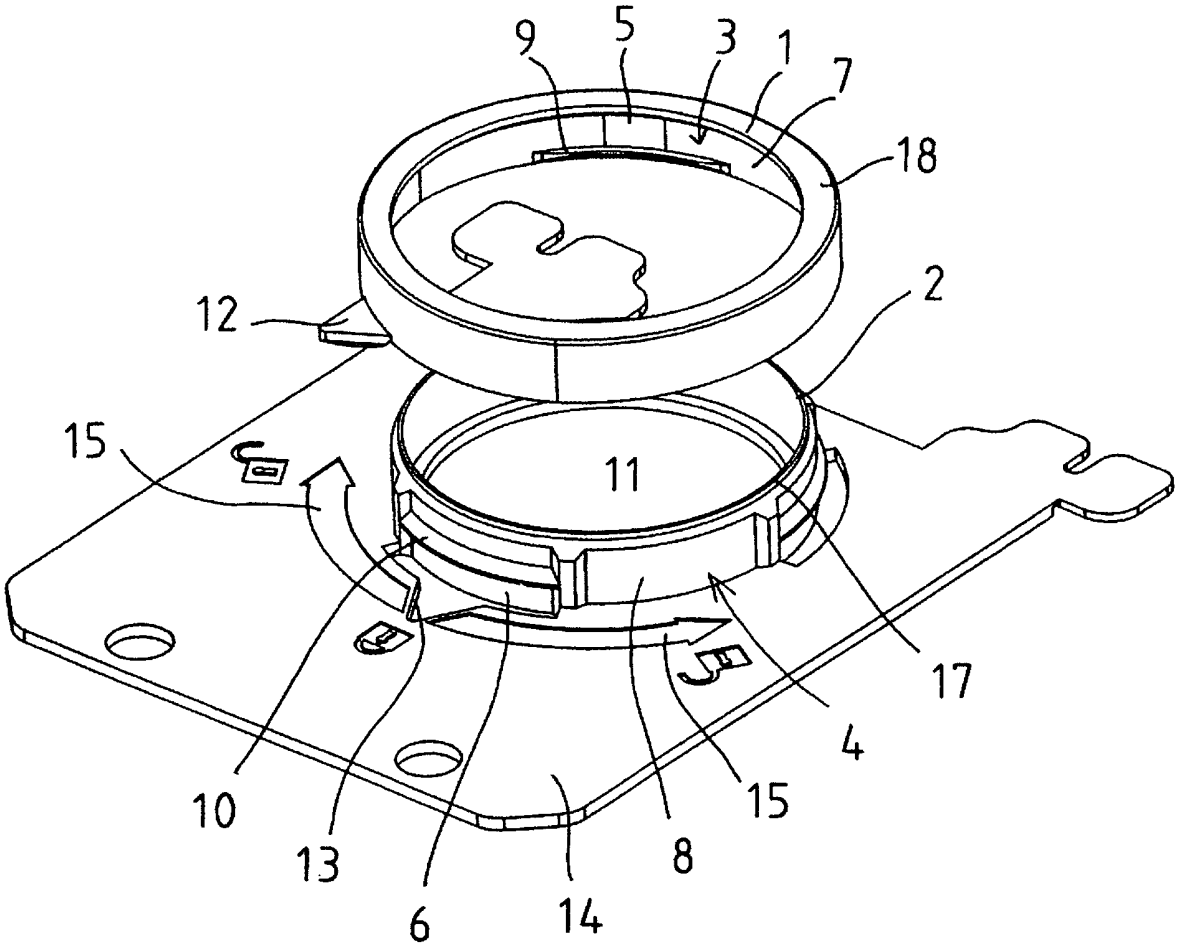

Fig 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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