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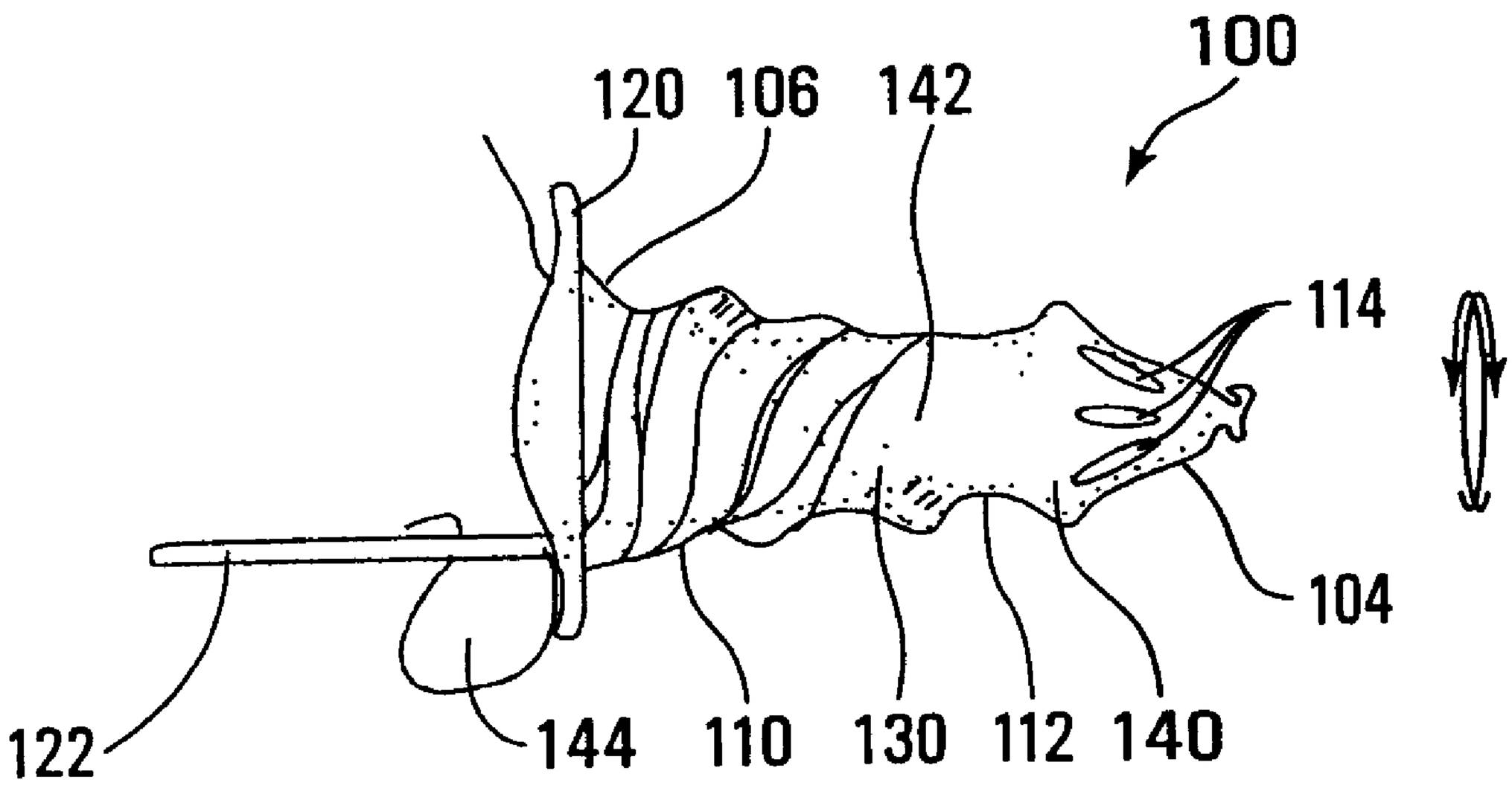
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(54) Titre : METHODE D'UTILISATION D'UN PRESERVATIF
(54) Title: METHOD OF USING CONDOM



(57) Abrégé/Abstract:
To use a loose-fitting condom, a penis or prosthesis is covered loosely with a condom having a loose-fitting portion. The loose-fitting portion is twisted so that the loose-fitting portion closely covers the penis or prosthesis. The loose-fitting portion is then secured in the twisted state. An external penile prosthesis is provided, which includes a generally tubular body portion and a head portion. The head portion can be rotatable about the central axis of the body portion or include a plurality of flaps swingably attached to the body portion for adjusting an opening between the flaps. Further provided is a combination of the prosthesis and a loose-fitting condom. The condom has a flexible sheath which has a loose-fitting portion sized for loosely covering a penis or the prosthesis. The combination may further include a holder for holding the loose-fitting condom in a twisted position.

ABSTRACT OF THE DISCLOSURE

To use a loose-fitting condom, a penis or prosthesis is covered loosely with a condom having a loose-fitting portion. The loose-fitting portion is twisted so that the loose-fitting portion closely covers the penis or prosthesis. The loose-fitting portion is then secured in the twisted state. An external penile prosthesis is provided, which includes a generally tubular body portion and a head portion. The head portion can be rotatable about the central axis of the body portion or include a plurality of flaps swingably attached to the body portion for adjusting an opening between the flaps. Further provided is a combination of the prosthesis and a loose-fitting condom. The condom has a flexible sheath which has a loose-fitting portion sized for loosely covering a penis or the prosthesis. The combination may further include a holder for holding the loose-fitting condom in a twisted position.

METHOD OF USING CONDOM

FIELD OF THE INVENTION

[0001] This invention relates generally to prophylactic devices and method of use, and more particularly to external penile prosthesis, combination of external penile prosthesis and loose-fitting condom, and method of using condom.

BACKGROUND OF THE INVENTION

[0002] Prophylactic devices such as condoms are widely used. They are useful for preventing pregnancy and sexually transmitted diseases (STD).

[0003] However, currently many users do not enjoy using condoms. For this reason, many people do not use condoms as often as they should, or not at all. Some problems with the conventional condoms and techniques for using them are that they may be uncomfortable to wear and inconvenient to use. For example, it can be difficult to put on a tight-fitting condom in a short time. Some users also find tight-fitting condoms are uncomfortable to wear. While loose-fitting condoms are known, they are not as popular as tight-fitting condoms because the conventional methods of using them are not enjoyable. They are also difficult to use for many users.

[0004] Another problem with the conventional condoms and many prophylactic devices is that they are not attractive to users and do not stimulate interests in users for using them.

[0005] A further problem with conventional prophylactic devices is that they are not easily adapted for use in a wide variety of sexual activities.

[0006] Yet another problem with conventional prophylactic devices is that they often have to be discarded after one use.

[0007] An additional problem with the conventional condoms and their use is that a user has to handle the condom during use which creates risks of contaminating the condom, and thus indirectly infecting a user.

[0008] Accordingly, there is a need for a prophylactic device and a method of using condom, which can overcome one or more problems discussed above.

SUMMARY OF THE INVENTION

[0009] In accordance with an aspect of the invention, there is provided a method of using a condom which includes covering a penis or prosthesis with a condom. A loose-fitting portion of the condom loosely covers a shaft portion of the penis or prosthesis. The loose-fitting portion has a first end and an opposite second end. The method further includes rotating the first end of the loose-fitting portion of the condom, while holding the second end or rotating the second end in an opposite direction, to twist the loose-fitting portion into a twisted state in which the loose-fitting portion closely covers the shaft portion. The loose-fitting portion of the condom is then secured over the shaft in the twisted state.

[0010] In accordance with another aspect of the invention, there is provided an external penile prosthesis. The prosthesis includes a generally tubular body portion extending about a central axis and having opposite first and second open ends for receiving the shaft of a penis therein, and a head portion attached to the first end of the body portion for covering the glans of the penis. The head portion extends along the central axis and is rotatable thereabout.

[0011] In accordance with a further aspect of the invention, there is provided an external penile prosthesis, which includes a generally tubular body portion extending about a central axis and having opposite first and second open ends for receiving the shaft of a penis therein, and a head portion attached to the first end of the body portion for covering the glans of the penis. The head portion includes a plurality of flaps. Each flap has a proximal end swingably attached to the body portion and a distal free end. The flaps are swingable about an edge of the first end of the body portion between a closed position and an open position. In the open position, the free ends of the flaps define an opening, and in the closed position, the opening is at least partially closed.

[0012] In accordance with another aspect of the invention, there is provided a combination including any one of the prostheses described in the previous two

paragraphs and a loose-fitting condom. The condom has a flexible sheath. The sheath has a closed end and an open end. The open end defines an opening for reception of a shaft having a central axis. The shaft is the penis of the user or the prosthesis. The sheath has a loose-fitting portion sized for loosely covering the shaft. The combination may further include a holder for holding the loose-fitting condom in a twisted position in which the sheath is twisted such that the loose-fitting portion of the sheath closely covers the shaft. The holder has an aperture sized for reception and engagement with the sheath over the shaft.

[0013] Other aspects and features of the present invention will become apparent to those of ordinary skill in the art upon review of the following description of specific embodiments of the invention in conjunction with the accompanying figures.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] In the figures, which illustrate, by way of example only, embodiments of the present invention,

[0015] **FIGS. 1A** and **1B** are respectively side and rear elevation views of a condom;

[0016] **FIG. 2A** is a side elevation view of a condom holder with a clamp in a folded position;

[0017] **FIG. 2B** is a top plan view of the holder of **FIG. 2A** with the clamp in an extended position;

[0018] **FIG. 2C** is a top plan view of the holder of **FIG. 2A** with a band;

[0019] **FIG. 3A** is a front elevation view of a retainer;

[0020] **FIG. 3B** is a side cross-sectional view of the retainer of **FIG. 3A** along the line **B**;

[0021] **FIG. 4** is a side elevation view of the combination of the condom of **FIG. 1A**, holder of **FIG. 2A** and retainer of **FIG. 3A** in use;

[0022] **FIGS. 5A** and **5B** to **20A** and **20B** are respectively side and rear elevation views of respective condoms;

[0023] **FIGS. 21** to **25** are top plan views of respective condom holders;

[0024] **FIG. 26A** is a front elevation view of another condom holder;

[0025] **FIG. 26B** is a side cross-sectional view of the holder of **FIG. 26A** along the line **B**;

[0026] **FIG. 27A** is a front elevation view of an elastic collar;

[0027] **FIG. 27B** is a side cross-sectional view of the collar of **FIG. 27A** along the line **B**;

[0028] **FIG. 28** is a side, partial cross-sectional view of a combination of a condom, the holder of **FIG. 26A**, and the collar of **FIG. 27A** in use;

[0029] **FIG. 29** is a side, partial cross-sectional view of a variation of the combination of **FIG. 28**;

[0030] **FIGS. 30A** and **30B** are side, partial cross-sectional views of respective combinations with two or three of the collar of **FIG. 27A** in use;

[0031] **FIG. 31** is a side elevation view of a combination of a condom and the collar of **FIG. 27A** in use;

[0032] **FIG. 32A** is a front elevation view of an extension cap;

[0033] **FIG. 32B** is a side cross-sectional view of the cap of **FIG. 32A** along the line **B**;

[0034] **FIG. 32C** is a side cross-sectional view of the cap of **FIG. 32B** in a folded position;

[0035] **FIG. 33** is a side, partial cross-sectional view of a combination including the cap of **FIG. 32A**;

[0036] **FIG. 34A** is a front elevation view of another extension cap;

[0037] **FIG. 34B** is a side cross-sectional view of the cap of **FIG. 34A** along the line **B**;

[0038] **FIG. 35A** is a side elevation view of another cap;

[0039] **FIG. 35B** is a side elevation view of the cap of **FIG. 35A** in a flattened position;

[0040] **FIG. 35C** is a front elevation view of the cap of **FIG. 35B**;

[0041] **FIG. 36A** is a front elevation view of a constriction ring;

[0042] **FIG. 36B** is a side cross-sectional view of the constriction ring of **FIG. 36A** along line **B**;

[0043] **FIG. 37A** is a front elevation view of a front frame;

[0044] **FIG. 37B** is a side cross-sectional view of the frame of **FIG. 37A** along the line **B**;

[0045] **FIG. 38A** is a front elevation view of a rear frame;

[0046] **FIG. 38B** is a side cross-sectional view of the frame of **FIG. 38A** along the line **B**;

[0047] **FIG. 39A** is a front elevation view of a housing member;

[0048] **FIG. 39B** is a side cross-sectional view of the housing member of **FIG. 39A** along the line **B**;

[0049] **FIGS. 40A** and **40B** are respectively rear and front elevation views of a condom package;

[0050] **FIG. 40C** is a side cross-sectional view of the package of **FIG. 40A** along the line **C**;

[0051] **FIG. 40D** and **40E** are side cross-sectional views of the package of **FIG. 40A** in use;

[0052] **FIGS. 41A** and **41B** are respectively rear and front elevation views of another condom package;

[0053] **FIG. 41C** is a side cross-sectional view of the package of **FIG. 41A** along the line **C**;

[0054] **FIG. 41D** and **41E** are side cross-sectional views of the package of **FIG. 41A** in use;

[0055] **FIGS. 42A** and **42B** are respectively rear and front elevation views of a further condom package;

[0056] **FIG. 42C** is a side cross-sectional view of the package of **FIG. 42A** along the line **C**;

[0057] **FIG. 42D** and **42E** are side cross-sectional views of the package of **FIG. 42A** in use;

[0058] **FIGS. 43A** and **43B** are respectively rear and front elevation views of another condom package;

[0059] **FIG. 43C** is a side cross-sectional view of the package of **FIG. 43A** along the line **C**;

[0060] **FIG. 43D** and **43E** are side cross-sectional views of the package of **FIG. 43A** in use;

[0061] **FIGS. 44A** and **44B** are respectively front and rear elevation views of a condom package;

[0062] **FIG. 44C** is a side cross-sectional view of the package of **FIG. 44A** along the line **C**;

[0063] **FIG. 44D** and **44E** are side cross-sectional views of the package of **FIG. 44A** in use;

[0064] **FIGS. 44F** to **44H** are side cross-sectional views of the package of **FIG. 44A** in storage;

[0065] **FIGS. 45** to **50** are respectively side cross-sectional views of different condom packages;

[0066] **FIG. 51A** is a side cross-sectional view of a condom package;

[0067] **FIG. 51B** is a magnified view of a portion of the package of **FIG. 51A**;

[0068] **FIG. 52** is a side elevation view of a condom in use for a female;

[0069] **FIG. 53** is a side elevation view of a condom in use for a male;

[0070] **FIG. 54A** is a side, partial sectional view of a condom combination in use;

[0071] **FIG. 54B** is a side, partial sectional view of the combination of **FIG. 54A** in a different position;

[0072] **FIG. 55A** is a front elevation view of a massager;

[0073] **FIG. 55B** is a side elevation view of the massager of **FIG. 55A**;

[0074] **FIG. 56A** is a front elevation view of a combination of the massager of **FIG. 55A** and a condom holder;

[0075] **FIG. 56B** is a side elevation views of the combination of **FIG. 56A**;

[0076] **FIG. 56C** is a side elevation view of the combination of **FIG. 56A** in a different position;

[0077] **FIG. 57** is a front elevation view of another massager;

[0078] **FIG. 58A** is a front elevation view of a fluid delivery tube;

[0079] **FIG. 58B** is a side cross-sectional view of the tube of **FIG. 58A** along the line **B**;

[0080] **FIG. 59A** is a front elevation view of a combination of the tube of **FIG. 58A** and a holder;

[0081] **FIG. 59B** is a side elevation view of combination of **FIG. 59A**;

[0082] **FIG. 60** is a side cross-sectional view of a prosthesis;

[0083] **FIG. 61A** is a front elevation view of a combination of the package of **FIG. 51A** and the prosthesis of **FIG. 60**;

[0084] **FIG. 61B** is a cross-sectional view of the combination of **FIG. 61A** along the line **B**;

[0085] **FIG. 62A** is a front elevation view of the combination of **FIG. 61A** in use;

[0086] **FIG. 62B** is a cross-sectional view of the combination of **FIG. 62A** along the line **B**;

[0087] **FIG. 63** is an exploded cross-sectional view of a combination including the condom of **FIG. 1A** and prosthesis of **FIG. 60**;

[0088] **FIG. 64A** is a rear elevation view of a combination including a prosthesis and two condoms;

[0089] **FIG. 64B** is a cross-sectional view of the combination of **FIG. 64A** along the line **B**;

[0090] **FIG. 64C** is a front elevation view of the combination of **FIG. 64A**;

[0091] **FIG. 65** is a rear elevation view of the prosthesis in **FIG. 64A** in a flattened position;

[0092] **FIG. 66** is a side cross-sectional view of a combination including a prosthesis and two condoms;

[0093] **FIG. 67A** is a rear elevation view of a combination including a prosthesis and two condoms;

[0094] **FIG. 67B** is a cross-sectional view of the combination of **FIG. 67A** along the line **B**;

[0095] **FIG. 67C** is a rear elevation view of the prosthesis in **FIG. 67A** in a

flattened position;

[0096] **FIG. 67D** is a cross-sectional view of the combination of **FIG. 67B** in a different arrangement;

[0097] **FIG. 68** is a side cross-sectional view of a combination including the prosthesis of **FIG. 60**;

[0098] **FIGS. 69**, **70A**, **70B**, **71**, **72A**, and **72B** are side cross-sectional views of respective combinations including respective prostheses;

[0099] **FIG. 73A** is a rear elevation view of a prosthesis;

[00100] **FIG. 73B** is a side cross-sectional view of a combination including the prosthesis of **FIG. 73A**;

[00101] **FIG. 73C** is a rear elevation view of the prosthesis of **FIG. 73A** in a flattened position;

[00102] **FIG. 73D** is a side cross-sectional view of the prosthesis of **FIG. 73C**;

[00103] **FIG. 74** is a side cross-sectional view of a combination including two prostheses;

[00104] **FIG. 75A** is a front elevation view of a prosthesis;

[00105] **FIG. 75B** is a cross-sectional view of the prosthesis of **FIG. 75A** along the line **B**;

[00106] **FIG. 75C** is a side cross-sectional view of a package including the prosthesis of **FIG. 75A** in a retracted position for storage;

[00107] **FIG. 75D** is a side cross-sectional view of the package of **FIG. 75C** in an extended position during use;

[00108] **FIG. 76A** is a rear elevation view of a package including a prosthesis;

[00109] **FIG. 76B** and **76C** are cross-sectional views of the combination of **FIG. 76A** along the line **B**, respectively in retracted and extended positions;

[00110] **FIGS. 77A** and **77B** are respectively front and rear elevation views of a combination including the package of **FIG. 42A** and prosthesis in **FIG. 76B**;

[00111] **FIG. 77C** is a cross-sectional view of the combination of **FIGS. 77A** and **77B** along the line **C**;

[00112] **FIGS. 78A** and **78B** are side cross-sectional views of a combination including an extendable prosthesis respectively in retracted and extended positions; and

[00113] **FIG. 79** is a side cross-sectional view of a combination including another extendable prosthesis.

DETAILED DESCRIPTION

[00114] An exemplary embodiment of the present invention relates to a method of using a loose-fitting condom. The method can be conveniently practised with a device described below. For example, the method can be practised with the combination of a loose-fitting condom and a condom holder.

[00115] An exemplary loose-fitting condom is illustrated in **FIG. 1A** and **1B**. Condom **100** has a flexible sheath **102** with a closed (front) end **104** and an open (rear) end **106** for reception of a user's penis or an external penile prosthesis (not shown, but see below and **FIG. 4**) through an opening **108**. Closed end **104** may be tapered and thickened. Sheath **102** may be elastic. Sheath **102** has a loose-fitting portion **110** sized for loosely covering a shaft portion of the penis or the prosthesis. Condom **100** has a non-loose-fitting, neck portion **112** between loose-fitting portion **110** and closed end **104**, which has a size for tightly fitting over an erected penis or a prosthesis. The tubular portion of sheath **102** may have a thickness from about 0.01 mm to about 2 mm. Neck portion **112** may be thicker than loose-fitting portion **110**. A number of projections **114** are formed on the external wall at closed end **104**, extending outwardly, the use of which will become apparent below. In different

embodiments, projections **114** can be conical projections or longitudinal ridges formed on the interior or exterior surfaces near or at closed end **104**. Condom **100** also has a number of flared lips **116** at open end **106**, flaring radially outward for attaching to or housing other components which will be described below. While condom **100** has three flared lips **116**, in alternative embodiments, the number of flared lips can be more or less. The thickness of a flared lip **116** may be similar or thicker than the wall thickness of sheath **102**.

[00116] Condom **100** can be made of any suitable material and in any suitable manner as can be understood by persons skilled in the art. For example, a material for making conventional condoms may be used. The condom may be made of a prophylactic material. The material may be flexible or elastic.

[00117] A surface of condom **100** may be coated or otherwise treated with a medicament, a lubricant, a contraceptive material, or any combination thereof.

[00118] An exemplary condom holder **120** is illustrated in **FIGS. 2A** and **2B**. Holder **120** can be attached to condom **100** in any suitable manner, such as to a flared lip **116** at open end **106**.

[00119] Holder **120** can have a clamp **122** which is foldable when not in use, as shown in **FIG. 2A**. As shown in **FIG. 2B**, clamp **122** defines a generally C-shaped notch for receiving a user's body part (not shown) when clamp **122** is unfolded or extended. Thus, clamp **122** can be used to attach holder **120**, and hence the condom attached to holder **120**, to a user's body during use.

[00120] As illustrated in **FIG. 2C**, in an alternative embodiment, clamp **122** may be replaced with a band **124**. Band **124** can be elastic. A pad **126** may be attached to band **124**, the use of which will become apparent below. Pad **126** may be made of a firm material.

[00121] An adhesive material may be applied to a surface of holder **120** for attaching it to a user.

[00122] One or more soft absorbent sealing pads (not shown) may also be

attached to holder **120**, such as near its outer periphery, for attaching the holder to a user.

[00123] The side of holder **120** that is in contact with the user during use may be contoured such that the contoured surface is in substantial conformity with the surface of the user's body it contacts.

[00124] Holder **120** may be made of any suitable material and may have any desirable shape. For example, holder **120** may be rigid, semi-rigid, or spongy. The material may also be absorbent. A person of skill in the art can readily construct a suitable holder **120**.

[00125] An exemplary retainer ring **130** is illustrated in **FIGS. 3A** and **3B**. Retainer ring **130** is generally ring-shaped and has a central aperture **132** sized for reception and engagement of sheath **102** of condom **100** over a penis or prosthesis. Retainer ring **130** has a number of holes **134**, the use of which will be described below. As depicted, the distance from the outer periphery of ring **130** to the centre may vary.

[00126] Retainer ring **130** may be made of any suitable material and have any suitable shape and size. For example, ring **130** may be elastic and can be deformed such as shown by the ghost lines in **FIG. 3A**. A suitable retainer ring can be readily constructed by a person skilled in the art.

[00127] In use, condom **100** can be used to cover a user's penis or a prosthesis, as described below in accordance with the exemplary method of using a condom.

[00128] As illustrated in **FIG. 4**, condom **100** is attached to holder **120**. Condom **110** covers a penis **140** (shown in ghost line) in a twisted state, in which loose-fitting portion **110** of condom **100** is twisted and closely covers penis **140**. To do so, penis **140** is inserted into condom **100** through the opening at open end **106**. Initially, loose-fitting portion **110** loosely covers a shaft portion **142** of penis **140**. One end (e.g. the closed or front end **104**) of sheath **102** can be rotated about a central axis of penis **140** while the other end (e.g., the rear

and closed end **106**) of sheath **102** is held in place or rotated in an opposite direction (as indicated by the arrows), to twist loose-fitting portion **110** into the twisted state. Projections **114** and holder **120** can be used to facilitate the twisting motion. Loose-fitting portion **110** is then secured over penis shaft **122** in this twisted state, such as with the use of holder **120**, which can be attached to a user's body. As shown, open end **106** of condom **100** is attached to holder **120** which can be clamped to the user's body. For instance, clamp **122** can be clamped around the user's scrotum **144**, between the thighs and against the perineum. The user may squeeze clamp **122** lightly when needed to keep holder **120** in place for holding condom **100**.

[00129] As can be appreciated, the loose-fitting portion of the condom can also be secured, at least in part, using a user's body. For example, the condom may be held in position with the fingers of a user. When the condom has a tight-fitting portion, the friction between the tight-fitting portion and the shaft may be sufficient to prevent unintentional rotation of the tight-fitting portion, thus keeping the condom in the twisted state.

[00130] Ring **130** is placed inside condom **100** (shown in ghost line) for stimulation purposes. However, as will be further explained below, retainer ring **130** may also be placed outside sheath **102** for holding condom **100** in the twisted state.

[00131] Conveniently, projections **114** may also provide stimulation to the user or the user's partner. Holder **120** also makes it easier to handle condom **100**. For example, with holder **120**, direct contact between sheath **102** and a user during handling of condom **100** can be reduced or avoided, as can be understood by a person skilled in the art.

[00132] As can be appreciated, by twisting the condom, it is possible to adjust the length and width of the condom, and to release air trapped at the front end of the condom. When the loose-fitting portion is twisted, it fits better with the contour of the penis or the prosthesis, which may be preferred by some users.

[00133] The use of retainer ring **130** is optional. It may be used to create different twisting forms of condom **100**, such as by placing it in different positions over the penis. The size of retainer ring **130** may also vary for this purpose. When the twisting form or shape of the condom is varied, the user may experience different sensations during use. Since the twisting form/shape of the condom can vary, it may create a mysterious effect and thus increase the user's enjoyment or pleasure in using it. The mysterious effect can also be created by placing in condom **100** a different object, such as a prefabricated jacket with un-even surfaces. The jacket may be made of any suitable material including paper.

[00134] While not shown in **FIG. 4**, clamp **122** may be replaced by band **124** and pad **126**. Pad **126** may be placed behind the scrotum **144** for securing and stabilizing holder **120**. For a female user, clamp **122** may be replaced with a band (not shown) which can be tied around the user's waist.

[00135] As can be understood, the twisting method of using condom described above can also be practised when the user wears an external penile prosthesis over his penis. The prosthesis can be covered with the loose-fitting condom. The shaft portion of the prosthesis may be covered by the loose-fitting portion of the condom similarly to the penis shaft. A prosthesis disclosed herein can be advantageously used, as will be further described below.

[00136] Other types of loose-fitting condoms can also be used. Exemplary alternative condoms are illustrated in **FIGS**. **5A** and **5B** to **20A** and **20B**. As can be seen, the condoms can have various sizes and shapes. For example, the opening at the open end of the condom may have a relatively large diameter, such as larger than that of the shaft portion to be received therein. The large opening can be large enough for receiving the scrotum of a user. Condoms with large openings are shown in **FIGS. 1A** and **1B**, and **5A** and **5B** to **14A** and **14B**. Optionally, the condom may have a pocket (not shown) near the open end for receiving and retaining a scrotum therein during use, as will be further described below. Alternatively, the opening at the open end may have a medium diameter, such as similar to that of the shaft portion. Condoms with medium openings are

shown in **FIGS. 15A** and **15B** to **18A** and **18B**. The opening at the open end may also be relatively small, such as substantially smaller than that of the shaft portion. Condoms with small openings are shown in **FIGS. 19A**, **19B**, **20A** and **20B**. For example, the small opening, such as in each of condoms **290** and **300**, may have a diameter of about 0.5 mm.

[00137] As can be seen, the open end of a condom with a medium or small opening can have a bottle-neck-like shape, as defined by the flared-lip portion. The bottle-neck portion of the condom sheath, which is adjacent or at the open end, can fit closely over a base portion of the shaft of the penis or prosthesis. The bottle-neck portion should be elastic and the opening may have an initial or natural diameter substantially smaller than that of the base portion of the shaft so that the bottle neck-portion can be in sealing and frictional engagement with the base portion of the shaft.

[00138] In some embodiments, the initial diameter of an opening at a flared lip can be, for example, more than about 0.3 in.

[00139] The bottle-neck portion may be of different uses. For example, it may be used for storing the loose-fitting and front portions of the condom when not in use. It may be used to prevent fluid leakage during use. When used by a female user, it may serve as a soft guard, for example when the female user has recently given birth. It may also help securing the condom in place during use. With the bottle-neck having a small opening, when a shaft is inserted into the condom, the bottle-neck can expand radially outwardly from the relaxed position and thus a large radial pressure can be exerted on the condom and the shaft received in the condom, for holding the condom in place.

[00140] Further, as in condom **100**, a condom sheath may have a non-loose-fitting portion, or an elastic neck portion between the loose-fitting portion and the closed end, such as shown in **FIGS**. **1A**, **8A**, **9A**, **12A**, **13A**, **14A**, **17A**, **19A**, and **20A**. The neck portion can be sized for close-fit over and frictional engagement with a head portion of a penis or prosthesis.

[00141] As shown in some of the figures, the sheath of a condom may

have a portion which has varying internal and/or external diameters for increased stimulation of a user during use.

[00142] In different condoms, the number of flared lips can vary. Different flared lips may have different thickness, such as shown in **FIGS. 6A**, **15A** and **16A**. A flared lip may be thicker than a tubular portion of the sheath adjacent the flared lip.

[00143] **FIG. 16A** and **16B** illustrate a dual-condom **260**, where two condom sheaths **262** and **264** are integrally formed on a same backing sheet. The open ends of sheaths **262** and **264** are positioned close to each other. As can be understood, condom **260** is suitable for simultaneous vaginal and anal use. During use, sheath **262** or **264** may be twisted as described above.

[00144] **FIG. 21** illustrates an alternative condom holder **310**, which has a flat back side **312** and a curved front side **314**. Elastic bands **316** are attached to back side **312** for securing holder **310** in place during use. Bands **316** can be attached to flange **310** with a fastener such as a clamp or an adhesive material. An adhesive can be applied to backside **312** for attaching holder **310** to a user. The adhesive can be a medical adhesive. A condom **318** (shown in ghost line) can be attached to holder **310**.

[00145] **FIG. 22** illustrates another holder **320**, which has a frame **322** and an elastic front wall **324**. Elastic bands **326** are attached to frame **322**. A condom **328** (shown in ghost line) can be attached to holder **320**. Frame **322** and front wall **324** are curved to conform to the body of a user.

[00146] **FIG. 23** illustrates a holder **330**, which is a variation of holder **320**. Holder **330** also has a frame **332** and an elastic front wall **334**, but their central portions are flat, instead of curved.

[00147] **FIG. 24** illustrates a holder **340**, which is also a variation of holder **320**. Holder **340** has a frame **342**, a front wall **344** and a constriction ring **346** attached to front wall **344**. The structures, use and benefits of constriction rings will be described below.

[00148] **FIG. 25** illustrates a holder **350** which has a flat frame **352** and attachment members **354** attached to frame **352**. Each member **354** has a curved surface **355** for conforming to the body of a user. Elastic bands **356** and an elastic front wall **358** are respectively attached to frame **352**.

[00149] **FIGS. 26A** and **26B** illustrate a further alternative condom holder, which includes a frame or flange **360**. Flange **360** may have a generally disk-like shape or hemispherical shape. Flange **360** has a central opening or aperture **362** sized for receiving a condom over a penis or prosthesis. Aperture **362** typically has a diameter larger than the diameter of the shaft to be received therein. For example, the central opening may have a size of about 1.5 inches to 15 inches. Bands or straps **364** are attached to flange **360** for securing or holding the flange, and therefore the condom attached to it, in place. Straps **364** can be an elastic band. Straps **364** may be attached to flange **360** with a fastener such as a clamp or an adhesive material.

[00150] In different embodiments, different straps can be used. For example, the strap can be an elastic band. A pad (not shown) may be attached to straps **364** for being placed behind the scrotum of the user so as to secure the condom in place, similar to band **124** and pad **126** shown in **FIG. 2C**.

[00151] One or more soft absorbent sealing pads may also be attached to flange **364**, such as adjacent an outer periphery of the flange, for attaching the flange to a user.

[00152] A side of flange **360** that is in contact with the user during use may be contoured such that the contoured surface is in substantial conformity with the surface of the user's body it contacts.

[00153] Flange **360** can also be used for handling a condom attached to it. To facilitate handling, a radially outward-facing surface adjacent the outer periphery of flange **360**, such as surface **366**, may be slip-resistant. The surface may be made of or coated with a non-slippery material, or may be roughened.

[00154] Flange **360** may be made of a semi-rigid or rigid material and can

be readily constructed by a person skilled in the art.

[00155] As now can be understood, straps **364** are optional and may be omitted or replaced by another securing member such as a hook, a clamp, a loop, a ring, or an adhesive tape. The adhesive tape can be a medical adhesive tape. Flange **360** may also have an adhesive surface for attachment to the user.

[00156] **FIGS. 27A** and **27B** illustrate a further alternative condom holder, a collar **370**. Collar **370** is elastic and has an aperture **372** sized for reception and engagement with sheath **102** of condom **100** over a penis or a prosthesis. Small openings **374** are provided near the outer peripheral of collar **370** for releasing trapped air.

[00157] As can be appreciated, collar **370** and retainer ring **130** can be similarly structured. In use, one of them may be substituted by the other. The depicted collar **370** or retainer ring **130** is generally ring-shaped, but they may have a different shape.

[00158] Collar **370** may be placed outside a condom to hold the condom in a twisted state, as illustrated in **FIG. 28**.

[00159] As illustrated in **FIG. 28**, a condom **380** can be twisted from a loose state (shown in the ghost outline) into a twisted state (shown in solid line) and closely cover a shaft (not shown). As shown (in dotted line), condom **380** can be twisted into a spiral shape. Collar **370** is placed over condom **380** in its twisted state such that a portion of condom **380** is received in the central aperture of collar **370** so as to hold condom **380** in the twisted state. The aperture can be sized such that collar **370** abuts condom **380** against the shaft to retain condom **380** in the twisted state by friction. Collar **370** may be placed close to the front end or the rear end, or at the middle of condom **380**. As can be understood, when collar **370** is placed at the middle, condom **380** may be twisted into a twin-spiral shape, such as by rotating collar **370**, or twisting both ends of condom **380** in the same direction.

[00160] Condom **380** can be attached to flange **360**. Flange **360** can be

strapped to a user with straps **364**.

[00161] As illustrated in **FIG. 29**, collar **370** may be placed inside a condom **382** for female use. As illustrated, for female use, the orientation of flange **360** may also be reversed so that straps **364** are on the same side as condom **382**.

[00162] A number of collars with same or different sizes or shapes may be provided. They may be color coded. That is, each collar may have a distinct color for ease of identification or for stimulating user interest.

[00163] As is apparent, two or more condom holders can be used simultaneously. For example, two or more collars **370** can be used as illustrated in **FIGS. 30A** and **30B**, wherein two or three collars **370** are respectively placed inside a condom and, for example, over penis **140**.

[00164] As illustrated in **FIG. 31**, collar **370** can be placed inside a condom **302** in a twisted state, near the open end or at the base portion of the shaft (not shown) received in the condom.

[00165] **FIGS. 32A** to **32C** illustrate an extension cap **390** which has a central web **392** defining a central opening **394**. It also has a number of foldable, fan-like flaps **396** extending radially from central web **392**. Cap **390** has a radially contoured surface. Extension cap **390** is normally in a flat position as shown in **FIG. 32B** but foldable flaps **396** can be bent or folded towards the central axis, as illustrated in **FIG. 32C**. Each flap **396** may have a thickened tip **398**. Extension cap **390** can be sized so that it can be received within a condom. As can be seen in **FIG. 32B**, opening **394** can be shaped such that it forms a fluid chamber defined by central web **392** for storing a body fluid discharged by a user during use.

[00166] In use, extension cap **390** can be placed inside a condom. As illustrated in **FIG. 33**, cap **390** may be placed inside a condom **150** for expanding and holding condom **150** in a vagina. Extension cap **390** may also be used as a penis extension, for twisting the condom, or for stimulating a user

(also see **FIGS. 40D** and **40E**). Conveniently, trapped air can be released through central opening **394**. A fluid discharged by a user may be temporarily stored in opening **394**.

[00167] **FIGS. 34A** and **34B** illustrate another extension cap **400** which is similar to cap **390** but has a naturally tapered shape and projecting lips **402**, instead of flaps. Further, each lip **402** has a through hole **404**. Each hole **404** may be sized to allow a foreign object, such as a user's finger, to apply pressure on the covered shaft during use. Holes **404** may also be used for releasing trapped air or for trapping discharged bodily fluid.

[00168] **FIGS. 35A** to **35C** illustrate yet another cap **410**. Cap **410** has a central hole **412** for releasing trapped air, a cavity **414** for trapping semen, weakened portions **416** for easy flattening, and sidewall windows **418** for contacting a covered shaft (not shown) during use. As illustrated in **FIG. 35B**, cap **410** can be flattened along the weakened portions **416** for easy storage. Cap **410** may be used as a penis extension or finger extension, to retain a condom in a vagina, or even as a prosthesis, as can be understood by a person skilled in the art.

[00169] For convenience of use and to stimulate user interest, a number of extension caps, such as caps **390, 400,** and **410**, may be provided within a condom package. The caps may have different colors. For example, the caps may have different sizes or shapes and are color-coded, that is, each cap has a distinct color for identification purposes. For instance, blue and pink colors may be respectively used to indicate that it is for a male user or a female user.

[00170] **FIG. 36A** and **36B** show a constriction ring **420**. Ring **420** has two layers of elastic sheets **422** and **424** at opposite ends, which are joined at a central portion **426**. Each layer **422** or **424** may have a thickness of about 1 mm. The total thickness of ring **420** may be about 5 or 7 mm. Ring **420** has a central opening **428** for receiving a penis covered with a condom therethrough. Opening **428** may have a diameter of about 10 mm. It may also have a narrowed portion **430**. The thickness of each layer may gradually increase towards opening **428**. Ring **420** is elastic and opening **428** is sized to frictionally

engage a condom over a penis received therein. Layer **424** defines four peripheral openings **432** for aiding the handling of ring **420**. For example, openings **432** can be sized to allow insertion of a human finger for stretching central opening **426**. Layer **422** may have an attachment member **434** for attaching ring **420** to, for example, flange **360** or another holding and handling component, as will be further described below.

[00171] A layer, such as layer **424**, of constriction ring **420** may have projections (not shown) thereon extending outwardly, for stimulating a female user.

[00172] An additional layer of elastic sheet (not shown) may be attached to rear layer **422** near the outer periphery. The additional layer may have a central aperture having a diameter of about 6 mm and have a thickness similar to the thickness of a condom sheath.

[00173] Constriction ring **420** can be constructed with any suitable material and in any suitable manner, which will be understood by persons skilled in the art after reviewing this paper.

[00174] In use, constriction ring **420** can be placed on a condom covering a penis, for example, in a similar manner as for collar **370** described above. However, the central opening of constriction ring **420** is relatively small and it may be used for maintaining penis erection, delaying premature ejaculation, and holding the condom in place. The use of constriction ring **420** will be further illustrated below.

[00175] **FIG. 37A** and **37B** illustrate a front frame **440**, which can be used in combination with flange **360**. Frame **440** has an outer frame **442**, front and back elastic sheets **444A** and **444B** (also collectively or individually referred to as **444**). Frame **440** defines a central opening **446**. Frame **440** may be attached to flange **360**.

[00176] The thickness of sheets **444** may be determined depending on the desired radial tension on the perimeter of the penis. The thickness of a sheet

444 may also vary from the perimeter to the center, such as thinner at the center.

[00177] In different embodiments, several concentric elastic rings (not shown) of different sizes may be formed on elastic sheets **444**.

[00178] More than two sheets **444** may be provided, which may also have different central aperture sizes, or have different elasticity. However, it may be advantageous to have two sheets with concentric central apertures of different diameters. For example, one aperture may have a diameter of about 0.5 in and the other may have a diameter of about 0.75 in.

[00179] **FIGS. 38A** and **38B** illustrate a rear frame **450**, which can be used in combination with flange **360**. Frame **450** has an outer frame **452**, front and back elastic sheets **454A** and **454B** (also collectively or individually referred to as **454**). Frame **450** defines a central opening **456**.

[00180] Sheets **454** may be similarly to or modified from sheets **444**. However, the central apertures may have different sizes. For example, the central apertures of sheets **454** may be larger.

[00181] Frames **440** and **450** may be attached to flange **360**, respectively on the front and rear sides of flange **360**, wherein their central openings **446** and **456** are substantially co-axial. Both central openings **446** and **456** may be sized for frictional engagement with a condom covering a penis received therein.

[00182] Constriction ring **420** can also be attached to frame **440** or **450**.

[00183] **FIGS. 39A** and **39B** illustrate an annular housing member **460**, which can be used in combination with other components described herein including flange **360**. Housing member **460** has a generally ring-shaped outer frame **462**, which defines a groove **464** and a central opening **466**. An attachment member **468** is provided on outer frame **462** for attaching housing member **460** to flange **360**. Housing member **460** may be attached to flange **360** so that their central openings are substantially co-axial.

[00184] Housing member **460** can be made of any suitable materials and in a suitable manner readily understood by persons skilled in the art.

[00185] Groove **464** may be used for storing a condom prior to use and for holding the condom during use. For example, a flared lip or a rim at the open end of a condom may be received in groove **464**. The condom may also be rolled-up and substantially stored in groove **464** as can be readily appreciated by persons skilled in the art.

[00186] The use of frames **440** and **450** and housing member **460** will be further described below.

[00187] An exemplary embodiment of the present invention is a condom package **470** shown in **FIGS**. **40A** to **40C**.

[00188] Package **470** includes a rear shielding sheet **472** and a front shielding sheet **474**. Sheet **472** has an opening **473**. Sheet **472** can be double-folded while sheet **474** can be a single layer. A condom combination is enclosed in package **470** between sheets **472** and **474**. Components of the combination may vary. As depicted, the combination includes a flange **360**, a condom **220A** attached to flange **360** at its open end, and a cap **390**. An optional second condom (not shown but see **FIG. 40D**) may be included.

[00189] Sheets **472** and **474** can be flexible or elastic. They shield the condom combination from contamination or damage before use. Sheet **472** may be sufficiently large for easy handling and for covering an adhesive portion at backside of flange **360**.

[00190] During use, sheets **472** (if it has no opening) and **474** can be pierced to allow a penis or prosthesis to go through. Sheet **472** may be removed during use, for example, to expose the adhesive portion of flange **360** so that it can be attached to a user.

[00191] During use, sheets **472** and **474** can also shield a user's skin adjacent the user's genital from contacting the condom or another user's skin.

[00192] While one shielding sheet may be omitted, providing two sheets, each for shielding one of the open and closed ends of the condom, may be advantageous as they provide better and convenient shielding.

[00193] As shown in **FIGS. 40D** and **40E**, after condom **220A** is put on a penis (not shown), condom **220A** can be twisted into a twisted state as described above. As shown by the dotted lines, condom **220A** can be twisted to form wrinkles. An additional holder such as front frame **440** may be placed over the twisted condom **220A** for holding condom **220A** in the twisted state. As shown in **FIG. 40D**, an additional condom **220B** may be provided to cover condom **220A**.

[00194] **FIGS. 41A** to **41C** illustrate another package **480**. Again, a condom combination is enclosed between shielding sheets **482** and **484**. A condom **486** and two caps **390** are provided, one inside and one outside condom **486**. Instead of a flange, condom **486** is attached to two separated holding and handling segments **488**, adjacent the opening at its open end.

[00195] In use, sheet **484** may be removed as shown in **FIGS. 41D** and **41E**. A penis (not shown for clarity) may be inserted into condom **486** from the left hand side as shown in **FIG. 41D**, through sheet **482** (not shown). Alternatively, the penis may be inserted into condom **486** from the right hand side, as shown in **FIG. 41E**. In either case, holding and handling segments **488** may be attached to a user for holding condom **486**. Depending on the direction of insertion, the users may choose to whom the segments will be attached. When used as a male condom, condom **486** may be twisted as shown by the dotted lines in **FIG. 41D**. Condom **486** may also be used as a female condom as shown in **FIG. 41E**.

[00196] **FIGS. 42A** to **42C** illustrate a further condom package **490**. It has shielding sheets **492** and **494** enclosing a dual condom **496** which has two sheaths **498** and **499**. Shielding sheet **492** may be used as a pulling tab. The open ends of sheaths **498** and **499** are near each other and may be spaced differently for different uses and applications. The closed ends of sheaths **498** and **499** can extend towards the same or opposite directions. Package **490** also

includes three caps **390**.

[00197] In use, sheaths **498** and **499** can be used simultaneously, for example, as shown in **FIGS. 42D** and **42E**, or one after another. A person skilled in the art can readily understand the use and operation of condom **496**. For example, the two sheaths can be used one after the other for two separate sexual activities including oral sex, in quick secession. The sheaths can be used hygienically. The top condom sheath **498** can be used either by a female or a male user, and the bottom sheath **499** can be used as an anal condom. The three caps **390** may have different colors for indicating their use. For example, the two caps on the left-hand side in **FIG. 42C** may be pink and the cap on the top-right may be blue.

[00198] **FIGS. 43A** to **43C** illustrate a further condom package **500**. It has shielding sheets **502** and **504** enclosing a single-sheath condom **506**, and two caps **390**. Condom **506** is attached to a flange **508**. Flange **508** is made of a flexible, bendable material. A side **510** of flange **508** is of a soft, absorbent material and its surface is adhesive. Flange **508** may be suitable for attaching to a male or female user.

[00199] In use, side **510** may face a female user (not shown) as shown in **FIGS. 43D**, or face a male user (not shown) as shown in **FIG. 43E**. In either case, flange **508** may be bent, as shown in ghost lines, to conform to the user's body shape.

[00200] **FIGS. 44A** to **44C** illustrate another dual condom package **520** which has a dual condom **522** and a frame **440**. **FIGS. 44D** and **44E** illustrate the use of package **520**.

[00201] As can be understood, a condom may be stored in rolled-up, folded or collapsed state before use. However, rolled-up condoms may not be convenient to use, especially if it is loose-fitting. It may take time to unroll the condom. Inexperienced users may have difficulties unrolling the condom with a single hand or when in a rush. It may be desirable that the condom is stored in a collapsed or folded state before use so that it can be easily opened for use.

[00202] As illustrated in **FIGS. 44E** to **44H**, package **520** can be easily folded in different manners during storage. It is not necessary to roll-up condom **522**. Thus, package **520** is convenient to use.

[00203] As can be appreciated, a package can contain different components depending on the intended user and use. Some example combinations are shown in **FIGS. 45** to **50**.

[00204] **FIGS. 51A** and **51B** illustrate another exemplary package **540**, which includes an assembly of flange **360**, front and rear frames **440** and **450**, housing member **460**, foldable cap **390**, constriction ring **420**, and a condom such as condom **100** stored in housing member **460**. The relative positions of the components can be best viewed in **FIG. 51B**. The use of package **540** can be readily understood by persons skilled in the art after reviewing this paper.

[00205] As can be appreciated, the condoms and combinations disclosed herein can be used by both men and women, and may be used either for intercourse or oral sex.

[00206] For example, **FIG. 52** illustrates the use of a condom **550** as a female or oral condom. Condom **550** is initially stored in a packaging sheet **552**. Sheet **552** is flexible and is folded to enclose condom **550** and a cap **390**. Sheet **552** can be removed during use.

[00207] **FIG. 53** illustrates the use of a condom **560** by a male user. Condom **560** is attached to a holder **564**, which may include a frame and/or a flange. A placid penis, such as penis **566**, may be inserted into condom **560** and may be orally stimulated. As can be seen, the scrotum **562** of the user may be placed behind flange **564**. An elastic band/ring **568** is attached to holder **564** and wrapped around scrotum **562**. Penis **566** and scrotum **562** may be held or secured in position with an elastic ring, such as ring **568**, attached to holder **564**. Alternatively, an elastic band may be used to hold the scrotum or around the user's waist with a hook and hoop fastener. Or, a clamp attached to the holder can be used to hold the scrotum between the thighs of either a male or a female user.

[00208] **FIGS. 54A** and **54B** illustrate the use of a condom **570** by a male user. As shown in **FIG. 54A**, a placid penis such as penis **566** may be received in condom **570**. Condom **570** has a flexible pocket **572** adjacent the open end of condom **570** for receiving a scrotum, such as scrotum **562**. Condom **570** is attached to a frame/flange **574**. As can be seen, pocket **572** can be disposed in front of frame/flange **574**. Scrotum **562** may be stimulated through pocket **572** and penis **566** may be stimulated, such as orally, through condom **570**. As shown in **FIG. 54B**, when penis **566** becomes erect, condom **570** may be twisted. A front frame **440** may be placed over the twisted condom **570** and erect penis **566**. Again, penis **566** and scrotum **562** may be held or secured in condom **570** with an elastic ring or band.

[00209] A condom described herein may also be used in combination with other or additional devices or components.

[00210] For example, **FIGS. 55A** and **55B** show a massager **580** for use with a loose-fitting condom. Massager **580** has a support frame **582** which supports a flap **584** rotatable about an axle **586**. Flap **584** may have a width of about 1 inch and a length of about 0.75 inches. A motor **588** is mounted on frame **582** for rotating axle **586** and thus flap **584**, such as at a rotation speed from about 100 to 200 rpm. The speed may be variable. A battery **590** is also mounted on frame **582** for providing power to motor **588**. Motor **588** can be turned on or off using a switch **592**. A lubricant dispenser **594** is mounted adjacent flap **584** for supplying a lubricant to flap **584** through dispensing holes **596**. A ring-shaped attachment **598** is attached to frame **582** for holding massager **580**, such as with a finger or a penis. A hook **600** is provided for attaching massager **580** to a frame or support. More hooks may be provided.

[00211] Massager **580** can be readily constructed by persons skilled in the art using known techniques.

[00212] Massager **580** may be used for automatic massaging or stimulating a body part of a user, such as in combination with another device disclosed herein, during foreplay or intercourse.

[00213] Massager **580** can be used for stimulating the female user without excessive stimulation of the male user, thus preventing premature ejaculation, which can be caused by the use of a conventional vibrator.

[00214] For example, **FIGS. 56A** to **56C** illustrate a combination of massager **580** and a condom holder **602**. Holder **602** has a central opening **604** for receiving a penis or a prosthesis covered with a condom (not shown). Holder **602** may be constructed similarly to a holder described earlier. Massager **580** may be attached to holder **602** with hook **600**.

[00215] During use, massager **580** may be positioned either above central opening **604** as illustrated in **FIG. 56B** or below central opening **604** as illustrated in **FIG. 56C**.

[00216] As can be appreciated, the massager can be constructed differently than as shown in **FIGS. 55A** and **55B**. For example, ring-shaped attachment **598** may be replaced with a generally C-shaped attachment **606** as shown in **FIG. 57**. More than one flap **584** may be operatively connected to motor **588** for automatic massaging of a user during use.

[00217] Massager **580** can also be held with a thumb during foreplay and it may have a handle. A protective, flexible sheet may be provided to form a sleeve around massager **580**, to protect the user's genital and skin during use.

[00218] **FIGS. 58A** and **58B** illustrate a lubricant delivery tube **610**. Tube **610** has a back support **612** with a central opening **614**. A fluid storage member **616** is mounted on back support **612**. Storage member **616** has a generally tubular and resilient wall **618** extending between opposite sides **620** and **622**. Wall **618** defines a channel **624** extending from side **620** to side **622** for receiving a penis or prosthesis covered with a condom. Channel **624** has a wide portion **626** and a narrow portion **628**. Wall **618** also defines a fluid chamber **630** for storing and delivering a lubricant (not shown) through a conduit **632**. Conduit **632** is sized so that a lubricant can be stored in chamber **630** when wall **618** is under no pressure but can be released from chamber **630** when a sufficient force is applied to wall **618**.

[00219] Tube **610** can be readily constructed by persons skilled in the art using known techniques.

[00220] Tube **610** can be attached to a condom holder, such as holder **640**, as shown in **FIGS. 59A** and **59B**.

[00221] The possible use and variations of tube **610** can be understood by persons skilled in the art after reviewing this paper. For example, when tube **610** is disposed and pressed between two users during use, it can release lubricant periodically and in sync with the users' body motion. A user can also deliberately press tube **610** to release a desired amount of lubricant. Tube **610** may also be held in a user's hand, such as on a thumb, during use.

[00222] **FIG. 60** illustrates an external penile prosthesis **1000**, exemplary of an embodiment of the present invention. Prosthesis **1000** has a generally tubular body portion **1002** extending about a central axis **A**. Body portion **1002** has opposite front and rear open ends **1004** and **1006** for receiving the shaft of a penis (not shown) therein.

[00223] A head portion **1008** is attached to front end **1004** for covering the glans of the penis received in the body portion. Head portion **1008** can be shaped so that it confirms generally to the shape of the glans. Head portion **1008** can extend along and rotate about axis **A**. Head portion **1008** includes a number of flaps **1010**. Each flap **1010** has a proximal end **1012** which is swingably attached to body portion **1002**. Each flap also has a distal end **1014**. Each flap **1010** can swing about an edge **1016** of front end **1004** of body portion **1002**, between an open position (as shown in ghost lines) and a closed position (as shown in solid lines). Flaps **1010** define a distal opening **1018** when they are in the open position. Opening **1018** is at least partially closed when flaps **1010** are in the closed position. Opening **1018** can also be adjustable for accommodating a varying size of the penis. In some embodiments, the distal end of head portion **1008** may be closed. If the distal end is closed, a liquid collector may be provided at the closed distal end for collecting and trapping a body fluid released from a user. Head portion **1008** may also be slidably movable along axis **A**, as indicated in ghost lines, for adjusting the total length

of prosthesis **1000**. Edge **1016** of body portion **1002** can serve as a stopper for stopping head portion **1008** from sliding off body portion **1002**.

[00224] The inner walls **1020** of body portion **1002** may have varying diameters. The exterior walls **1022** of body portion **1002** may also have varying diameters.

[00225] Body portion **1002** has one or more side openings or windows **1024** for contacting a penis received therein or for releasing air. Window **1024** can be expandable.

[00226] An inner wall of body portion **1002** also defines a circumferentially extending groove **1026** for collecting and storing a body fluid released from a user, or for being used as a fluid reservoir for storing a fluid such as a lubricant. Groove **1026** can also be used for both purposes. For example, a lubricant can be initially stored prior to use, which is released from groove **1026** during use. Subsequently, groove **1026** can receive and store a body fluid discharged by a user.

[00227] Head portion **1008** may have a fluid reservoir **1028** (shown in ghost lines) for storing a fluid (not shown), such as a lubricant. The fluid may be released through an opening section **1029** during use onto the penis received within prosthesis **1000**. Opening section **1029** may have one or more openings and include a plug made of a spongy material for controlled release of the fluid. Release of the fluid can result when a user applies pressure to head portion **1008**. As can be appreciated, the thrusting motion of the user during use can apply a varying pressure to head portion **1008** and cause repeated release of the fluid. As shown, reservoir **1028** is formed in the wall of head portion **1008**. However, as can be understood, a fluid reservoir for lubricant can also be formed in body portion **1002**, or elsewhere but is connectable to either body portion **1002** or head portion **1008**.

[00228] Prosthesis **1000** may include a flange-like end member **1030** attached to rear end **1006**. Holes **1031** are provided for attaching end member **1030** and thus prosthesis **1000** to a condom holder or frame, such as one of

those described above, with a fastener (not shown). End member **1030** can also serve as a protective guard when the prosthesis is folded for storage.

[00229] Body portion **1002** can be axially extendable and retractable. Body portion **1002** can also be radially expandable. In this regard, body portion **1002** may be made of a flexible or elastic material. For example, body portion **1002** may have a section **1032** that is more flexible than other sections. Section **1032** may be made of a springy or non-springy, soft material for pliability, extendibility, and shock absorption. Section **1032** may include a foam material and an enclosure enclosing a spring **1034**. Spring **1034** can be used to axially extending or retracting body portion **1002**. Spring **1034** can be a coil spring. In a different embodiment, the coiled spring may be replaced with a coiled wire, which is extendable and compressible but not resilient.

[00230] Further, body portion **1002** may have a weakened section **1036** which will facilitate folding or flattening of prosthesis **1000**.

[00231] In a different embodiment, prosthesis **1000** may include an actuator for axially extending and retracting body portion **1002**. The actuator may be manually operable or drivable by an electrical motor.

[00232] Body portion **1002** and head portion **1008** can both be deformable such that they can be flattened laterally, relative to the central axis.

[00233] Body portion **1002** and head portion **1008** can be made of any suitable material. Each of them can be made of a flexible material, a semi-rigid material, or a rigid material. For example, a suitable material can be selected from paper, fabric, plastic, and rubber. The material can be firm or soft but firm enough for insertion during intercourse, as can be understood by persons skilled in the art.

[00234] As can be appreciated, in different embodiments, head portion **1008** can have different structures, shape and sizes. For example, head portion **1008** may have one or more flaps. Flaps may be merely rotatable but not swingable, or swingable but not rotatable.

[00235] As can be understood by a person skilled in the art, a vibrator (not shown) may be disposed within head portion **1008**. The vibrator may be used to stimulate a user.

[00236] A person skilled in the art can readily construct prosthesis **1000** after reviewing this paper.

[00237] Prosthesis may be used in combination with other components described herein, such as package **540** as illustrated in **FIGS. 61A**, **61B**, **62A**, and **62B**.

[00238] During use, prosthesis **1000** and package **540** may positioned as better shown in **FIGS**. **61B** and **62B**. Condom **100** is initially rolled up, folded or collapsed. A penis **140** is inserted into prosthesis **1000**, through body portion **1002** and then head portion **1008**, and eventually into and through the central openings in package **540**. Prosthesis **1000** may also be inserted through the central openings of package **540**. As the penis/prosthesis is inserted, condom **100** is unrolled, unfolded or expanded, and covers the penis/prosthesis.

[00239] As described above, condom **100** has a loose-fitting portion which loosely covers a shaft portion of the penis/prosthesis. After the penis/prosthesis is fully inserted, condom **100** may be twisted and secured in the twisted state as described before. For this purpose, an end of condom **100** may be conveniently rotated by rotating head portion **1008** of prosthesis **1000**. Condom **100** may also be secured by securing package **540** in position.

[00240] As can be appreciated, prosthesis **1000** can also be used with a tight-fitting condom and without twisting.

[00241] **FIG. 63** illustrates a combination **2000**, showing the relative positions of various components described herein during use. Combination **2000** includes prosthesis **1000** enclosed in a protective sheet **2002** which can be similar to sheet **552**, package **490**, frame **450**, housing member **460**, flap **390**, condom **100**, holder **120**, holder **360**, frames **440**, constriction ring **420**, massager **580**, and tube **610**.

[00242] During use, a penis (not shown) may be inserted through each component in combination **2000**, except the condoms, as can be appreciated and understood by persons skilled in the art.

[00243] In different applications, more or fewer components may be used. Each component may also be substituted as can be understood by persons skilled in the art.

[00244] **FIGS. 64A** to **64C** illustrate another prosthesis **1050** and its use. Prosthesis **1050** is similar to prosthesis **1000**. It has a tubular body **1052** and a rotatable head **1054**. Head **1054** has a proximal end **1056** and a distal end **1058**. Body **1052** has a front end **1060** and a rear end **1062**. The rear end **1062** of body **1052** can be covered with a protective sheet such as sheet **472** as shown. Proximal end **1056** of head **1054** is received in a groove **1064** formed on body **1052** at front end **1060**. Distal end **1058** defines a central opening **1066** sized for receiving an erect penis (not shown). A side window **1068** is provided on body **1052** for contacting the penis received therein, or for releasing air therefrom.

[00245] As shown, prosthesis **1050** is covered by a first, inside condom **1070**, and a second, outside condom **1072**, both of which are attached to housing member **460** and holder **360**. Prosthesis **1050**, with the covering condoms, may be inserted through a front frame **440**.

[00246] As in prosthesis **1000**, body **1052** of prosthesis **1050** may have one or more flexible sections. For example, it may have a firm base **1074** and softer and longitudinally extending sections **1076**. Softer sections **1076** can facilitate folding or flattening of prosthesis **1050**. Prosthesis **1050** can be made of a material selected from pliable, elastic, flexible, bendable, soft, and biodegradable materials. Thus, prosthesis **1050** can be flattened as shown in **FIG. 65**.

[00247] A person skilled in the art can readily understand and make prosthesis **1050** after reviewing this paper.

[00248] In use, a penis may be received in prosthesis **1050**. Rotatable head **1054** may be rotated to twist condoms **1070** and **1072**. Prosthesis **1050** can be used in a manner similar to that for prosthesis **1000**.

[00249] **FIG. 66** shows another prosthesis **1100**, which is similar to prosthesis **1050**, except that prosthesis **1100** includes a rotatable head **1102** which has a smaller distal opening **1104** for allowing air to pass therethrough.

[00250] **FIGS. 67A** to **67D** show a further prosthesis **1110**. Prosthesis **1110** is similar to prosthesis **1000** and can be used similarly. However, prosthesis **1110** has a base **1112** and four protective guards **1114** at its rear end. One end of each guard **1114** is attached to base **1112** and the other end can be attached to a holder such as holder **360**. Guards **1114** are distributed circumferentially. Guards **1114** can be plate-like shaped and can be thin. Guards **1114** are hingedly mounted and can swing about relative to base **1112**. Thus, prosthesis **1110** can be flattened, as shown in **FIG. 67C**, by a user with ease, even when guards **1114** are made of a rigid and strong material.

[00251] As illustrated in **FIGS. 67B** and **67D**, holder **360** can be attached either to base **1112** or guards **1114**.

[00252] **FIG. 68** shows the use of prosthesis **1000** which is positioned between condoms **1070** and **1072**. As can be appreciated, in this arrangement, condom **1070** can be used to separate prosthesis **1000** from the penis to be received therein.

[00253] **FIG. 69** illustrates another prosthesis **1120**. Prosthesis **1120** is formed of a single piece and has a thin-wall portion **1122** for increased flexibility, pliability and shock absorption.

[00254] **FIGS. 70A** and **70B** show a prosthesis **1130**, which is similar to prosthesis **1110**. However, prosthesis **1130** includes a head **1132** which has a closed distal end **1134**. A chamber **1136** is formed at distal end **1134** for receiving and trapping ejaculated body fluid. Prosthesis **1130** can be used in either of the arrangements shown in **FIGS. 70A** and **70B**.

[00255] **FIG. 71** shows a prosthesis **1140**, which is similar to prosthesis **1130** but with a different head **1142**, as can be seen and understood by comparing **FIGS. 70B** and **71**.

[00256] **FIGS. 72A** and **72B** show a prosthesis **1150** in different use arrangements. Prosthesis **1150** is similar to prosthesis **1140** but has an extended body **1152** which provides improved support for head **1154**.

[00257] **FIGS. 73A** to **73D** show a prosthesis **1160**, which is similar to prosthesis **1000**. However, the rear guards **1162** of prosthesis **1160** extend radially farther beyond body portion **1164**, as compared to that of prosthesis **1000**. On the front side of guard **1162**, projections **1166** are formed for stimulating a female user. Prosthesis **1160** is flexible and deformable so that it can be flattened for storage, as shown in **FIGS. 73C** and **73D**.

[00258] **FIG. 74** shows two prostheses **1170** attached to a condom holder **360**. This combination may be used by two female users, as will be understood by persons skilled in the art.

[00259] **FIGS. 75A** and **75B** show a prosthesis **1180** having longitudinal segments **1182**. Each segment **1182** is hinged, at hinge **1184**, to a head **1186**. Segments **1182** can swing about hinges **1184** between a flat position and a tube position. In the flat position, segments **1182** extend radially outward, as shown. Segments **1182** may be in the flat position when prosthesis **1180** is not in use, as shown in **FIG. 75C**. During use, segments **1182** may be rotated to the tube position and extend axially as shown in **FIG. 75D**, thus forming a tube-shaped body for receiving a penis **140** therebetween. Prosthesis **1180** can be packaged and used together with other components described herein, such as illustrated in **FIGS. 75C** and **75D**. As illustrated, segments **1182** can have suitable corresponding shapes for use and storage with the other components.

[00260] **FIG. 76A** to **76C** show a prosthesis **1190** in a package **1192**. An adhesive material may be applied to the rear end **1194** of prosthesis **1190**. Prosthesis **1190** is enclosed in a protective sheet **1196**. In use, protective sheet **1196** can be opened to expose the adhesive rear end **1194** which can then be

attached to a user, or a holder. Prosthesis **1190** has a number of telescopic tubes **1198**, which form the body of prosthesis **1190**. For example, it can have three telescopic tubes as shown.

[00261] As can be understood, prosthesis **1190** can move between a compacted or retracted position, as shown in **FIG. 76B**, and an extended position, as shown in **FIG. 76C**. The extended length of prosthesis **1190** can thus be easily adjusted to suit different users or for different situations.

[00262] Tubes **1198** may have different sizes for smooth sliding movement. Stoppers or locking mechanisms (not shown) may be provided thereon for preventing separation of the tubes and for locking the tubes in position. Such stoppers and locking mechanisms may include pins, holes, rubber rings and ridges formed on the walls of the tubes. The construction and use of telescopic tubes can be readily understood by persons skilled in the art.

[00263] In different embodiments, the inner and outer walls of the telescopic tubes may also have corresponding and engaging spiral ridges (not shown) so that relative rotation of the tubes can cause extension or reduction of the overall length. Thus, extension of the prosthesis and twisting of the condom covering the prosthesis can be achieved with a single rotation motion.

[00264] As can be understood, prosthesis **1190** may be modified to include an elastic coil (not shown) for actuating the telescopic tubes. The coil may be placed either inside or outside the tubes. The two ends of the coil may be attached to the two opposite ends of the tubes respectively. The coil may be a compression coil which has sufficient resistance to withstand pressure applied during insertion or handling of the prosthesis. The coil may be covered with a suitable material such as a soft material. Generally, the outer surface of the coil should feel stimulating, soft and comfortable.

[00265] In different embodiments, the coil can be springy or non-springy. A non-springy coil can be useful for quickly adjusting the length of the prosthesis. The coil may also have both a springy portion and a non-springy portion.

[00266] As can be appreciated, when a penis received in the prosthesis loses its erection and retracts into the prosthesis during intercourse, the prosthesis can maintain its length and can be used to continue stimulation of the female user. In addition, if a cap **390** is used, cap **390** may be stopped at the front end of the prosthesis, which can also be used to stimulate the female user.

[00267] **FIGS. 77A** to **77C** illustrate the use of prosthesis **1190** and package **490** in combination, which can be readily understood by a person skilled in the art.

[00268] **FIGS. 78A** and **78B** show a prosthesis **1200**, which has an enclosure **1202** in its body **1204**. A cylindrical coil **1206** is enclosed in enclosure **1202**. Coil **1206** is resilient. The body material is elastic. Coil **1206** abuts body **1204** and urges it to extend. Thus, body **1204** can extend or retract depending on whether an external pressure is applied to counter the abutting force of coil **1206**, as illustrated.

[00269] **FIG. 79** shows a prosthesis **1210** similar to prosthesis **1200**, except that the coiled portion **1212** and the coil **1214** in prosthesis **1210** are generally cone-shaped. An advantage of a cone-shaped body is that the body can easily collapse into a flat form. Coil **1214** in coil portion **1212** can be covered with an elastic, flexible, soft, and pliable material, which can be biodegradable.

[00270] As can be understood, instead of using a spring to actuate extension of the body of a prosthesis, an expandable chamber in the prosthesis body can be connected to a container so that they are in fluid communication. In use, the container can be filled with a compressed fluid, such as a lubricant, air, water, or the like. The compressed fluid can be released from the container and fed into the expandable chamber for axially extending or radially expanding the body of the prosthesis.

[00271] Other actuating mechanisms, such as mechanical or electrical actuating mechanisms may also be used for extending or shortening the prosthesis. Such mechanisms may include an electronic circuit, battery, motor,

gear, switch and the like. Such mechanisms can be readily understood by persons skilled in the art.

[00272] The head portion of a prosthesis may also include a built-in vibrator for stimulating a user, such as a female user.

[00273] As now can be appreciated, the exemplary condoms described above can be conveniently used to cover a penis, a prosthesis or a penis-like figure such as a finger, or to be inserted into a female's vagina. For holding or securing a condom in place, the condom may be attached to any suitable holder such as one of the exemplary holders, frames, prostheses, and other components described above. The condom can be twisted by twisting one or more of the components to which it is attached.

[00274] As can be understood, some of the components described above can be interchangeable. For example, a holder can be a frame, a collar, a ring, a flange, or a prosthesis, or vice versa. Similarly, many of the components described can be made of a material that is pliable, elastic, flexible, bendable, soft, rigid, or semi-rigid. The material can also be biodegradable. The material can be selected from paper, fabric, plastic, rubber, and the like.

[00275] When desired, other devices may also be used or attached to an exemplary embodiment described above. For example, micro sound devices and flicking lights may be added, for fun and entertainment.

[00276] As can be appreciated, embodiments of the present invention provide users with methods and tools for improving their enjoyment of sexual activities. Users can choose from a variety of alternatives based on their personal preferences.

[00277] The embodiments of the present invention can be versatile, joyful, attractive, sexually appealing, desirable, handy, easy and convenient to use, practical, compact, hygienic, and maintenance free. They can be fun and entertaining to use and can feel natural. They can be used by users of different background, sex, age, and sexual orientation. They can be used in a variety of

sexual activities, including intercourse and oral sex, and meet different demands of different users. As a result, more users will likely use condoms more often.

[00278] The embodiments of this invention can be used to encourage sexually active people to practice fulfilling, healthy and safe sex. They can also be used for birth control, and for treatment of different ailments and disabilities.

[00279] Of course, the above described embodiments are intended to be illustrative only and in no way limiting. The described embodiments are susceptible to many modifications of form, arrangement of parts, details and order of operation. The invention, rather, is intended to encompass all such modification within its scope, as defined by the claims.

WHAT IS CLAIMED IS:

1. A method of using a condom comprising:

covering a penis or a prosthesis with a condom, a loose-fitting portion of said condom loosely covering a shaft portion of said penis or said prosthesis, said loose-fitting portion having a first end and an opposite second end;

rotating one of said first and second ends, while holding the other of said first and second ends, to twist said loose-fitting portion into a twisted state in which said loose-fitting portion closely covers said shaft portion;

securing said loose-fitting portion of said condom over said shaft in said twisted state.

2. The method of claim 1, wherein said securing comprises placing a retainer having an aperture over said condom and said shaft in said twisted state such that a portion of said condom is received in said aperture of said retainer, said aperture is sized such that said retainer abuts said condom against said shaft portion of said penis or said prosthesis so as to retain said condom in said twisted state.

3. The method of claim 2, wherein said retainer is placed proximate one of said first and second ends.

4. The method of claim 2 or claim 3, wherein said retainer is generally ring-shaped.

5. The method of any one of claims 2 to 4, wherein said retainer comprises an elastic constriction ring, frictionally engaging said condom over said shaft.

6. The method of any one of claims 1 to 5, wherein said covering comprises covering said penis with said condom, said method further comprising placing an insert between said penis and said condom.

7. The method of claim 6, wherein said insert comprises a generally fan-shaped member.

8. The method of claim 6, wherein said insert comprises a generally ring-shaped collar, placed over said penis.

9. The method of any one of claims 6 to 8, wherein said insert has at least one opening, said method comprising pressing a portion of said condom to force air trapped within said portion of said condom through said opening.

10. The method of any one of claims 1 to 5, wherein said covering comprises covering said prosthesis with said condom.

11. The method of claim 10, wherein said prosthesis comprises a rotatable head portion, said rotating comprises rotating said head portion covered by said condom.

12. The method of claim 10 or claim 11, wherein said prosthesis comprises a head portion having an opening, said method comprising inserting a penis through said opening of said head portion of said prosthesis.

13. The method of any one of claims 1 to 12, wherein said condom is attached to a frame, said shaft passing through an aperture of said frame.

14. The method of claim 13, wherein said aperture of said frame is initially shielded by a sheet attached to said frame, said method comprising inserting said shaft through said sheet and said aperture.

15. The method of any one of claims 1 to 14, comprising frictionally engaging said shaft with a close-fitting portion of said condom, said close-fitting portion connected to an open end of said loose-fitting portion.

16. The method of any one of claims 1 to 15, wherein said condom has varying internal diameters.

17. The method of any one of claims 1 to 16, wherein different portions of said condom have different thicknesses.

18. The method of any one of claims 1 to 17, wherein said condom has an open end and a tapered closed end.

19. The method of claim 18 wherein said closed end of said condom is thickened.

20. The method of claim 18 or claim 19, wherein said condom comprises projections extending outwardly from an external wall of said closed end of said condom.

21. The method of any one of claims 1 to 20, further comprising attaching an end of said condom to a user.

22. The method of claim 21, wherein said attaching comprises strapping said end of said condom to a user.

23. The method of any one of claims 1 to 22, wherein said condom is attached to at least one of a plurality of segments of a frame for holding and handling said condom.

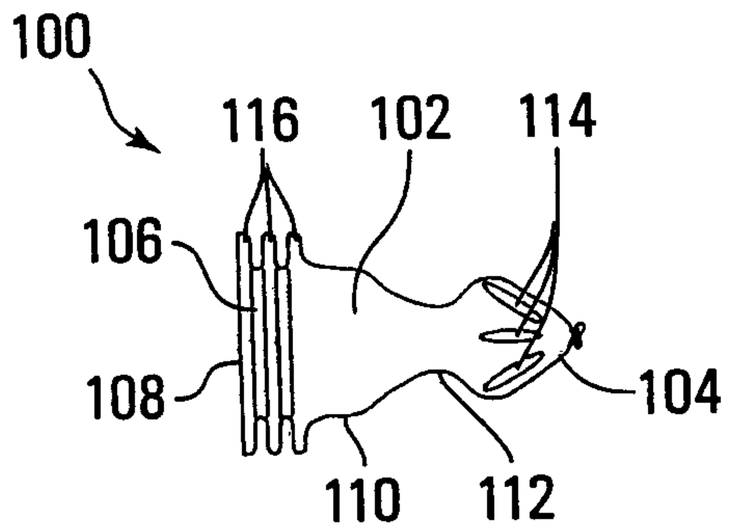


FIG. 1A

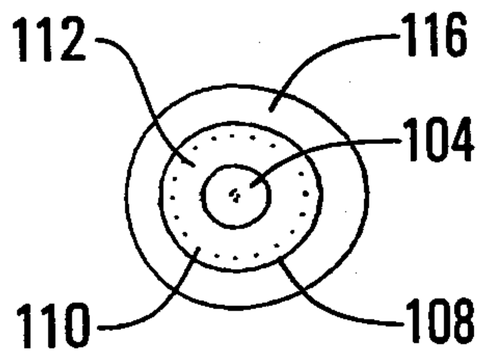


FIG. 1B

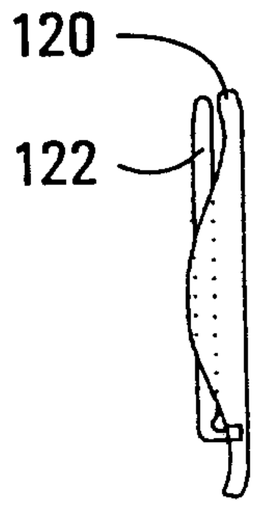


FIG. 2A

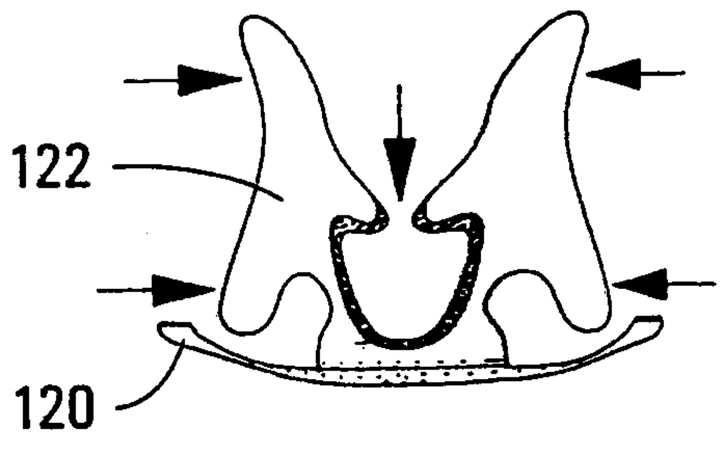


FIG. 2B

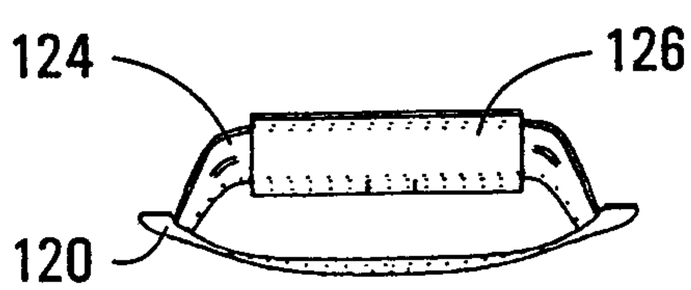


FIG. 2C

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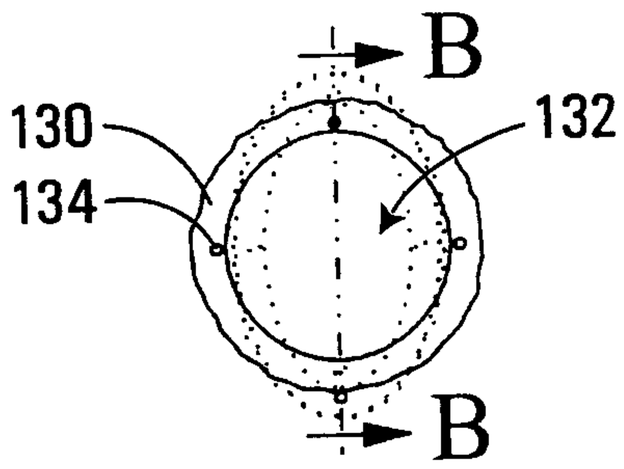


FIG. 3A

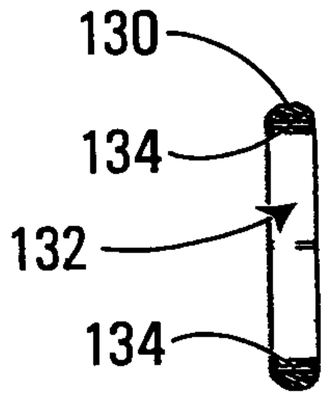


FIG. 3B

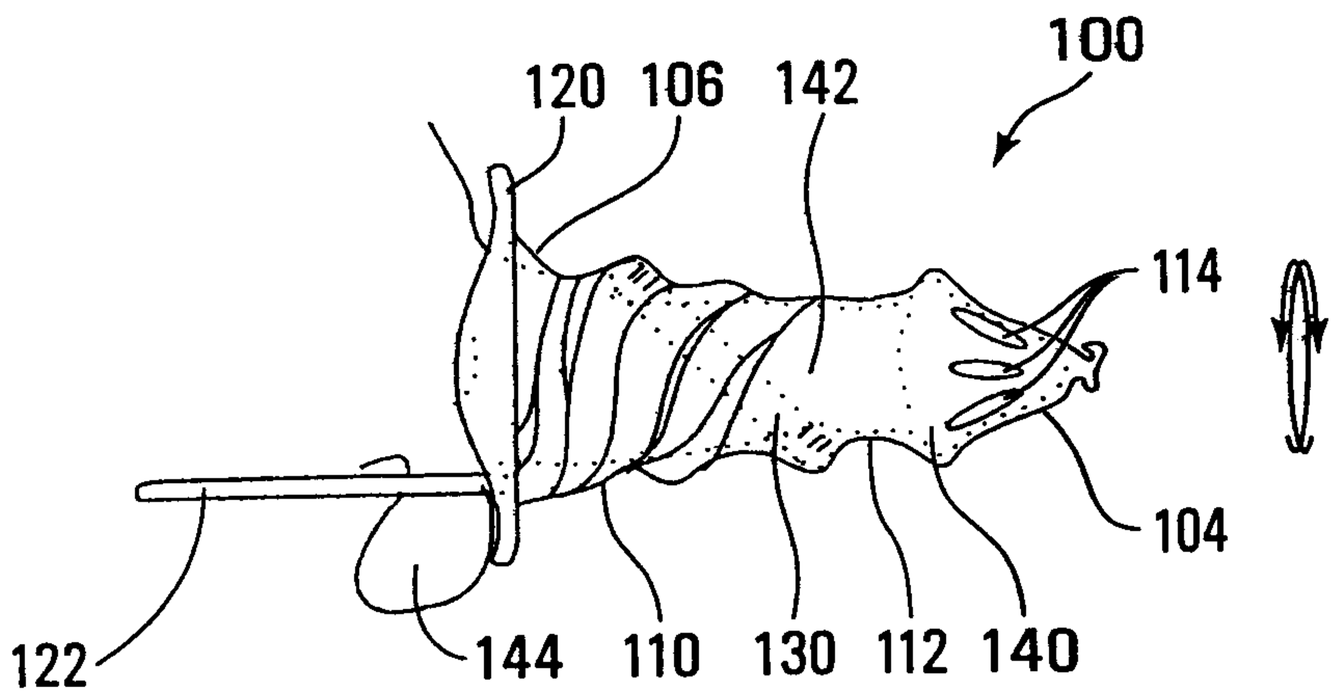


FIG. 4

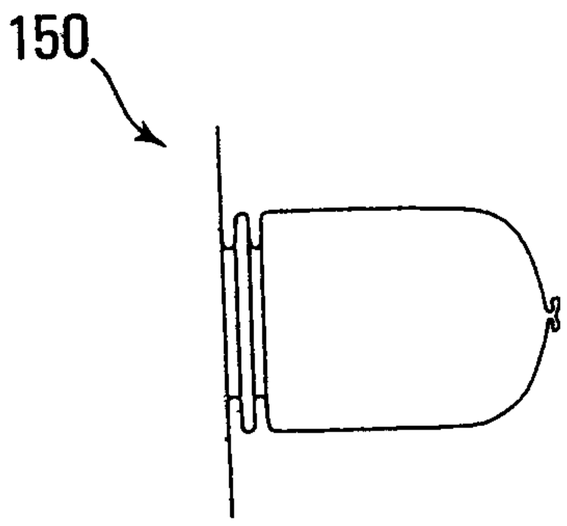


FIG. 5A

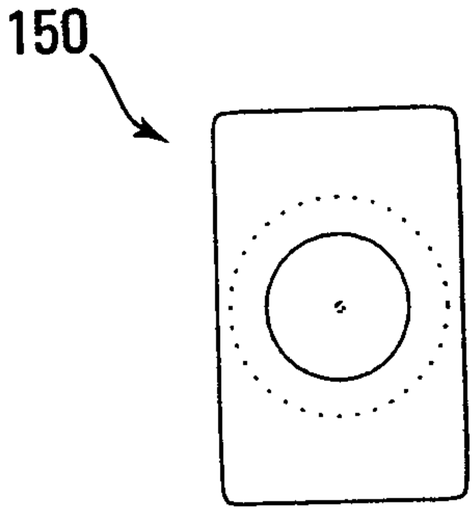


FIG. 5B

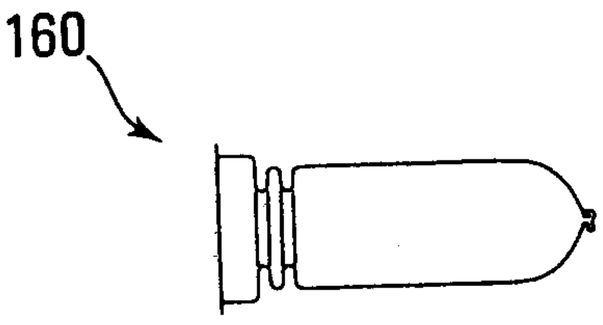


FIG. 6A

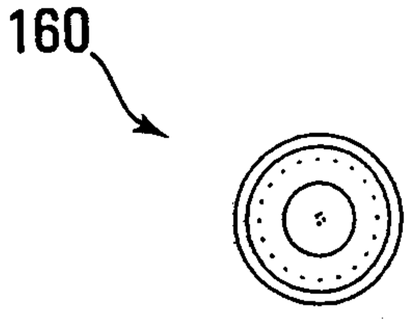


FIG. 6B

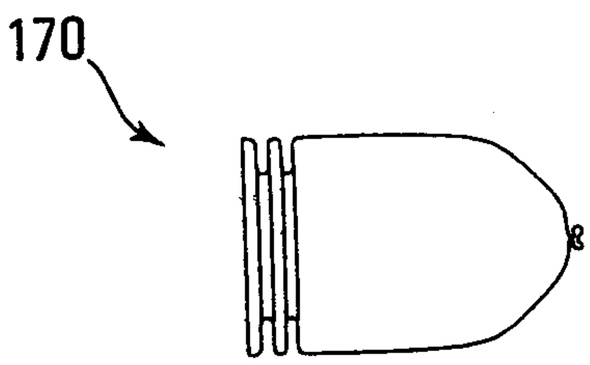


FIG. 7A

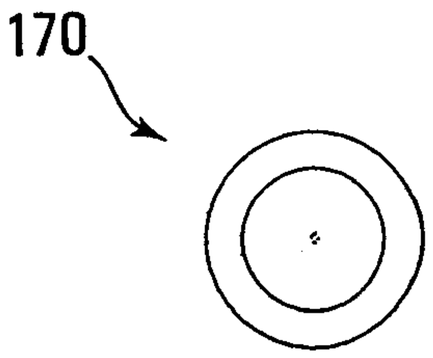


FIG. 7B

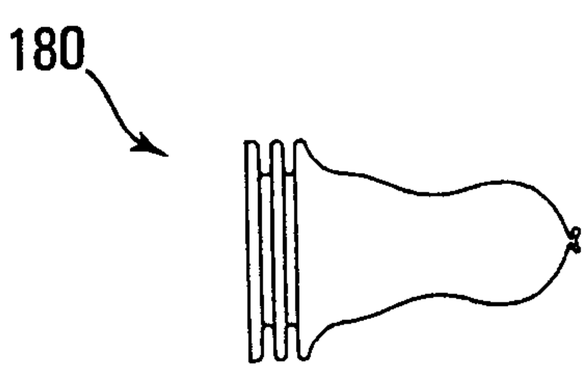


FIG. 8A

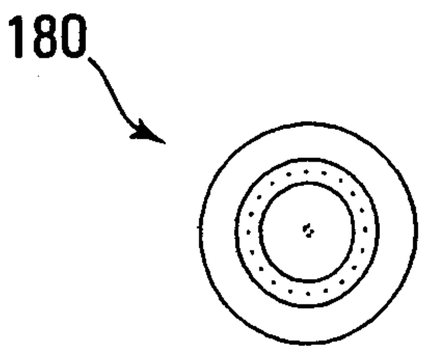


FIG. 8B

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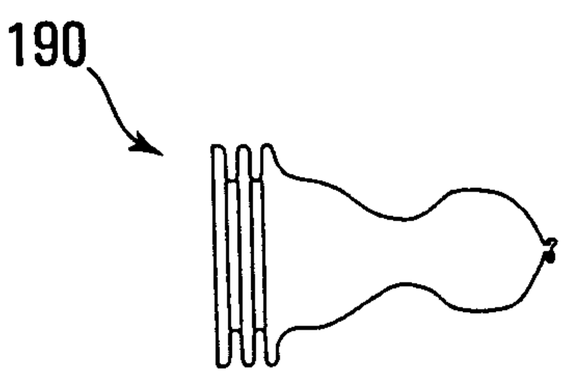


FIG. 9A

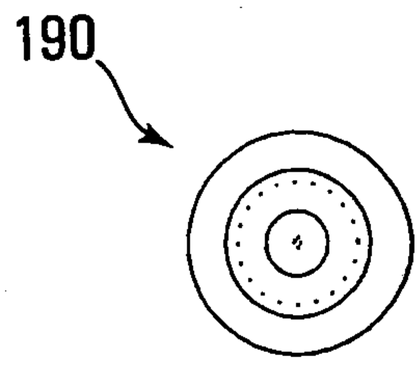


FIG. 9B

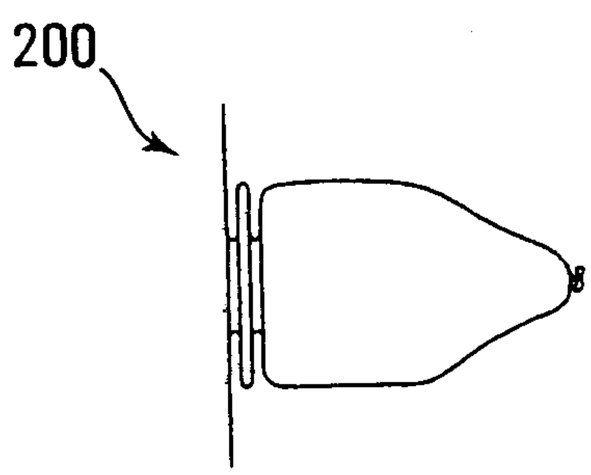


FIG. 10A

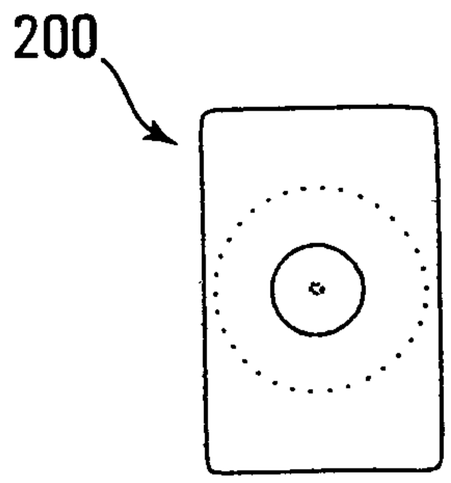


FIG. 10B

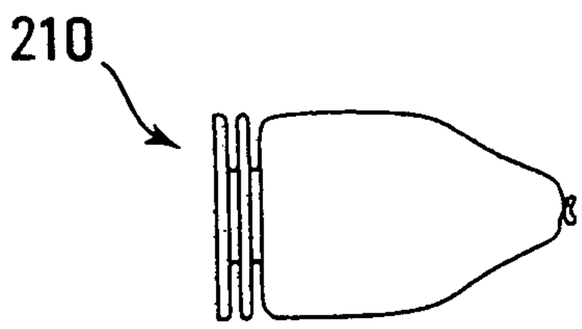


FIG. 11A

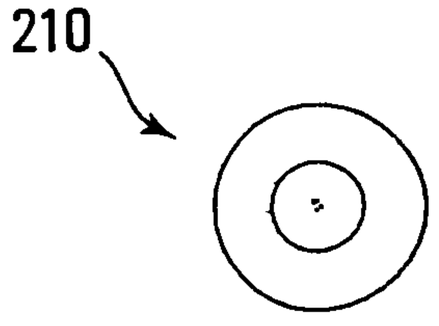


FIG. 11B

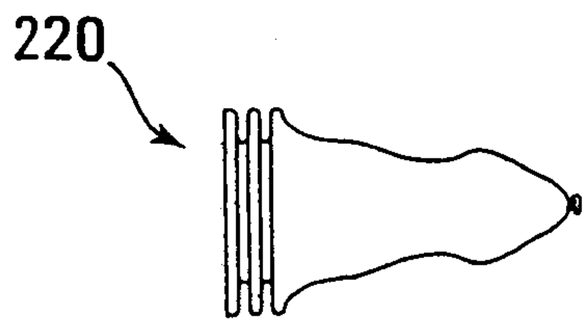


FIG. 12A

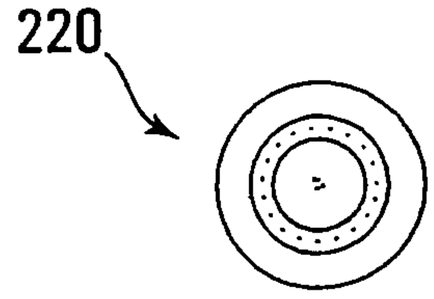


FIG. 12B

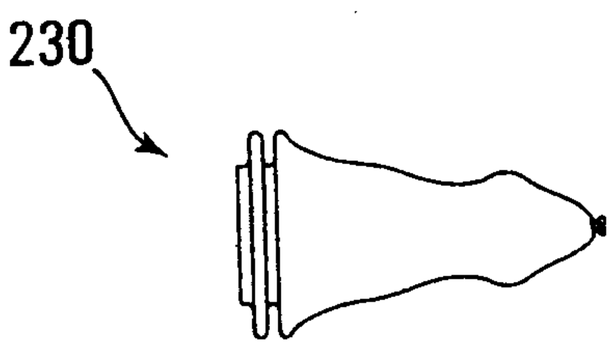


FIG. 13A

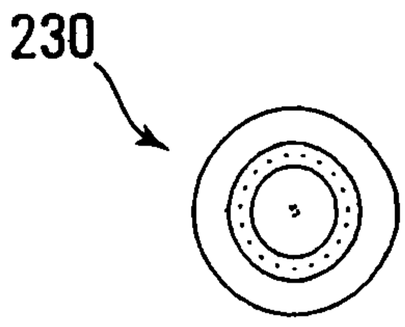


FIG. 13B

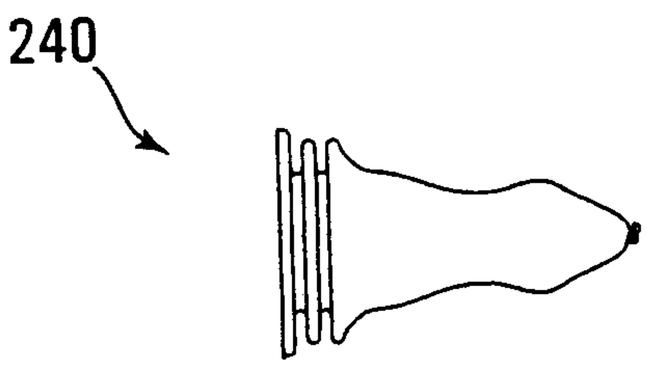


FIG. 14A

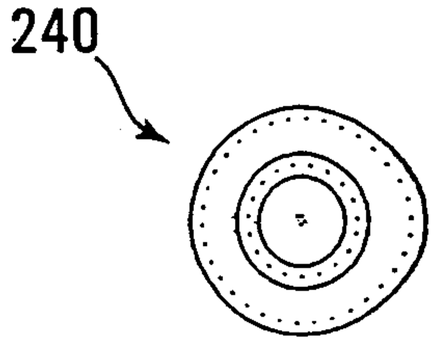


FIG. 14B

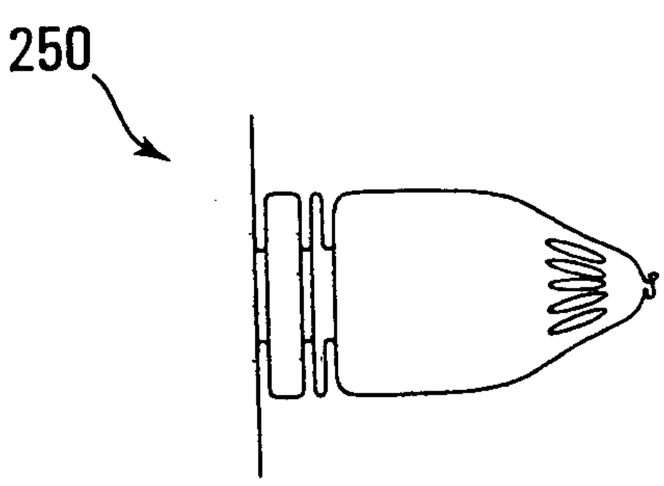


FIG. 15A

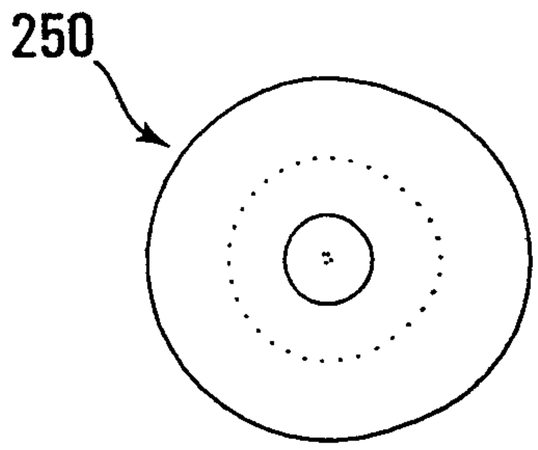


FIG. 15B

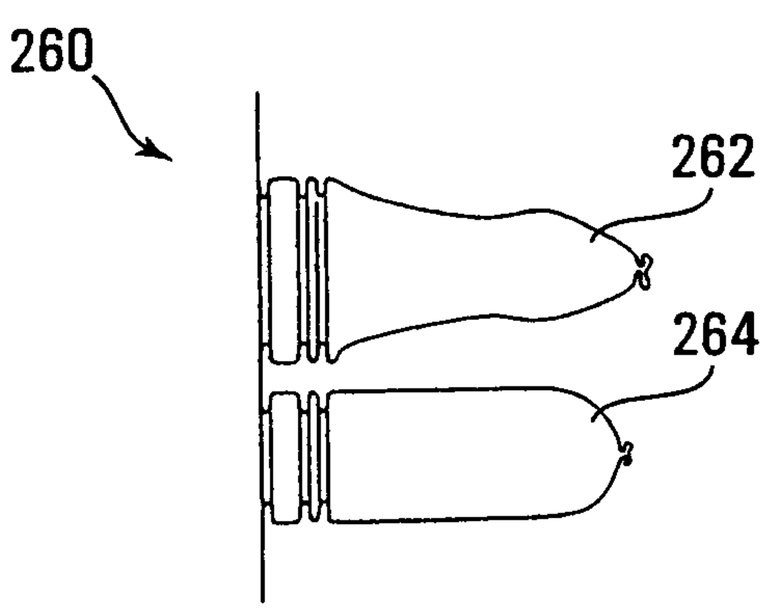


FIG. 16A

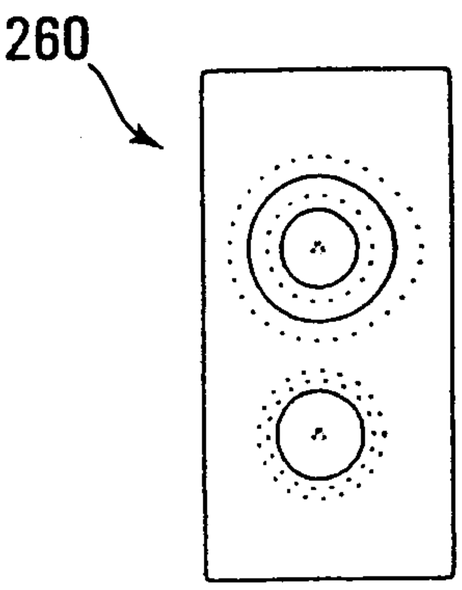


FIG. 16B

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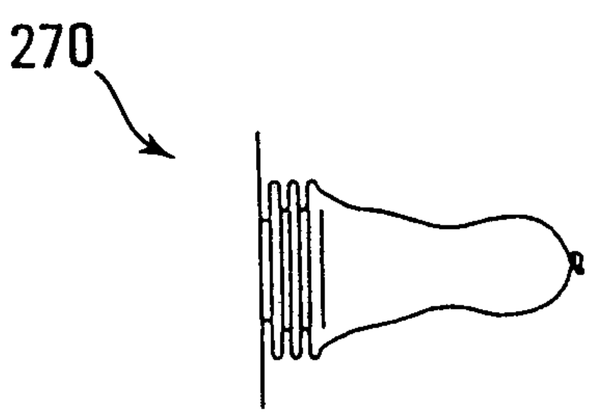


FIG. 17A

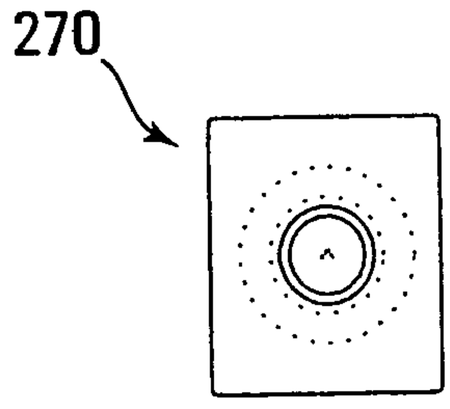


FIG. 17B

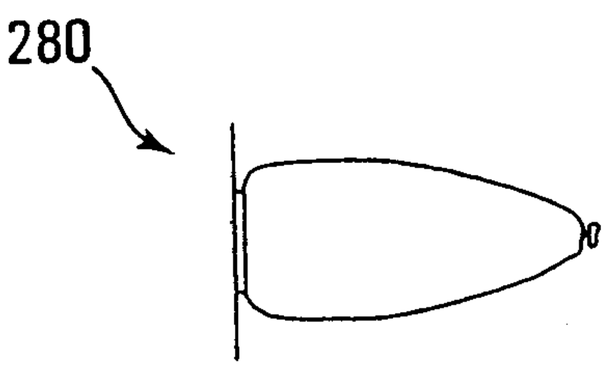


FIG. 18A

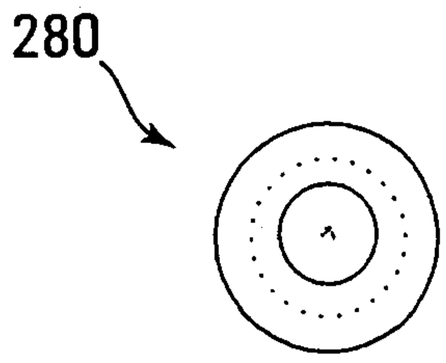


FIG. 18B

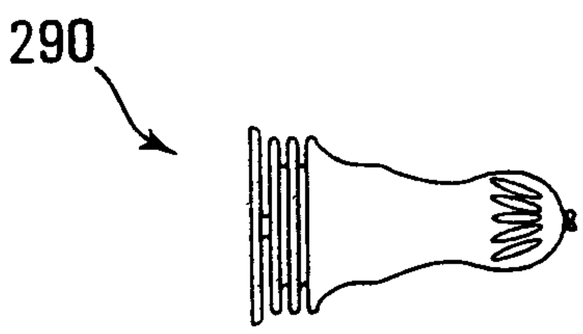


FIG. 19A

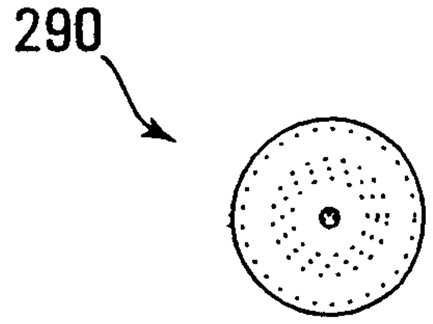


FIG. 19B

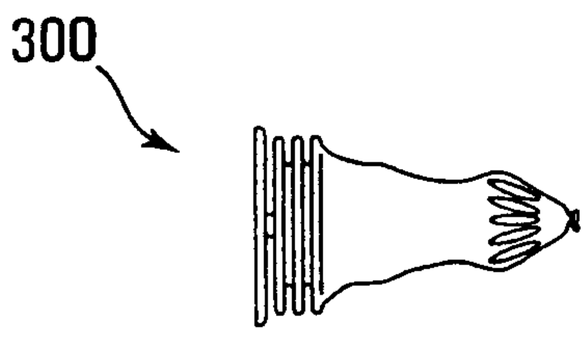


FIG. 20A

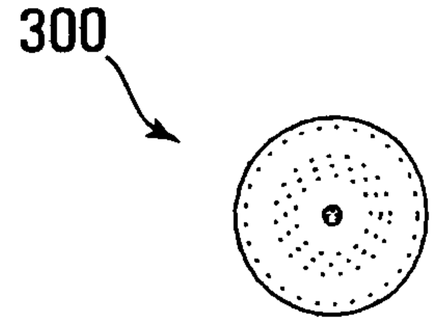


FIG. 20B

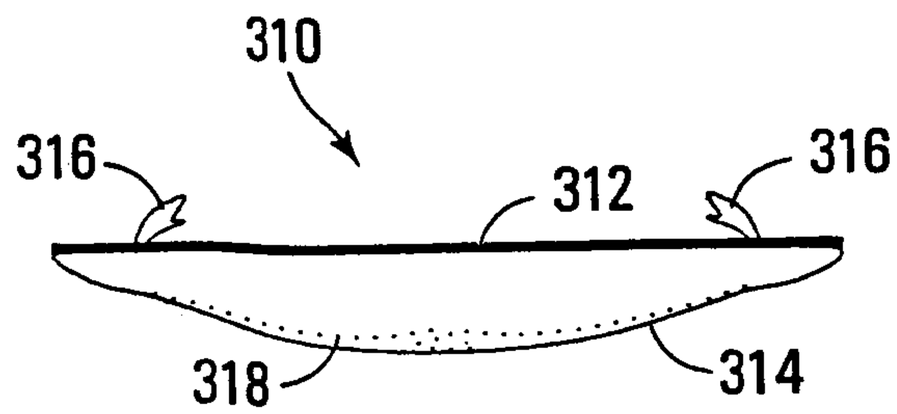


FIG. 21

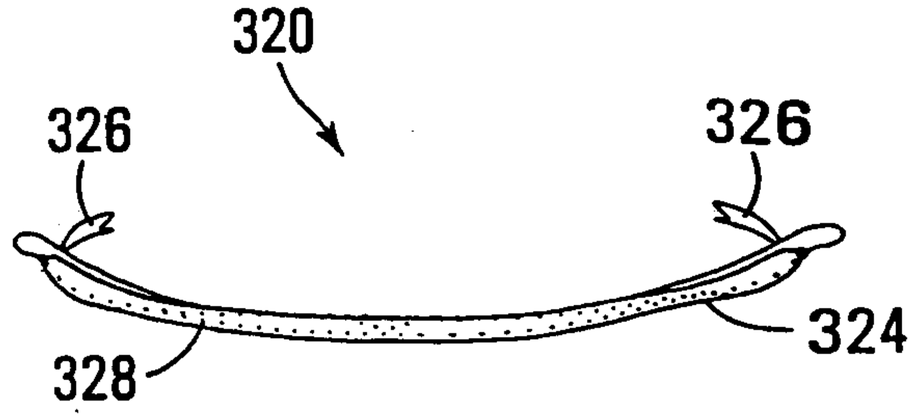


FIG. 22

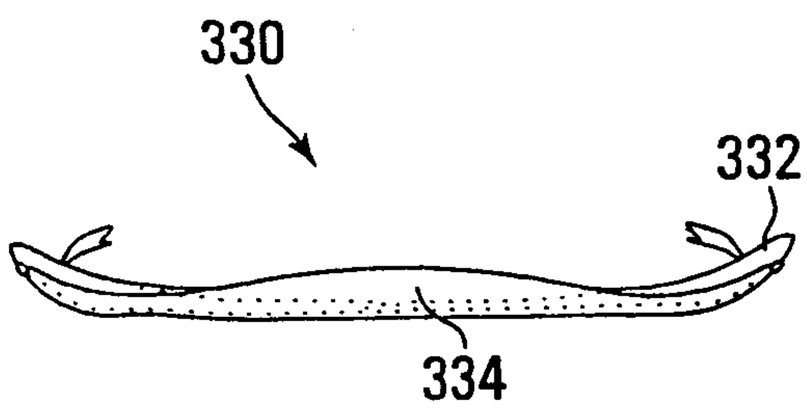


FIG. 23

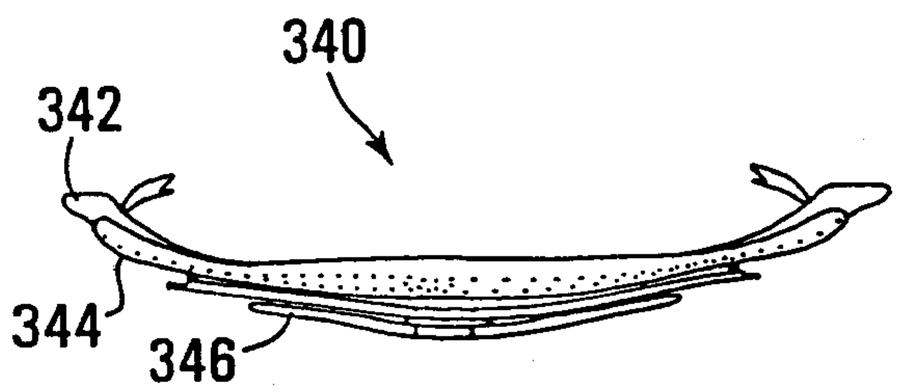


FIG. 24

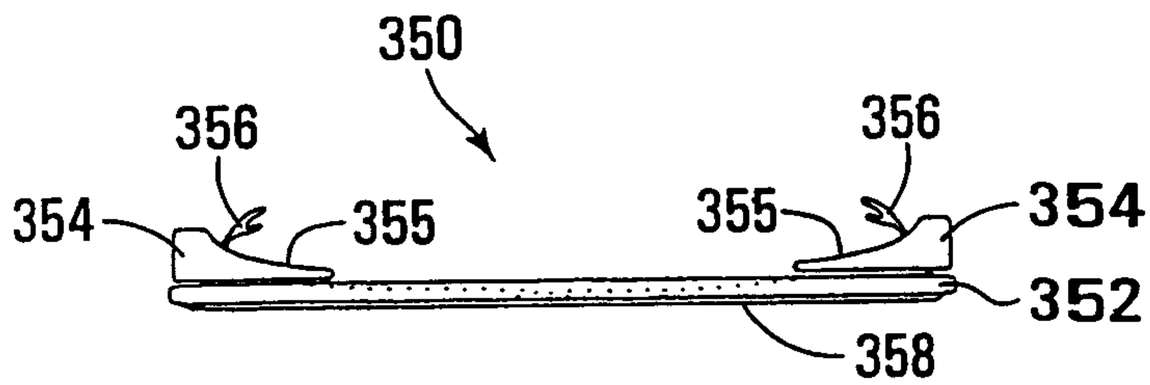


FIG. 25

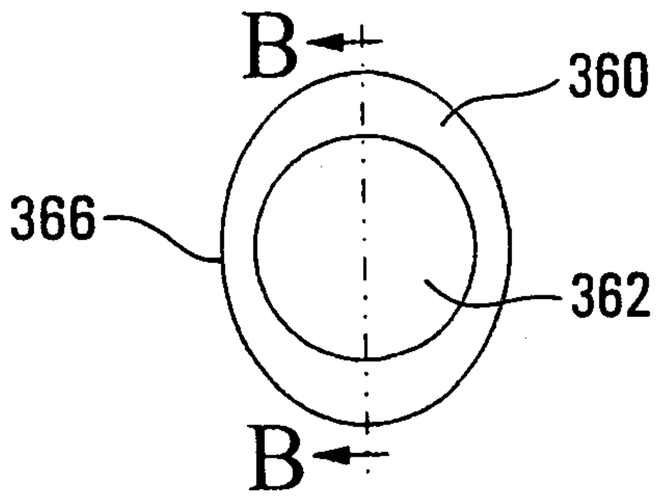


FIG. 26A

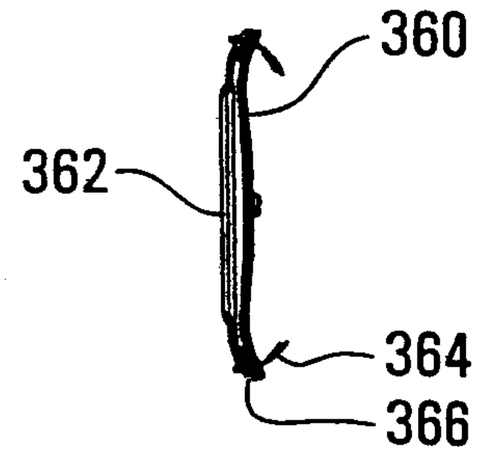


FIG. 26B

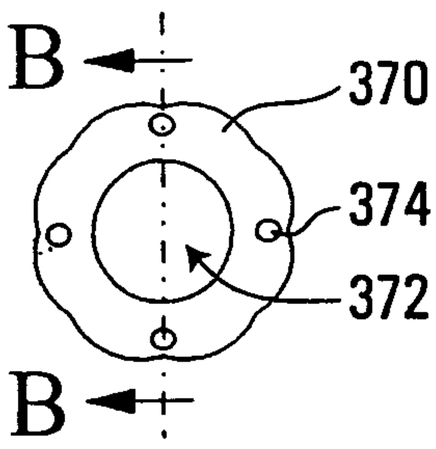


FIG. 27A

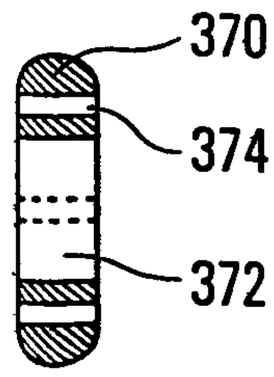


FIG. 27B

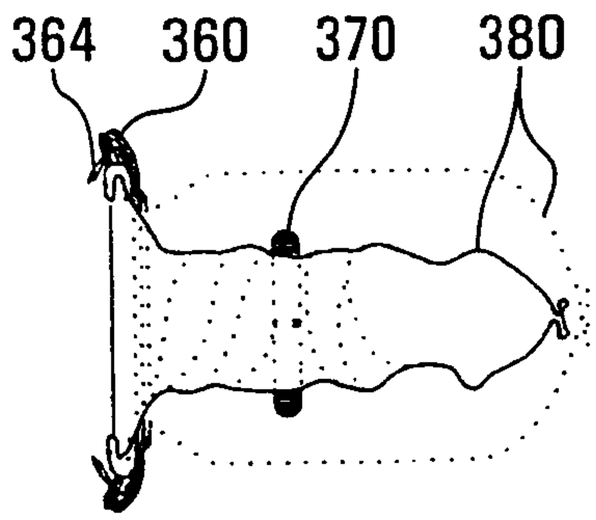


FIG. 28

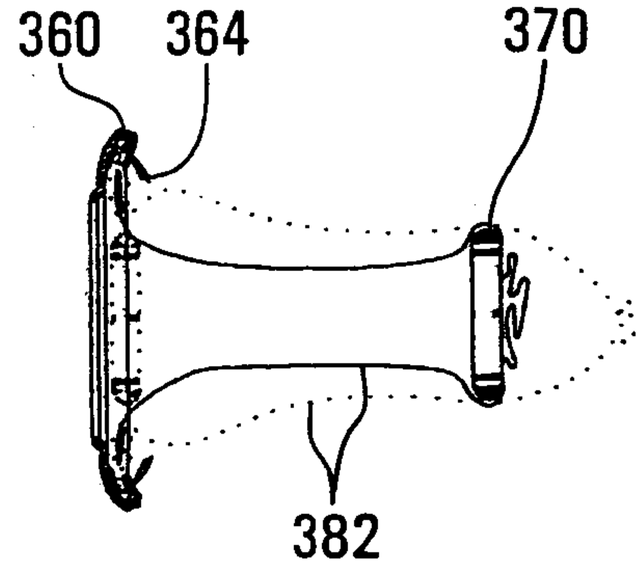


FIG. 29

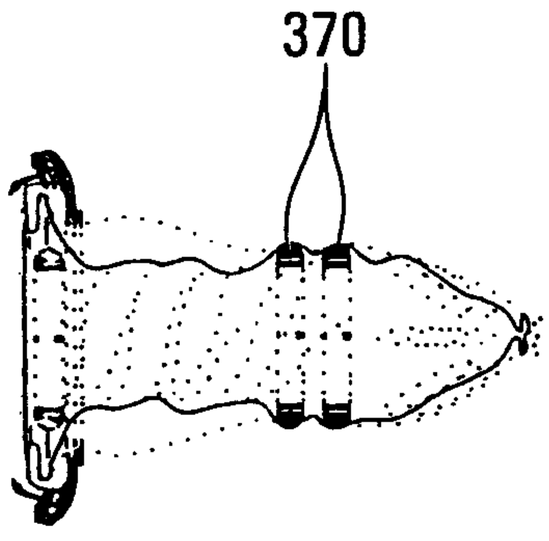


FIG. 30A

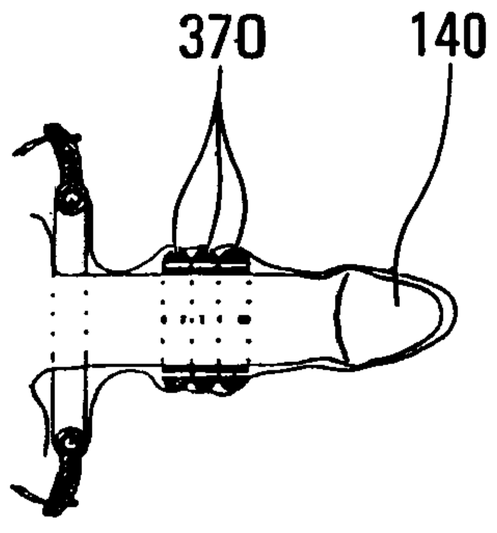


FIG. 30B

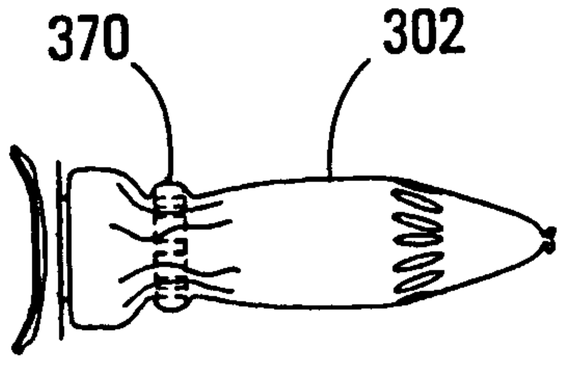


FIG. 31

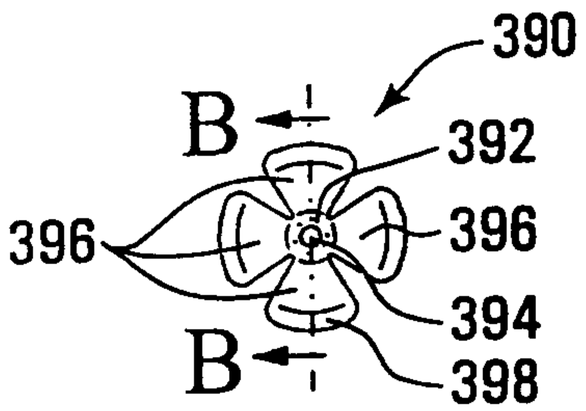


FIG. 32A

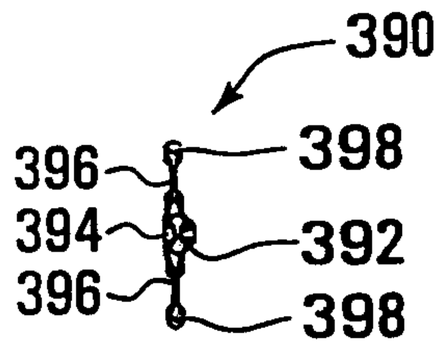


FIG. 32B



FIG. 32C

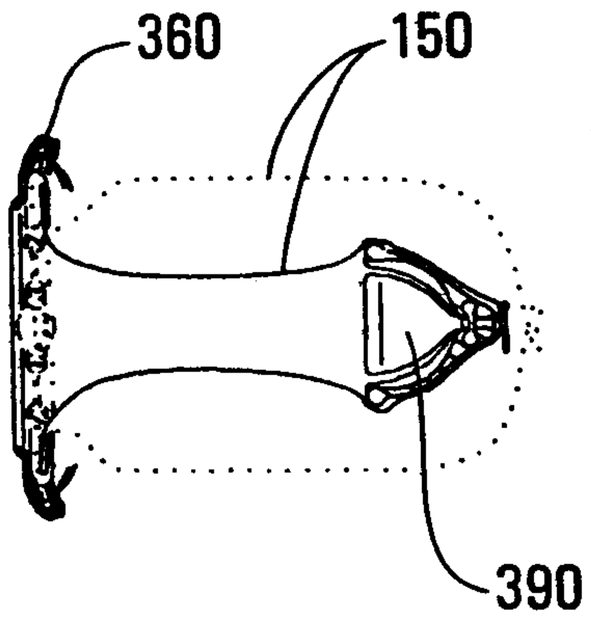


FIG. 33

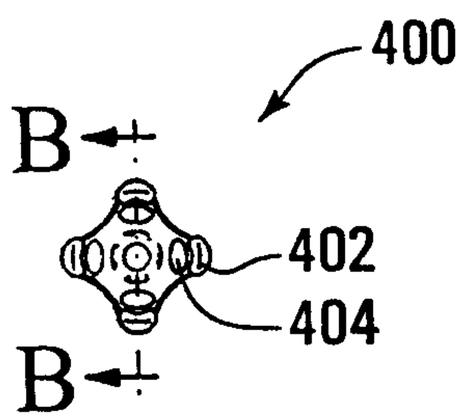


FIG. 34A

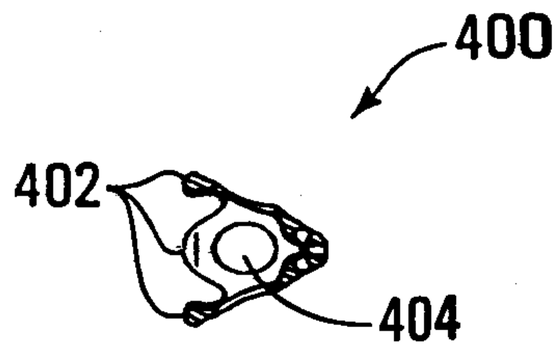


FIG. 34B

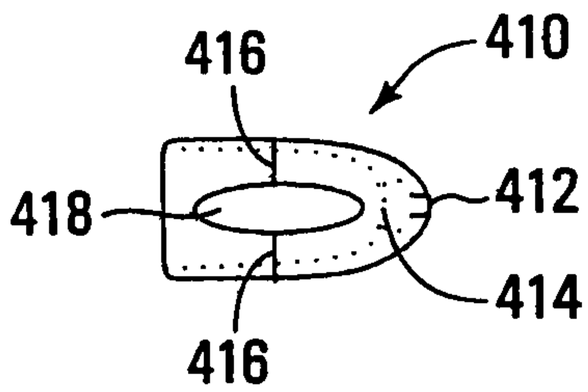


FIG. 35A

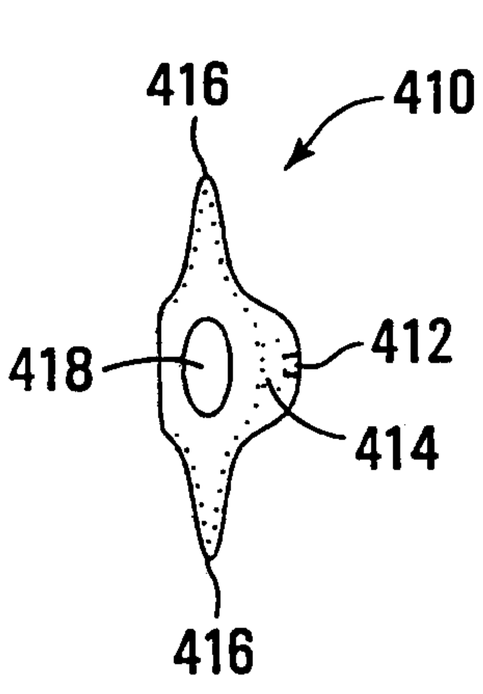


FIG. 35B

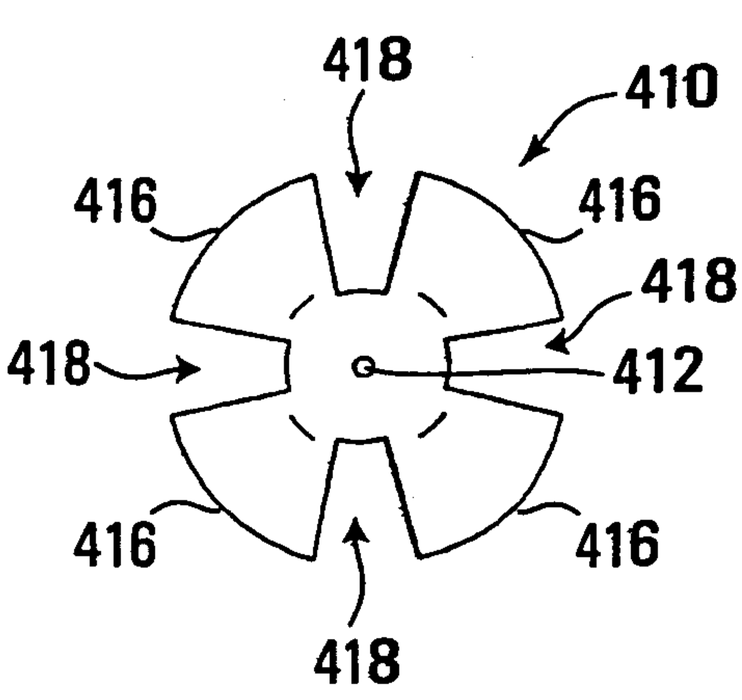


FIG. 35C

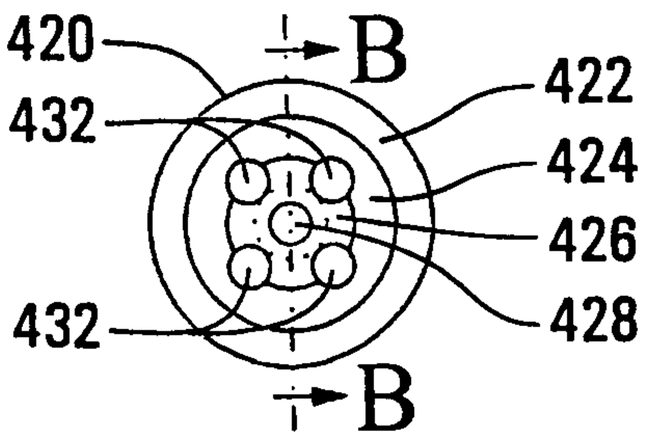


FIG. 36A

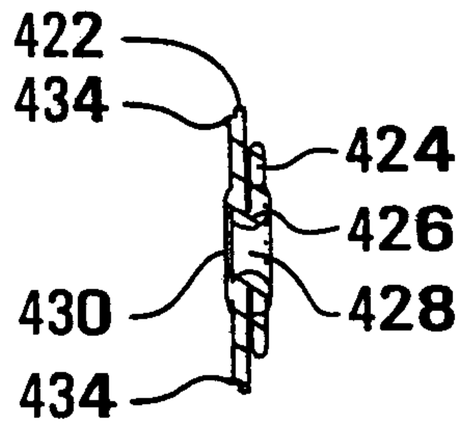


FIG. 36B

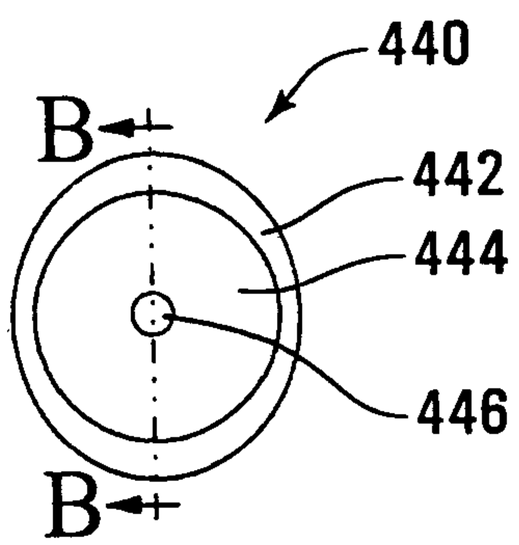


FIG. 37A

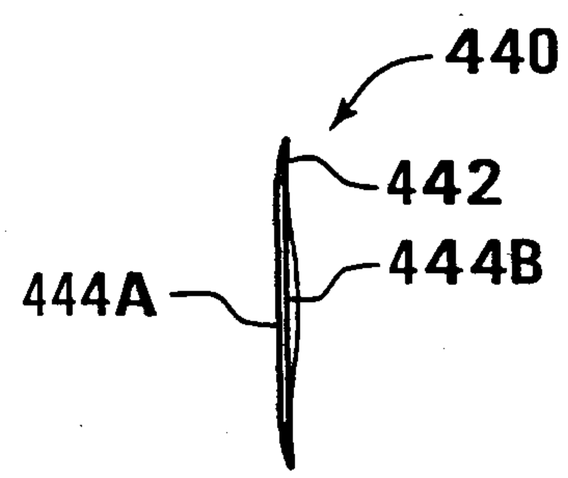


FIG. 37B

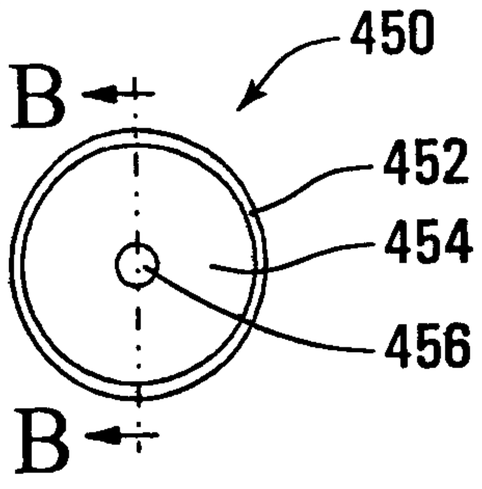


FIG. 38A

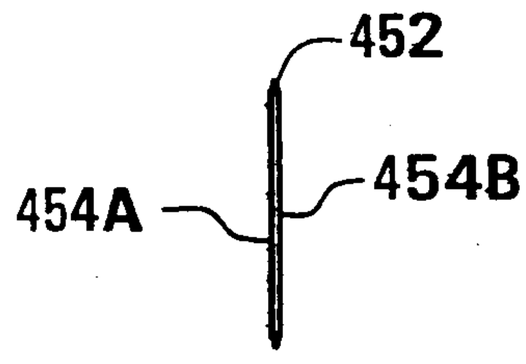


FIG. 38B

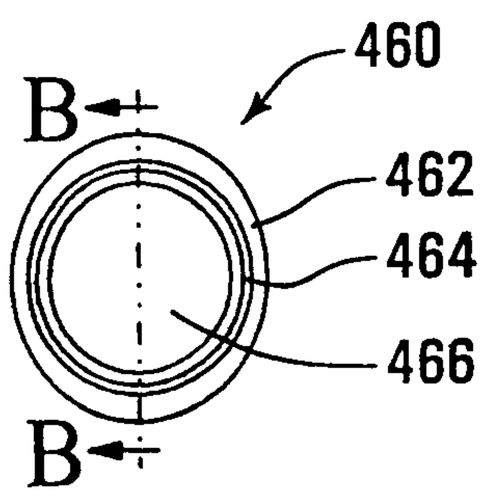


FIG. 39A

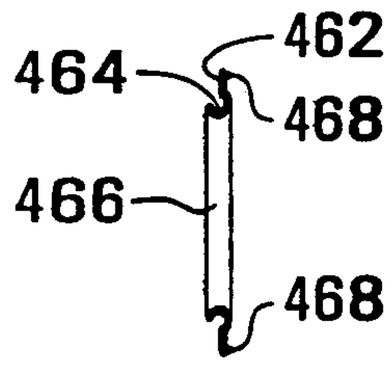


FIG. 39B

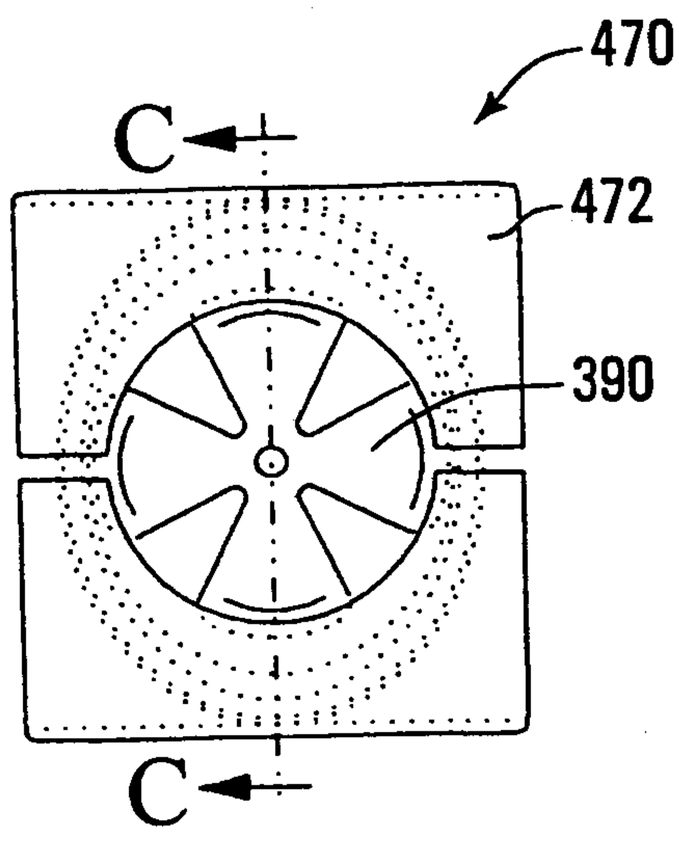


FIG. 40A

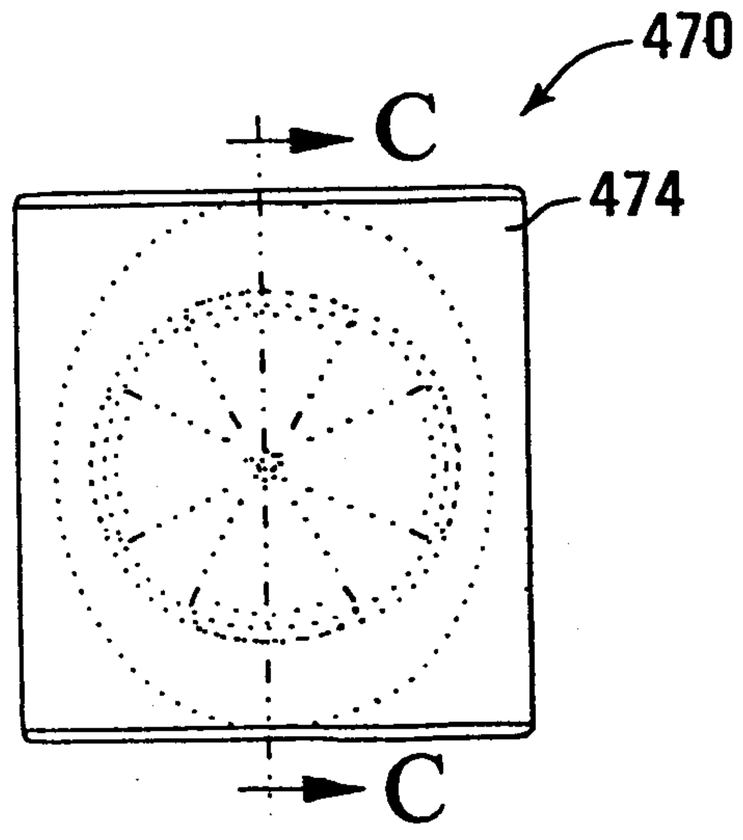


FIG. 40B

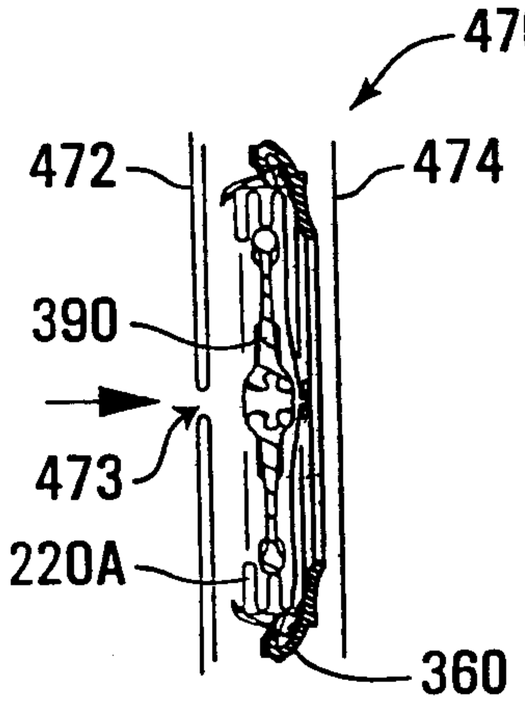


FIG. 40C

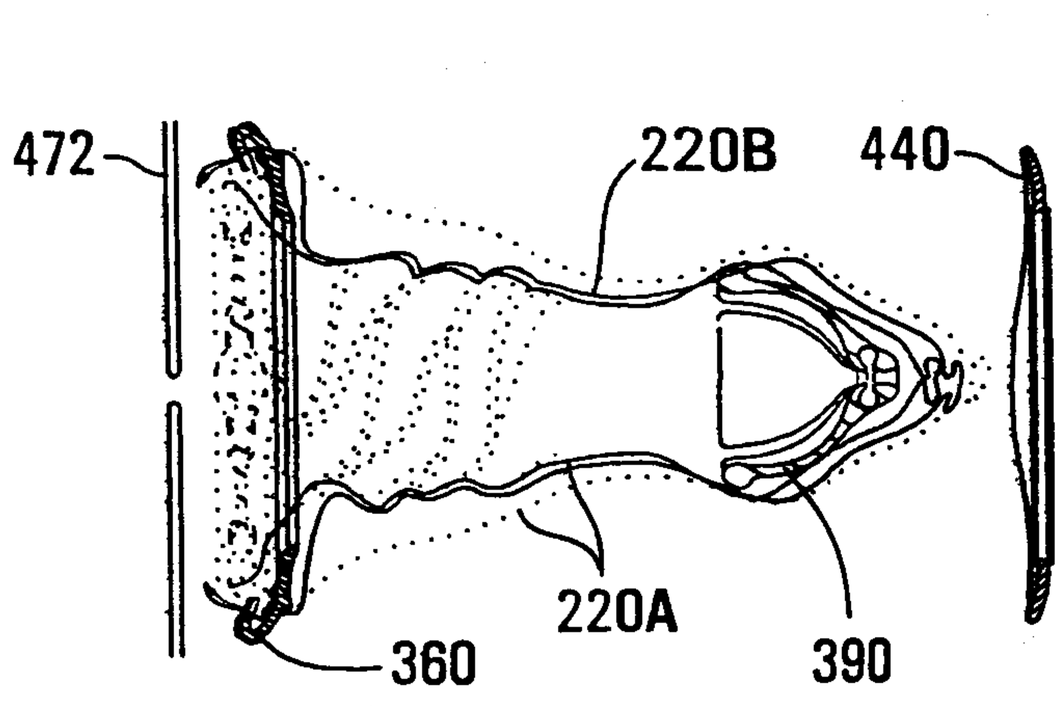


FIG. 40D

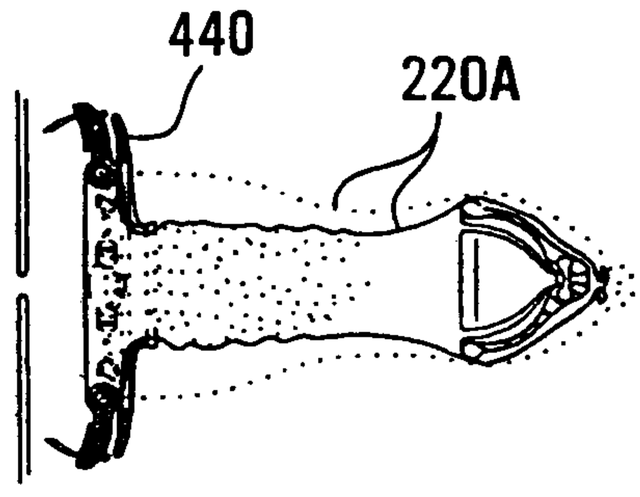


FIG. 40E

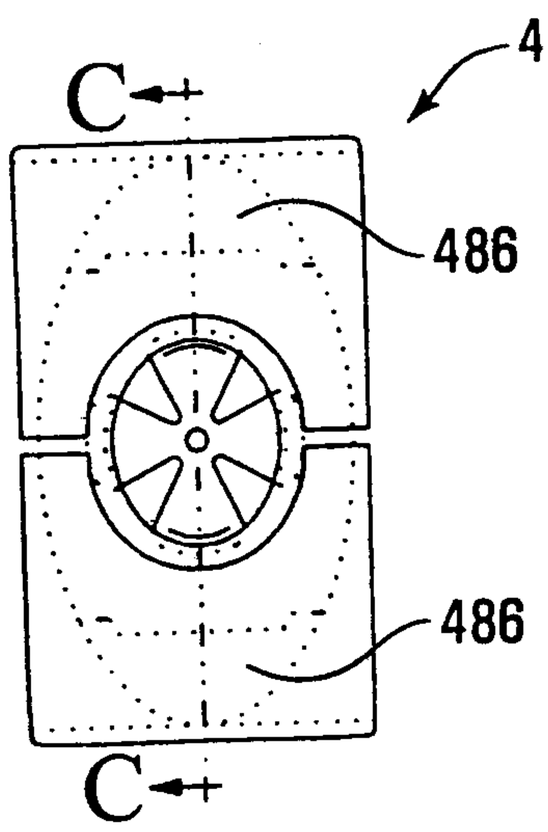


FIG. 41A

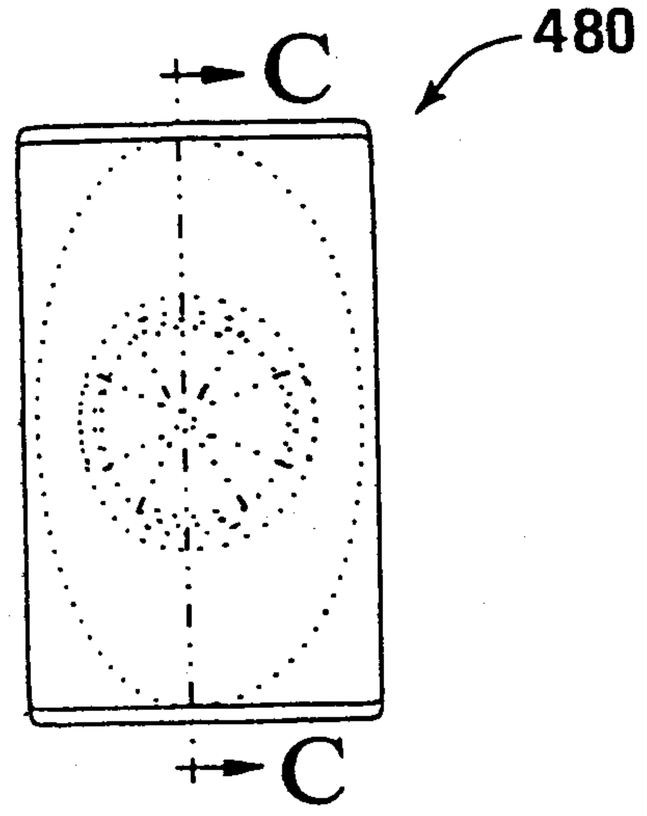


FIG. 41B

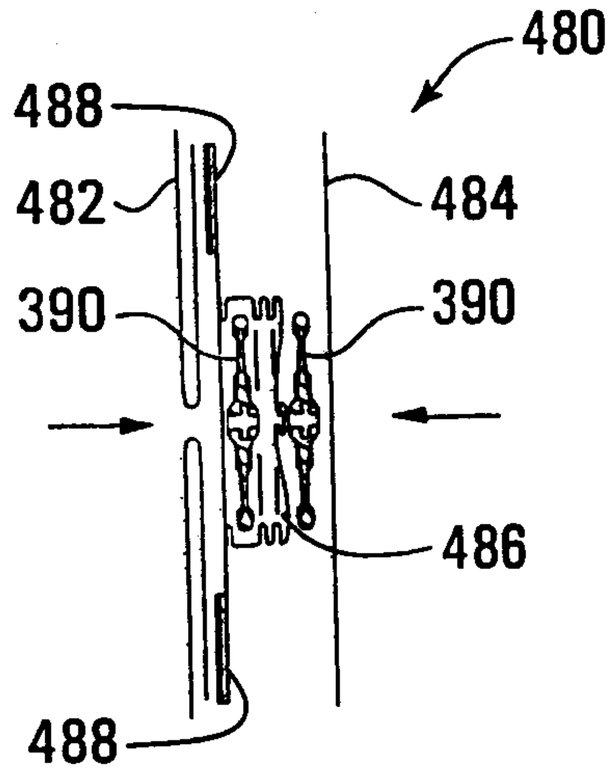


FIG. 41C

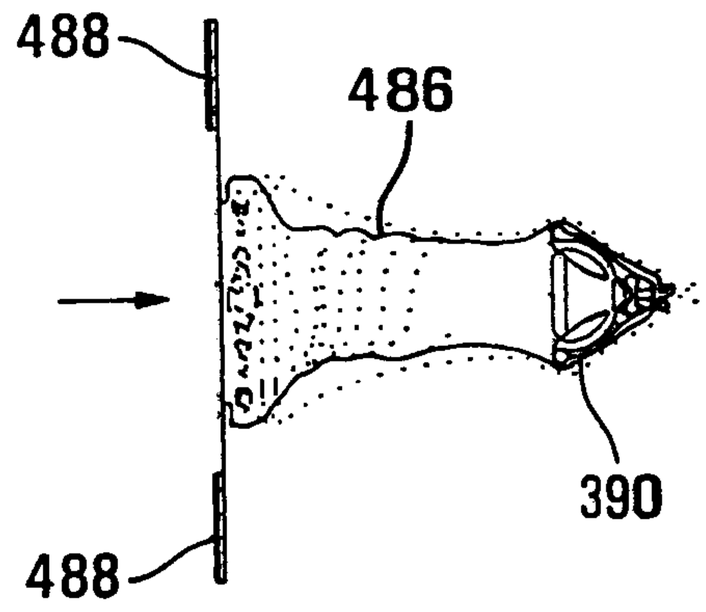


FIG. 41D

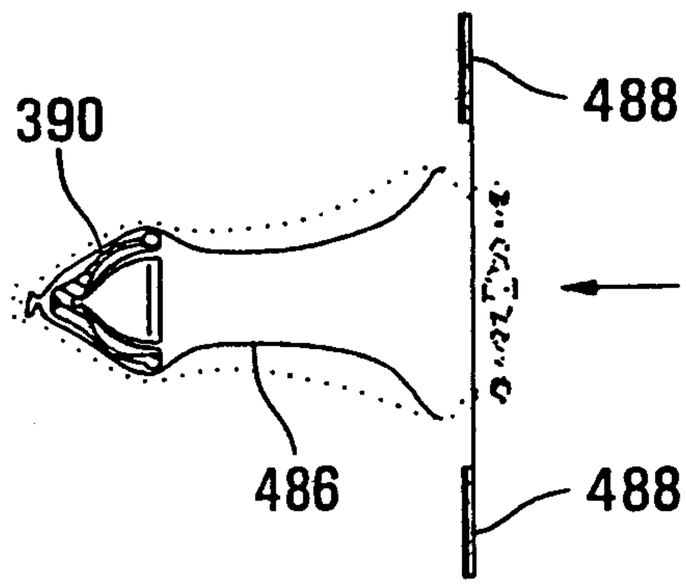


FIG. 41E

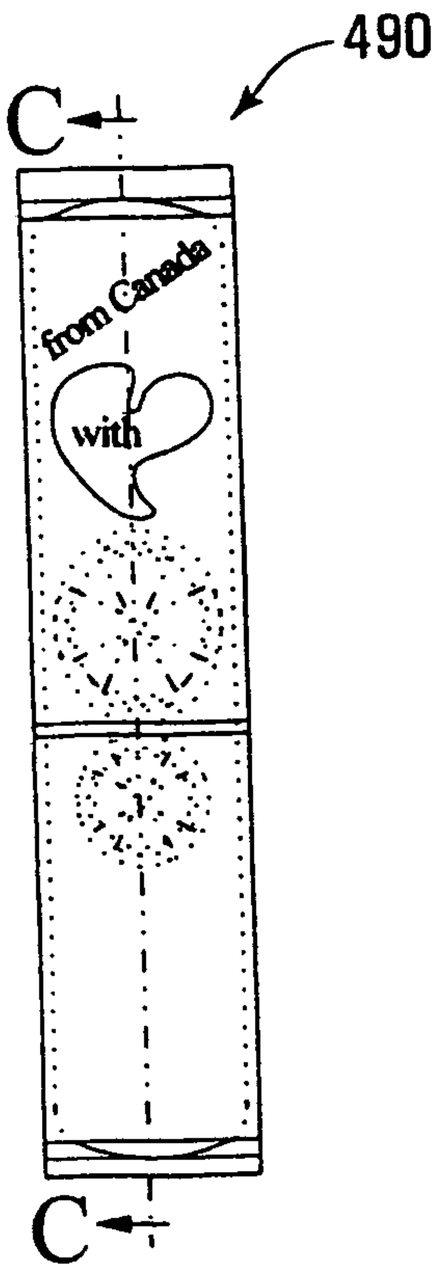


FIG. 42A

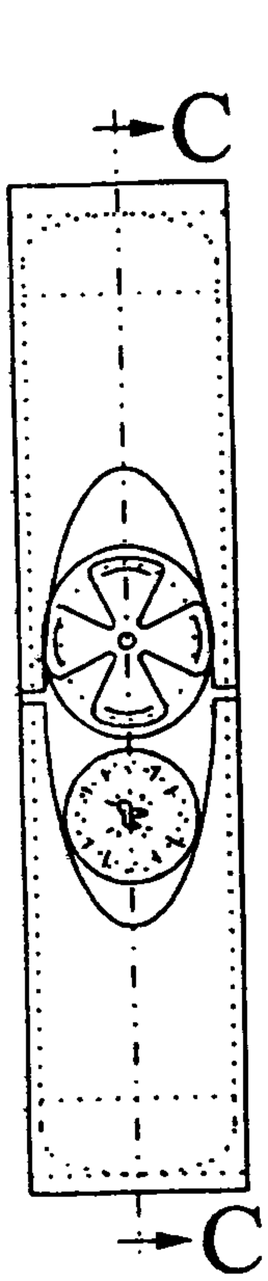


FIG. 42B

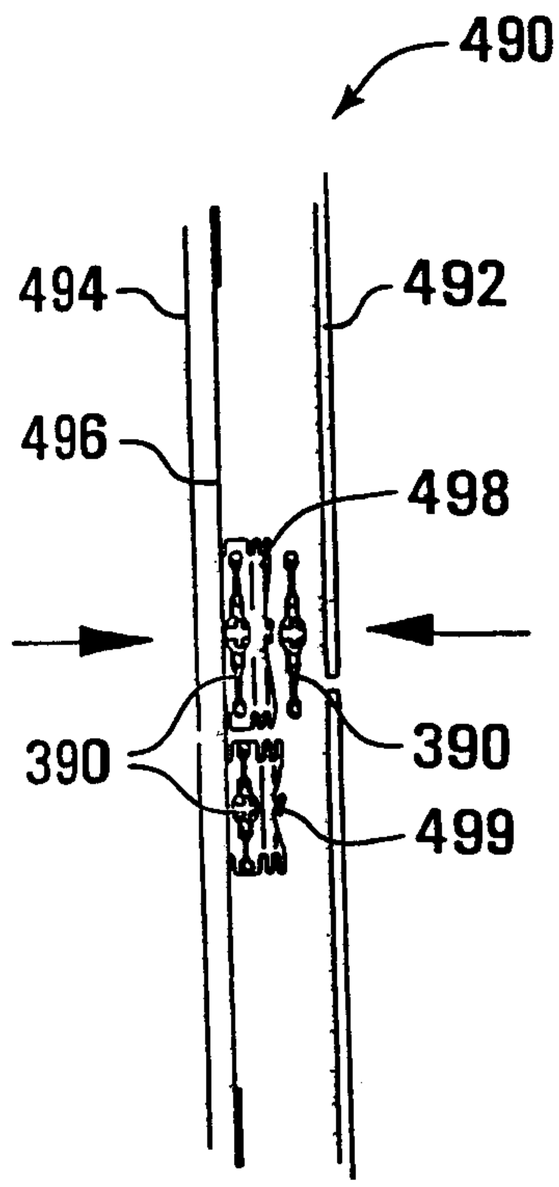


FIG. 42C

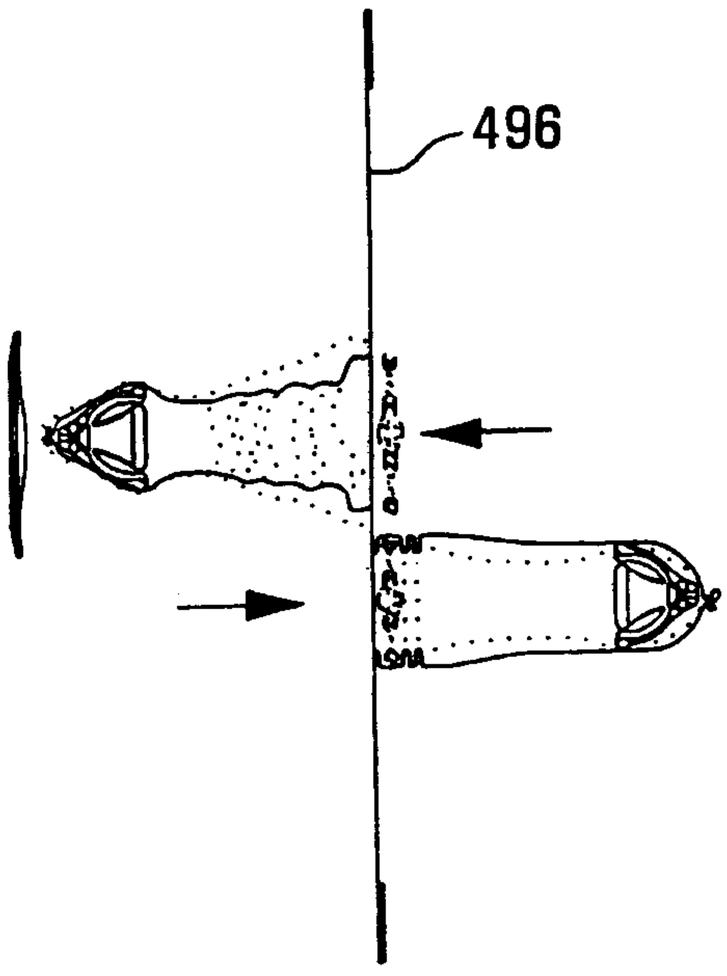


FIG. 42D

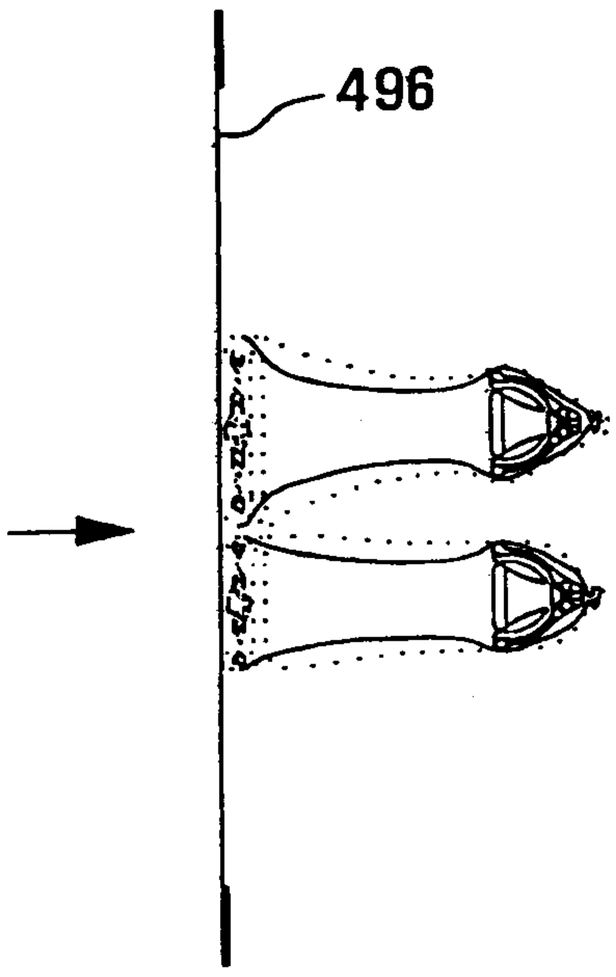


FIG. 42E

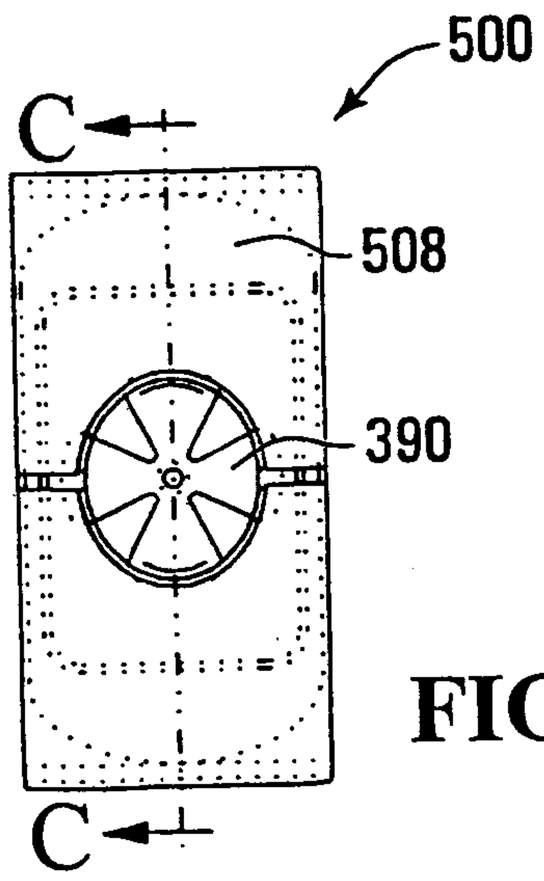


FIG. 43A

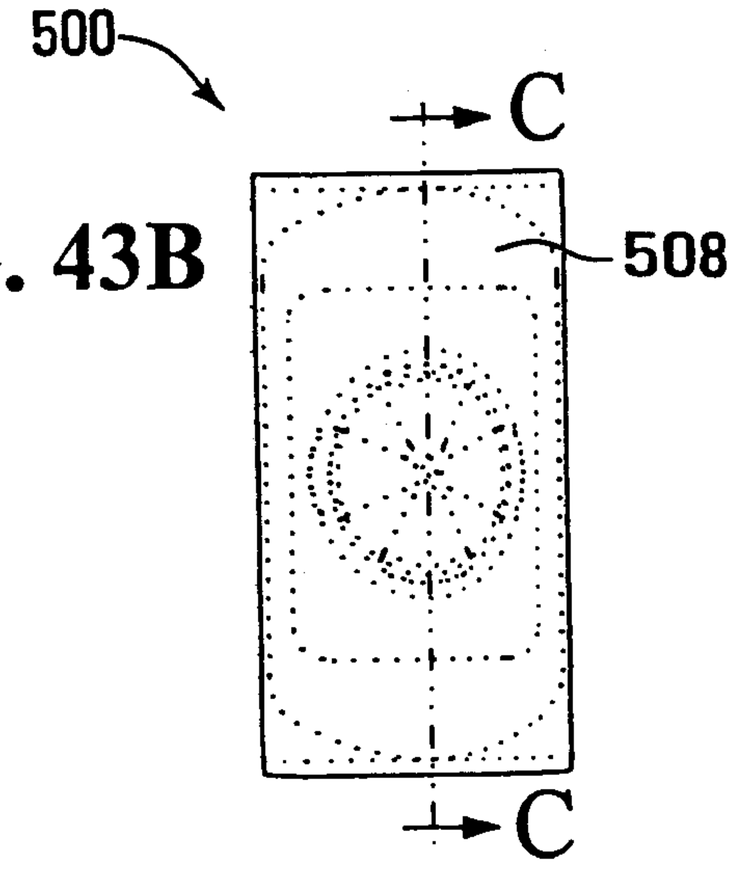


FIG. 43B

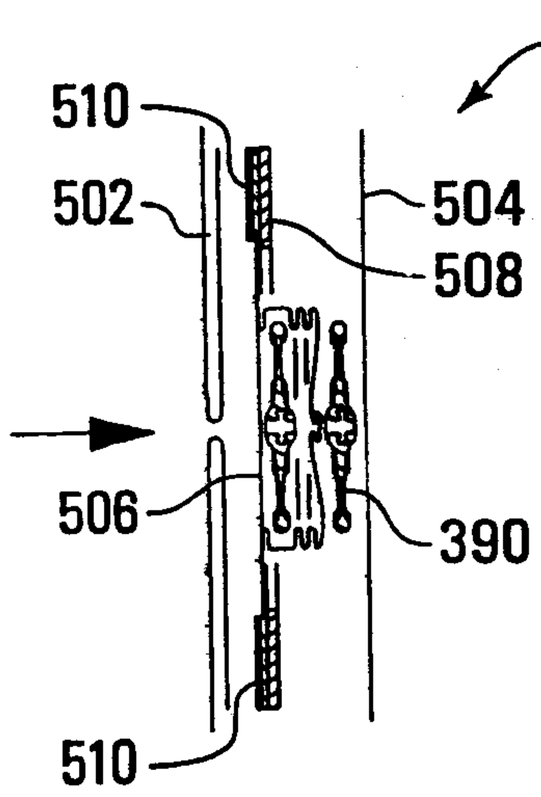


FIG. 43C

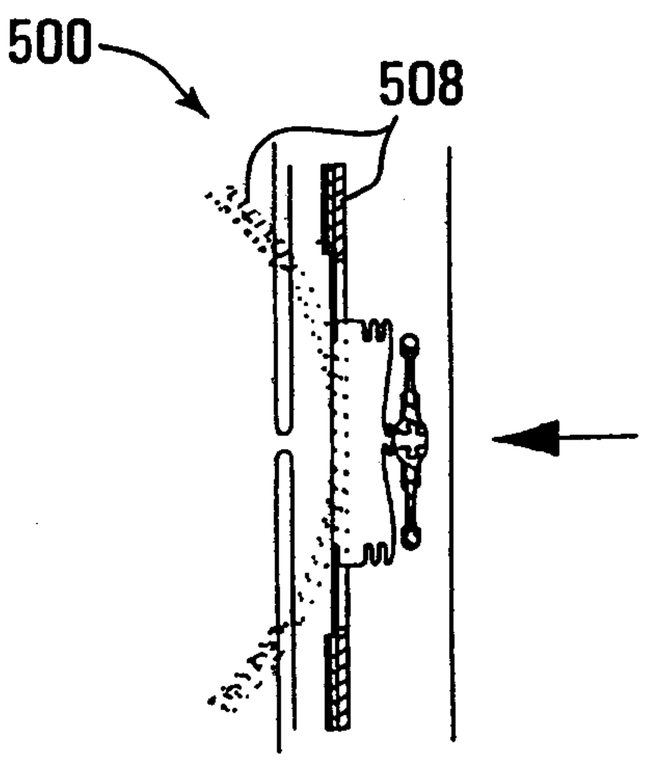


FIG. 43D

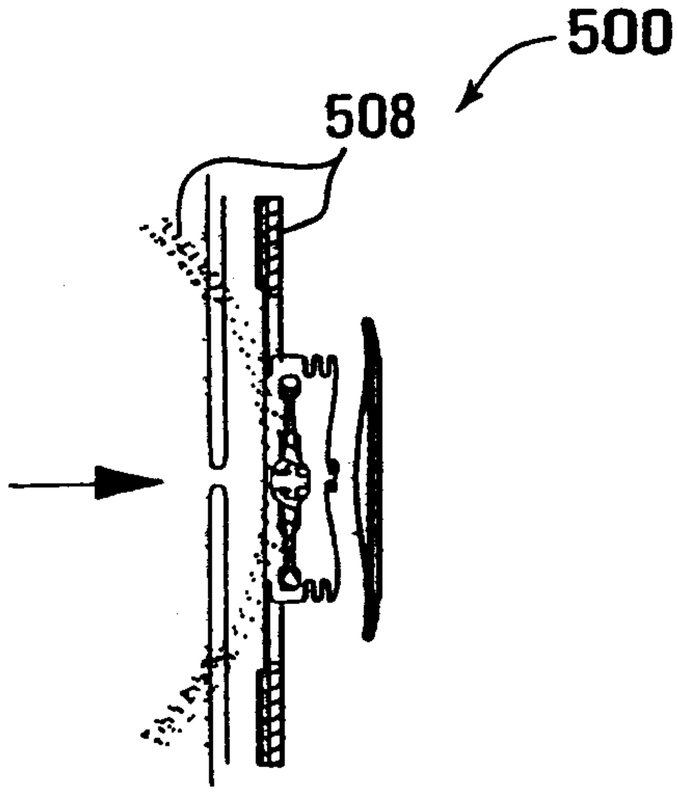


FIG. 43E

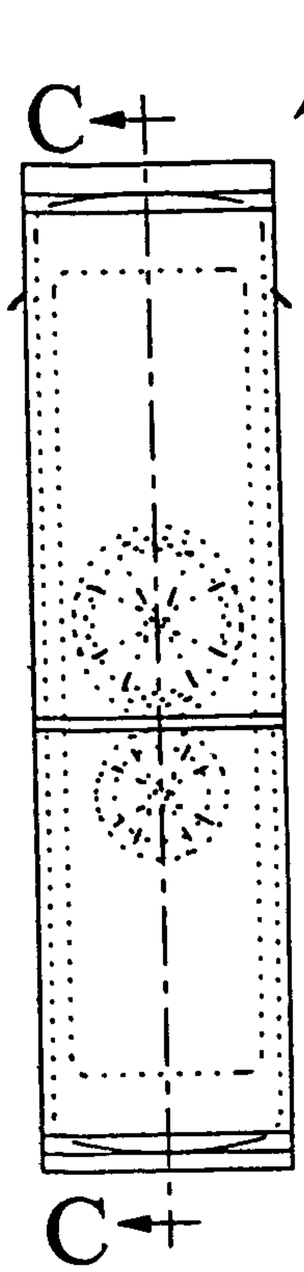


FIG. 44A

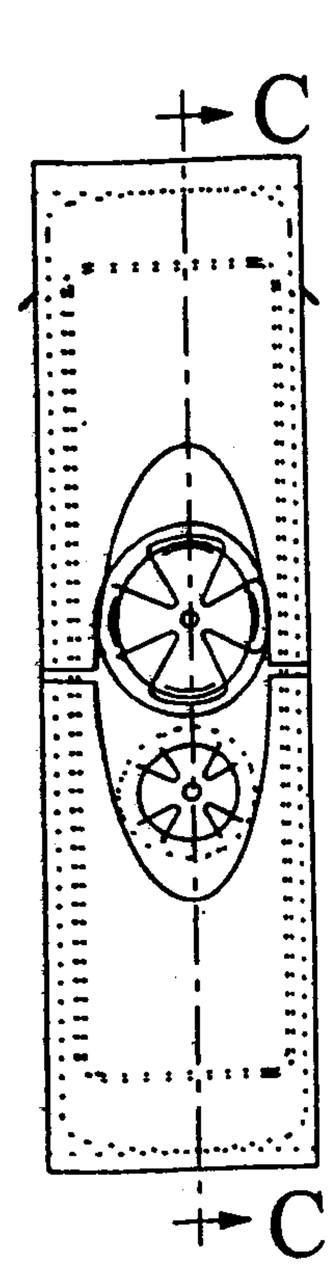


FIG. 44B

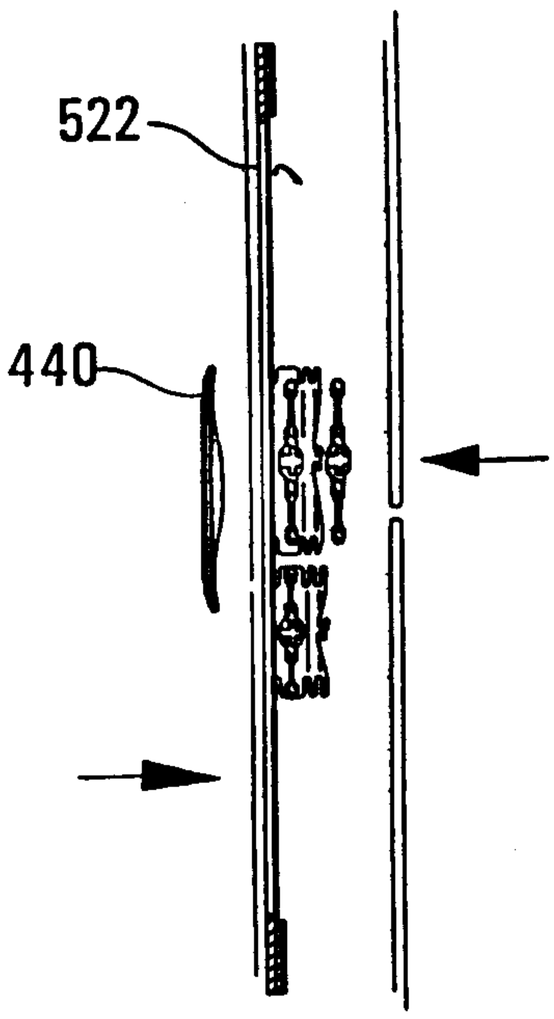


FIG. 44C

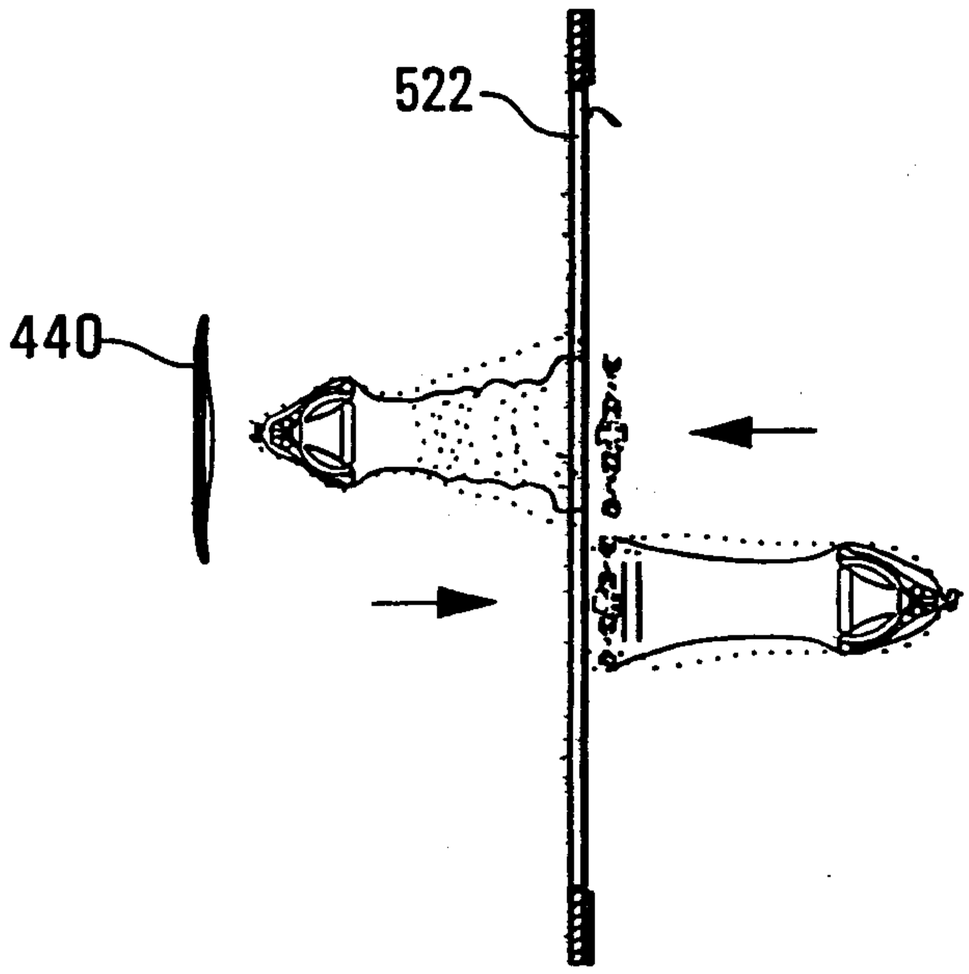


FIG. 44D

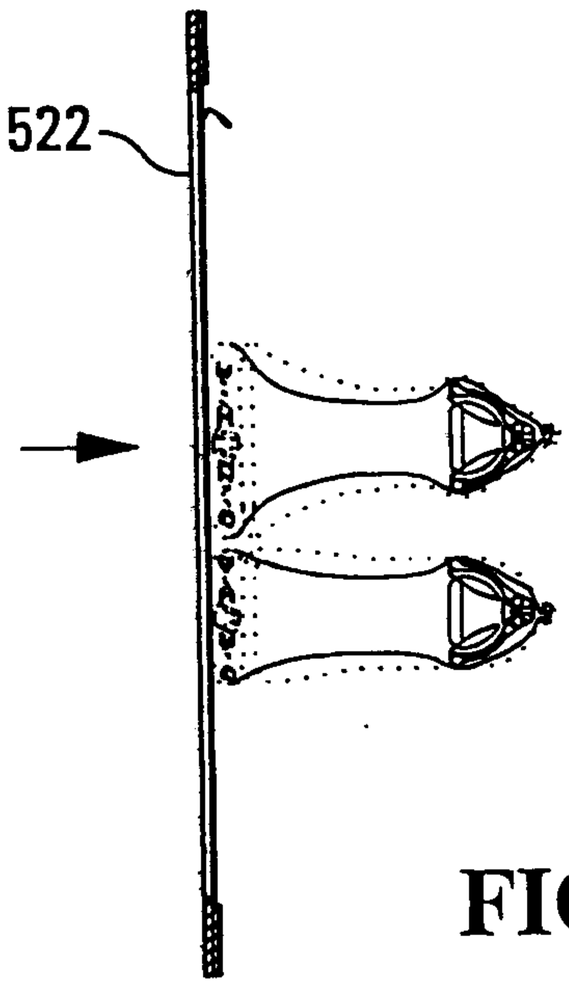


FIG. 44E

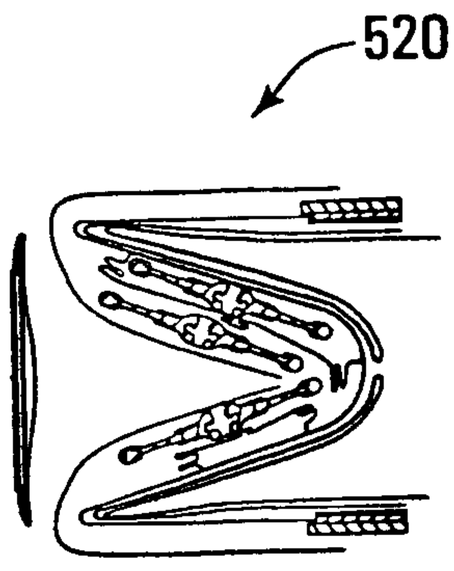


FIG. 44F

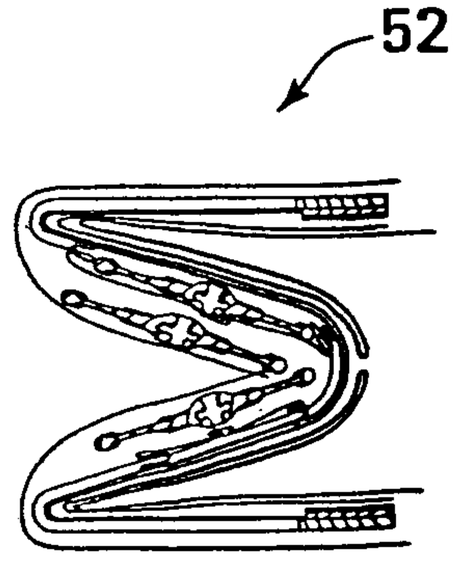


FIG. 44G

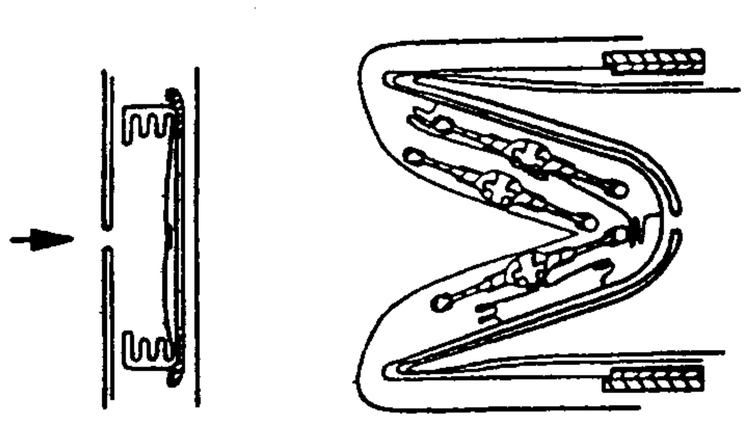


FIG. 44H

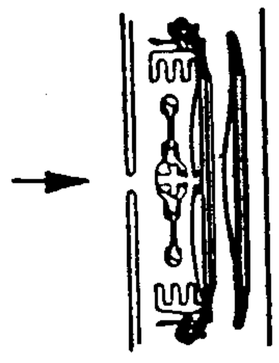


FIG. 45

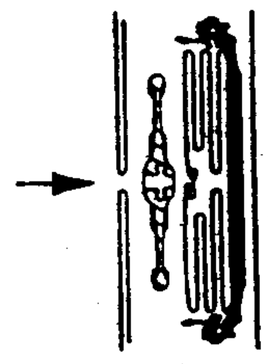


FIG. 46

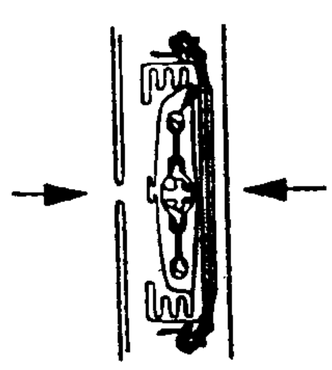


FIG. 47

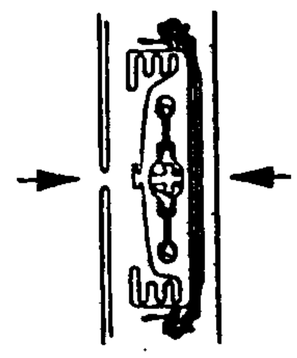


FIG. 48

FIG. 49

FIG. 50

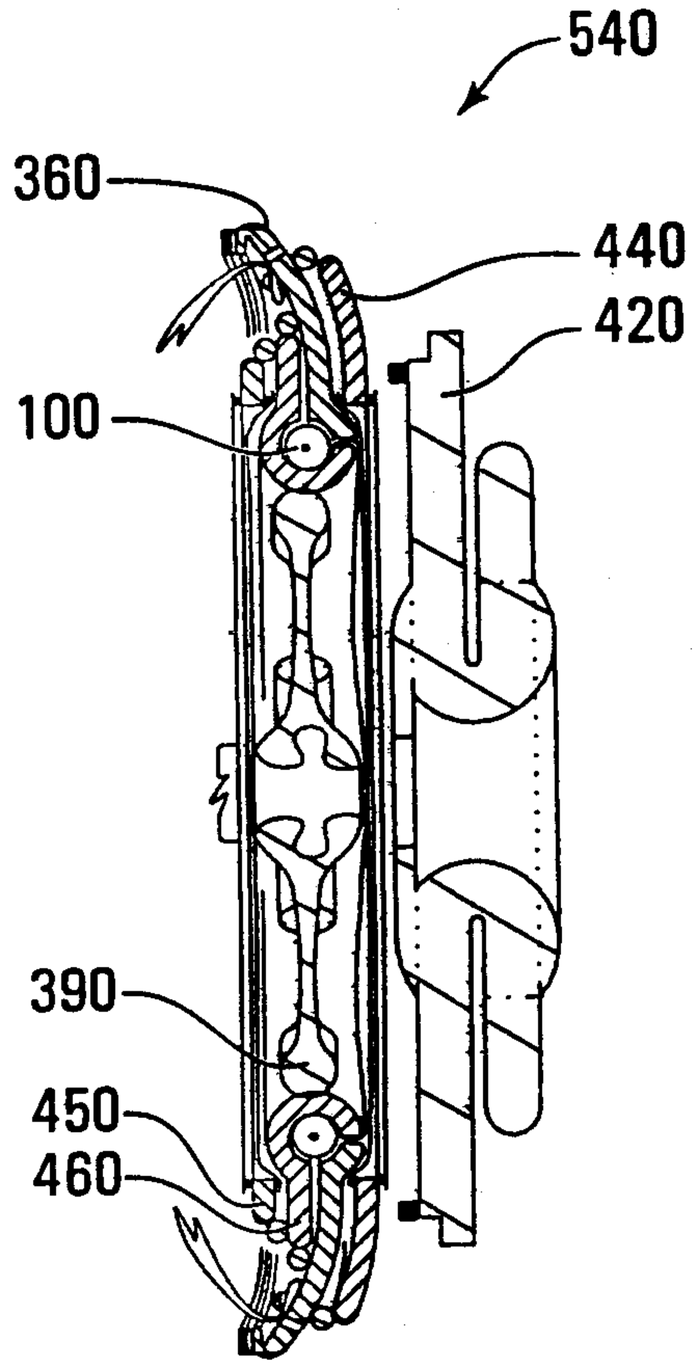


FIG. 51A

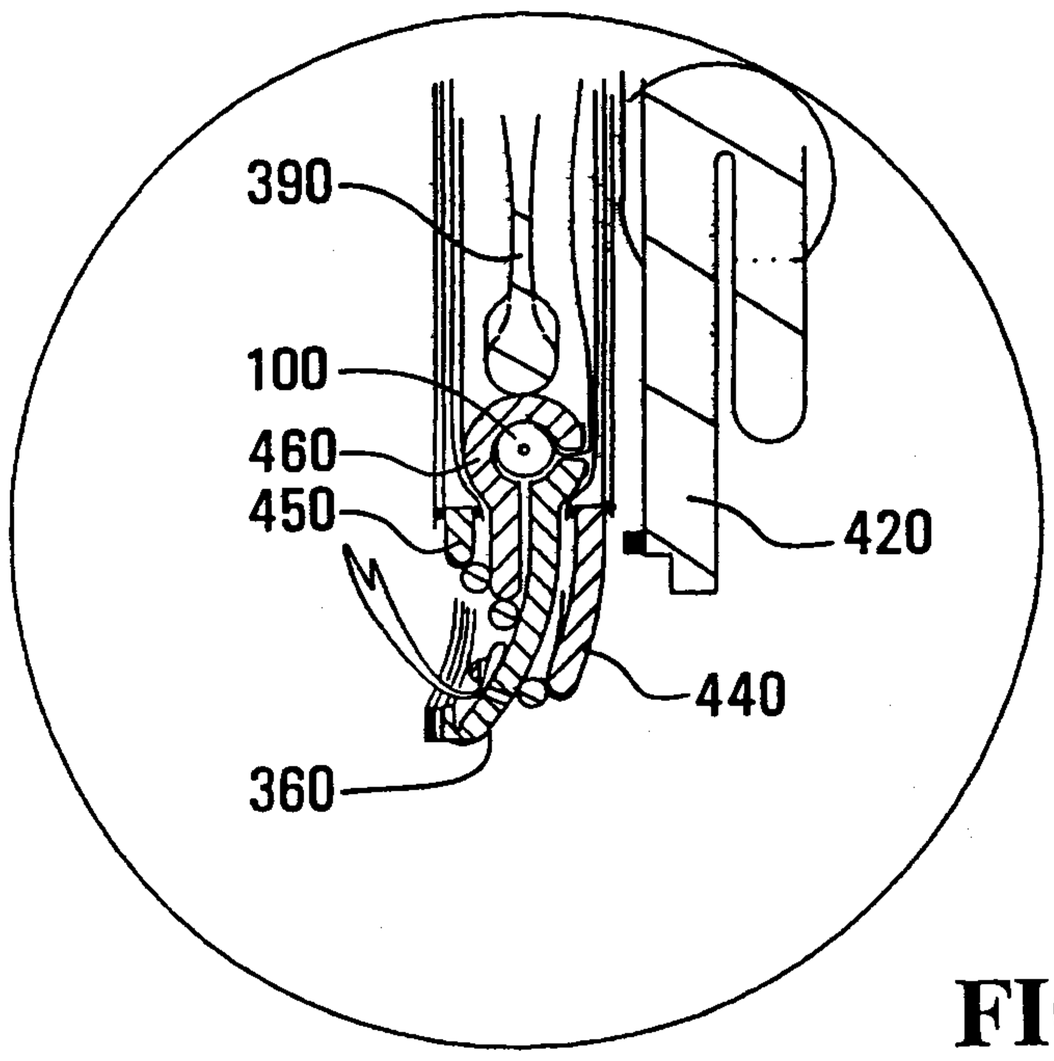


FIG. 51B

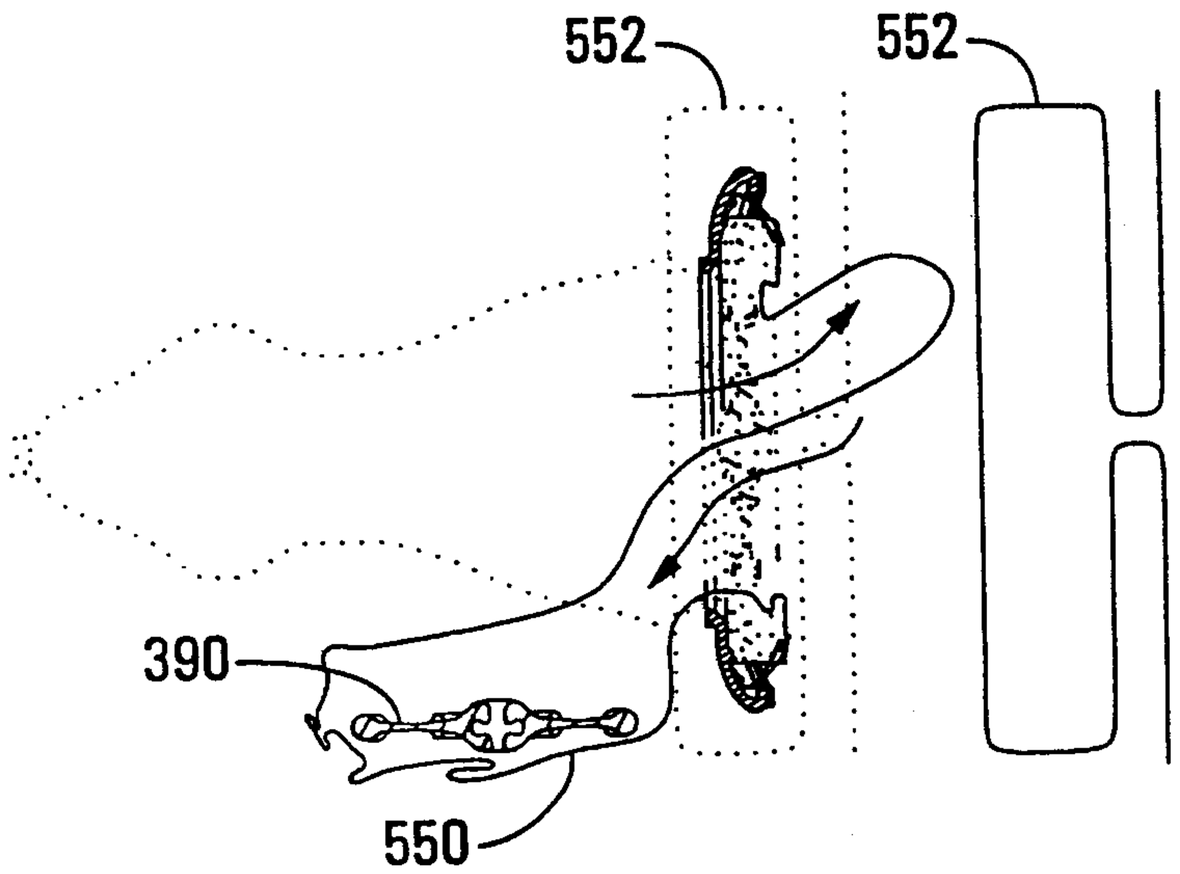


FIG. 52

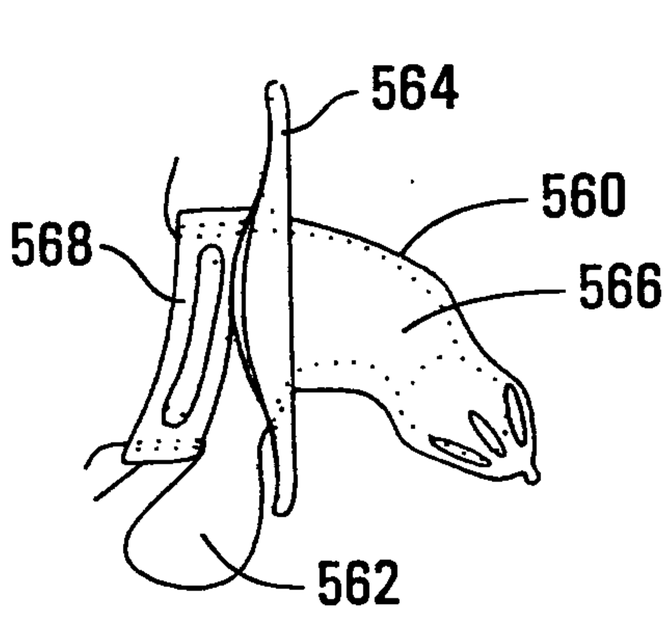


FIG. 53

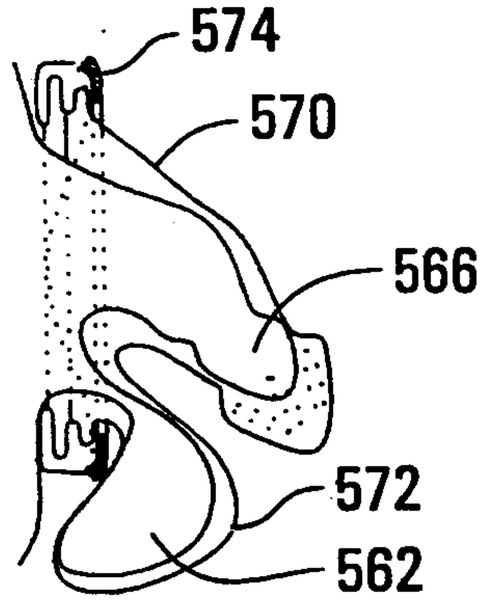


FIG. 54A

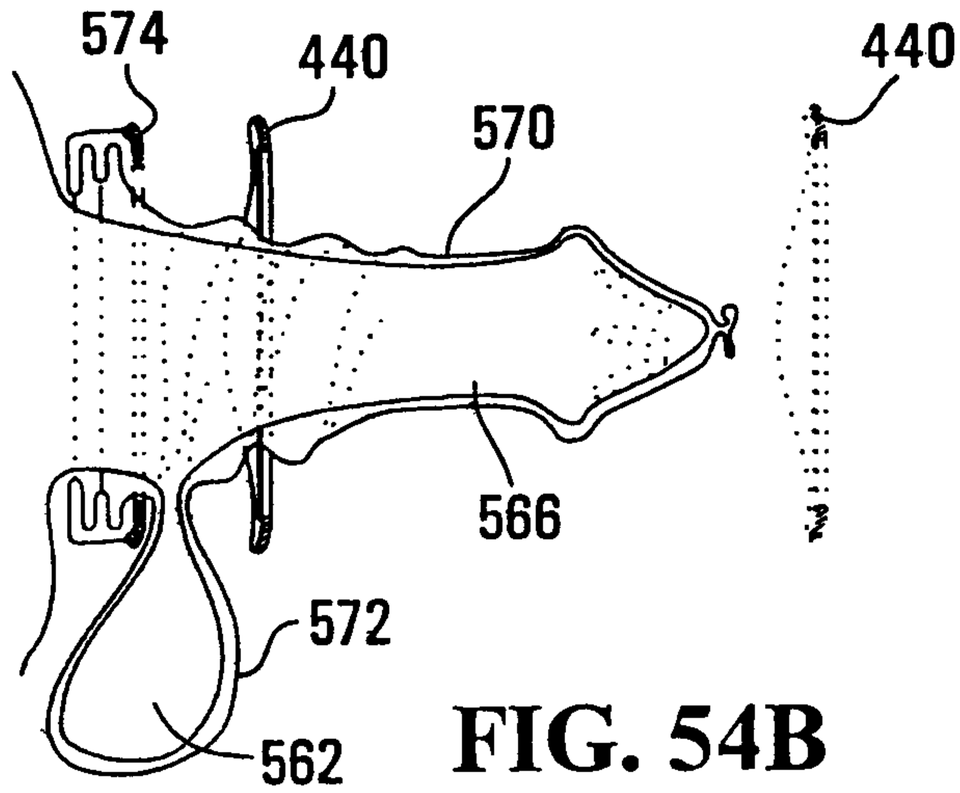


FIG. 54B

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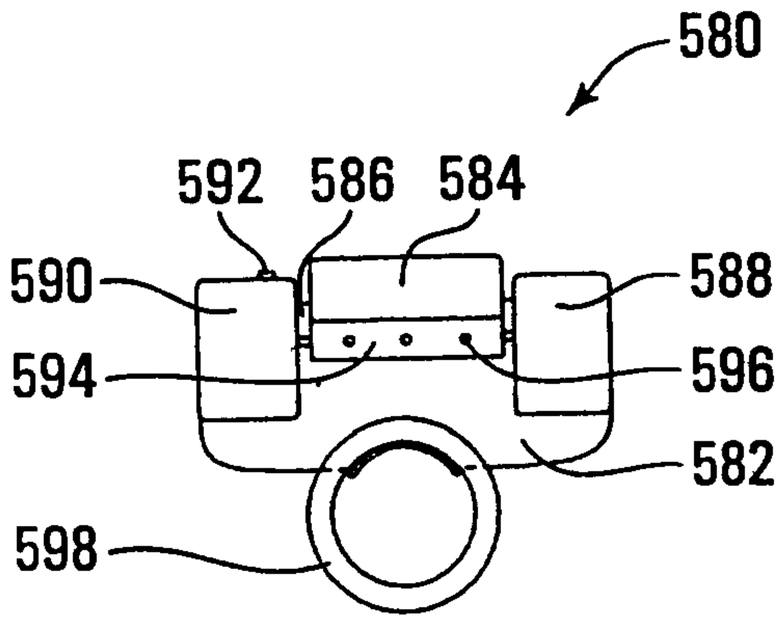


FIG. 55A

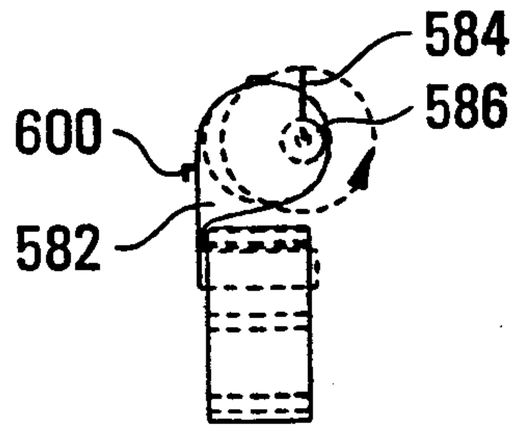


FIG. 55B

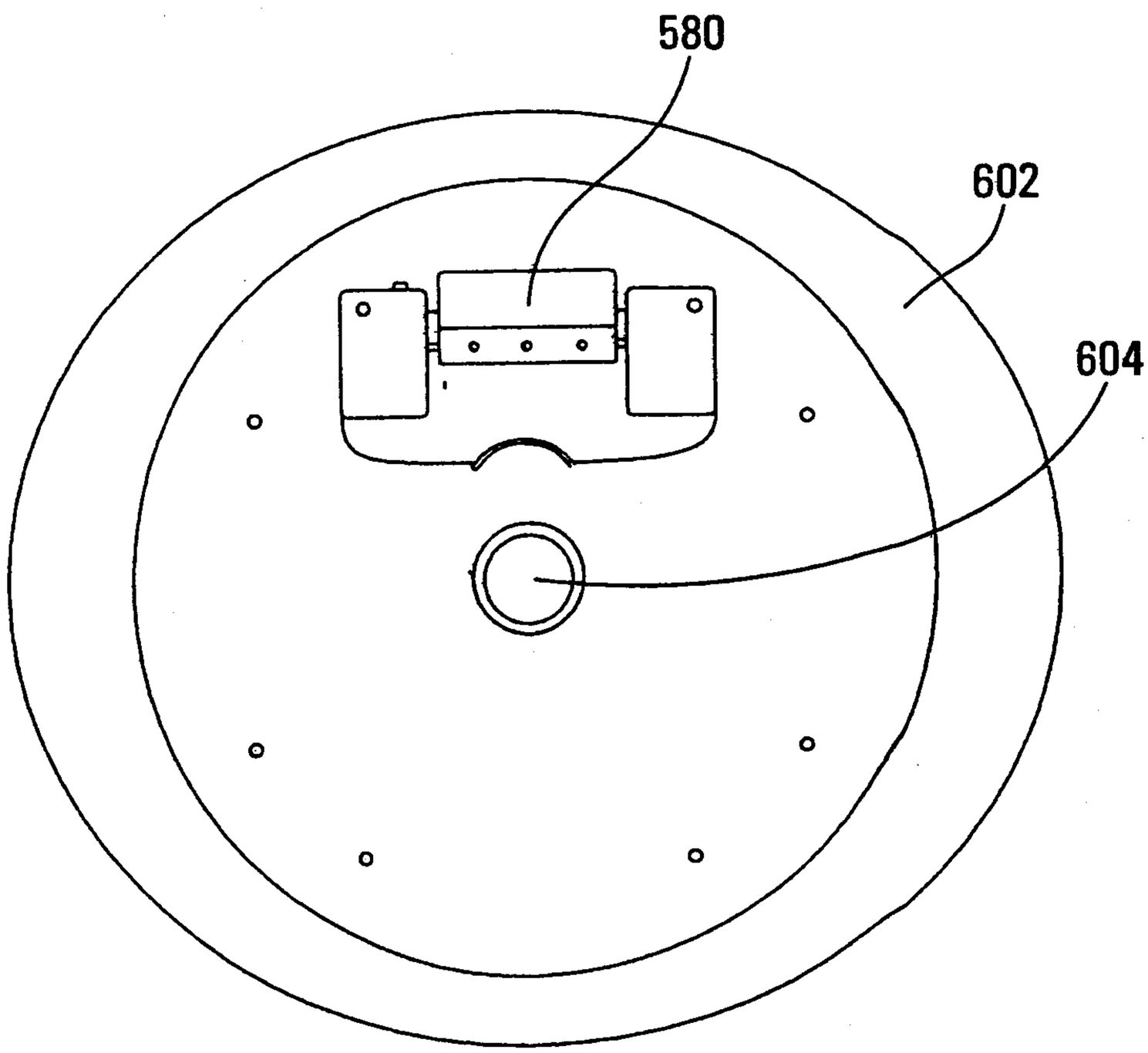


FIG. 56A

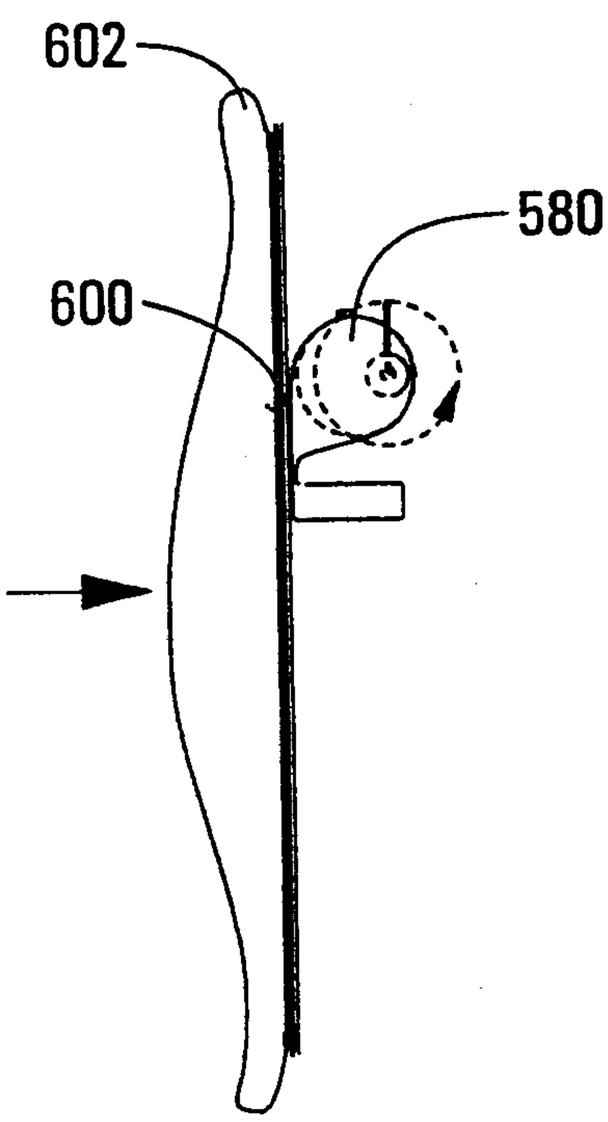


FIG. 56B

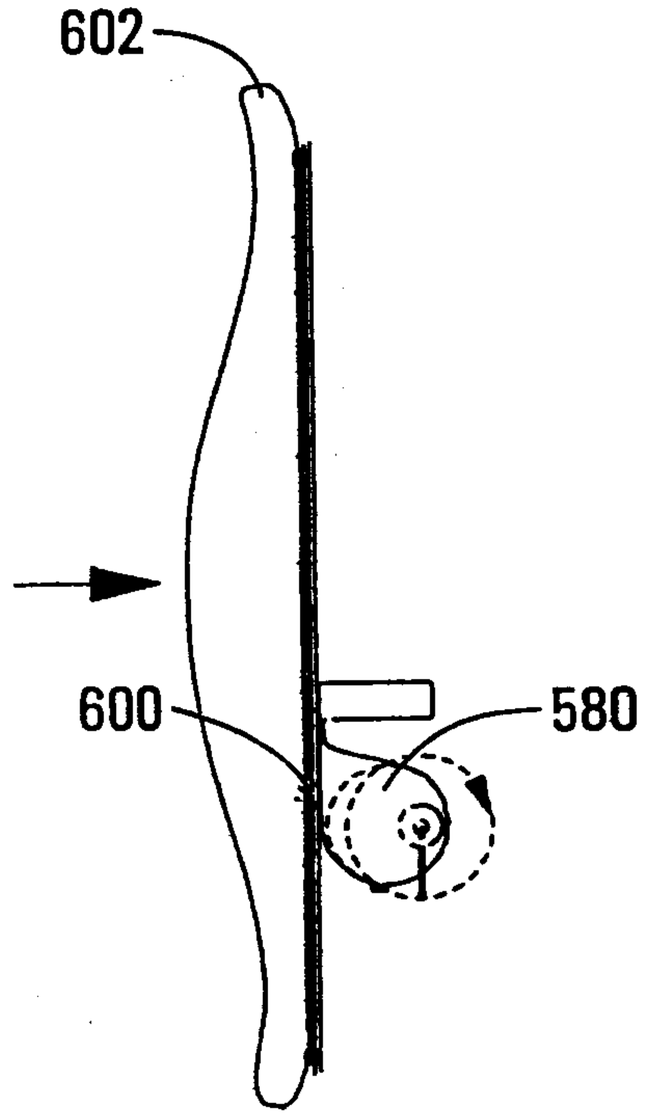


FIG. 56C

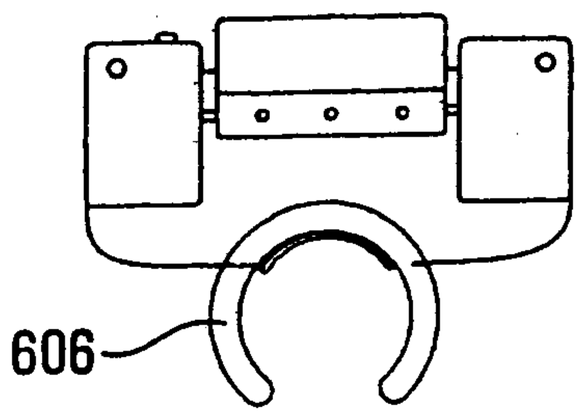


FIG. 57

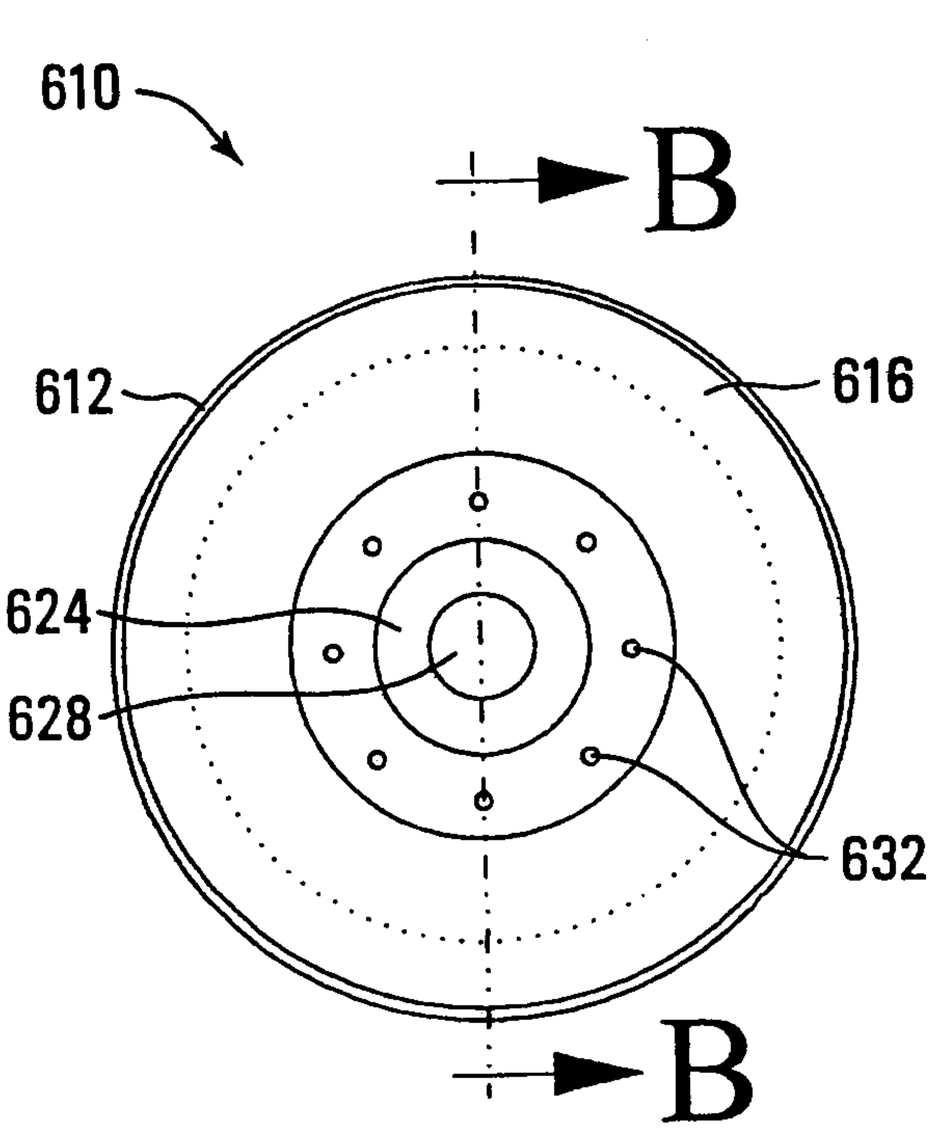


FIG. 58A

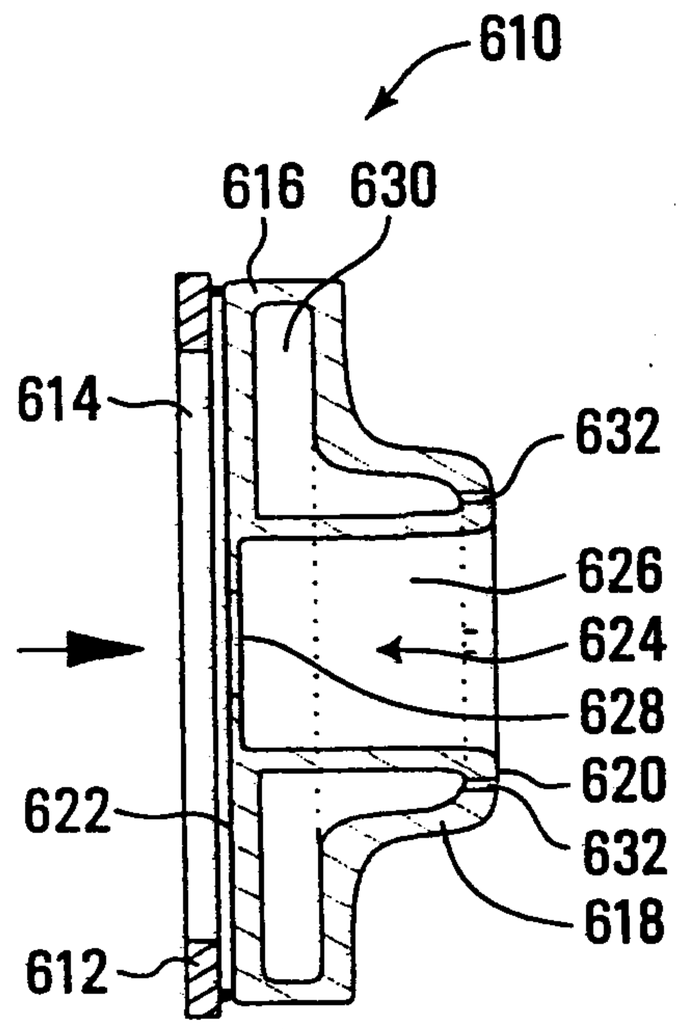


FIG. 58B

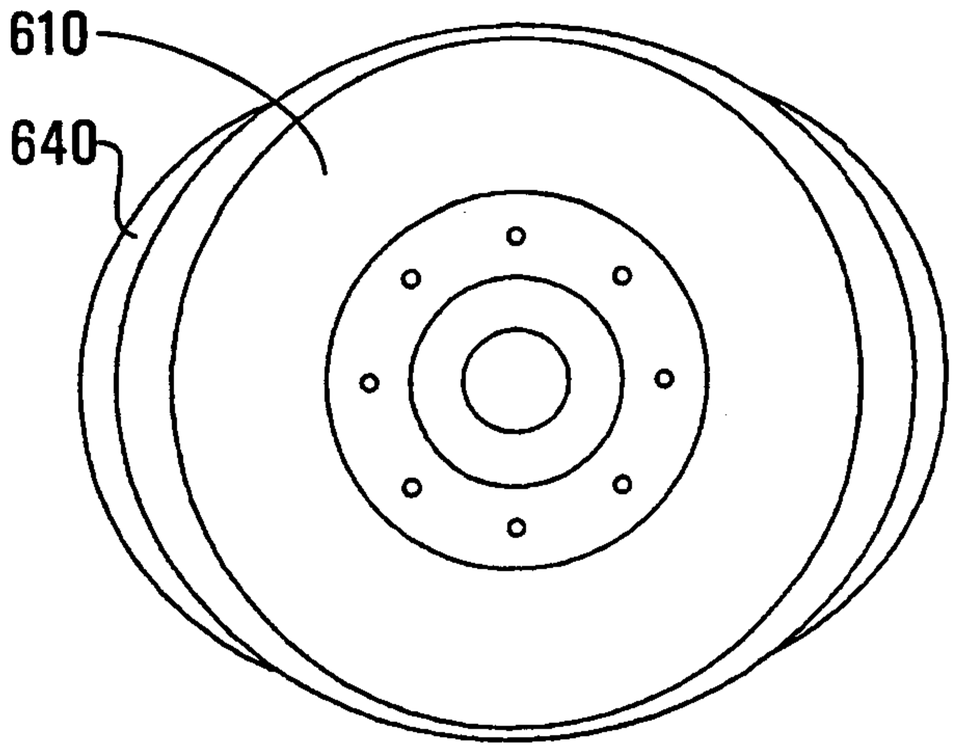


FIG. 59A

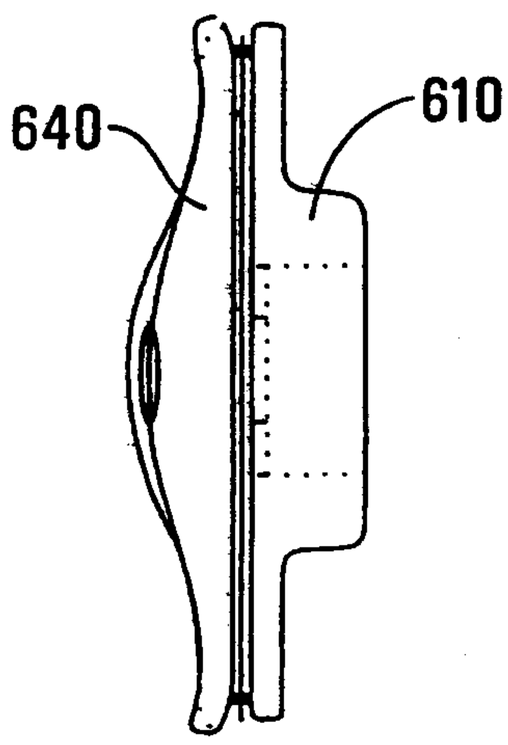


FIG. 59B

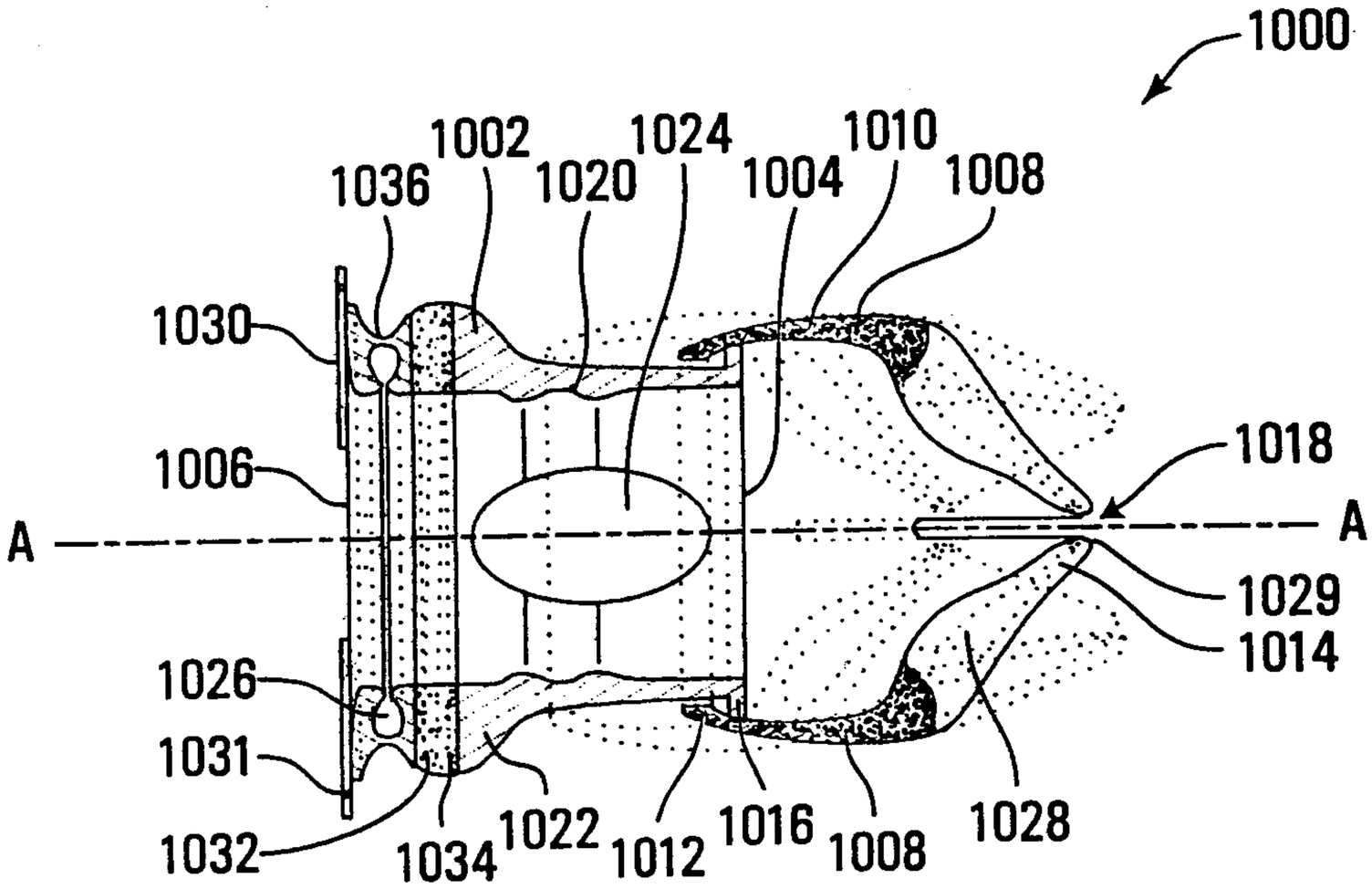

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FIG. 60

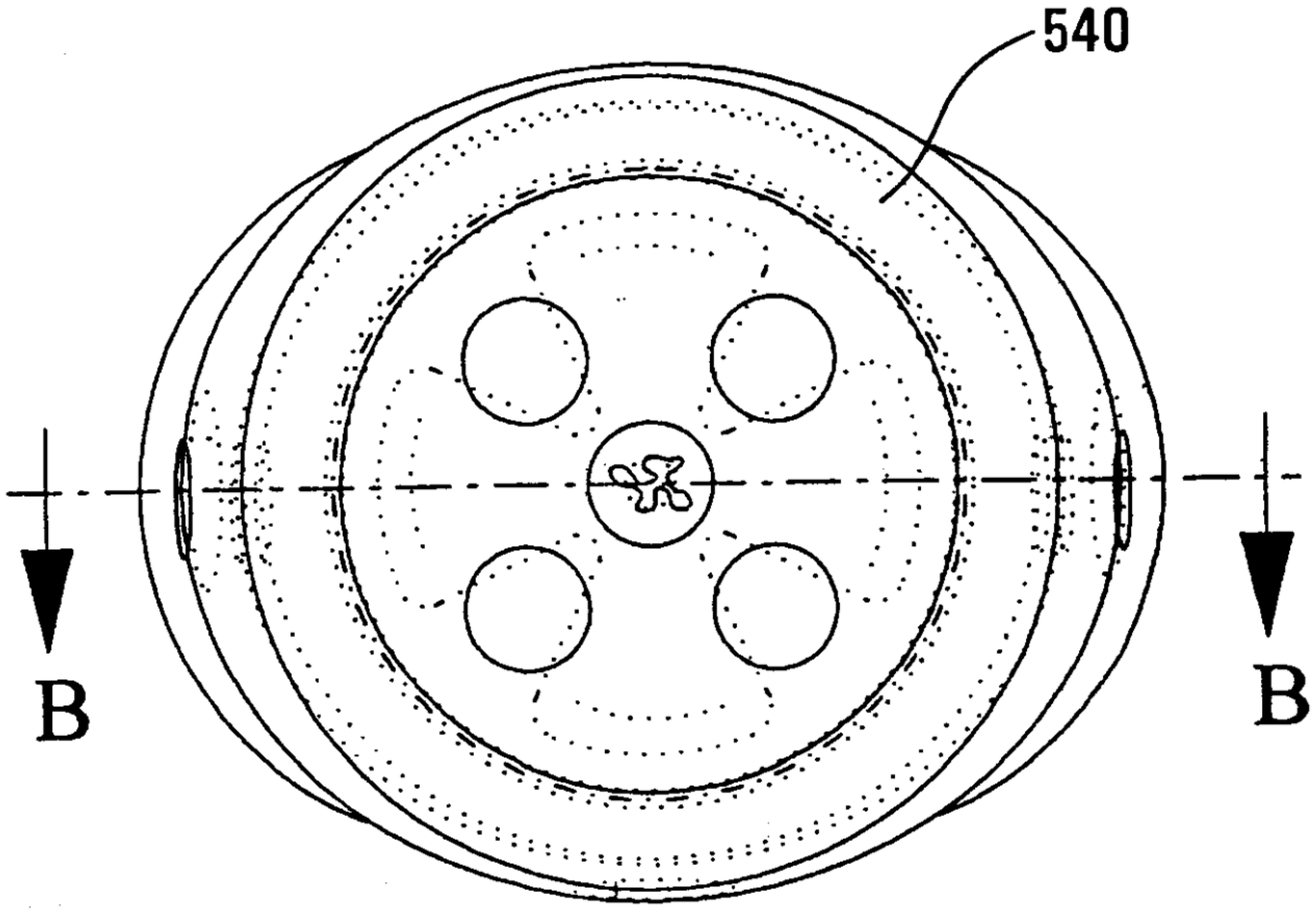


FIG. 61A

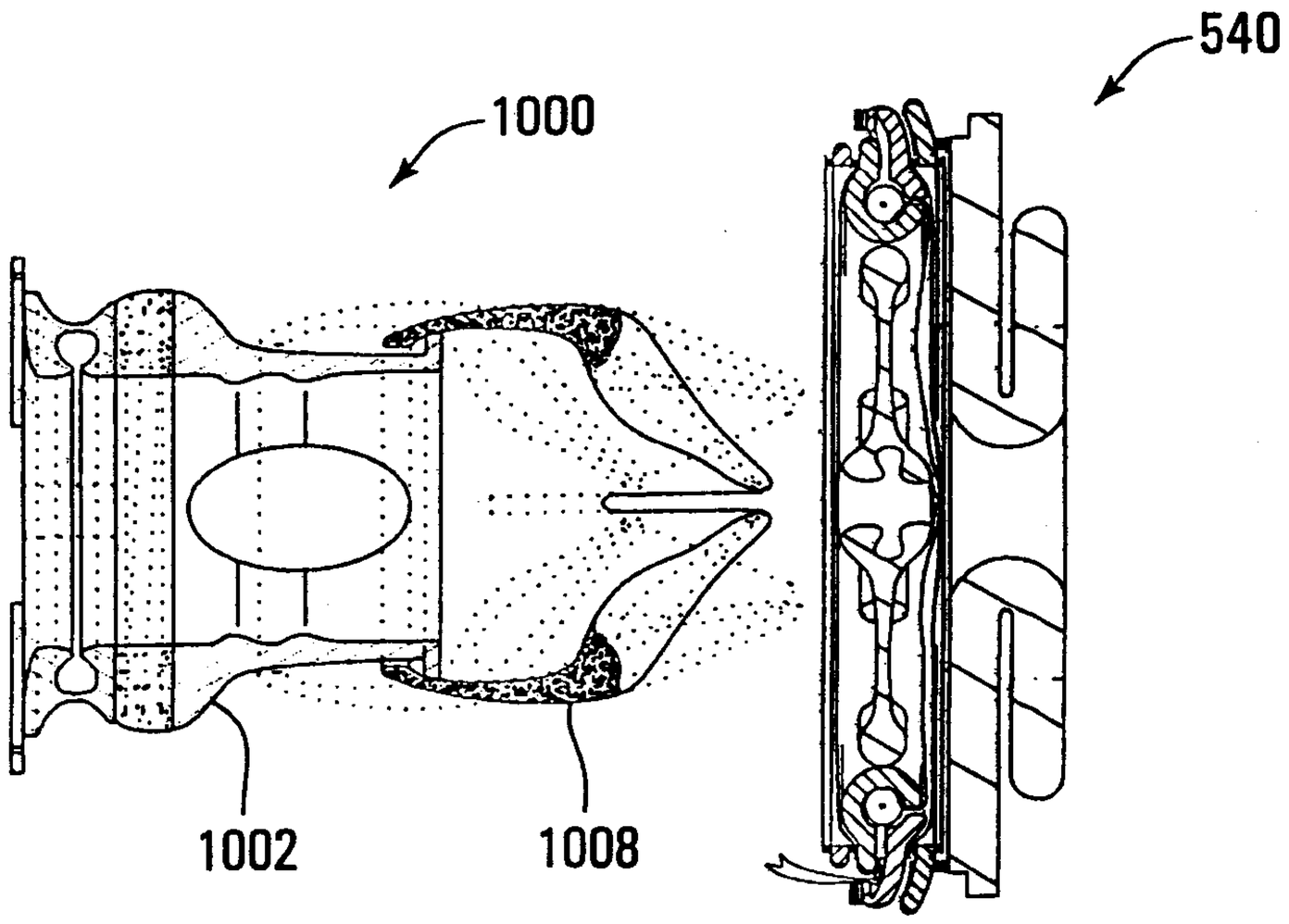


FIG. 61B

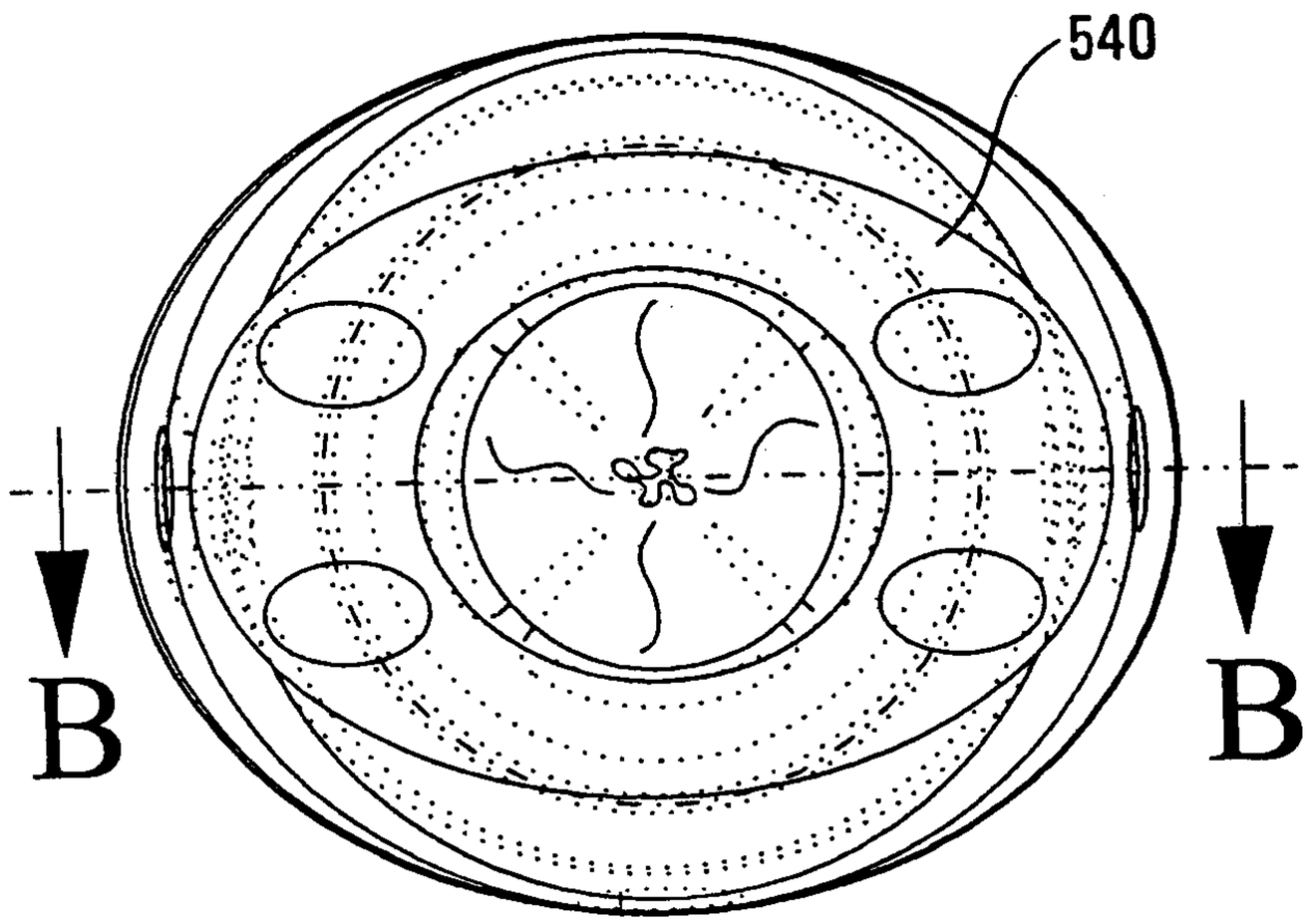


FIG. 62A

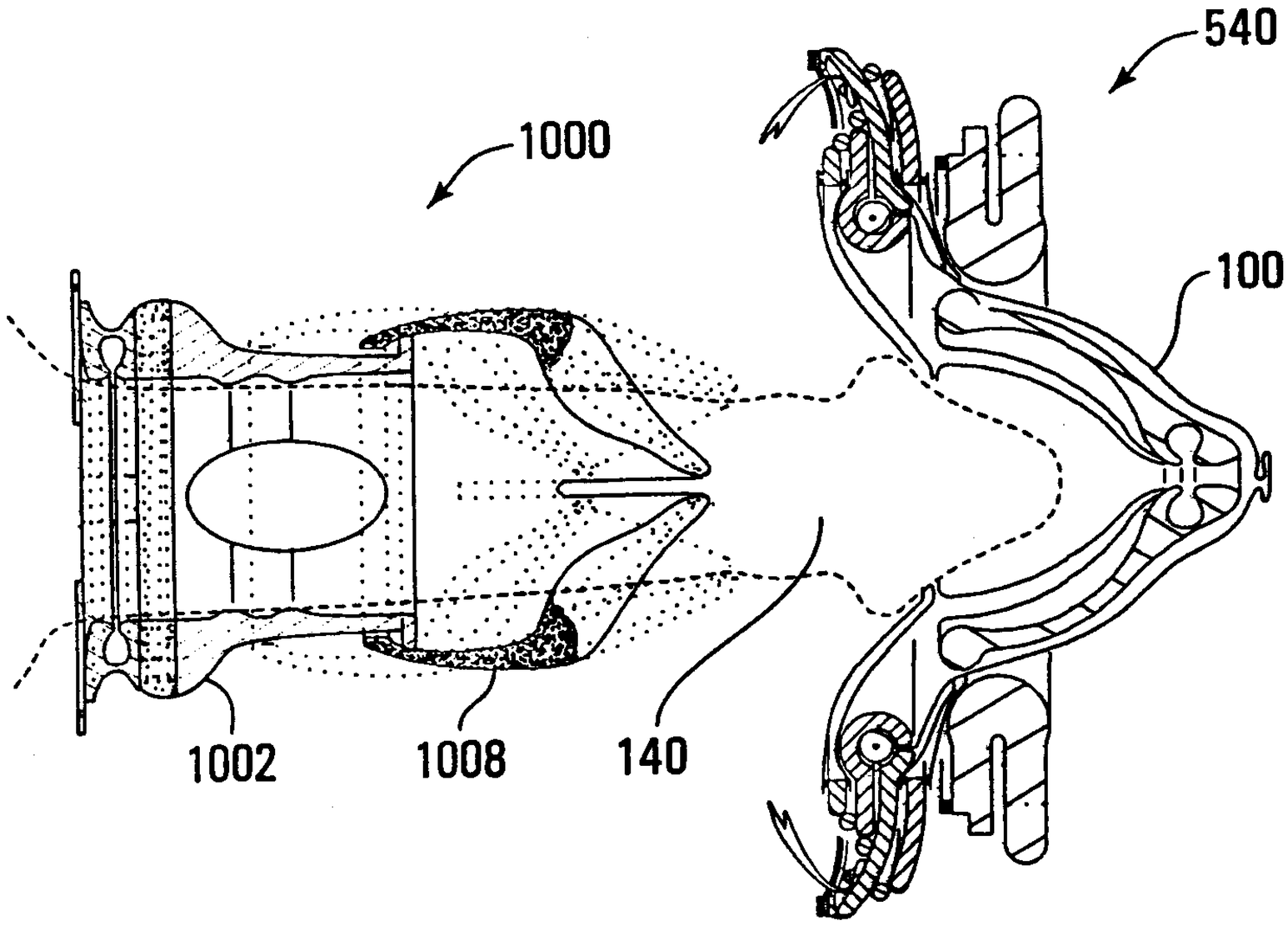


FIG. 62B

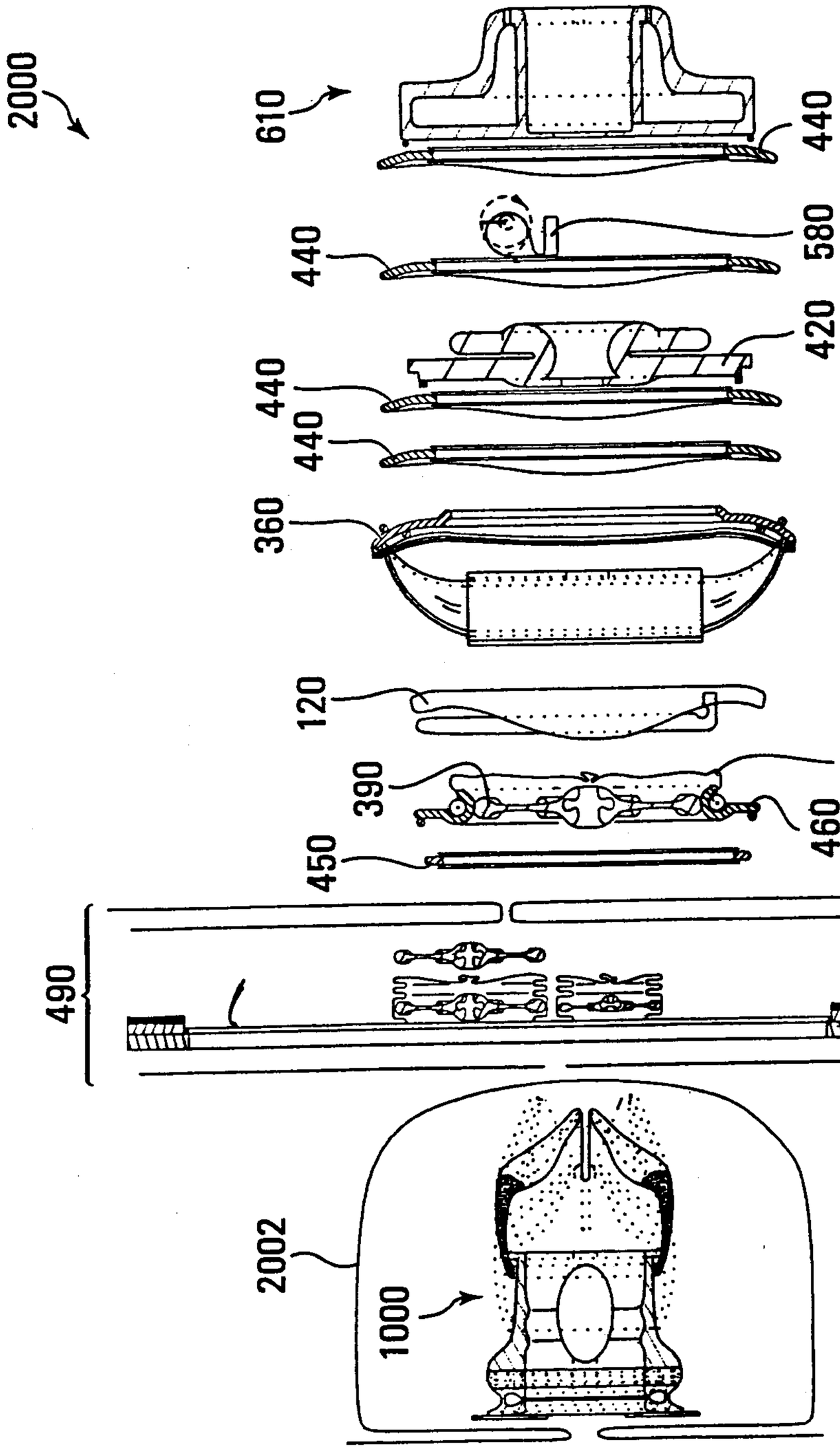

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FIG. 63

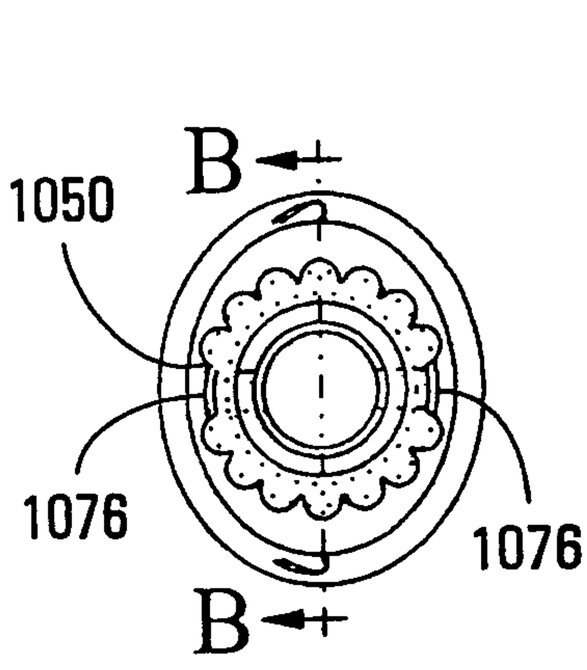


FIG. 64A

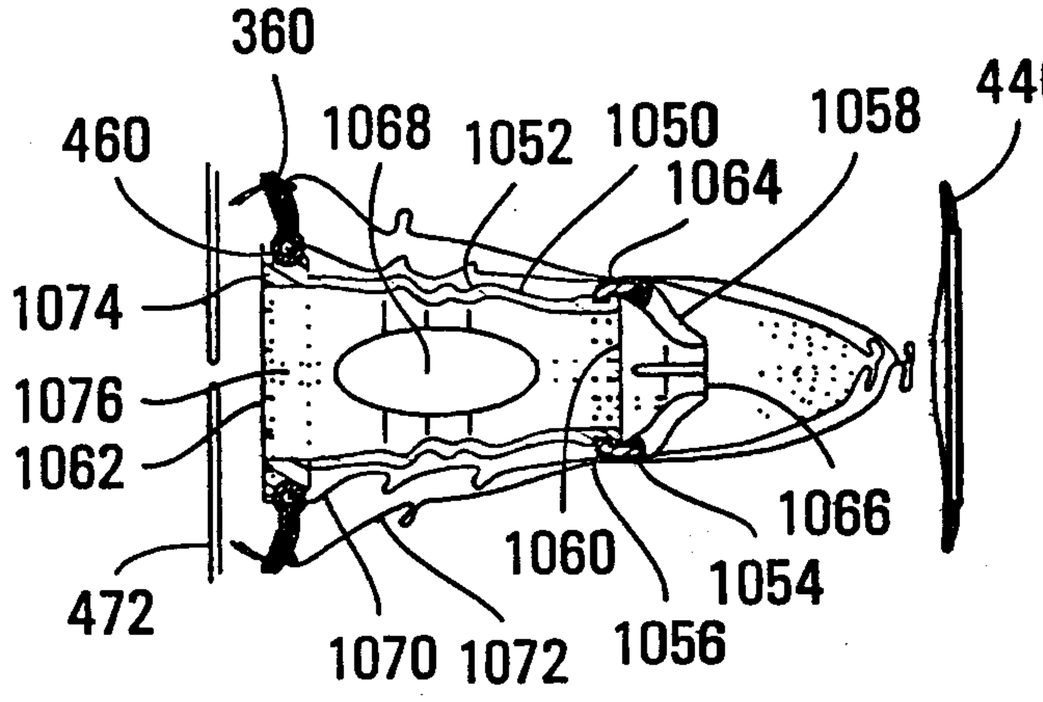


FIG. 64B

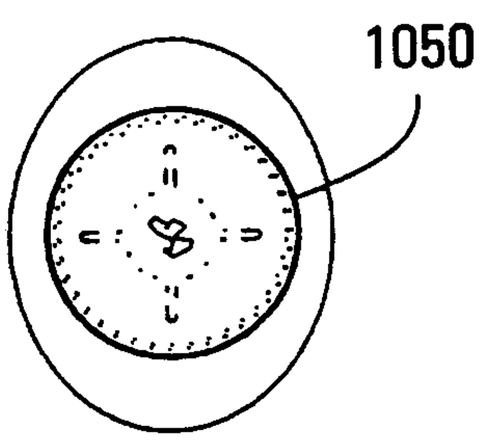


FIG. 64C

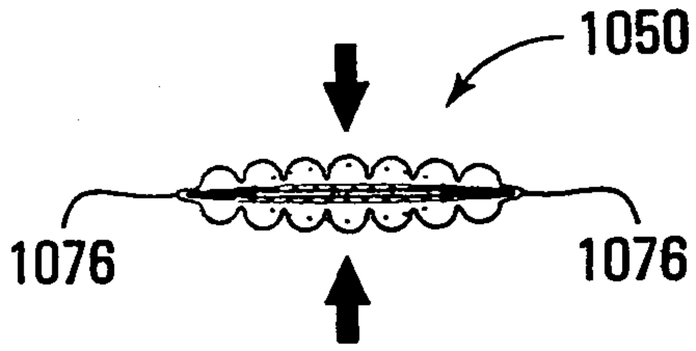


FIG. 65

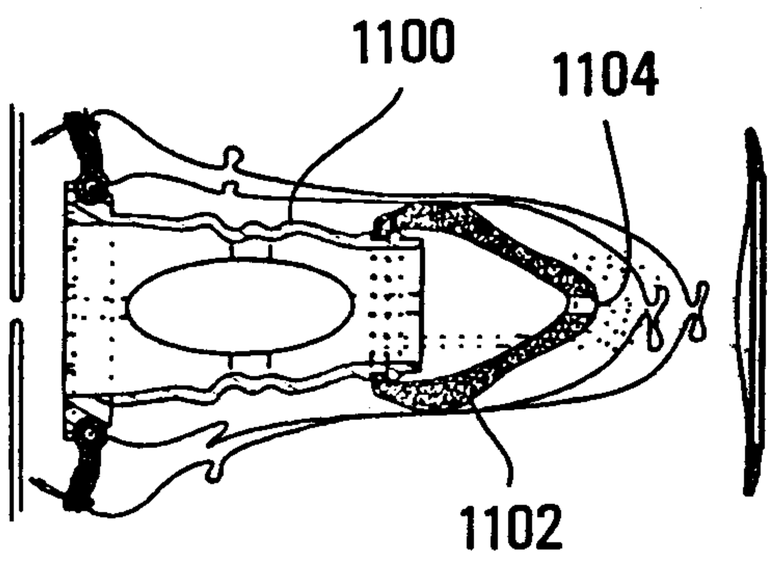


FIG. 66

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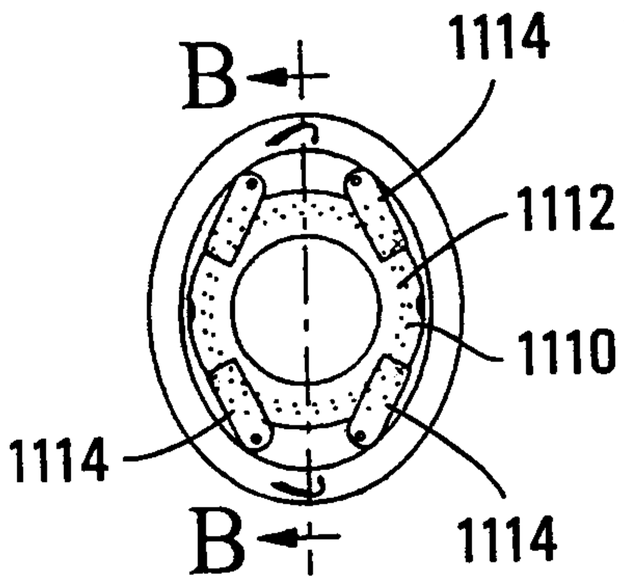


FIG. 67A

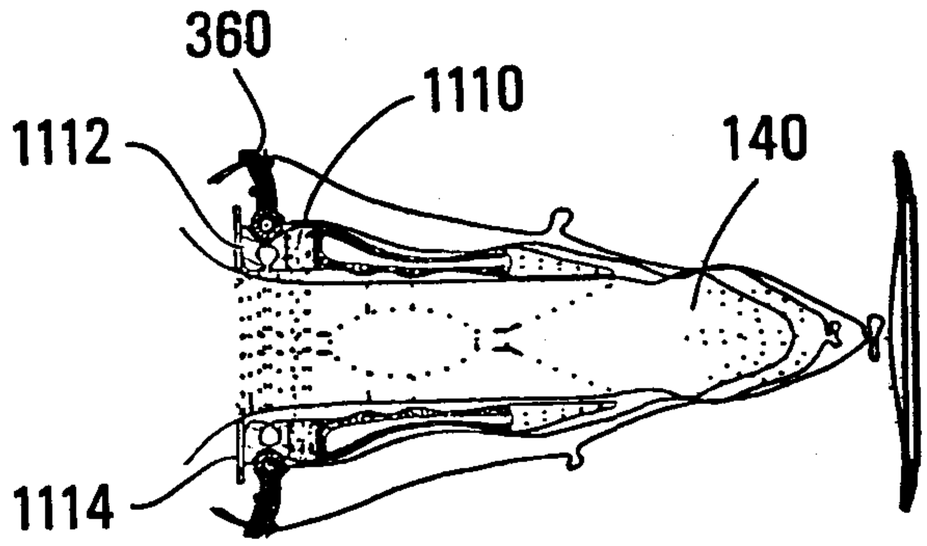


FIG. 67B

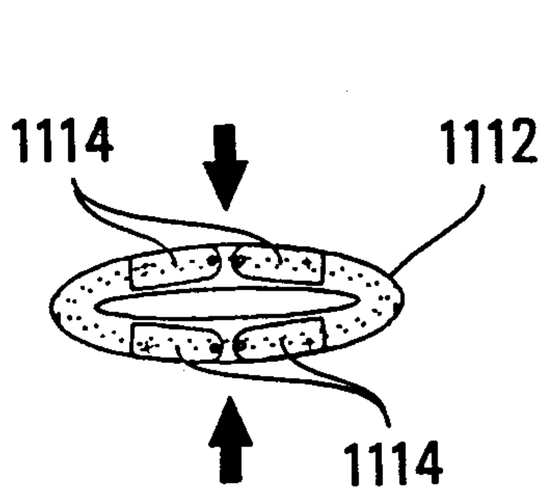


FIG. 67C

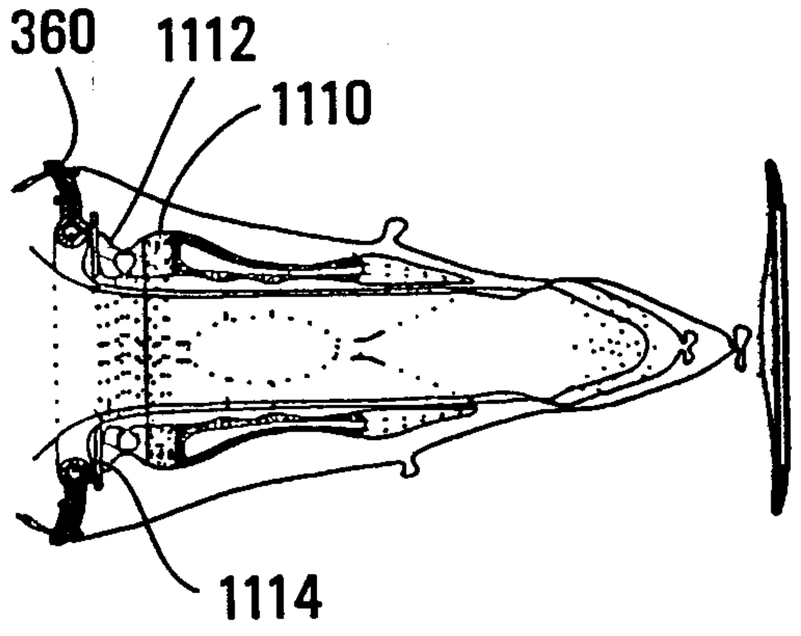


FIG. 67D

FIG. 68

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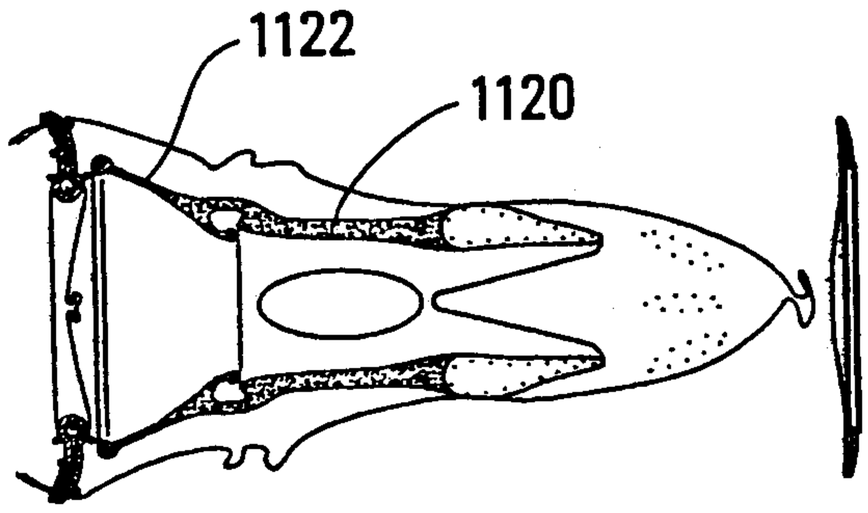


FIG. 69

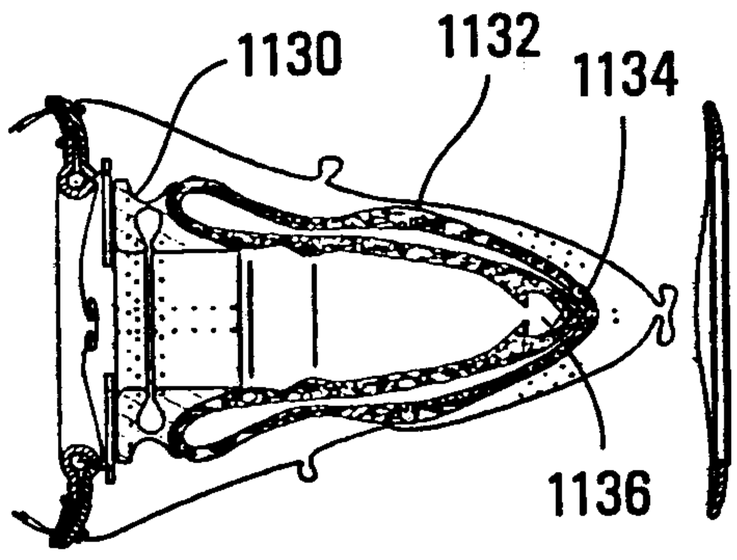


FIG. 70A

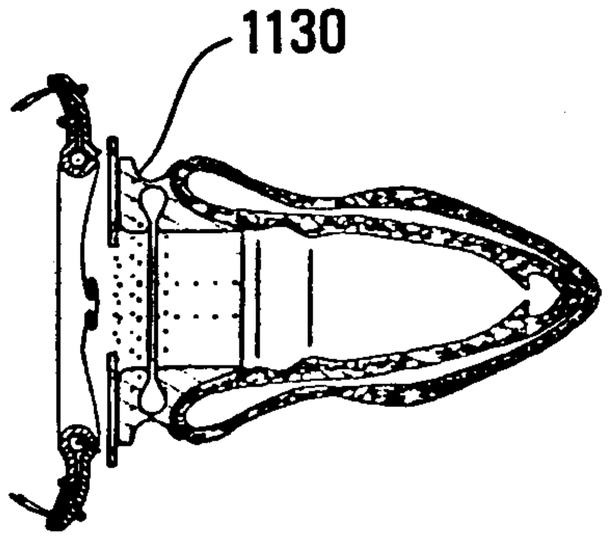


FIG. 70B

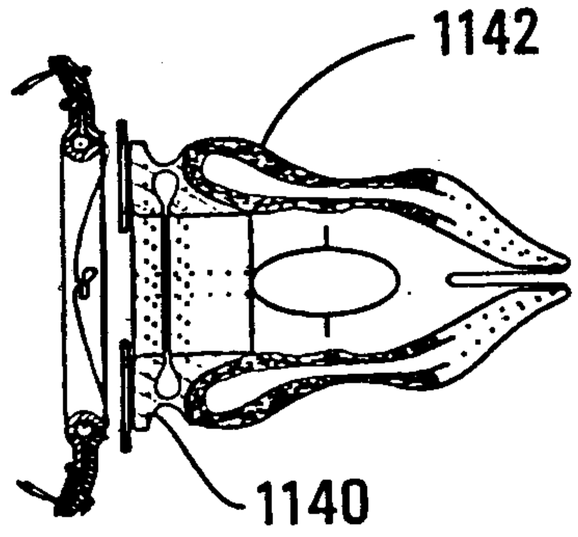


FIG. 71

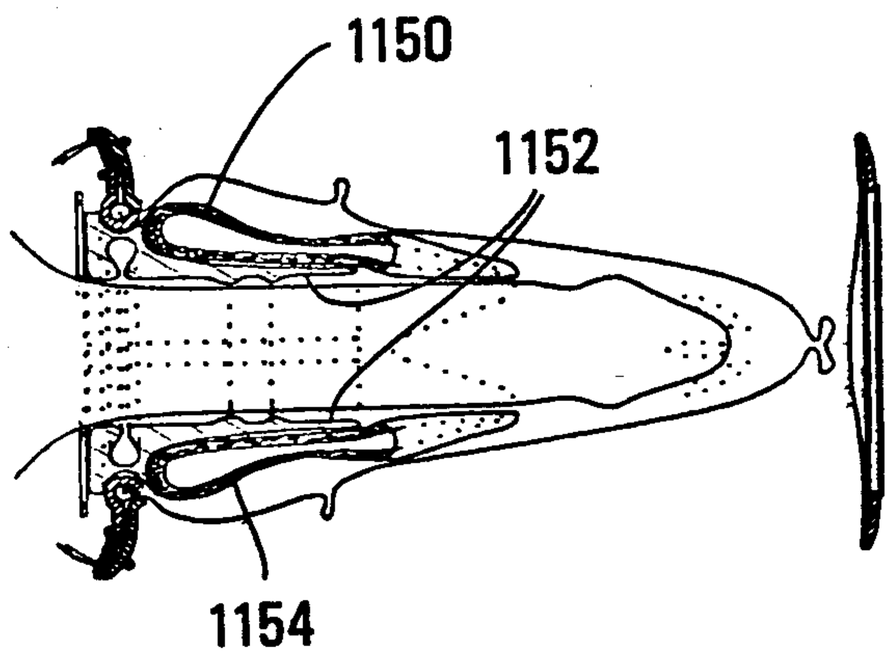


FIG. 72A

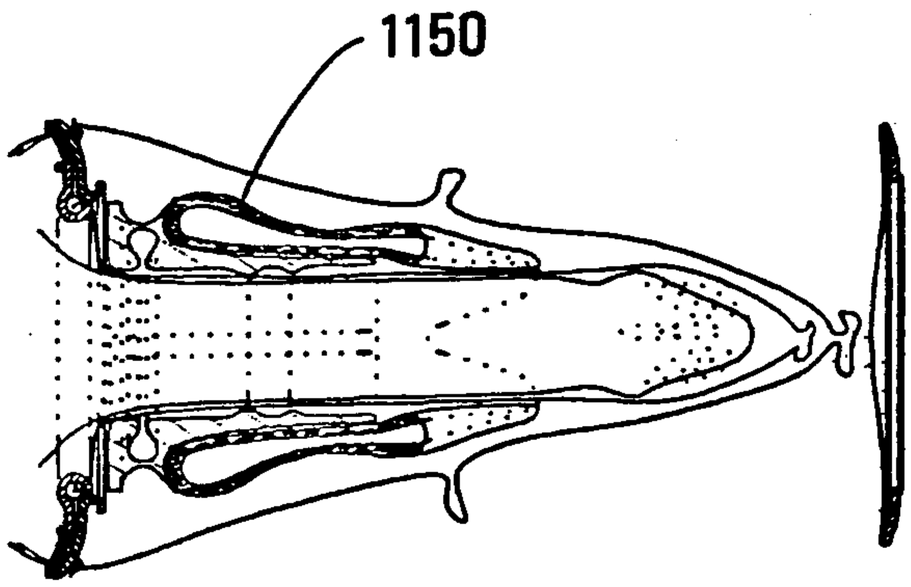


FIG. 72B

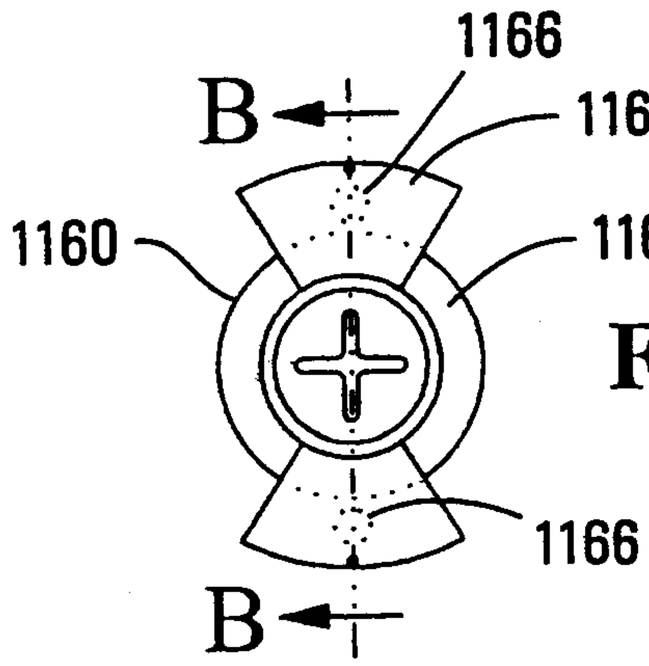


FIG. 73A

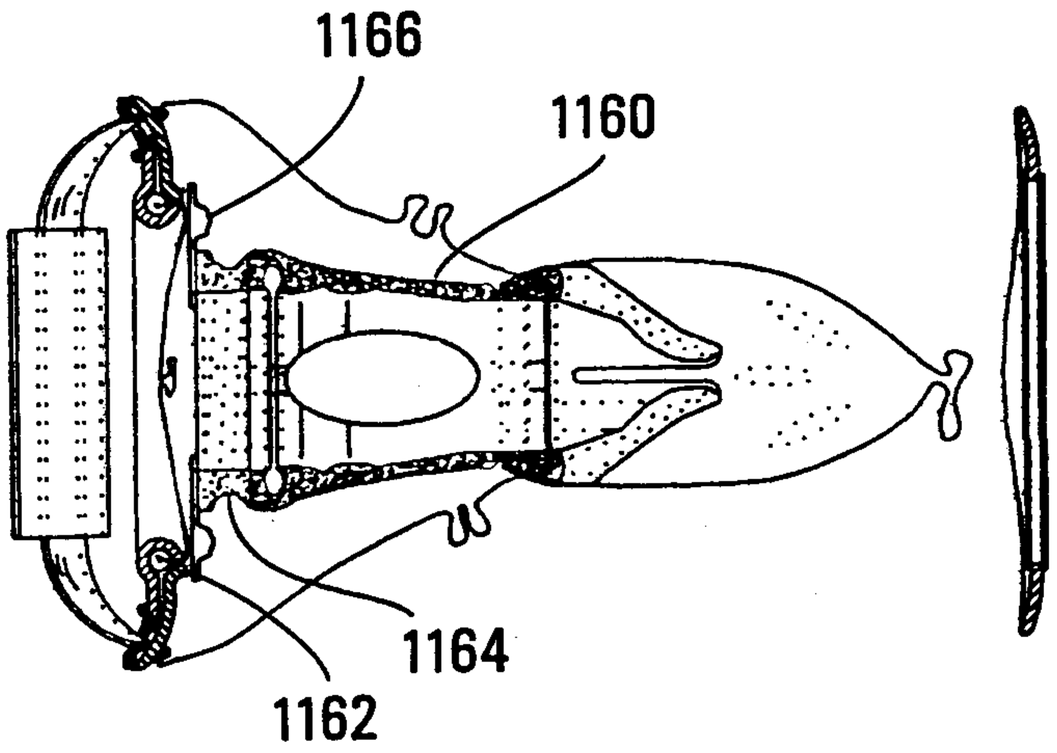


FIG. 73B

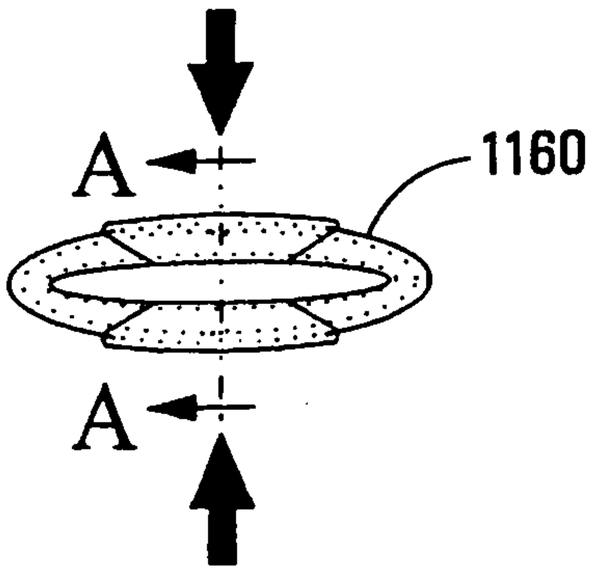


FIG. 73C

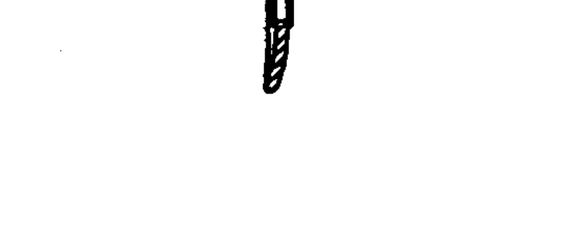


FIG. 73D

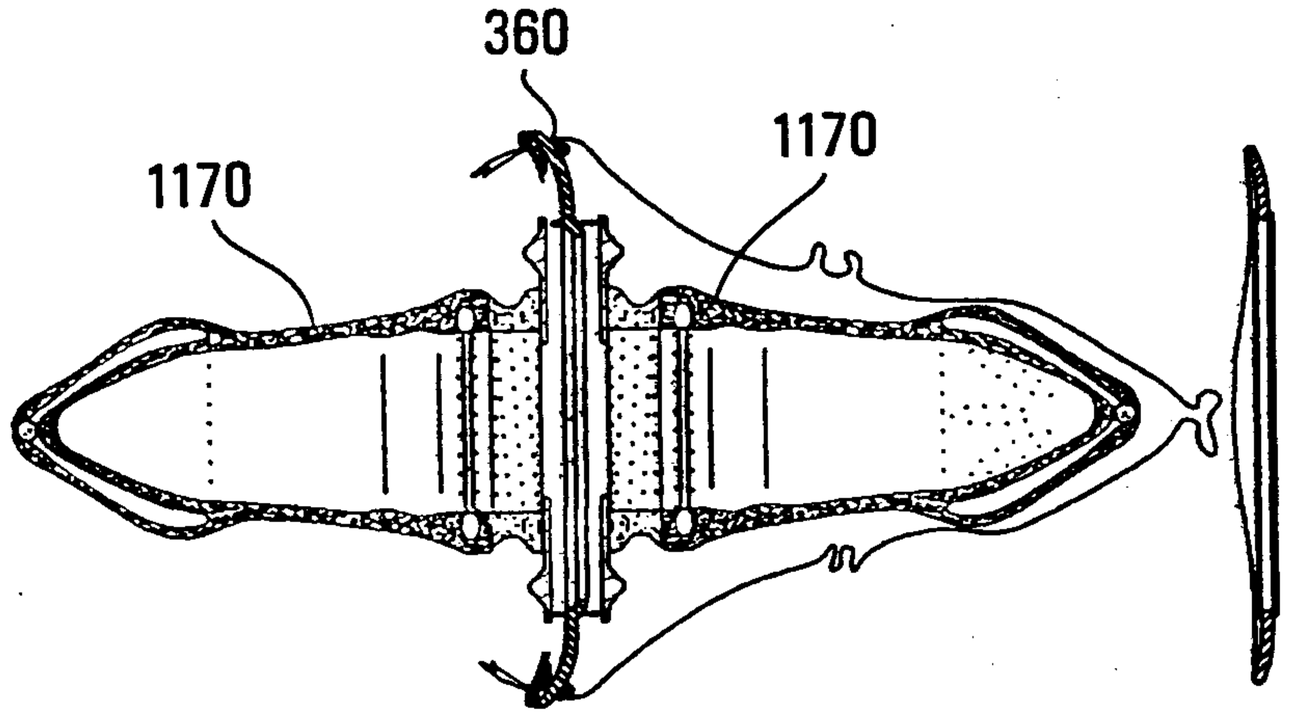


FIG. 74

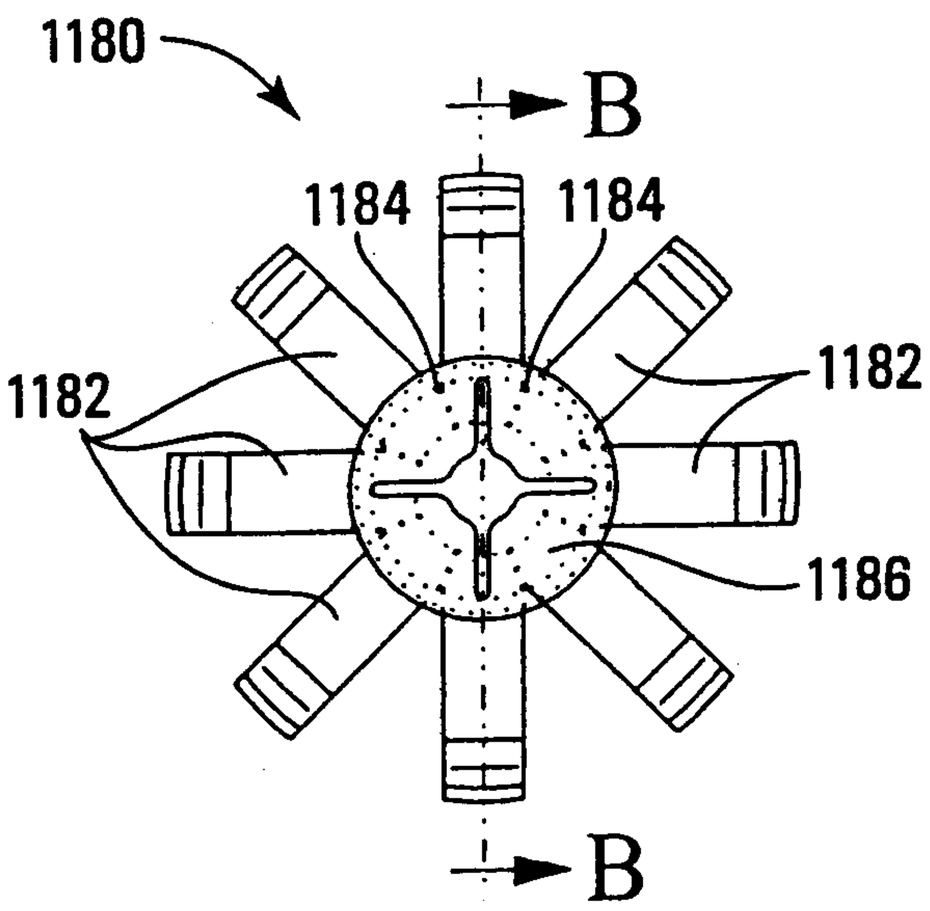


FIG. 75A

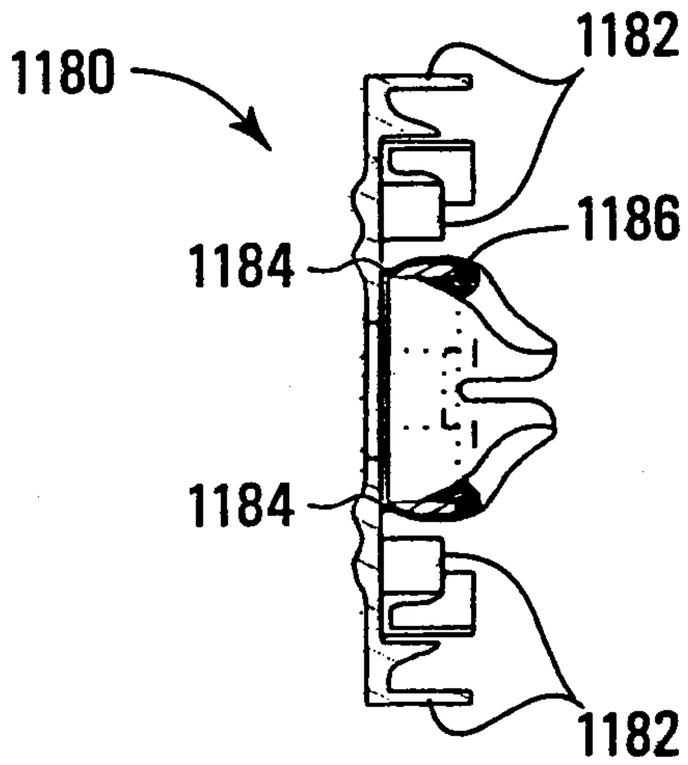


FIG. 75B

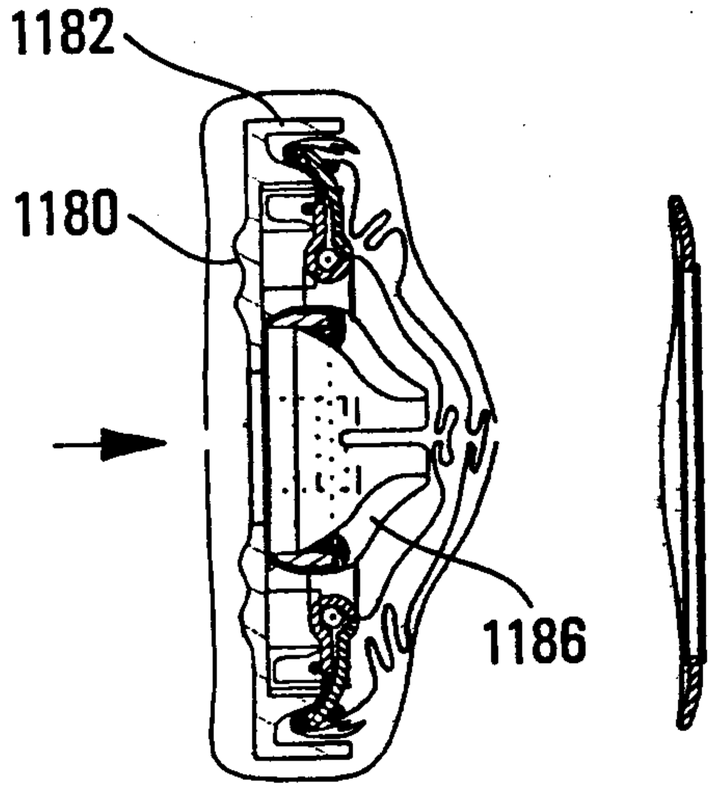


FIG. 75C

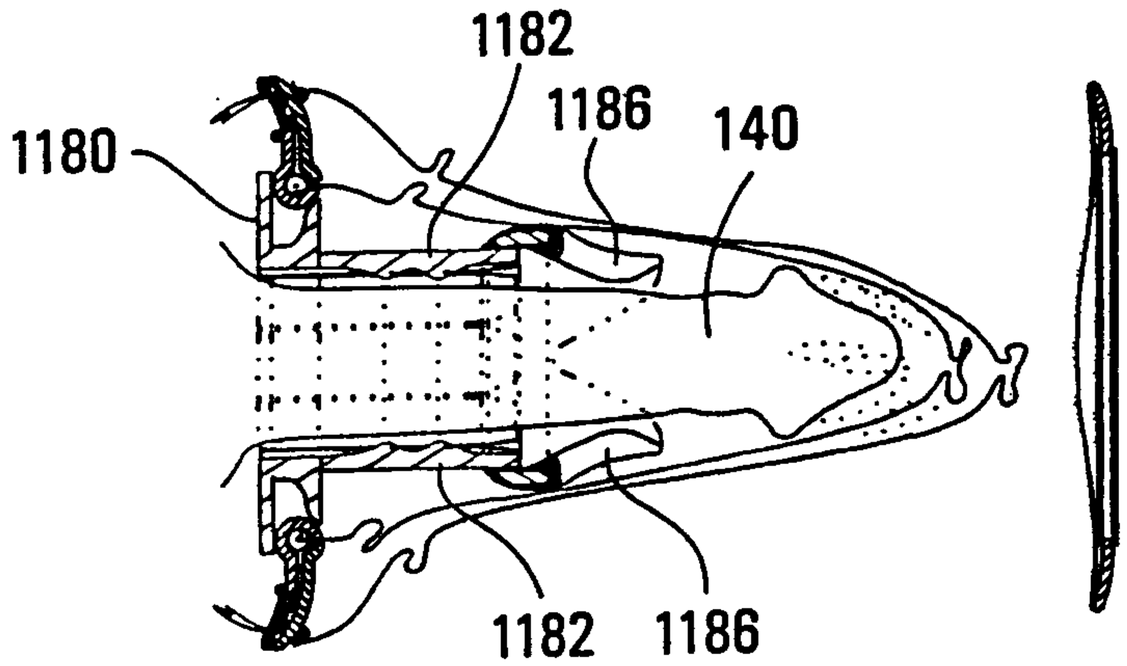


FIG. 75D

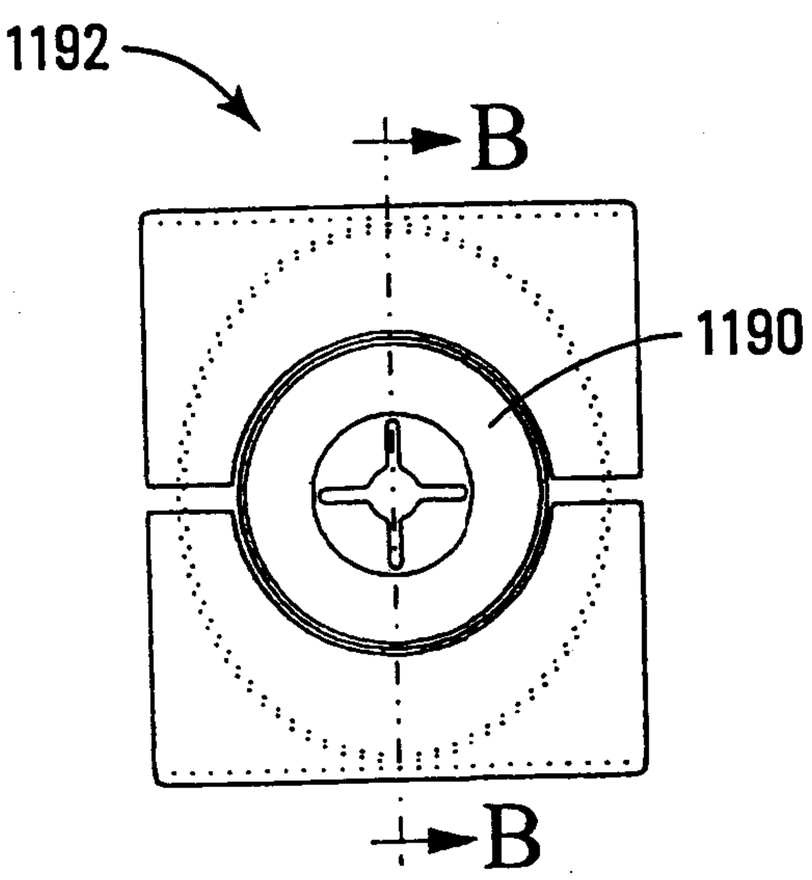


FIG. 76A

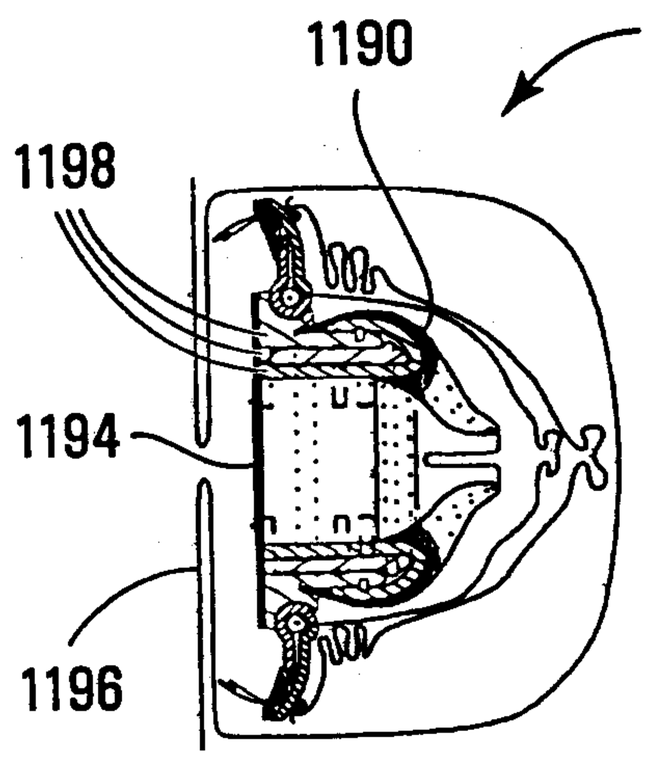


FIG. 76B

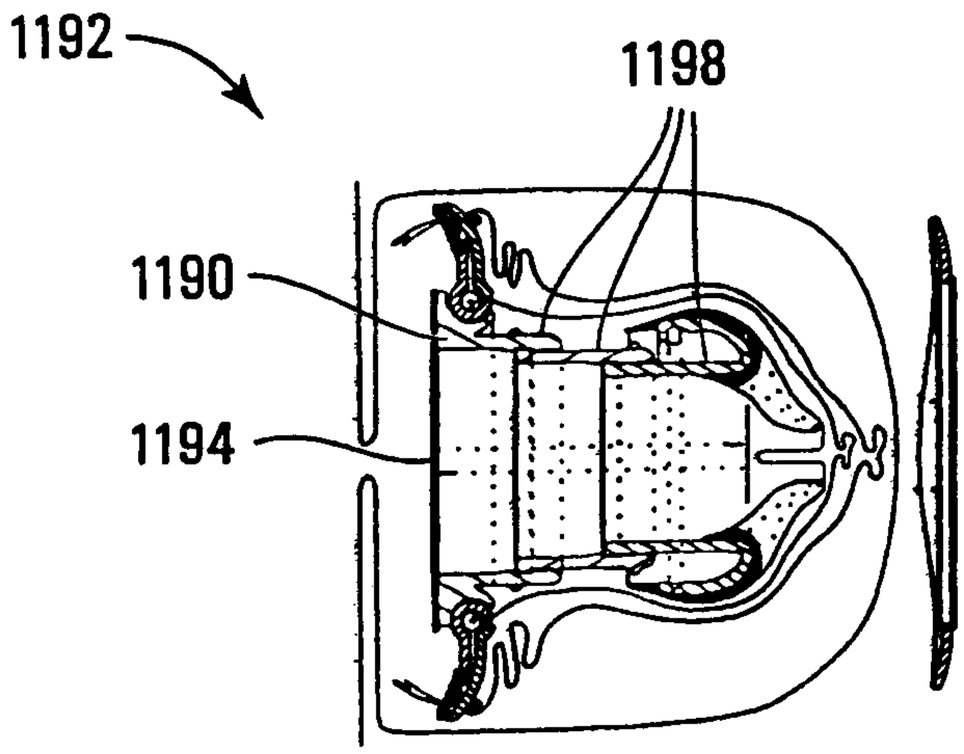


FIG. 76C

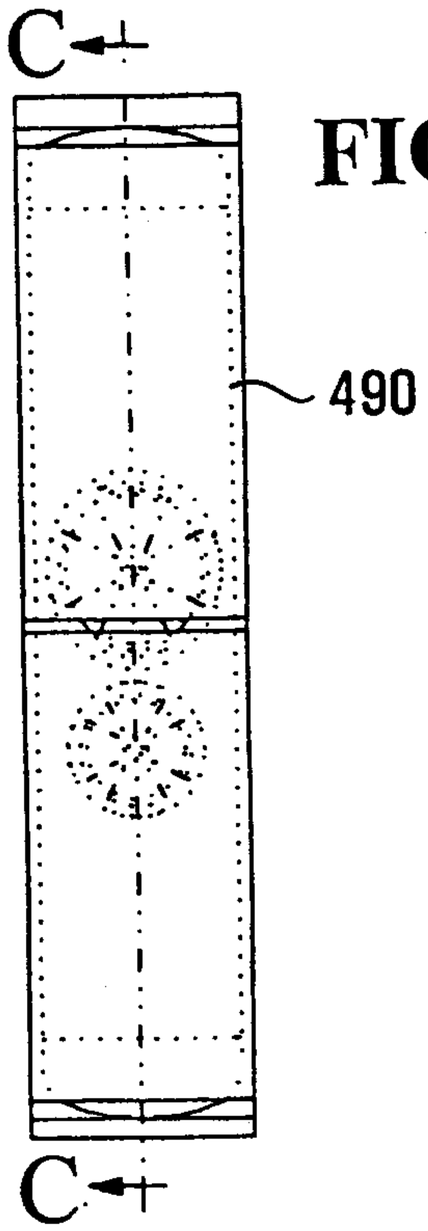


FIG. 77A

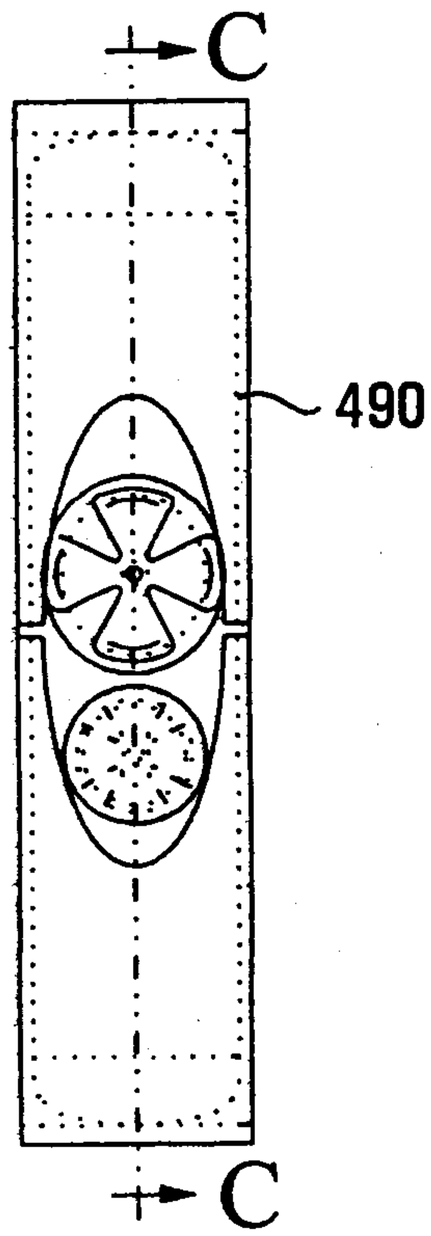


FIG. 77B

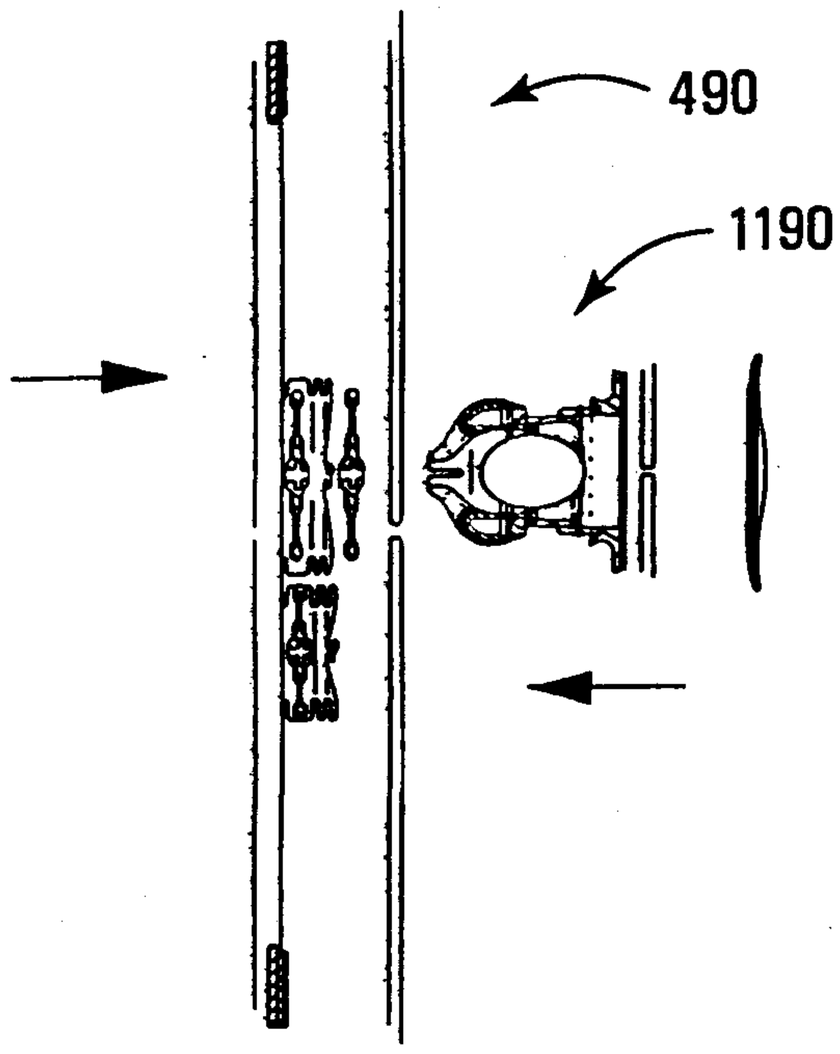


FIG. 77C

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Smart & Bigga

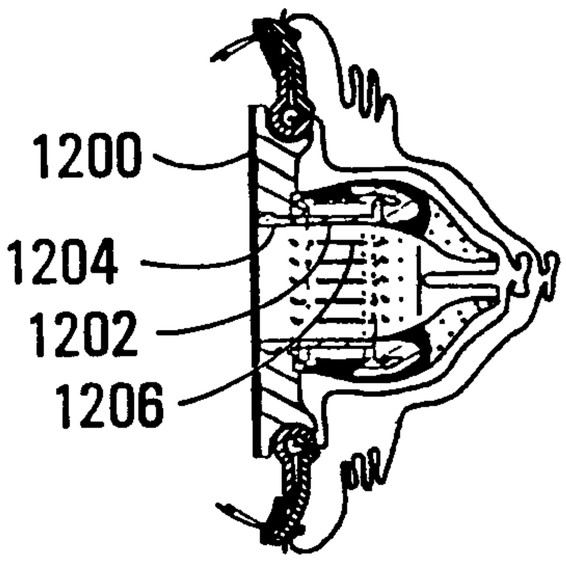


FIG. 78A

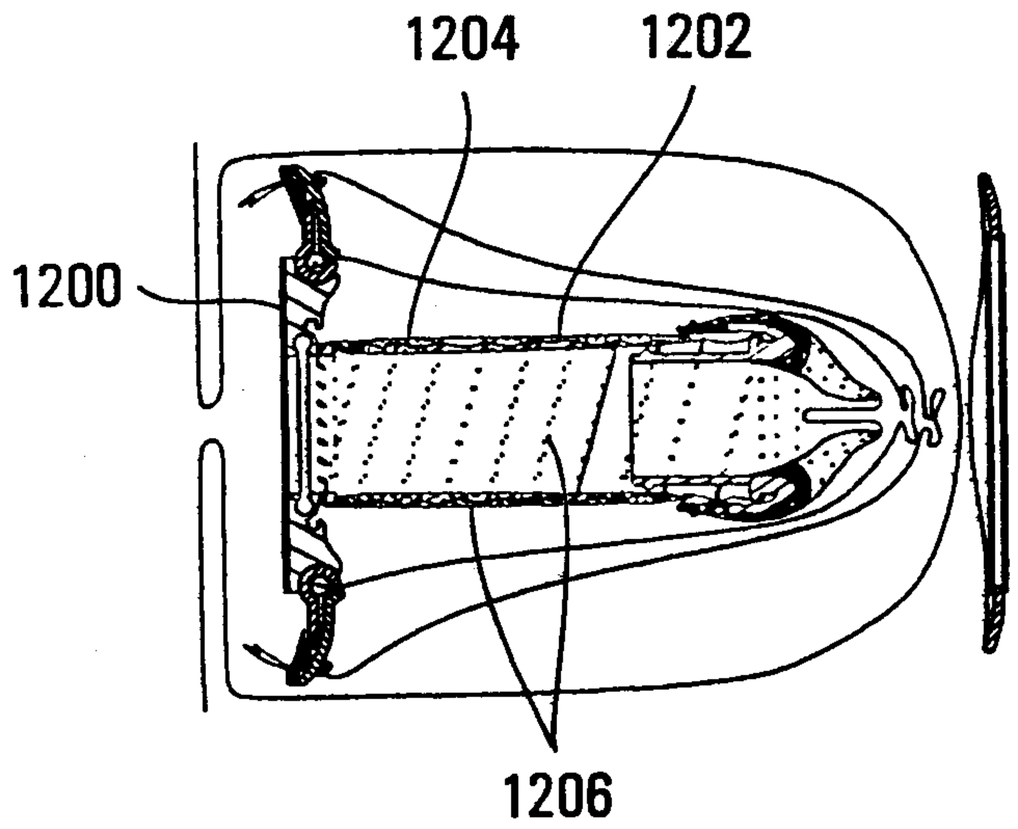
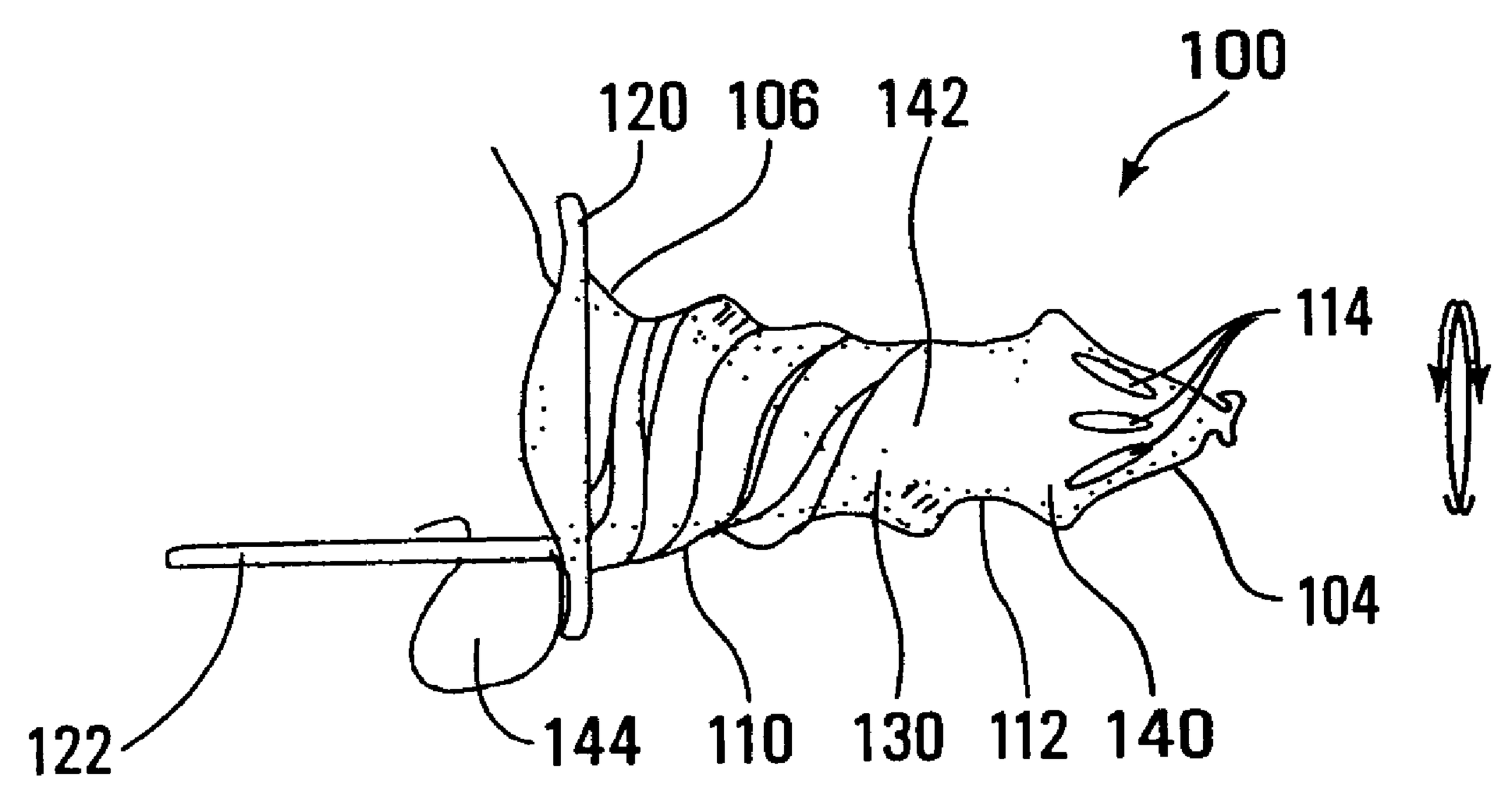


FIG. 78B

FIG. 79


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