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(54) **VACUUM CLEANER**

STAUBSAUGER

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Description

[0001] The present invention relates to a vacuum cleaner comprising an accessory box to store the accessories, that is removably attached below the handle of the vacuum cleaner.

[0002] For the vacuum cleaners, different suction nozzles have to be used according to the structure and nature of the surfaces to be cleaned. Such nozzles which in general are removably attached to the end portions of the handle and/or of the pipes connected to the handle, are used as brushes or end portions in different shapes and or dimensions, varying according to the intended use. The user, attaches or removes said parts which can also be defined as the 'vacuum cleaner accessories' depending on the intended use while using the vacuum cleaner. However, when required accessories are not easily accessible by the user, changing and replacing said accessories may create a problem for the user.

[0003] In European Patent No. 0747000, the storage compartment wherein the accessories are placed, can be removably attached to the pipe by the user, by means of two fasteners. The space formed between the pipe and said compartment serves as a handle.

[0004] In USA Patent No. 5303447, the accessories used for vacuum cleaning are placed on a rack attached to the vacuum cleaner body. This arrangement increases the dimensions of the cleaner.

[0005] Whereas in the French Patent No. 750883, the accessories to be used during vacuum cleaning are disposed in the pockets provided on the apron worn by the user.

[0006] In the USA Patent No. 5247719, the accessories are received in a tool storage compartment formed in the body of the cleaner and in specific recesses formed on the door of said compartment.

[0007] In the German Utility Model No. 8119955 U, accessories to be used during vacuum cleaning are attached to the recesses formed on the pipe.

[0008] In the German Utility Model No. 8809157 U, the accessory is attached to a gap formed above a part fastened onto the pipe.

[0009] The object of the present invention is to provide ease and comfort of use to the user by placing the vacuum cleaner accessories in a box that can removably be attached below the handle.

[0010] The vacuum cleaner realized to attain the object of present invention has been illustrated in the attached drawings; wherein:

Figure 1, is a schematical view of a vacuum cleaner;
Figure 2, is a three-dimensional view of the handle to which the accessory box is attached;
Figure 3, is a three-dimensional top view of the accessory box;
Figure 4, is the exploded view of the accessory box;
Figure 5, is the three-dimensional view of the inner section of the accessory box rear part,

Figure 6a, is the three-dimensional front view of the textile nozzle

Figure 6b, is the three-dimensional bottom view of the textile nozzle,

Figure 6c, is the three-dimensional side view of the textile nozzle,

Figure 7a, is the top view of the tube nozzle,

Figure 7b, is the side view of the tube nozzle,

Figure 7c, is the three-dimensional view of the tube nozzle,

Figure 8a, is the three-dimensional view of the accessory box, with its door open and with its rear part unattached, containing the accessories,

Figure 8b, is the three-dimensional view of the accessory box, with its door and rear part unattached, containing the accessories.

[0011] The parts shown in the drawings have been given reference numerals as listed below:

1. vacuum cleaner body
2. Hose
3. Handle
4. Pipe
5. Accessory box
6. Rear part
7. Body
8. Main body
9. Door
10. Tube nozzle
11. Textile nozzle
12. Connecting latch
13. Locking recess
14. Locking latch
15. Fixation recess
16. Guide protrusion
17. Rail
18. Channel
19. Support protrusion
20. Support recess
21. Propping extension
22. Propping base
23. Attaching extension
24. Attaching protrusion
25. Brush
26. Fastening hole (opening)
27. Stopping protrusion
28. Fastening protrusion
29. Fastening side
30. Sucking side
31. Connection recess.

[0012] Vacuum cleaners being one of the most commonly used domestic appliances, comprise a vacuum cleaner body (1) wherein the motor unit realizing the suction operation and the control unit take place; a flexible hose (2) preferably made of plastic material; a handle (3) connected to said hose (2), preferably made of plastic

material and which provides ease of handling for the user, a pipe (4) connected to said handle (3) and made of metal or preferably of hard plastic material; and a brush (25) used by being attached to the end of the pipe (4) in order to perform the vacuum cleaning of the rugs and/or hard ground surfaces.

[0013] In cases where said brush (25) is not used, one or more end parts and/or brushes, of various shapes and/or dimensions that modify the shape of the suction mouth-piece of the pipe (4) and/or handle (3), depending on the area and/or dirt to be vacuum cleaned, are attached to the end of the pipe (4) and/or handle. These end parts and brushes are named as accessories. Said accessories are stored in an accessory box (5) that provides ease of access and use of said accessories. The accessory box (5) is mounted preferably below the handle (3) and a fixation recess (15) that enables the box (5) to be attached to and removed from the lower part of the handle (3), is provided on said accessory box (5).

[0014] In an embodiment of the present invention, two accessories that can be used frequently, are preferred; namely a tube nozzle (10) and a textile nozzle (11). The former, i.e. a tube nozzle (10) may be used by being attached to both the handle (3) and to the end of the pipe (4) whereas the textile nozzle (11) can only be attached to the tube nozzle (10) by pushing. Both end pieces are provided with a fastening side (29), a sucking side (30) and one or more protrusions, projections, holes, recesses or cavities.

[0015] In a preferred embodiment, the tube nozzle (10) is provided with a fastening protrusion (28) and a stopping protrusion (27), one on each side. The fastening protrusion (28) is smaller and closer to the end point than the stopping protrusion (27). Fastening holes (26) of a size, position and number that is suitable for receiving the fastening protrusions (28) on the tube nozzle (10), are provided at the fastening side (29) of the textile nozzle (11), wherein the tube nozzle (10) enters.

[0016] The accessory box (5) preferably made as an elliptical structure due to such factors as, the place it is attached to, the dimensions of the accessories it contains, and esthetical features, comprises a rear part (6), a body (7) and a door (9). The rear part (6) and the door (9) are formed by elliptical surfaces in conformity with the shape of the accessory box (5). The body (7) is preferably in a hollow, elliptical cylinder form, in line with the shape of the accessory box (5), with no base surfaces. The main body (8) is formed by fixing the body (7) and the rear part (6).

[0017] The portion of the rear part (6) that faces towards the body (7) is provided with one or more connecting latches (12) and one or more attaching recesses (23).

[0018] The body (7) comprises connection recesses (31) with a shape, position and number conforming to the connecting latches (12) and attaching protrusions (24) with a shape, position and number conforming to the attaching recesses (23).

[0019] In an embodiment, the rear part (6) is attached

to the body (7) by means of a screw passing through the connection recesses (31) and the connecting latch, (12), after the attaching protrusions (24) are fitted into the attaching recesses (23). In a preferred embodiment, the body (7) is fixed to the rear part (7) by fitting two attaching protrusions (24) into two attaching recesses (23) and two connecting latches (12) into two connection recesses (31).

[0020] A fixation recess (15) is provided on the body (7) in order to attach the accessory box (5) to the handle (3). Said fixation recess (15) consists of two sections, namely a narrow and a wide section. The projection at the lower part of the handle (3) is first passed through the wide section and the fixation of the body (7) below the handle (3) is ensured by pushing the body (7) towards the narrow section.

[0021] Two guide protrusions (16) in preferably opposing positions, and preferably one support protrusion (19) are located in the body (7) and one or more lock recesses (13) are located on the closing side of the door (9). In a preferred embodiment, locking recesses (13) are provided preferably at the upper and lowers parts of the door (9) closing edge of accessory box (5) so that the user can open it easily by using her fingers.

[0022] On the door (9), rails (17) in the same number as that of the guide protrusions (16), locking latches (14) of a number, position and shape in line with the locking recesses (13), one or more propping extensions (21) and propping bases (22) for placing said accessories, in conformity with the shape, number and position of the accessories, and a support recess (20) of a number, shape and position of the said support protrusions (19) are provided. The rail (17) of a length as permitted by the body (7) is provided with a channel (18) at the center, wherein the guide protrusion (16) can enter and move preferably in one direction.

[0023] The rail (17) connected to the door (9) moves on the guide protrusion (16) when the door (9) moves. In this manner, the door (9) is opened/closed. Meanwhile, the locking latch (14) is pushed and fitted into the locking recess (13) in order to lockingly engage the door (9) to the body (7). To open the door (9), the locking latch (14), preferably of a flexible structure, is pressed and pulled to a direction opposite to that of the body (7). When the locking latch (14) is released from the locking recess (13), the door (9) remains suspended to the body (7) by means of the rails (17) attached to the guide protrusion (16). As the door (9) may be opened as much as the length of the rail (17), it is opened to such a degree that it enables the accessories contained in the main body (8) to be taken out. After said accessories are taken out of the main body (8), the door (9) is pushed and closed by fitting the locking latch (14) into the locking recess (13). During these operations, the potential pivoting movement of the door (9) around the guide protrusions (16) is avoided by moving the support protrusion (19) inside the support recess (20). Thus the door (9) is prevented from being separated from the main body (8) and the user can easily take the ac-

cessories out of the accessory box (5) and close it by using one hand, while holding the handle (3) with the other hand.

[0024] In a preferred embodiment, for placing and arranging the accessories in the accessory box (5), first the textile nozzle (11) is located on the propping extensions (21) and on the propping base (22) in the main body (8), then tube nozzle (10) is disposed in its place in the accessory box (5) (Fig. 8). Both end pieces (10 and 11) rest against the propping extensions (21) and the bases (20) provided on the inner surface of the door (9). As the tube nozzle (10) has to be attached to the handle (3) or the pipe (4) so that the textile nozzle (11) can be used, the forms on the propping extensions (21) have such a structure that first, the tube nozzle (10), then the textile nozzle (11) can be placed in and/or taken out of the box.

[0025] To use the accessory box (5), the locking latch (14) is pressed and released from the recess on the body (7) and the door (9) is pulled horizontally by holding its sides. In this way the door (9) is opened but it is not separated from the main body (8) as the guide protrusion (16) is attached to the rail (17). From the opening formed between the door (9) and the main body (8), among the accessories arranged on the inner surface of the door (9) first the tube nozzle (10) is taken out, and is attached to the pipe (4) or the handle (3). When the textile nozzle (11) is also required, then it is also taken out of the main body (8) and attached to the tube nozzle (10) which is attached to the pipe (4) or the handle (3).

[0026] To attach the textile nozzle (11) to the tube nozzle (10), the sucking side (30) of the tube nozzle (10) is placed in the fastening side (29) of the textile nozzle (11) and is pushed until the fastening protrusion (28) enters the fastening hole (26). A stopping protrusion (27) is used in order to avoid the fastening protrusion (28) from being released from the fastening hole (26) and progressing forward. The textile nozzle (11) is first attached to the tube nozzle (10) and then can be attached to the handle (3) or the pipe (4) by means of the tube nozzle (10).

[0027] To place the accessories into their places after they are used, first the textile nozzle (11), then the tube nozzle (10) are placed in the propping extension (21) and/or base (22), in the accessory box (5). Then, the door (9) is pushed horizontally, and is fixed into the main body (8) by the seating of the locking latch (14) into the locking recess (13).

[0028] The accessory box (5) is made of a desired color, form and dimension, according to the properties, shape and position of the handle (3). Said box (5) may either be colored according to the properties of the material used for its production, or by painting, using various techniques and providing it with writings, signs, symbols, designs, employing different techniques such as screen printing or buffer printing; or when required, externally prepared materials may be adhered on it.

[0029] In another embodiment of the present invention, the accessories of various dimensions, numbers

and properties, depending on the preferences of the user and on the intended use, are arranged in the accessory box (5). The user is provided with the accessories having different properties, in dimensions, numbers and characteristics that can be contained in the accessory box (5), together with the vacuum cleaner; then the user chooses the most frequently used accessories and arranges them in the accessory box (5) to use during vacuum cleaning.

Claims

1. A vacuum cleaner comprising a vacuum cleaner body (1) wherein the motor unit realizing the suction operation and the control unit take place; a flexible hose (2) preferably made of plastic material; a handle (3) connected to said hose (2), preferably made of plastic material and which provides ease of handling for the user, a pipe (4) connected to said handle (3) and made of metal or preferably of hard plastic material; a brush (25) used by being attached to the end of the pipe (4) in order to perform the vacuum cleaning of the rugs or hard ground surfaces; and in cases where said brush (25) is not used one or more cleaning accessories of various shapes or dimensions that modify the shape of the suction mouth-piece of the pipe (4) or handle (3), an accessory box (5), that can be removably attached below the handle (3); comprising a rear part (6), a body (7) and a door (9); which allows the accessories to be placed or taken out easily, according to the order of use, and to be used together with another accessory so that a space optimization is provided in it and so that it can be of as small volume and weight as possible, which has preferably an elliptical structure with a closed volume with regard to such factors as the place it is attached to, the dimensions of the accessories it contains **characterized by** the door (9) comprising one or more propping extensions (21) and propping bases (22) for placing said accessories, in conformity with the shape, number and position of the accessories.
2. A vacuum cleaner as defined in Claim 1, **characterized by** the accessory box (5) comprising, in cases where said brush (25) is not used, among the accessories of various shapes or dimensions that modify the shape of the suction mouth-piece of the pipe (4) or handle (3), namely a tube nozzle (10) that may preferably be directly attached to the pipe (4) or handle (3) and a textile nozzle (11) that can be used after being attached to the tube nozzle (10), which are arranged by first inserting the latter (11) and then the former (10) in such a manner that they rest against the supports provided inside, and said box (5) having such a structure that for taking them out, first the tube nozzle (10), then the textile nozzle (11) is per-

mitted to be drawn out of it, and that its door (9) may be opened or closed during the use of said accessories, without being separated from the body (7) by means of a locking mechanism that can be controlled externally.

3. A vacuum cleaner according to claims 1 to 2, **characterized by** a rear part (6), the section of which, that faces towards the body (7) is provided with one or more connecting latches (12) and one or more attaching recesses (23). 10
4. A vacuum cleaner according to Claims 1 to 3, **characterized by** the body (7) preferably of a hollow, elliptical cylinder form, in line with the shape of the accessory box (5); with no base surfaces, comprising connection recesses (31) with a shape, position and number conforming to the connecting latch (12), attaching protrusions (24) with a shape, position and number conforming to the attaching recesses (23), one or more guide protrusions (16) in preferably opposing positions, preferably one support protrusion (19) and one or more locking recesses (13) provided preferably at the upper and lowers parts of the door (9) closing edge so that the user can open it easily by using her fingers; which is secured to the rear part (6) by fitting the attaching protrusions (24) into the attaching recesses (23) and the connecting latches (12) into the connection recesses (31). 20 25 30
5. A vacuum cleaner according to Claims 1 to 4, **characterized by** the door (9) comprising a rail (17) of a length as permitted by the body (7) that is provided with a channel (18) at the center, wherein the guide protrusion (16) can enter and move preferably in one direction, in the same number as that of the guide protrusions (16), locking latches (14) of a number, position and shape in line with the locking recesses (13) and support recesses (20) of a number, shape and position of the said support protrusions (19). 35 40
6. A vacuum cleaner according to Claims 1 to 5, **characterized by** the tube nozzle (10) that may be used both by being attached to a handle (3) and to a pipe (4); comprising a fastening side (29), a sucking side (30), stopping protrusions (27) preferably one on each side, and a fastening protrusion (28) being smaller and closer to the end portion than the stopping protrusion (27). 45 50
7. A vacuum cleaner according to Claims 2 to 6, **characterized by** the textile nozzle (11) that may be used after being attached to the tube nozzle (10) and which comprises a fastening side (29), a sucking side (30), at the portion where the tube nozzle (10) is inserted, and fastening holes (26) of suitable dimensions, positions and numbers to receive the fastening protrusions (28) provided on the tube nozzle (10). 55

Patentansprüche

1. Staubsauger, Folgendes umfassend: einen Staubsaugergrundkörper (1), in dem die Motoreinheit, die den Saugvorgang realisiert, und die Steuerungseinheit untergebracht sind, einen flexiblen Schlauch (2), der vorzugsweise aus Kunststoffmaterial hergestellt ist; einen Griff (3), der mit dem genannten Schlauch (2) verbunden ist, und der vorzugsweise aus Kunststoffmaterial hergestellt ist und vom Benutzer leicht zu handhaben ist; ein Rohr (4), das mit dem genannten Griff (3) verbunden ist, und aus Metall oder vorzugsweise aus hartem Kunststoffmaterial hergestellt ist; eine Bürste (25), die durch Anbringen an das Ende des Rohres (4) benutzt wird, um das Staubsaugen von Teppichen oder harten Bodenflächen zu ermöglichen; und, für Fälle, in denen die Bürste (25) nicht benutzt wird, ein oder mehrere Reinigungszubehöerteile unterschiedlicher Form oder Abmessung, die die Form des Saugmundstücks des Rohres (4) oder des Griffs (3) modifizieren; einen Zubehöerteilekasten (5), der abnehmbar unterhalb des Griffs (3) anbringbar ist, und einen hinteren Teil (6), einen Gehäusekörper (7) und eine Tür (9) umfasst, und der ein müheloses Hineinlegen oder Herausnehmen der Zubehöerteile der je nach Benutzungsreihenfolge und zusammen mit einem anderen Zubehöerteil erlaubt, derart, dass darin eine Platzoptimierung bereitgestellt ist, und dass er so klein und leicht wie möglich ausgebildet sein kann, und der vorzugsweise einen elliptischen Aufbau mit einem geschlossenen Volumen in Bezug auf Faktoren wie die Stelle, an der er angebracht ist, oder die Abmessungen der in ihm enthaltenen Zubehöerteile aufweist, **dadurch gekennzeichnet, dass** die Tür (9) einen oder mehrere Aufsatzvorsprünge (21) und Aufsatzbasen (22) zum Aufsetzen der genannten Zubehöerteile umfasst, die der Form, Anzahl und Position der Zubehöerteile entsprechen. 5 10 15 20 25 30 35 40
2. Staubsauger nach Anspruch 1, **dadurch gekennzeichnet, dass** der Zubehöerkasten (5) in Fällen, in denen die Bürste (25) nicht benutzt wird, unter den Zubehöerteilen unterschiedlicher Form oder Abmessung, die die Form des Saugmundstücks des Rohres (4) oder des Griffs (3) modifizieren, Folgende umfasst: eine Röhrendüse (10), die vorzugsweise direkt am Rohr (4) oder am Griff (3) angebracht werden kann, und eine Textildüse (11), die nach dem Anbringen an die Röhrendüse (10) benutzbar ist, und die derart angeordnet sind, dass zunächst die letztere (11) und dann die erstere (10) derart angeordnet sind, dass sie an im Inneren vorgesehenen Stützen ruhen, und wobei der genannte Kasten (5) einen Aufbau aufweist, bei dem zum Herausnehmen derselben zunächst die Röhrendüse (10) und dann die Textildüse (11) herausgezogen werden kann, und wobei seine Tür (9) mithilfe eines Verriegelungsme- 45 50 55

chanismus, der sich von außen bedienen lässt, während der Benutzung der genannten Zubehöriteile geöffnet oder geschlossen werden kann, ohne vom Gehäusekörper (7) getrennt zu werden.

3. Staubsauger nach den Ansprüchen 1 bis 2, **dadurch gekennzeichnet, dass** derjenige Abschnitt eines hinteren Teils (6), der zum Körper (7) hingewandt ist, mit einem oder mehreren Verbindungsnasen (12) und einer oder mehreren Befestigungsaussparungen (23) versehen ist.

4. Staubsauger nach den Ansprüchen 1 bis 3, **dadurch gekennzeichnet, dass** der Gehäusekörper (7) vorzugsweise eine hohle, elliptische Zylinderform aufweist, die der Form des Zubehöriteilekastens (5) entspricht; ohne Basisflächen, und Verbindungsaussparungen (31) umfasst, die in Form, Position und Anzahl der Verbindungsnase (12) entsprechen, Befestigungsvorsprünge (24), die in Form, Position und Anzahl den Befestigungsaussparungen (23) entsprechen, einen oder mehrere Führungsvorsprünge (16), vorzugsweise an gegenüberliegenden Positionen, vorzugsweise einen Stützvorsprung (19) und eine oder mehrere Verriegelungsaussparungen (13), die vorzugsweise am oberen und unteren Teil der schließenden Kante der Tür (9) vorgesehen sind, derart, dass der Benutzer diese leicht mit seinen Fingern öffnen kann; und am hinteren Teil (6) durch Einsetzen der Befestigungsvorsprünge (24) in die Befestigungsaussparungen (23) und der Verbindungsnasen (12) in die Verbindungsaussparungen (31) gesichert ist.

5. Staubsauger nach den Ansprüchen 1 bis 4, **dadurch gekennzeichnet, dass** die Tür (9) eine Schiene (17) umfasst, die so lang ist, wie dies vom Gehäusekörper (7) zugelassen wird, und die in der Mitte mit einem Kanal (18) versehen ist, in den der Führungsvorsprung (16) eintreten und sich vorzugsweise in eine Richtung bewegen kann, und in gleicher Anzahl vorgesehen ist wie die Führungsvorsprünge (16), Verriegelungsnasen (14), die in Anzahl, Position und Form den Verriegelungsaussparungen (13) entsprechen, und Stützaussparungen (20), die in Anzahl, Position und Form den Stützvorsprüngen (19) entsprechen.

6. Staubsauger nach den Ansprüchen 1 bis 5, **dadurch gekennzeichnet, dass** die Röhrendüse (10), die durch Anbringen an einen Griff (3) und an ein Rohr (4) benutzbar ist, eine Anbringungsseite (29), eine Saugseite (30), vorzugsweise jeweils einen Haltevorsprung (27) auf jeder Seite, und einen Anbringenvorsprung (28) umfasst, der kleiner und näher zum Endabschnitt hin angeordnet ist als der Haltevorsprung (27).

7. Staubsauger nach den Ansprüchen 2 bis 6, **dadurch gekennzeichnet, dass** die Textildüse (11), die nach dem Anbringen an die Röhrendüse (10) benutzbar ist, eine Anbringungsseite (29), eine Saugseite (30), und am Abschnitt, an dem die Röhrendüse (10) eingeführt wird, Anbringungsöffnungen (26) geeigneter Abmessung, Position und Anzahl zum Aufnehmen der Anbringenvorsprünge (28) an der Röhrendüse (10) umfasst.

Revendications

1. Un aspirateur comprenant un corps d'aspirateur (1) dans lequel l'unité de moteur réalise l'opération d'aspiration et l'unité de contrôle a sa place ; un tuyau flexible (2) de préférence en matière plastique, une poignée (3) reliée audit tuyau (2), de préférence en matière plastique et qui offre une facilité de manipulation pour l'utilisateur, une conduite (4) connectée à ladite poignée (3) et faite de métal ou de préférence en matière plastique dure, une brosse (25) utilisée en étant attachée à la extrémité de la conduite (4) afin d'effectuer le nettoyage des tapis ou des surfaces au sol dur, et dans les cas où ladite brosse (25) n'est pas utilisée, un ou plusieurs accessoires de nettoyage de diverses formes ou dimensions qui modifieraient la forme de la bouche d'aspiration des pièces de la conduite (4) ou de la poignée (3), une boîte d'accessoires (5), qui peut être fixée de manière amovible en dessous de la poignée (3) ; comprenant une partie arrière (6), un corps (7) et une porte (9) ; ce qui permet de placer ou retirer les accessoires facilement, selon l'ordre d'utilisation, et de les utiliser conjointement avec un autre accessoire de sorte qu'une optimisation de l'espace est fournie en elle et de sorte qu'elle peut avoir un volume et un poids aussi faibles que possible, de préférence à une structure elliptique avec un volume fermé à l'égard de facteurs tels que la place qui lui est attachée et les dimensions des accessoires qu'il contient, **caractérisé par** la porte (9) comprenant une ou plusieurs extensions de soutènement (21) et des bases de soutènement (22) pour placer ces accessoires, en conformité avec la forme, le nombre et la position des accessoires.
2. Un aspirateur, selon la revendication 1, **caractérisé par** la boîte d'accessoires (5) comprenant, dans les cas où ladite brosse (25) n'est pas utilisée, parmi les accessoires de différentes formes ou dimensions qui modifieraient la forme de la bouche d'aspiration des pièces de la conduite (4) ou de la poignée (3), à savoir un embout de tube (10) qui peut être de préférence directement sur la conduite (4) ou la poignée (3) et un embout de textile (11) qui peut être utilisé après avoir été attaché à l'embout de tube (10), qui sont tous les deux disposés d'abord en insérant le

deuxième (11), puis le premier (10) de telle manière qu'ils reposent contre les supports fournis à l'intérieur, et ladite boîte (5) présentant une telle structure que pour les prendre, tout d'abord l'embout de tube (10), ensuite l'embout de textile (11) sont autorisés à tour de rôle à être tiré hors de lui, et que sa porte (9) peut être ouverte ou fermée durant l'utilisation de ces accessoires, sans être séparés du corps (7) au moyen d'un mécanisme de verrouillage qui peut être commandé de l'extérieur.

3. Un aspirateur selon la revendication 1 ou 2, **caractérisé par** une partie arrière (6), dont la section, qui fait face vers le corps (7), est munie d'un ou de plusieurs verrous de connexion (12), et d'un ou de plusieurs évidements de fixation (23). 15
4. Un aspirateur selon les revendications de 1 à 3, **caractérisé par** le corps (7) de préférence à un creux, à la forme cylindre elliptique, en ligne avec la forme de la boîte d'accessoires (5) ; sans surfaces de base, comprenant des évidements de connexion (31) avec une forme, une position et un numéro conformes au verrou de connexion (12), des protubérances de fixation (24) avec une forme, une position et un numéro conformes aux évidements de fixation (23), une ou plusieurs saillies de guidage (16), ayant de préférence, des positions opposées, et de préférence une saillie de support (19) et un ou plusieurs évidements de blocage (13) disposés de préférence à la partie supérieure et aux parties inférieures de la porte (9) qui ferme le côté de sorte que l'utilisateur puisse l'ouvrir facilement en utilisant ses doigts ; qui est par ailleurs fixée à la partie arrière (6) par l'ajustement des protubérances de fixation (24) dans les évidements de fixation (23) et les verrous de connexion (12) dans les évidements de connexion (31). 20 25 30 35
5. Un aspirateur selon les revendications de 1 à 4, **caractérisé par** la porte (9) comprenant un rail (17) d'une longueur permise par le corps (7) et muni d'un canal (18) au centre, où la saillie de guidage (16) peut pénétrer et se déplacer de préférence dans une direction, au même numéro que celui des saillies de guidage (16), des loquets de verrouillage (14) d'un certain nombre, dont la position et la forme sont en ligne avec les évidements de blocage (13) et le soutien d'évidements (20) de mêmes nombre, forme et position que ladite saillie de support (19). 40 45 50
6. Un aspirateur selon les revendications de 1 à 5, **caractérisé par** l'embout de tube (10) qui peut être utilisé à la fois en étant attaché à une poignée (3) et à une conduite (4) ; comprenant un côté de fixation (29), un côté d'aspiration (30), des saillies d'arrêt (27) de préférence une de chaque côté, et une saillie de fixation (28) plus petite et plus proche de l'extrémité que la saillie d'arrêt (27). 55

7. Un aspirateur selon les revendications de 2 à 6, **caractérisé par** l'embout de textile (11) qui peut être utilisés après avoir été attaché à l'embout de tube (10) et qui comprend un côté de fixation (29), un côté d'aspiration (30) à la partie où l'embout de tube (10) est inséré, et les trous de fixation (26) de dimensions, positions et numéros appropriés pour recevoir les saillies de fixation (28) prévues sur l'embout de tube (10).

Figure 1

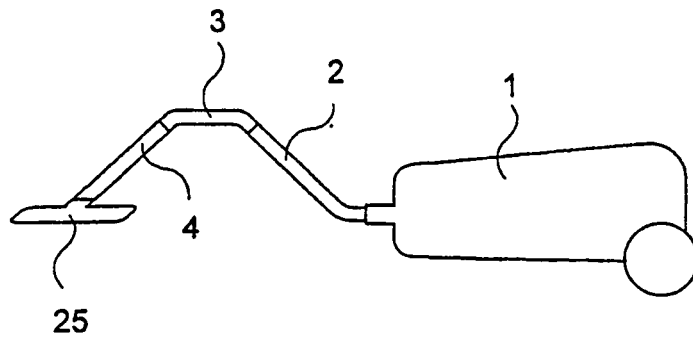


Figure 2

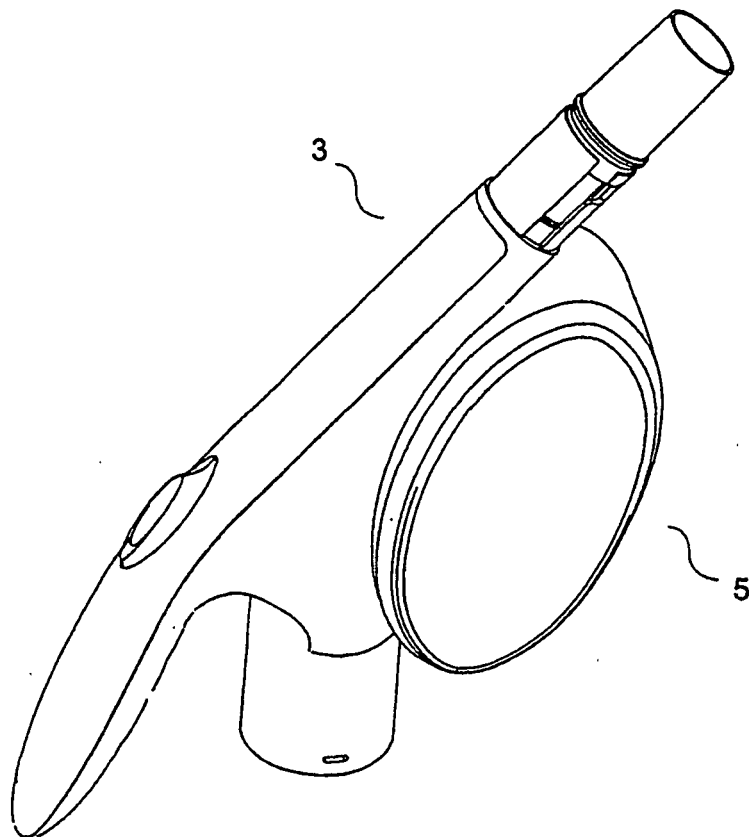


Figure 3

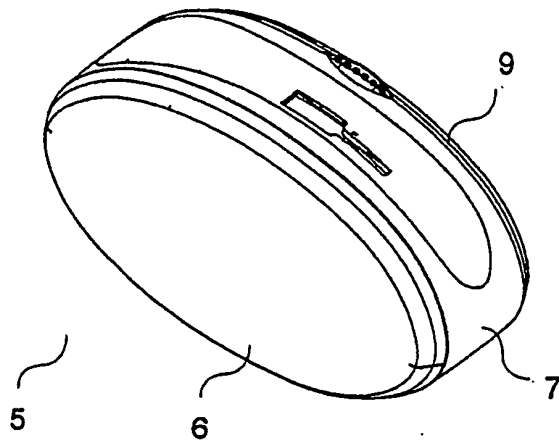


Figure 4

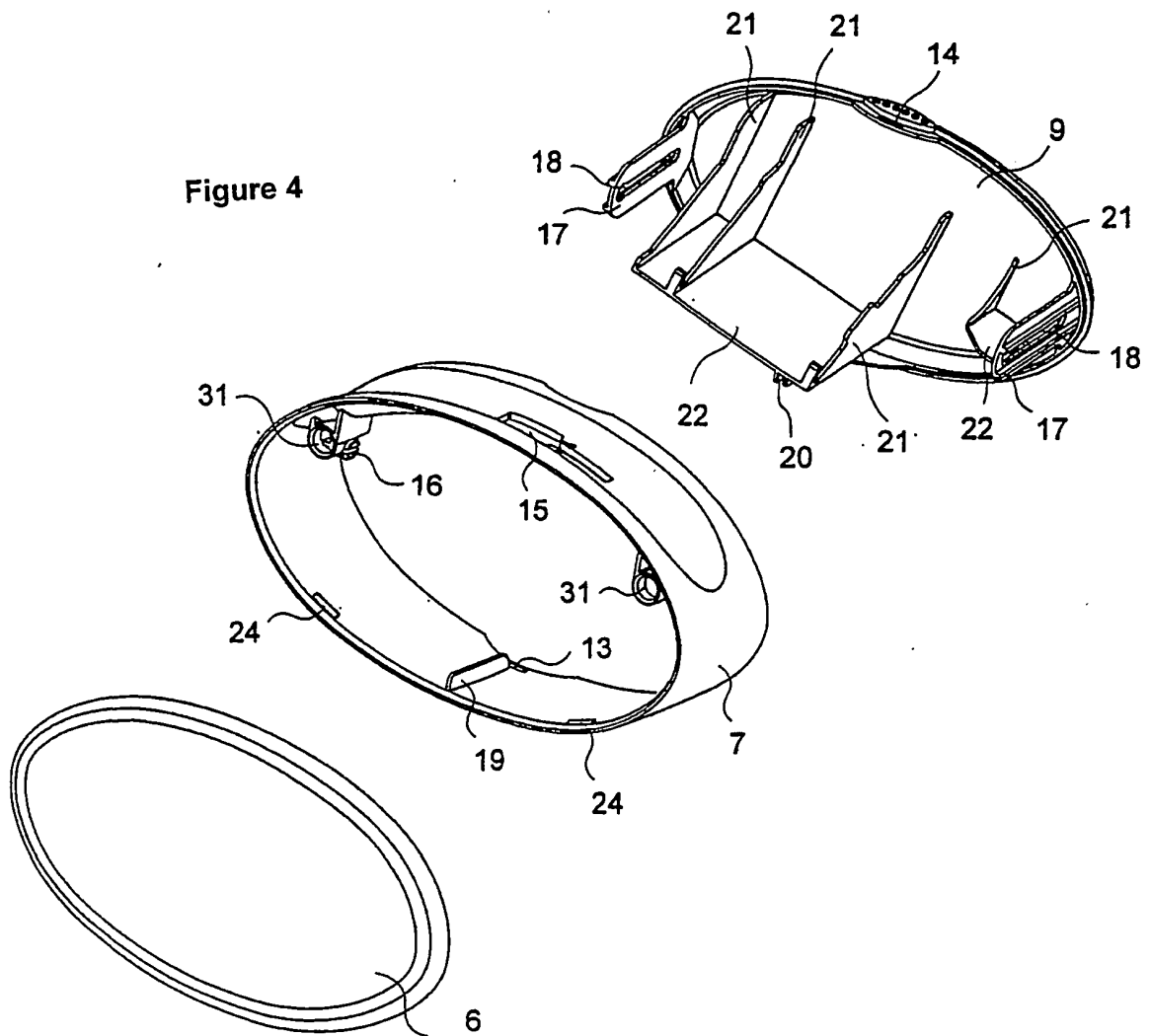


Figure 5

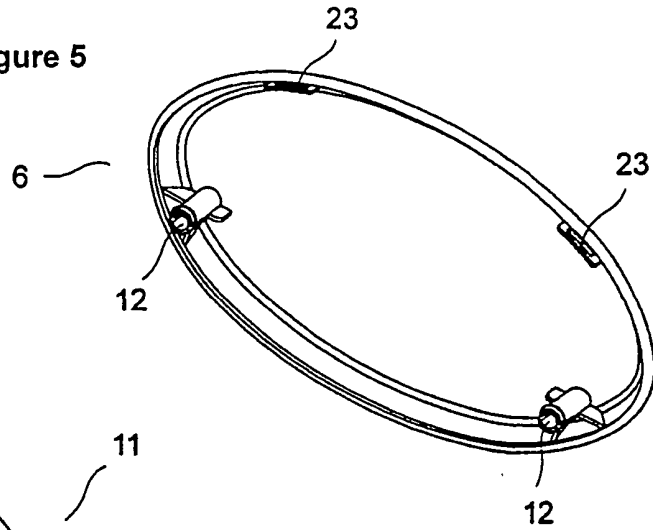


Figure 6a

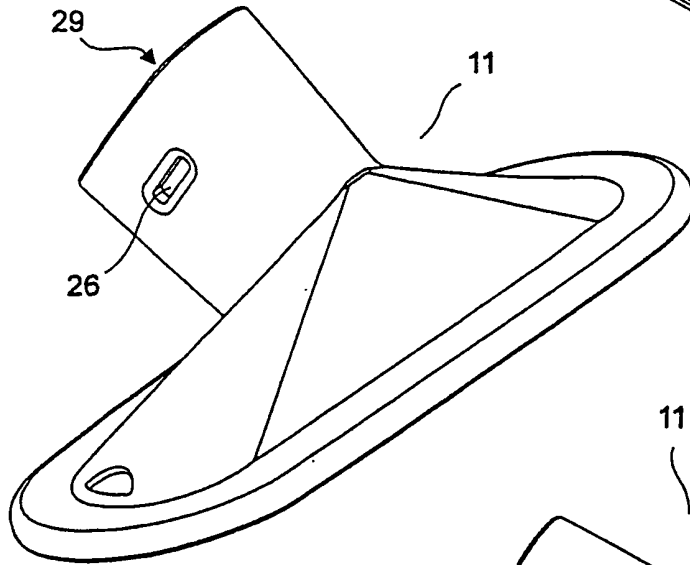


Figure 6c

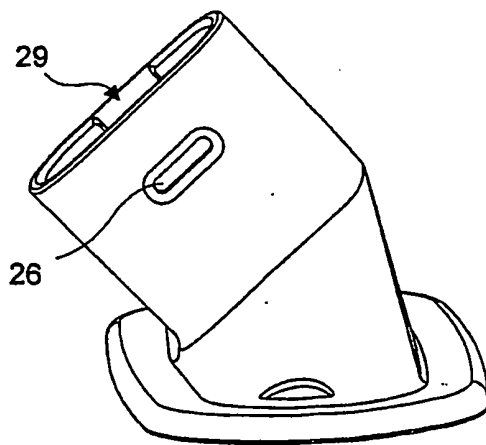


Figure 6b

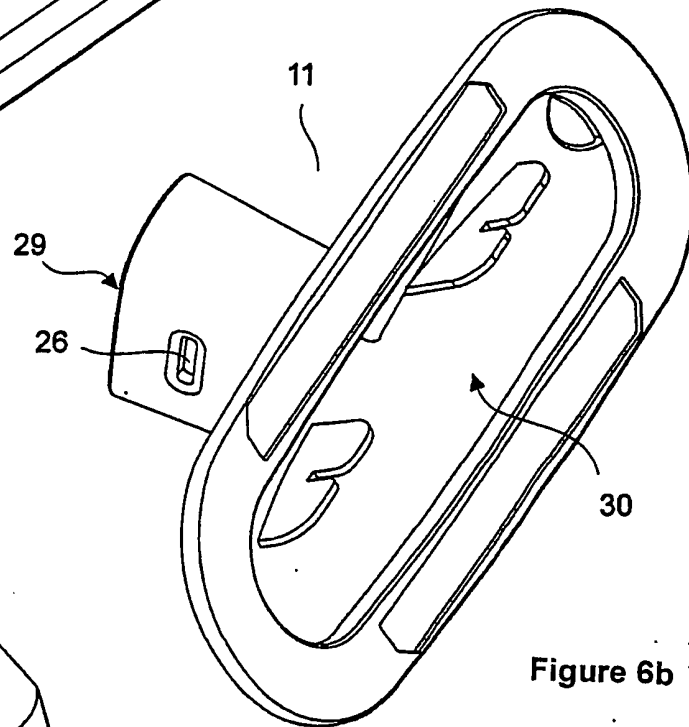


Figure 7a

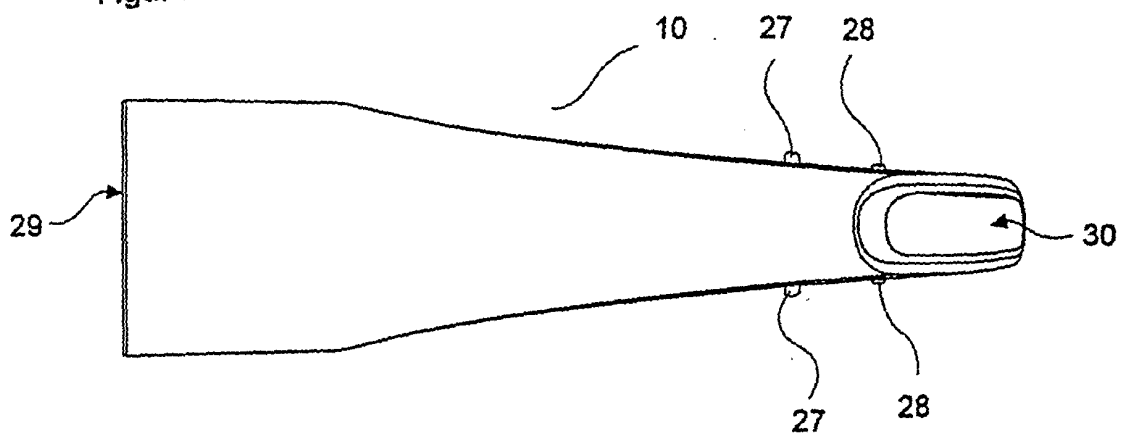


Figure 7b

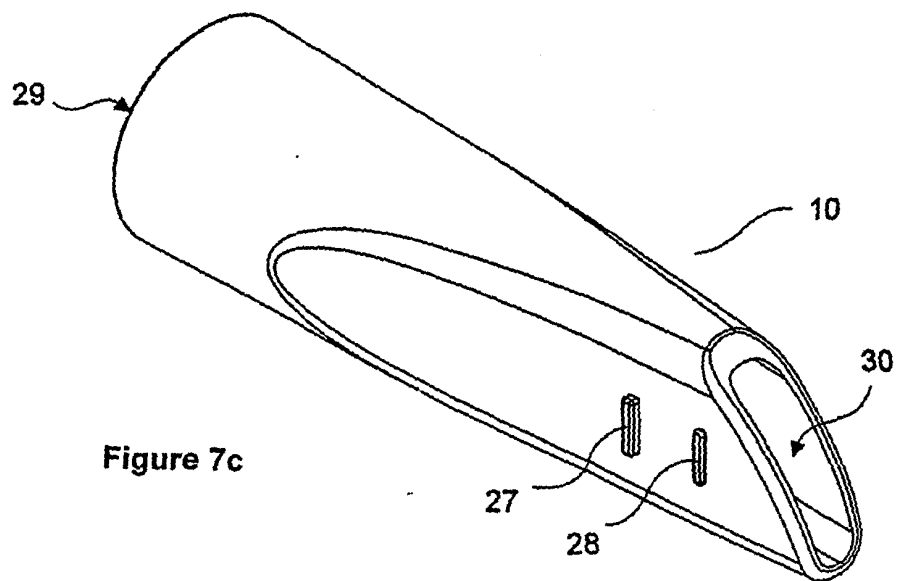
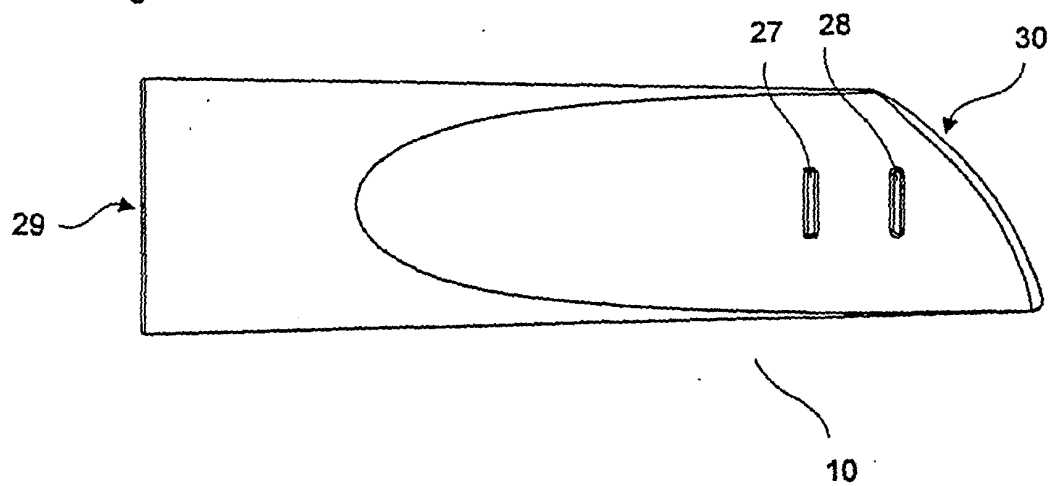


Figure 7c

Figure 8a

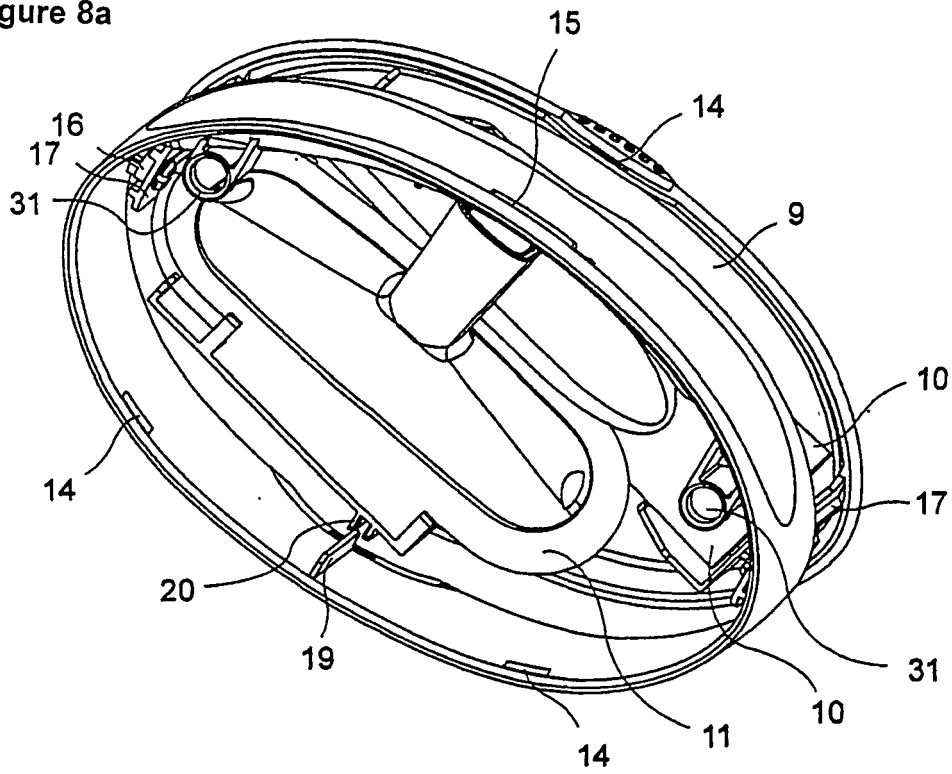
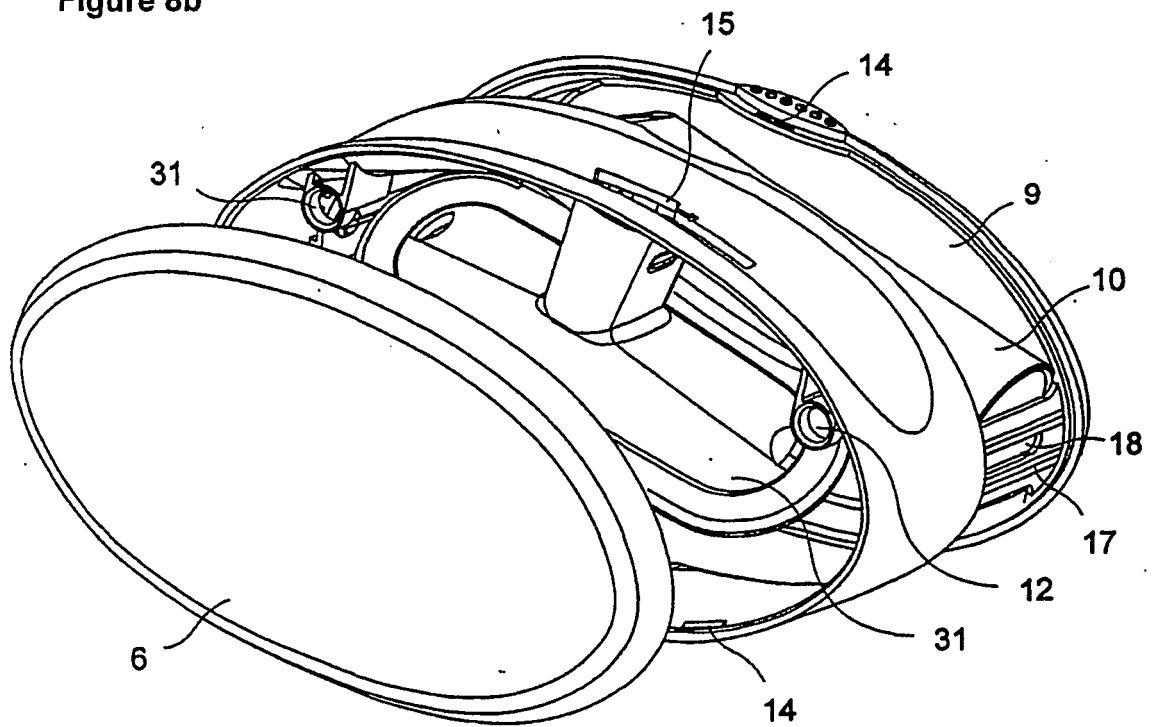


Figure 8b



REFERENCES CITED IN THE DESCRIPTION

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