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(54) WOMEN'S SHAVER

Rasierapparat für Frauen

RASOIR POUR FEMMES

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Description

The present invention relates to a razor handle assembly which can mate with a cover for retaining a dispenser containing a plurality of safety razor blade cartridges, the razor handle assembly having a substantially planar hand-gripping portion to provide a compact assembled unit for storage and packaging, the razor handle assembly being of the type wherein the blade assembly is pivotally movable during a shaving operation.

A number of razor handles are available on the market which are designed to receive a cartridge releasably attached to the razor handle and pivotally supported about an axis parallel to the razor edge. Razors of this type are to be found in U.S. Patents 4,026,016 issued May 31, 1977, 4,198,746 issued April 26, 1980, 4,253,237 issued March 3, 1981, 4,253,236 issued March 3, 1981, 4,253,235, issued March 3, 1981; and 4,492,025 issued January 8, 1985, all assigned to the assignee of the present invention.

In U.S. Patent 4,168,571, which forms the basis for the preamble of claim 1, issued September 25, 1979 and assigned to the assignee of the present invention, it is also suggested to employ a razor of the block type comprising a casing of a size and shape to be gripped in the palm of the hand in the manner of a conventional electric razor, however, to be employed with blade members in the wet shaving process.

While many of the various razor structures employing elements of the aforementioned patents have gained popularity and various modifications have achieved commercial success, a need has arisen for a razor of the type described above which is lightweight, simple in construction and is attractive to the consumer.

It has been suggested in U.S. Design Patent Number DES 320,342 to Michael J. Gray (see also US-A-3754326) to provide a combined blade cartridge tray wherein a safety razor may be fixedly clamped to one side of the tray, the blade cartridge being stored in a dispenser on the opposite side of the tray. While such a clamping arrangement is successfully employed with a razor of the type having an elongated stock type handle, the aforementioned razor having a substantially flat planar body member does not lend itself to this type of clamping structure where it is desired to provide a compact combination of razor and dispenser retaining means for shipping and storage purposes. It is further desirable to provide a contact between the razor and the dispenser retaining structure which does not encourage the user to grasp both elements and use the combination in the wet shaving process, as the unused blades in the cartridge may contain materials which would be altered or reduced in effectiveness by becoming wet prior to the use in the shaving process.

According to the present invention there is provided a razor handle assembly for receiving a razor blade assembly, said handle comprising a substantially planar

body, an opening formed in the forward end of said handle and a pair of bearing members adjacent said opening, said bearing members being movable by means disposed in the handle toward and away from each other and adapted pivotally to receive a razor blade assembly for pivotal movement on said handle, characterized in that the razor handle is shaped to mate with a cartridge receiving and retaining cover and is formed by a substantially planar body member, a top shell member mounted on one surface of the body member and a bottom shell member mounted on the opposite surface of said body member, each of said shell members covering only the peripheral top and bottom surface of said body member and having portions which extend forwardly beyond the body member to form a housing, said opening being in the forward end of said housing, and in that the bottom surface of the handle has a concave recess in which a plurality of sinuous recesses are formed to cooperate with corresponding projections on a cartridge receiving and retaining cover.

The razor blade assembly may thus be combined with a cover for receiving and retaining a dispenser containing a plurality of safety razor blade cartridges. The cover comprises wall structure forming a substantially rectangular opening on the bottom thereof for receiving a dispenser therein and a top wall having an outer surface of convex configuration for meeting engagement with the handle concave surface. A pair of sinuous upwardly projecting ribs are provided for interfitting engagement with a selected pair of recesses in the razor handle and are effective to locate and retain the combination razor and dispenser cover for storage and packaging.

In the construction wherein a portion of the razor handle extends from the planar body member to form an angle with the razor body the top wall outer surface, the cover is contoured for mating engagement with the forward portion of the razor when the pair of ribs are engaged with the recesses in the razor handle.

The cover is generally manufactured of a plastic material and the wall structure forming the rectangular opening is provided with a plurality of detent members for interlocking engagement with a dispenser for retaining the dispenser received within the rectangular opening.

Preferably, the forward portions of the shells forming the housing are generally inclined downwardly to form an angle with the body member and a pair of openings are formed one at each side of the housing, each opening containing one of a pair of buttons which extend through the openings. Each of the buttons are movable inwardly into the housing to cause the bearing member moving means to move the bearing members toward each other to release a razor blade assembly retained on the bearing members. The buttons may be interconnected by a flexible connector disposed within the housing and at least one of the shell members comprises means cooperating with each of the buttons to

guide the button in a direction parallel to movement of the bearing members.

The bearing members are generally formed on the forward end of a unitary blade attachment member which is part of the means for moving the bearing members toward and away from each other. The legs are interconnected by a flexible hinge portion of the blade attachment member and a pair of laterally facing opposed surfaces are disposed one on each leg of the blade attachment member for contacting a respective button. A V-shaped spring member is disposed between the legs of the blade attachment member adjacent the flexible hinge biasing the leg surfaces outwardly against the buttons. The blade attachment member and the button assembly are both manufactured of a resilient plastic material to meet the functional requirements required during manufacturing assembly, and use in the razor handle.

Figure 1 is a left side elevational view showing the combination of a safety razor handle and blade dispenser cover constructed in accordance with the teachings of the present invention;

Figure 2 is a top plan view, showing the safety razor assembly of Figure 1;

Figure 3 is a left side elevational view showing the assembly structure of Figure 2;

Figure 4 is a left elevational sectional view taken along the lines IV-IV of Figure 2 showing details of the structure of Figures 2 and 3;

Figure 5 is a rear elevational sectional view taken along the lines V-V of Figure 2 showing further details of the structure of Figures 2 through 4;

Figure 6 is a top front sectional view taken along the lines VI-VI of Figure 1 showing details of the operative mechanism of the safety razor handle assembly shown in Figures 2 through 5 during operation;

Figure 7 is a top front sectional view similar to Figure 6 showing details of the mechanism of Figure 6 in the at rest position;

Figure 8 is a top plan view of the dispenser cover shown in Figure 1;

Figure 9 is a bottom plan view of the structure shown in Figure 8;

Figure 10 is a left side elevational view of the structure of Figures 8 and 9;

Figure 11 is a right side elevational view of the structure of Figures 8 through 10;

Figure 12 is front elevational view of the dispenser cover of Figures 8 through 11;

Figure 13 is a rear elevational view of the dispenser cover of Figures 8 through 12;

Figure 14 is a left side elevational sectional view taken on the line XIV - XIV of Figure 12 showing details of the dispenser cover of Figures 8 through 13 in combination with a razor of the type shown in Figures 1 through 7;

Figure 15 shows a portion of the structure of Figure

14 taken on an enlarged scale for clarity; and

Figure 16 is a rear elevational cross sectional view taken on the line XVI - XVI of Figure 10 showing details of the dispenser cover of Figures 8 through 13 in combination with the mating razor of Figures 1 through 7.

Referring now to the drawing, and in particular to Figure 1, there is shown a combination safety razor handle 10 and blade dispenser cover 110. The safety razor handle assembly 10 comprises a substantially flat planar body member 12 having a top shell member 14 and a bottom shell member 16 mounted on the opposite surfaces of the body member, as best shown in Figures 2 through 5. The body member 12 is manufactured of a substantially rigid plastic material such as a styrene and may be of a color or design which is attractive to the user employing the razor handle assembly 10.

The top shell member 14 and bottom shell member 16 each are manufactured of a resilient plastic material such as ABS and as best shown in Figure 2, the bottom shell member 16 is provided with a plurality of upwardly projecting cylindrical pins 18 which extend through an equal number of aligned circular openings 19 in the body member 12. With the body member 12 and the bottom shell member 16 assembled as shown in Figures 2 through 5, the upper portion of each of the pins 18 is formed to the configuration shown in Figure 5, producing a head 20 and locking the two members together. As it will further be noted, the body member 12 is provided with a plurality of slots 22, each having an outwardly extending flange 23 disposed in alignment with the opening. The top shell member 14 is provided with a plurality of downwardly extending detents 24, as best shown in Figure 4, in the same number as the slots 22 and aligned therewith such that when the top shell member 14 is placed onto the assembled body member 12 and bottom shell member 16, the detents 24 are snapped over the flanges 23 to secure the top shell member to the handle assembly 10.

With the top shell member 14, body member 12 and bottom shell member 16 thus assembled, it will be observed that the shell members 14 and 16 extend only about the periphery of the body member 12 and therefore enable the body member to be of a colored material or of a designed surface which may be changed from time to time, while retaining the top shell member and bottom shell member assembly employed in the present construction. With the members thus, the body member 12 extends slightly beyond the top shell member 14 and bottom shell member 16 to provide a firm and rigid sandwich structure for the grasp of the user.

Referring now to Figures 3 and 4, it will be noted that a portion of the top shell member 14 and bottom shell member 16 extend beyond the body member 12 and are curved downwardly at an angle of about 45° with the body member 12. That portion of the combined shell members 14 and 16 form a substantially enclosed

housing 26 having a slotted opening 27 formed at the forwardmost end of the shell members 14 and 16 and a pair of slotted openings 28 and 29 formed at the sides of the housing.

Referring now to Figures 6 and 7, taken in conjunction with Figures 2 through 5, a button assembly including a pair of buttons 30 and 31 are disposed within the housing 26 and are interconnected by a flexible web 32, the buttons 30 and 31 each extending through a respective slotted opening 28 and 29, as best seen in Figure 6. The button is generally manufactured of Nylon or similar material suitable for employment in the operative mechanism to be described below.

A pair of bearing members 34 and 36 are disposed adjacent the slotted opening 27 and are movable toward and away from each other to accept a razor blade assembly for pivotal movement, as is well known in the art. The razor blade assembly for which the bearing members 34 and 36 are designed, as well as similar bearing members, are shown and described in U.S. Patent 4,492,025. Therefore, the bearing members and the related razor blade assembly will not be described in detail herein.

Referring back to Figures 6 and 7, the bearing members 34 and 36 are each formed on a pair of forwardly extending legs 38 and 40, respectively, which are interconnected by a flexible hinge 41 providing a unitary structure which is of one piece molded construction. A pair of laterally facing opposed surfaces 42 and 44 are disposed one on each of the legs 38 and 39 for contact with a respective button 30 or 31, and a V-shaped spring 45 is disposed between the legs 38 and 40 biasing the surfaces 42 and 44 against the buttons 30 and 31. Within the V-shaped spring 45 is located a plunger 46 having a pair of arms 47 and 48 which extend laterally and forwardly to contact a pair of detents 49 and 50 disposed on the legs 38 and 40. A helical spring 52 is received in a cylindrical opening in the base of the plunger 46 and extends rearwardly to contact the spring 45 and bias the plunger forwardly within the unitary assembly containing the legs 38 and 39.

In operation, the operative elements of the razor handle assembly 10 are in the configuration shown in Figure 6 of the drawing when a blade assembly is not disposed on the razor handle, movement of the bearing members 34 and 36 toward one another being required for receiving a razor assembly for pivotal movement, as described in the aforementioned U.S. Patent 4,492,025. The V-shaped spring 45 is biasing the buttons 30 and 31 outwardly and the helical spring 52 is biasing the plunger 46 forwardly, the forward surface of the arms 47 and 48 contacting the detents 49 and 50. In order to move the bearings members 34 and 36 inwardly to receive a razor assembly, the buttons 30 and 31 are pushed simultaneously inwardly and ride linearly inwardly guided by a pair of guide members 55 and 56 formed on the bottom shell 16, which are received in a pair of slots 57 and 58 formed in the buttons 30 and 31.

With the legs 38 and 40 moved inwardly by virtue of movement of the buttons 30 and 31, the detents 49 and 50 are moved inwardly to a position which allows the arms 47 and 48 of the plunger 46 to assume the locked position shown in Figure 5, the plunger 46 moving forwardly under the action of the spring 52. As described in the previously cited U.S. Patent 4,492,025, when the blade assembly is placed over the bearing members, a portion of the blade assembly contacts the plunger 46 moving it inwardly to the released position, as shown in Figure 7, in which the bearing members 34 and 36 are received in proper alignment in the blade assembly, the structural elements assuming the position as shown in Figure 7 until the buttons 30 and 31 are again depressed to release the blade assembly.

Referring now to Figures 8 through 13 there is shown the cover 110 for retaining a dispenser (not shown) containing a plurality of safety razor blade cartridges. The dispenser is generally of the type shown in U.S. Design patent DES 316,962.

The cover 110 comprises wall structure including a top wall 112, side walls 114 extending downwardly from the top wall 112 forming the right side wall and the rear wall of the cover 110 and terminating to provide a side opening 115 into a rectangular cavity 116 in the bottom of the cover. A front wall 118 contains an indentation 120 formed in the lower surface thereof which is generally provided for easy removal of a safety razor blade cartridge dispenser having a tab extending outwardly therefrom, which will be explained as the description proceeds.

As best shown in Figure 9, in addition to the wall structure described above, the cavity 116 is further formed by inner walls 122, 123 and 124 which provide a box-like structure in combination with a pair of ribs 126 and 127. The box-like structure is dimensioned to receive a blade dispenser of generally rectangular configuration therein and a pair of detents 128 and 129 on the wall 124 in combination with a single detent 130 disposed on the wall 122 are dimensioned and so spaced as to retain the blade dispenser within the cavity 116 with the blade dispenser resting on the ribs 126 and 127 and the opposite side of the dispenser firmly held within the detents 128, 129 and 130.

As best shown in Figures 8 and 10 through 13, the top wall 112 is formed of a substantially domed configuration having an elongated convex surface 132 centrally located on the upper surface of the top wall. Midway between the ends of the raised elongated surface 132 there is provided a pair of sinuous outwardly projecting ribs 134 and 136 extending laterally substantially entirely across the convex surface 132.

At the forward end of the cover 110 the top wall 112 and the front wall 118 are joined by a radial surface 138 extending laterally across the width of the cover 110. The cover 110 is preferably manufactured of a T grade ABS material, however it should be understood that the cover may be fabricated from any of a plurality of similar

plastic materials.

Referring now to Figures 14, 15 and 16, the above described cover 110 is shown in combination with the razor handle 10 indicated by the dotted lines of Figures 14, 15 and 16. The razor handle 10 comprises the flat planar body member 12 having a forward portion 104 extending downwardly forming an angle with the handle 10. The lower surface of the handle 10 is provided with a plurality of sinuous recesses 106 which are provided to offer a gripping surface for the user during the shaving process. Each of the recesses 106 is a mirror image of the sinuous ribs 134 and 136 provided on the cover 110 and are formed in a concave portion 108 of the razor, the concave portion 108 being of a dimension for nesting with the elongated convex surface 132 of the cover 110.

The recesses 106 are of the same lateral extent as the ribs 134 and 136 however as best shown in Figure 14, there is one position wherein the ribs 134 and 136 mate with a corresponding pair of recesses 106 the two pairs of ribs and recesses falling into interfitting engagement when the lower surface of the forward portion 104 of the razor is in contact with the radial surface 138 of the cover and the concave portion 108 of the razor is properly located on the convex surface 132 of the cover 110. With the ribs 134 and 136 so located, the razor handle 10 is locked from movement in any direction in a plane parallel to the top wall 112 of the cover 110.

The razor handle 10 cover 110 combination is now provided as a compact unit which may be packaged for shipment as a unit and may be stored as a compact unit by the user during the life of the razor, as shown in Figure 1.

In the present embodiment the ribs 134 and 136 are dimensions such that their fit with the recesses 106 does not provide a locking engagement in the vertical direction but merely a nesting of razor handle 10 and cover 110 which prevents movement in the direction of the plain of the top wall 112 of the cover. Thus, there is little likelihood that the user would attempt to employ the combination of razor handle 10 and cover 110 in the shaving process thereby wetting the unused blades retained within the cover. However, it should be understood that the pair of ribs 134 and 136 could be of a dimension to provide such locking engagement, and in addition more than two ribs could be provided to contact more than two recesses, if desired.

Claims

1. A razor handle assembly (10) for receiving a razor blade assembly, said handle (10) comprising a substantially planar body, an opening (27) formed in the forward end of said handle (10) and a pair of bearing members (34, 36) adjacent said opening, said bearing members (34, 36) being movable by means disposed in the handle toward and away from each other and adapted pivotally to receive a razor blade

assembly for pivotal movement on said handle, characterized in that the razor handle (10) is shaped to mate with a cartridge receiving and retaining cover and is formed by a substantially planar body member (12), a top shell member (14) mounted on one surface of the body member (12) and a bottom shell member (16) mounted on the opposite surface of said body member (12), each of said shell members covering only the peripheral top and bottom surface of said body member and having portions which extend forwardly beyond the body member (12) to form a housing (26), said opening (27) being in the forward end of said housing (26), and in that the bottom surface of the handle has a concave recess (108) in which a plurality of sinuous recesses (106) are formed to cooperate with corresponding projections on a cartridge receiving and retaining cover.

2. A razor handle assembly according to claim 1, characterized in that the portions of the top and bottom shell members (14, 16) forming the housing (26) extend forwardly and downwardly beyond the body member (12) to form an angle therewith.
3. A razor handle assembly according to claim 1 or claim 2, characterized in that a pair of openings (28, 29) are formed one on each side of the housing (26) and in that a pair of buttons (30, 31) extend one through each of said openings, each said button being movable inwardly into said housing (26) to cause the bearing member moving means to move said bearing members toward each other to release a razor blade assembly retained on said bearing members.
4. A razor handle assembly according to claim 3, characterized in that each bearing member is formed on the forward end of a respective leg (38, 40) of a unitary blade attachment member, said legs (38, 40) being interconnected by a flexible hinge (41) of said blade attachment member, and in that a pair of laterally facing opposed surfaces (42, 44) is disposed one on each leg of said blade attachment member for contacting a respective button (30, 31).

Patentansprüche

1. Griffanordnung (10) für einen Rasierer zur Aufnahme einer Rasierklingenanordnung, wobei der Griff (10) einen im wesentlichen ebenen Körper, eine im vorderen Ende des Griffes (10) ausgebildete Öffnung (27) und ein Paar Lagerelemente (34, 36) im Bereich der Öffnung umfaßt, wobei die Lagerelemente (34, 36) durch eine im Griff angeordnete Einrichtung aufeinander zu und voneinander weg bewegt werden können und eine Rasierklingenanordnung schwenkbar aufnehmen

können, so daß diese auf dem Griff eine Schwenkbewegung ausführt, dadurch gekennzeichnet, daß der Griff (10) des Rasierers so geformt ist, daß er mit einer Abdeckung zum Aufnehmen und Festhalten einer Kassette in Eingriff kommt und gebildet ist aus einem im wesentlichen ebenen Körperelement (12), einem oberen Schalenelement (14), das auf einer Seite des Körperelements (12) angebracht ist, und einem unteren Schalenelement (16), das auf der anderen Seite des Körperelements (12) angebracht ist, wobei jedes der Schalenelemente nur die obere und untere Umfangsfläche des Körperelements bedeckt und Abschnitte aufweist, die sich nach vorne über das Körperelement (12) hinaus erstrecken, um ein Gehäuse (26) zu bilden, wobei sich die Öffnung (27) in dem vorderen Ende des Gehäuses (26) befindet, und daß die Unterseite des Griffes eine konkave Ausnehmung (108) aufweist, in der eine Vielzahl von gewellten Ausnehmungen (106) ausgebildet sind, die mit entsprechenden Vorsprüngen auf einer Abdeckung zum Aufnehmen und Festhalten einer Kassette zusammenwirken.

2. Griffanordnung für einen Rasierer nach Anspruch 1, dadurch gekennzeichnet, daß die Abschnitte der oberen und unteren Schalenelemente (14, 16), die das Gehäuse (26) bilden, nach vorne und nach hinten über das Körperelement (12) hinausragen und mit diesem einen Winkel bilden.
3. Griffanordnung für einen Rasierer nach Anspruch 1 oder Anspruch 2, dadurch gekennzeichnet, daß ein Paar Öffnungen (28, 29) auf jeder Seite des Gehäuses (26) ausgebildet sind, und daß jeweils einer von einem Paar Knöpfe (30, 31) durch die Öffnungen ragen, wobei jeder Knopf in das Gehäuse (26) hineingedrückt werden kann, damit die Einrichtung zum Bewegen der Lagerelemente diese aufeinander zu bewegt, um eine Rasierklingenanordnung freizugeben, die auf den Lagerelementen gehalten wird.
4. Griffanordnung für einen Rasierer nach Anspruch 3, dadurch gekennzeichnet, daß jedes Lagerelement am vorderen Ende des jeweiligen Schenkels (38, 40) eines einstückigen Klingenbefestigungselements ausgebildet ist, wobei die Schenkel (38, 40) durch ein freibewegliches Scharnier (41) des Klingenbefestigungselements miteinander verbunden sind, und daß jeweils eine von einem Paar zur Seite weisender, entgegengesetzt angeordneter Flächen (42, 44) auf jedem Schenkel des Klingenbefestigungselements so angeordnet ist, daß sie den jeweiligen Knopf (30, 31) berührt.

Revendications

1. Ensemble de poignée de rasoir (10) destiné à recevoir un ensemble de lame de rasoir, ladite poignée (10) comportant un corps sensiblement plan, une ouverture (27) formée dans l'extrémité avant de ladite poignée (10) et une paire d'éléments de support (34, 36) adjacents à ladite ouverture, lesdits éléments de support (34, 36) étant mobiles vers et à l'écart l'un de l'autre à l'aide de moyens disposés dans la poignée et prévus de façon pivotante pour recevoir un ensemble de lame de rasoir pour un mouvement pivotant sur ladite poignée, caractérisé en ce que la poignée de rasoir (10) est conformée afin de correspondre à un couvercle de réception de retenue de cartouche et est formée par un élément de corps sensiblement plan (12), un élément de boîtier supérieur (14) monté sur une surface de l'élément de corps (12) et un élément de boîtier inférieur (16) monté sur la surface opposée dudit élément de corps (12), chacun desdits éléments de boîtier recouvrant uniquement la surface périphérique supérieure et inférieure dudit élément de corps et ayant des parties qui s'étendent vers l'avant au-delà de l'élément de corps (12) afin de former un boîtier (26), ladite ouverture (27) étant dans l'extrémité avant dudit boîtier (26), et en ce que la surface inférieure de la poignée possède un renforcement concave (108) dans lequel sont formés plusieurs renforcements sinueux (106) afin de coopérer avec des saillies correspondantes sur un couvercle de réception et de retenue de cartouche.
2. Ensemble de poignée de rasoir selon la revendication 1, caractérisé en ce que les parties des éléments de boîtier supérieur et de boîtier inférieur (14, 16) formant le boîtier (26) s'étendent vers l'avant et vers le bas au-delà de l'élément de corps (12) afin de former un angle avec celui-ci.
3. Ensemble de poignée de rasoir selon la revendication 1 ou la revendication 2, caractérisé en ce qu'une paire d'ouvertures (28, 29) est formée sur chaque côté du boîtier (26) et en ce qu'une paire de boutons (30, 31) s'étend à travers chacune desdites ouvertures, chacun desdits boutons étant mobile vers l'intérieur dans ledit boîtier (26) afin d'amener les moyens de déplacement d'élément de support à déplacer lesdits éléments de support l'un en direction de l'autre de façon à libérer un ensemble de lame de rasoir retenu sur lesdits éléments de support.
4. Ensemble de poignée de rasoir selon la revendication 3, caractérisé en ce que chaque élément de support est formé sur l'extrémité avant d'une patte respective (38, 40) d'un élément de fixation de lame unitaire, lesdites pattes (38, 40) étant intercon-

tées par une charnière flexible (41) dudit élément de fixation de lame, et en ce qu'une paire de surfaces opposées dirigées latéralement (42, 44) est disposée sur chaque patte dudit élément de fixation de lame afin de venir en contact avec un bouton respectif (30, 31). 5

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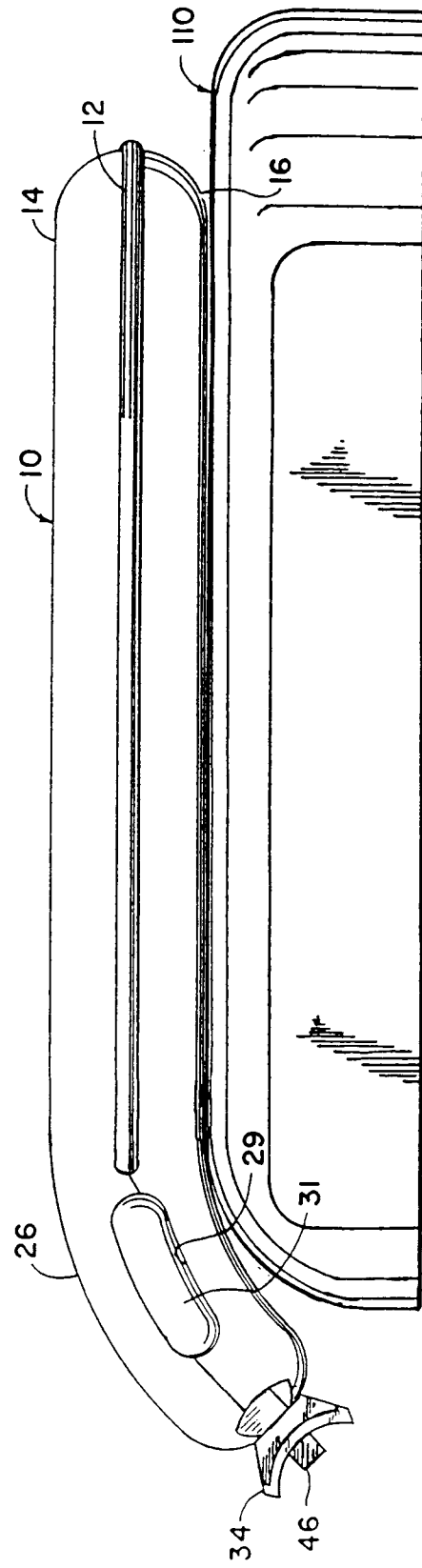


Fig. 1

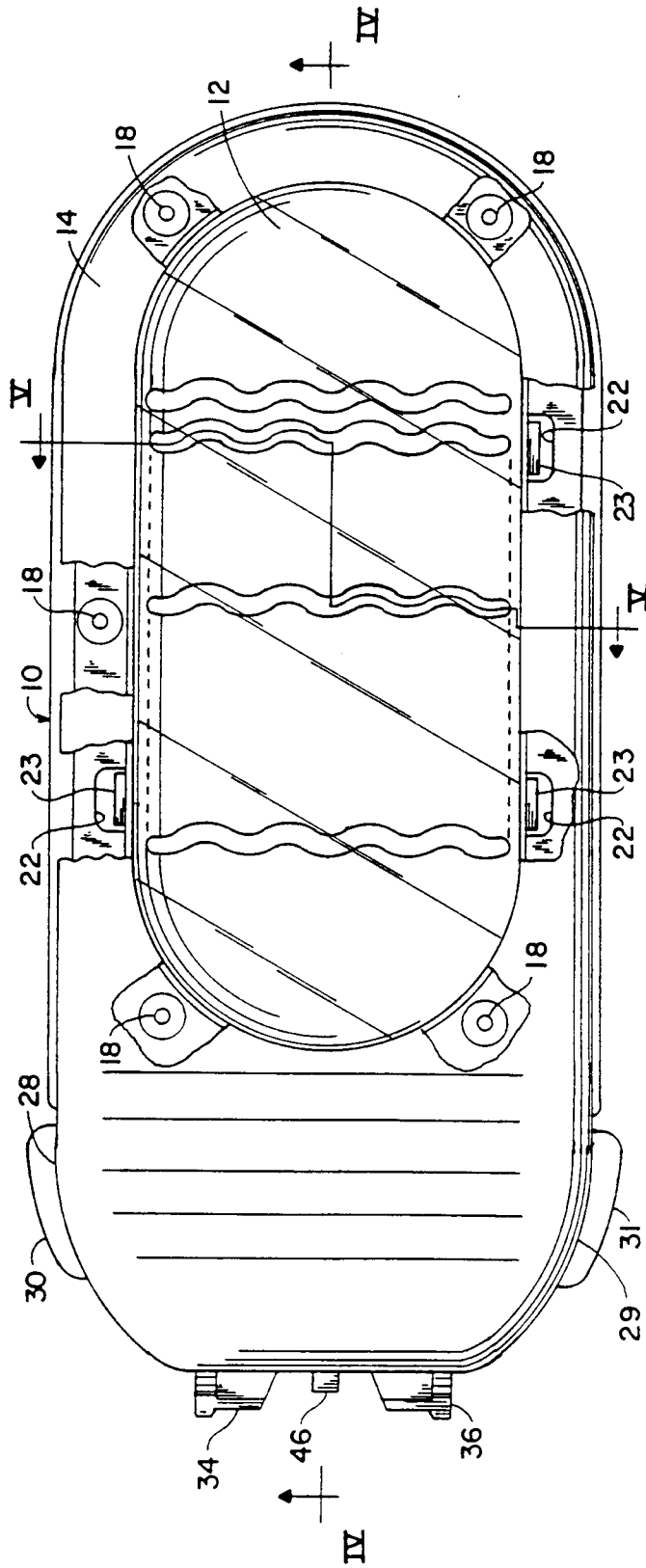


Fig. 2

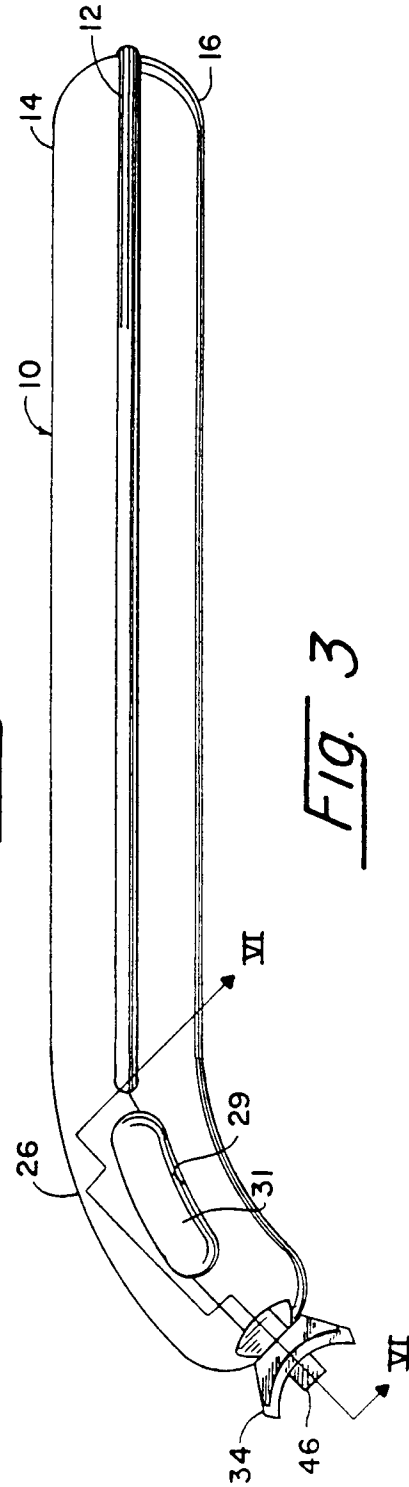
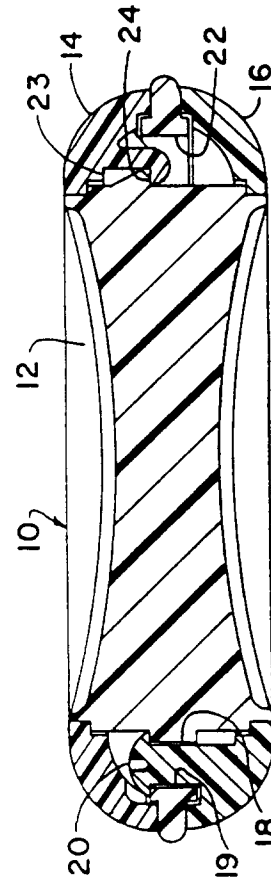
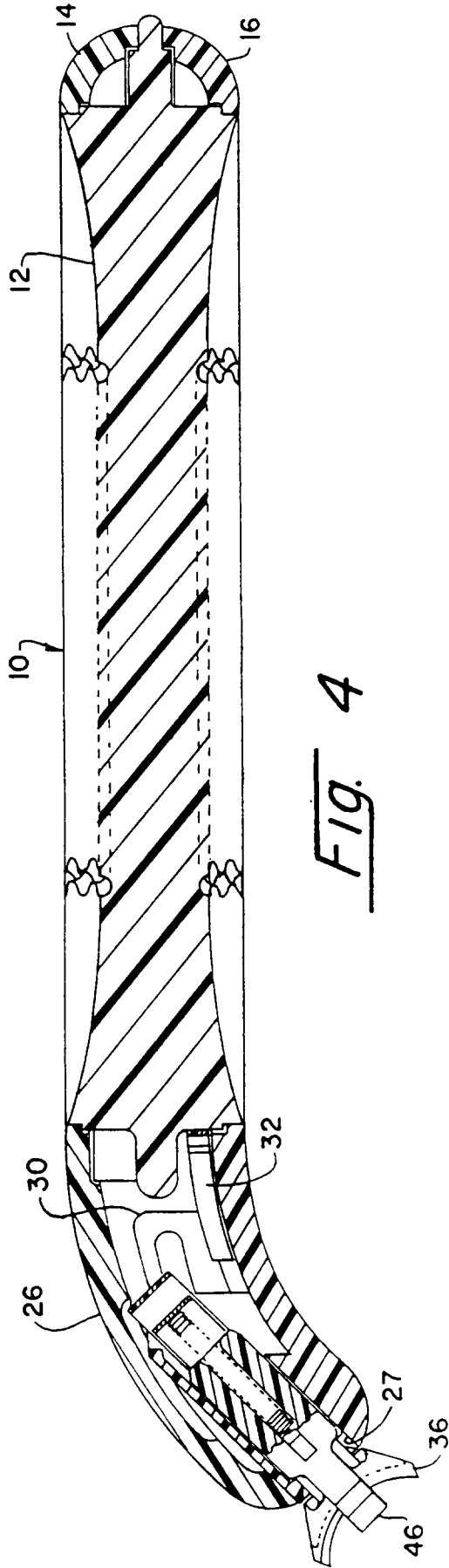


Fig. 3



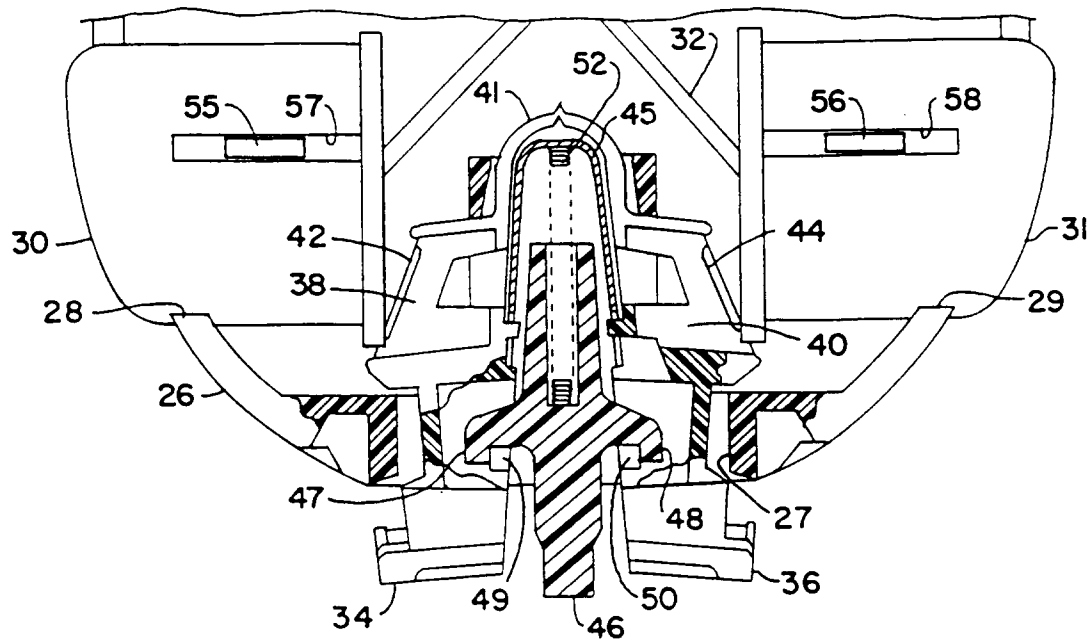


Fig. 6

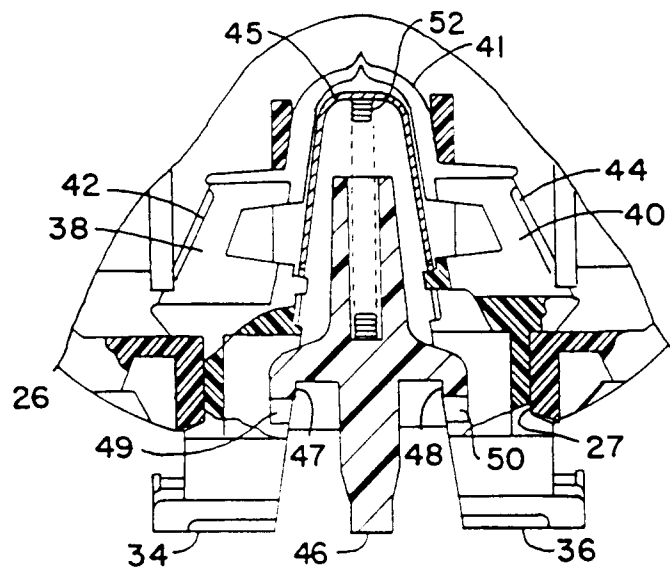


Fig. 7

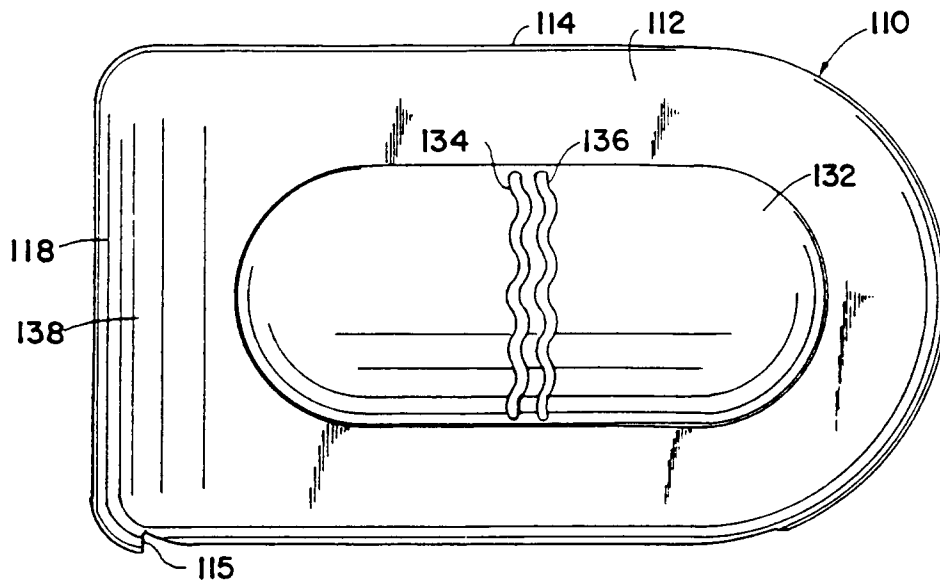


Fig. 8

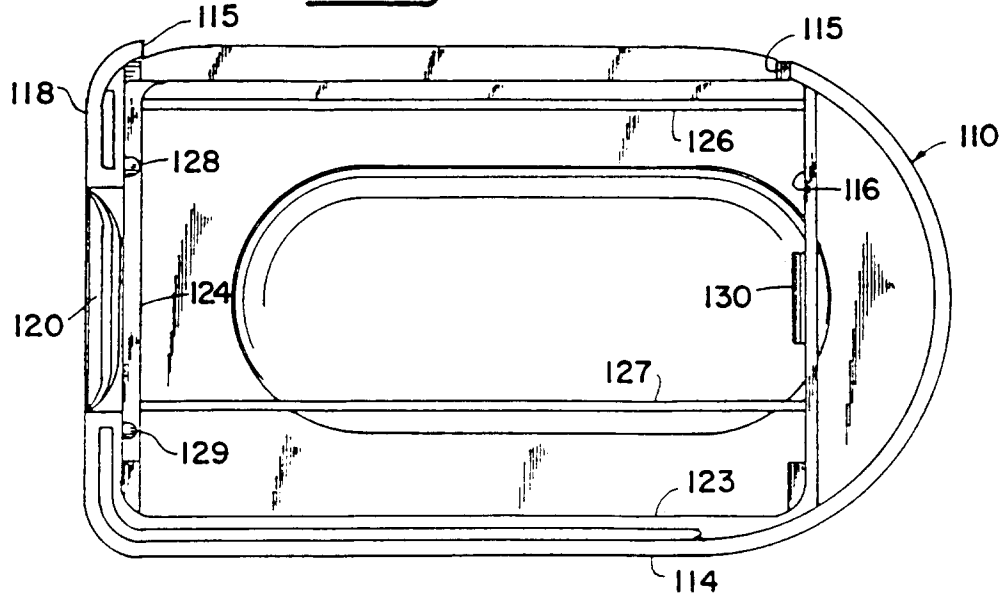


Fig. 9

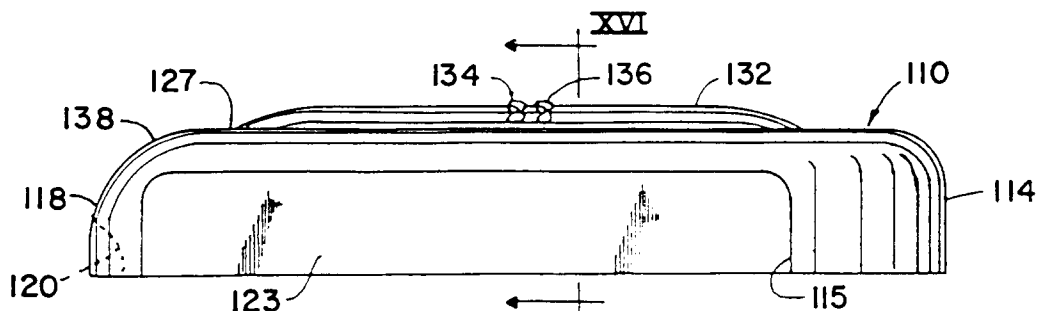


Fig. 10

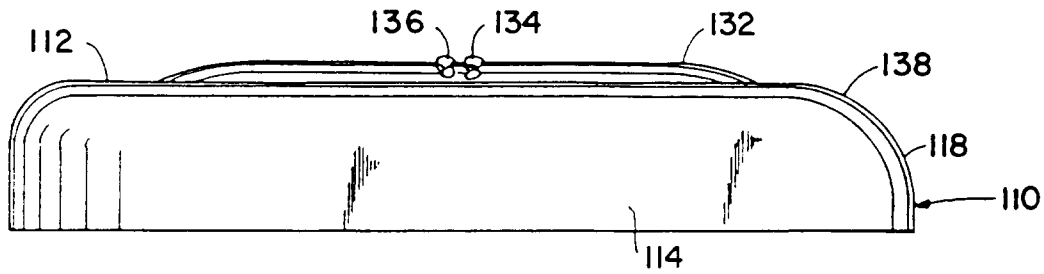


Fig. 11

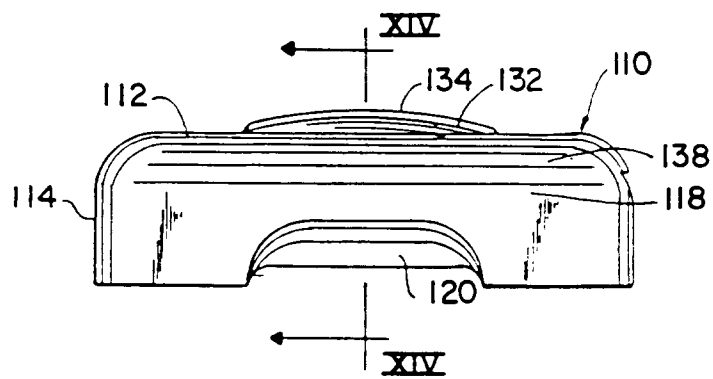


Fig. 12

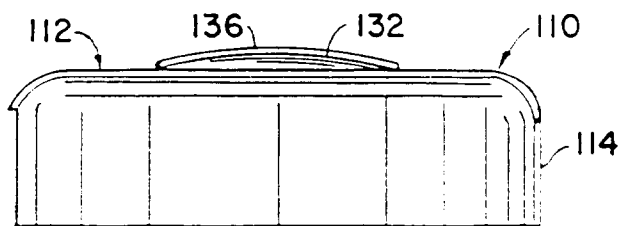


Fig. 13

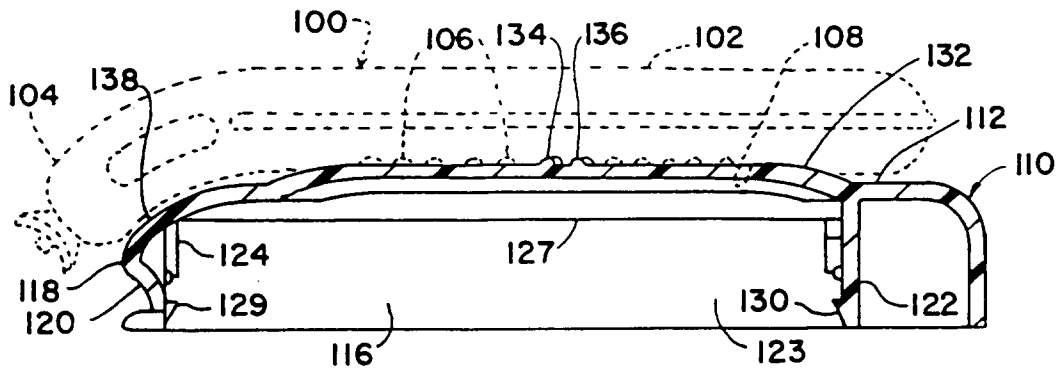


Fig. 14

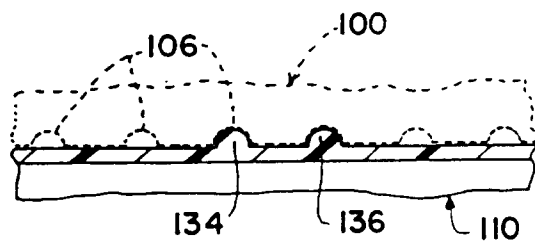


Fig. 15

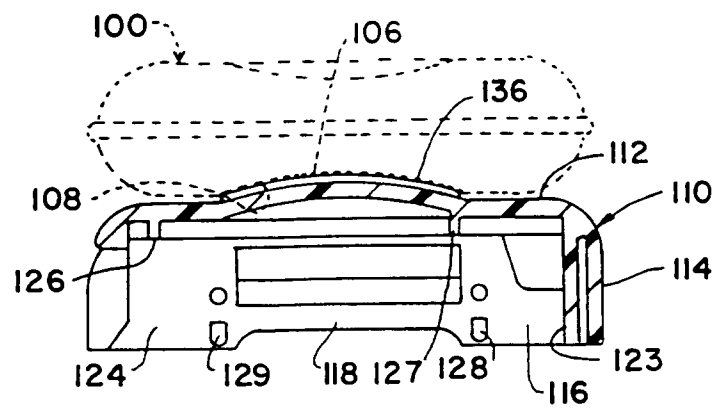


Fig. 16