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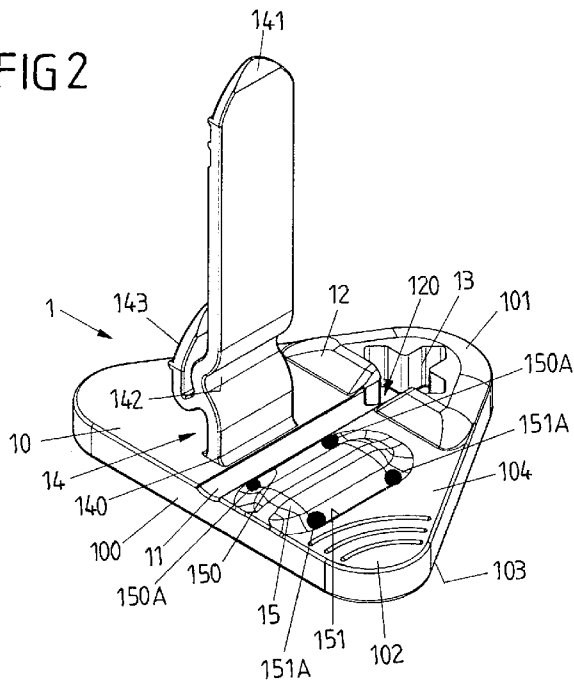
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(54) Title: RETENTION MEMBER FOR SECURING A CATHETER ON A PATIENT

FIG 2



(57) Abstract: A retention member (1) for securing a catheter (2) on a patient (P) comprises a base element (10) having a bottom side (103) and a top side (104), the bottom side being placeable on the patient (P) and the top side (104) being adapted for receiving the catheter (2). The retention member (1) furthermore comprises a ribbon (14) having a first end (140) connected to the top side (104) of the base element (10) and having a second end (141) opposite the first end (140), wherein the base element (10) comprises at least one opening (150, 151) through which the second end (141) of the ribbon (14) is insertable for fixing the catheter (2) on the retention member (1) in between the base element (10) and the ribbon (14). In this way a retention member is provided which is easy and safe to use, may suit to secure catheters of different sizes on a patient and at the same time may be manufactured in a cost-effective manner.

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Retention member for securing a catheter on a patient

Description

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The invention relates to a retention member for securing a catheter on a patient according to the preamble of claim 1.

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A retention member of this kind comprises a base element having a bottom side and a top side, the bottom side being placeable on the patient's skin and the top side being adapted for receiving the catheter.

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A retention member for securing a catheter on a patient known from US 2008/0132848 A1 comprises a base element forming a receiving structure into which a catheter fitting is insertable. By fixing a cover to the base element the catheter can be secured on the base element and in this way can be fixedly arranged on the patient.

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US 5,137,519 describes a retention element defining a tubular member having a bore for receiving and retaining a catheter therein.

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A retention member of the kind concerned herein may for example be used to secure a catheter for the medication, hydration or feeding of a patient. A catheter of this kind may for example be used to access the gastro-intestinal tract of the patient, for example for the intra-gastric feeding of the patient.

Generally, for the feeding of a patient or for other applications catheters of different kinds may be used. Conventional retention members herein are adapted for a catheter of a particular diameter and a particular material, such that for different catheters different retention members must be selected, a wrong selection leading potentially to an incomplete securing of a catheter on the patient. In addition, having to provide different retention members for different catheters increases the logistic expenditure and the manufacturing costs.

One requirement for a retention member is for example a safe and reliable fixation of a catheter under tensile to build a stoma channel during the first hours after a catheter placement. A retention member shall be usable over a longer time period, over hours or days, and shall be easy to handle in daily use for a user, for example a nurse.

It is an object of the instant invention to provide a retention member which is easy and safe to use, may suit to secure catheters of different sizes on a patient and at the same time may be manufactured in a cost-effective manner.

This object is achieved by means of a retention member comprising the features of claim 1.

Accordingly, the retention member comprises a ribbon having a first end connected to the top side of the base element and having a second end opposite the first end, wherein the base element comprises at least one opening through which the second end of the ribbon is insertable for fixing the catheter on the retention member in between the base element and the ribbon.

The retention member may for example be integrally formed in one piece. The retention member may for example be made from silicone rubber.

The retention member allows securing a catheter on a patient by fastening the catheter by means of the ribbon on the base element of the retention member. The ribbon comprises a first end connected to the top side of the base element and a second end opposite the first end. With the second end the ribbon can be inserted through an opening of the base element such that a loophole is formed through which the catheter can be inserted such that the catheter is held on the base element by means of the ribbon extending circumferentially about the catheter.

The base element, in one embodiment, comprises a first opening and a second opening separated from each other by a rib. The ribbon can be inserted through the first opening and the second opening such that it extends through the first opening from the top side of the base element towards the bottom side, reaches around the rib and extends
5 through the second opening of the base element from the bottom side towards the top side. Hence, in the inserted state the ribbon, with its second end, projects from the top side of the base element such that a user can pull on the second end for securing a catheter to the base element. By extending about the rib the ribbon is deformed and is securely fastened to the base element such that a catheter placed in the loophole
10 formed by the ribbon is securely held on the base element and, by placing the base element with its bottom side on a patient, can be secured on the patient.

The rib may, in one embodiment, be recessed at a side opposite the top side of the base element with respect to the bottom side of the base element. The bottom side of
15 the rib hence is displaced with respect to the bottom side of the base element towards the inside, allowing to place the ribbon around the rib without the ribbon protruding beyond the bottom side of the base element. This allows to for example tape the base element to the skin of the patient in an easy, reliable manner.

20 On the top side of the base element, in one embodiment, an elevation is placed, the elevation extending along the rib in between the first opening and the second opening and protruding from the top side of the base element. By means of the elevation the base element may be stiffened in the region of the rib such that the ribbon can be securely fastened to the base element by inserting the ribbon with its second end
25 through the first and the second opening to extend about the rib formed in between the first opening and the second opening.

The base element, in one embodiment, has a generally triangular shape, wherein the base element may be rounded at its tips. The ribbon may be placed at a central location
30 on the base element such that a catheter may be placed on the top side of the base element to extend along a middle line from a leg in between a first tip and a second tip of the triangular base element towards a third tip of the base element.

To receive the catheter on the base element, a groove may be formed into the top side
35 of the base element. The ribbon in this case is connected with its first end to the top side of the base element such that the ribbon bridges over the groove when inserted into the at least one opening formed in the base element.

In one embodiment, the base element comprises a guide hole extending through the base element from the top side to the bottom side. The guide hole is adapted to receive the catheter, the catheter being insertable through the guide hole.

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The guide hole may for example be arranged at a tip of the generally triangular base element, wherein the base element at least to some extent can be bent at the tip carrying the guide hole. When received on the base element, the catheter extends along the top side of the base element and is secured to the top side by means of the ribbon, and is inserted through the guide hole such that it extends from the top side towards the bottom side of the base element. This causes the catheter to be pressed against the skin of the patient when the retention member is placed on the patient, the catheter being tensioned towards the skin and hence assuming a defined position on the patient.

10 The guide hole for example may have a circular or a triangular shape. In another embodiment the guide hole may have the shape of a cross adapted to guide catheters having a fairly large diameter as well as catheters having a fairly small diameter.

15 In one embodiment, for example a wall section is placed on the top side of the base element, the wall section extending transversely across the top side. The wall section separates the base element, at its top side, into two regions, the guide hole being placed on a first side of the wall section and the ribbon on another, second side of the wall section. The wall section may serve to increase the stiffness of the base element along the transverse direction, such that a bending of the base element is primarily possible about the wall section, the wall section hence forming a bending axis.

20 In order to place the catheter on the base element to extend from the second side of the wall section (at which it is fixed to the base element by means of the ribbon) towards the first side (where the guide hole is placed), in one embodiment an opening is formed in the wall section, the opening forming a passage in the wall section for the catheter through which the catheter may extend. The catheter hence runs along the top side of the base element through the opening of the wall section and through the guide hole, hence extending from the top side of the base element to the bottom side of the base element.

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In one embodiment, the ribbon comprises a reception groove formed by a curvature of the ribbon. The reception groove is adapted to receive the catheter such that, when the

ribbon is inserted through the at least one opening of the base element, a beneficial seat for the catheter on the base element is provided. The reception groove herein is formed by suitably curving the ribbon, the reception groove being present in the ribbon already when the ribbon is in a relaxed state in which it is not inserted into the at least one opening of the base element.

For securing the catheter on the retention member and, via the retention member, on a patient, the ribbon is inserted through the at least one opening of the base element and, by pulling on the second end of the ribbon, the catheter is fastened on the base element. If the catheter shall be released from the retention member, a user may grab on a pulling handle, which, in one embodiment, is placed on a section of the ribbon in between the first end and the second end. By grabbing on the pulling handle, hence, a user can pull the ribbon out of the at least one opening formed in the base element and hence may open the loophole formed by the ribbon on the base element such that the catheter may be removed from the retention element.

The idea underlying the invention shall subsequently be described in more detail with respect to the embodiments shown in the figures. Herein:

Fig. 1 shows a schematic view of a patient, a catheter being placed on the patient;

Fig. 2 shows a perspective view of an embodiment of a retention member for securing a catheter on a patient;

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Fig. 3 shows a view of the retention member, with a catheter being placed on the retention member;

Fig. 4A shows a sectional view of the retention member, in a relaxed state of the ribbon of the retention member;

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Fig. 4B shows a sectional view of the retention member, with a catheter being placed on the retention member;

Fig. 4C shows a sectional view of the retention member, when releasing the ribbon to remove the catheter from the retention member;

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- Fig. 5A shows a sectional view of the retention member, with a catheter of a first diameter being placed on the retention member;
- 5 Fig. 5B shows a sectional view of the retention member, with a catheter of a second, smaller diameter being placed on the retention member;
- Fig. 6 shows a perspective view of another embodiment of a retention member for securing a catheter on a patient;
- 10 Fig. 7 shows a sectional view of the retention member, in a relaxed state of the ribbon of the retention member.

Fig. 1 shows in a schematic embodiment a general scenario of a patient P being subjected for example to a gastro-intestinal feeding. A catheter 2 is placed on the patient P, entering into the patient P through an access 20, wherein the catheter 2 is secured to the patient P close to the access 20 by means of a retention member 1 in order to avoid, for example, an accidental removal or displacement of the catheter 2.

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An embodiment of a retention member 1 is shown in Fig. 2 to 5A, 5B.

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The retention member 1 comprises a base element 10 having a generally triangular shape with three tips and three legs extending in between the tips of substantially equal length. The retention member 10 has a top side 104 for receiving the catheter 2 and a bottom side 103 to be placed on the skin of a patient P.

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The retention member 1 comprises a ribbon 14 connected, at a first end 140, to the top side 104 of the base element 10 and having a second end 141 opposite the first end 140. The ribbon 14 extends from the base element 10 and can be inserted through openings 150, 151 formed in the base element 10 in order to secure the catheter 2 on the retention member 1, as it is illustrated in Fig. 3.

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The openings 150, 151 are formed by slits in the base element 10, wherein the slits are terminated at both ends by end holes 150A, 151A extending from the top side 104 through to the bottom side 103 of the base element 10. The ribbon 14 can be inserted through the slits 150, 151 (leading to an elastic deformation of the base element 10 in the area of the slits 150, 151). The end holes 150A, 151A ensure that the base element 10 is not torn open in the area of the slits 150, 151 when using the retention member 1.

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The base element 10, at its top side 104, comprises a groove 11 extending along a middle line of the base element 10 from a leg 100 in between a first end a second tip of the triangular base element 10 towards a third tip 101 of the base element 10, as it is visible in Fig. 2. The groove 11 is formed into the top side 104 of the base element 10 and passes by the ribbon 14, such that by inserting the ribbon 14 with its second end 141 through the openings 150, 151 a loophole is formed through which the catheter 2 may extend for securing it to the retention member 10 (see the sectional views of Fig. 4B, 4C and 5A, 5B).

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At the third tip 101 a guide hole 13 is formed having a cross-sectional shape of a cross. The guide hole 13 reaches from the top side 104 of the base element 10 towards the bottom side 103 and allows to insert the catheter 2 such that the catheter 2 extends along the groove 11 on the top side 104 and reaches through the guide hole 13 to pass from the top side 104 to the bottom side 104 of the base element 10.

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The guide hole 13, as said, is arranged at the third tip 101 of the base element 10. The region of the guide hole 13 herein is separated from the region of the base element 10 in which the ribbon 14 is placed by means of a wall section 12 protruding from the top side 104 of the base element 10, the wall section 12 extending transversely with respect to the middle line, i.e., transversely to the groove 11 formed on the top side 104 of the base element 10. The wall section 12 provides for a stiffening across the base element 10 and allows for a bending of the tip 101 carrying the guide hole 13 about the wall section 12, the wall section 12 providing for a bending axis, as it is illustrated in Fig. 3.

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By inserting the catheter 2 through the guide hole 13 from the top side 104 of the base element 10 towards the bottom side 103 and by, at least to some extent, bending the base element 10 at the third tip 101, the catheter 2, at the tip 101, is (slightly) bent and pretensioned towards the skin of the patient P such that it is pressed against the skin and assumes a defined, secure position on the skin of the patient P.

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For securing the catheter 2 on the retention member 1, the ribbon 14, with its second end 141, is inserted through the openings 150, 151 formed in the base element 10. Herein it is possible to first place the catheter 2 on the base element 10 and to insert the ribbon 14 through the openings 150, 151 after placing the catheter 2 on the base element 10. It however is also possible to first insert the ribbon 14 through the openings

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150, 151 to form a loophole and to subsequently insert the catheter 2 through the loophole formed by the ribbon 14.

5 As visible from the sectional views of Fig. 4B and 4C, the ribbon 14, when inserted through the openings 150, 151, extends about a rib 153 formed in between the openings 150, 151. The ribbon 14 herein extends through a first opening 150 from the top side 104 of the base element 10 towards the bottom side 103, reaches around the rib 153 and extends back from the bottom side 103 towards the top side 104 through a second opening 151. By pulling on the second end 141 of the ribbon 14 in a pulling
10 direction F1 as indicated in Fig. 4B, a catheter 2 extending through the loophole formed by the ribbon 14 can be fastened to the base element 10 such that it is securely held on the base element 10.

15 As it is visible for example from Fig. 4A, a bottom side 152 of the rib 153 is recessed with respect to the bottom side 103 of the base element 10. This allows to place the ribbon 14 around the rib 153, as it is shown in Fig. 4B, without the ribbon 14 protruding beyond the bottom side 103 of the base element 10 when the ribbon 14 is inserted through the openings 150, 151.

20 To stiffen the base element 10 in the region of the rib 153, an elevation 15 is formed within the region of the rib 153, the elevation 15 protruding from the top side 104 of the base element 10.

25 When the ribbon 14 is inserted through the openings 150, 151 and when the ribbon 14 is tightened by pulling on the second end 141 to securely fasten a catheter 2 on the base element 10, the ribbon 14 is held in place by compressional forces acting in between the ribbon 14 and the base element 10 within the openings 150, 151 such that the ribbon 14 is frictionally retained within its inserted position.

30 For releasing the catheter 2, a user may grab on a pulling handle 143 arranged on a section of the ribbon 14 in between the first end 140 and the second end 141. By pulling, in a pulling direction F2 (see Fig. 4C), on the pulling handle 143 the ribbon 14 can be pulled out of the openings 150, 151 such that the loophole formed by the ribbon 14 may be opened to remove the catheter 2 from the retention member 1. At the same
35 time a user may press onto a tip 102 of the base element 10 closest to the rib 153 formed in between the openings 150, 151, such that a pulling force in the direction F2 may be exerted onto the ribbon 14 in an easy manner.

The retention member 1 with the base element 10 and the ribbon 14 formed thereon is integrally formed in one piece for example from silicone rubber. The retention member 1 is easy and intuitive to handle and at the same time is easy and cost-efficient to manufacture.

In addition, the retention member 1 may be, as illustrated in Fig. 5A and 5B, used in connection with catheters 2 of different diameters, without having to modify the retention member 1. In particular, by placing a catheter 2 of a particular diameter on the base element 10 of the retention member 1 and by suitably pulling on the second end 141 of the ribbon 14 until the catheter 2 is securely fastened to the base element 10, a catheter 2 of any (conventionally used) diameter may be fastened to the retention member 1 without having to structurally modify the retention member 1.

Fig. 6 and 7 show another embodiment of a retention member 1 having a base element 10 and a ribbon 14 connected thereto.

The embodiment of Fig. 6 and 7 differs from the previously described embodiment in the shape of the guide hole 13, the shape of the pulling handle 143 attached to the ribbon 14 and furthermore in the shape of the opening 151 extending through the base element 10. Furthermore, the embodiment of Fig. 6 and 7 does not comprise a wall 12 protruding from the base element 10 to structurally separate the area of the guide hole 13 from the area of the base element 10 to which the ribbon 14 is attached.

In the embodiment of Fig. 6 and 7, the guide hole 13 has a triangular shape. Analogously as depicted in Fig. 3 a catheter 2 may be inserted through the guide hole 13 to extend along a groove 11 on the top side 104 of the base element 10 through the guide hole 13 towards the bottom side 103 of the base element 10. This allows for a guiding of the catheter 2 and a pretensioning of the catheter 2 towards the patient's skin.

The pulling handle 143 in the embodiment of Fig. 6 and 7 points towards the other side as compared to the embodiment of Fig. 2 to 5A, 5B. Just as well the pulling handle 143 allows a user to pull on the ribbon 14 in order to release the ribbon 14 with its end 141 from the base element 10.

As visible in the sectional view of Fig. 7, the opening 151 extends through the base element 10 at a tilted angle. Again, as in the embodiment of Fig. 2 to 5A, 5B, the ribbon 14 with its end 141 may be inserted through the openings 150, 151 formed by slits in the base element 10 and terminated by end holes 150A, 151A such that, in a closed state analogously to Fig. 4B, a loophole is formed to fasten the catheter 2 on the base element 10.

Other than that the embodiment of Fig. 6 and 7 resembles the embodiment of Fig. 2 to 5A, 5B, such that it also shall be referred to the detailed description above.

The idea underlying the invention is not limited to the embodiments described above, but may be implemented in an entirely different manner.

A retention member of the kind described herein may be employed for different purposes, for example for the medication, hydration or feeding of a patient. The gastrointestinal feeding of a patient in this regard is only one example of a possible use of a retention member as described herein.

The retention member may have a different shape and structure than described herein. For example, the retention member may be made out of a different material than silicone rubber. In addition, the retention member may have a shape different than a triangular shape, for example a quadratic or rectangular shape.

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List of Reference Numerals

1	Retention member
10	Base element
100	Leg
101, 102	Tip
103	Bottom side
104	Top side
11	Groove
12	Wall
120	Opening
13	Guide hole
14	Ribbon
140, 141	End
142	Reception groove
143	Pulling handle
15	Elevation
150, 151	Opening
150A, 151A	End hole
152	Bottom side
153	Rib
2	Catheter
F1, F2	Direction
P	Patient

Claims:

1. Retention member (1) for securing a catheter (2) on a patient (P), comprising:
- a base element (10) having a bottom side (103) and a top side (104), the bottom
5 side being placeable on the patient (P) and the top side (104) being adapted for receiving the catheter (2),

characterized by

10 a ribbon (14) having a first end (140) connected to the top side (104) of the base element (10) and having a second end (141) opposite the first end (140), wherein the base element (10) comprises at least one opening (150, 151) through which the second end (141) of the ribbon (14) is insertable for fixing the catheter (2) on the retention member (1) in between the base element (10) and the ribbon (14).

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2. Retention member (1) according to claim 1, **characterized in** that the retention member (1) is integrally formed in one piece.

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3. Retention member (1) according to claim 1 or 2, **characterized in** that the base element (10) comprises a first opening (150) and a second opening (151) separated by a rib (153), the ribbon (14) being insertable through the first opening (150) and the second opening (151) to extend about the rib (153).

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4. Retention member (1) according to claim 3, **characterized in** that the rib (153), at its side opposite the top side (104) of the base element (10), is recessed with respect to the bottom side (103) of the base element (10).

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5. Retention member (1) according to claim 3 or 4, **characterized by** an elevation (15) placed on the top side (104) of the base element (10) in between the first opening (150) and the second opening (151) and protruding from the top side (104) of the
35 base element (10).

6. Retention member (1) according to one of the preceding claims, **characterized in** that the base element (10) has a generally triangular shape.

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7. Retention member (1) according to one of the preceding claims, **characterized in** that the base element (10) comprises a groove (11) extending along the top side (104) for receiving the catheter (2), the ribbon (14) bridging over the groove (11) when inserted into the at least one opening (150, 151).

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8. Retention member (1) according to one of the preceding claims, **characterized in** that the base element (10) comprises a guide hole (13) extending through the base element (10) from the top side (104) to the bottom side (103).

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9. Retention member (1) according to claim 8, **characterized in** that the guide hole (13) is arranged at a tip (101) of the generally triangular base element (10).

20

10. Retention member (1) according to claim 8 or 9, **characterized by** a wall section (12) placed on the top side (104) of the base element (10) and extending across the top side (104), the guide hole (13) being placed on a first side of the wall section (12) and the ribbon on another, second side of the wall section (12).

25

11. Retention member (1) according to claim 10, **characterized in** that the wall section (12) comprises an opening (120) forming a passage for the catheter (2) from the second side towards the guide hole (13) on the first side of the wall section (12).

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12. Retention member (1) according to claim 10 or 11, **characterized in** that the base element (10) is bendable about the wall section (12).

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13. Retention member (1) according to one of the preceding claims, **characterized in** that the ribbon (14), in a state in which it is not inserted into the at least one opening (150, 151), comprises a reception groove (142) formed by a curvature of the ribbon (14).

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14. Retention member (1) according to one of the preceding claims, **characterized in** that the ribbon (14), at a section in between the first end (140) and the second end (141), comprises a pulling handle for pulling the ribbon out the at least one opening (150, 151).

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FIG 1

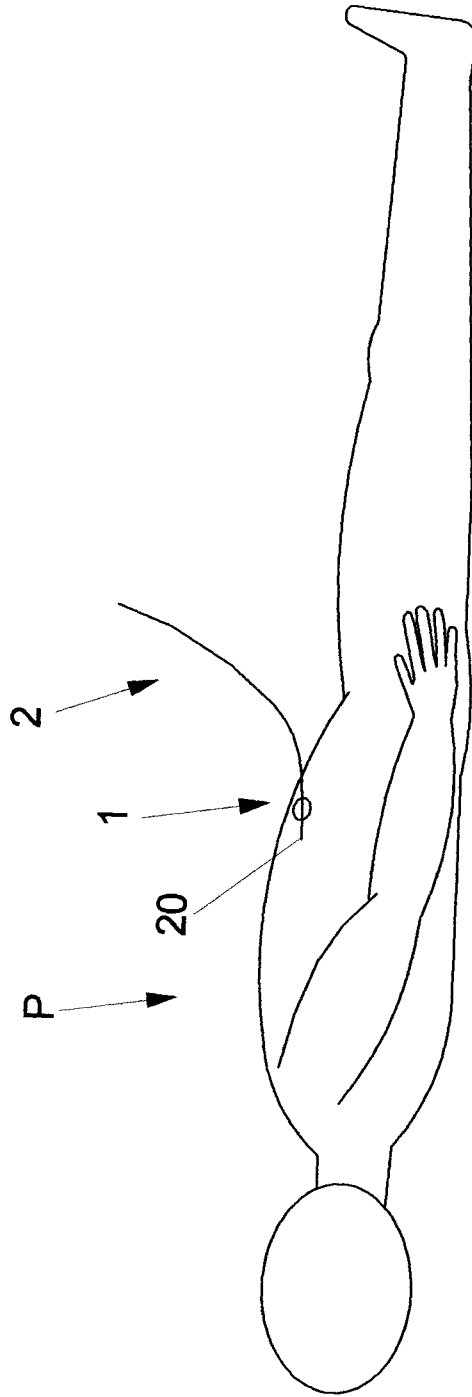


FIG 2

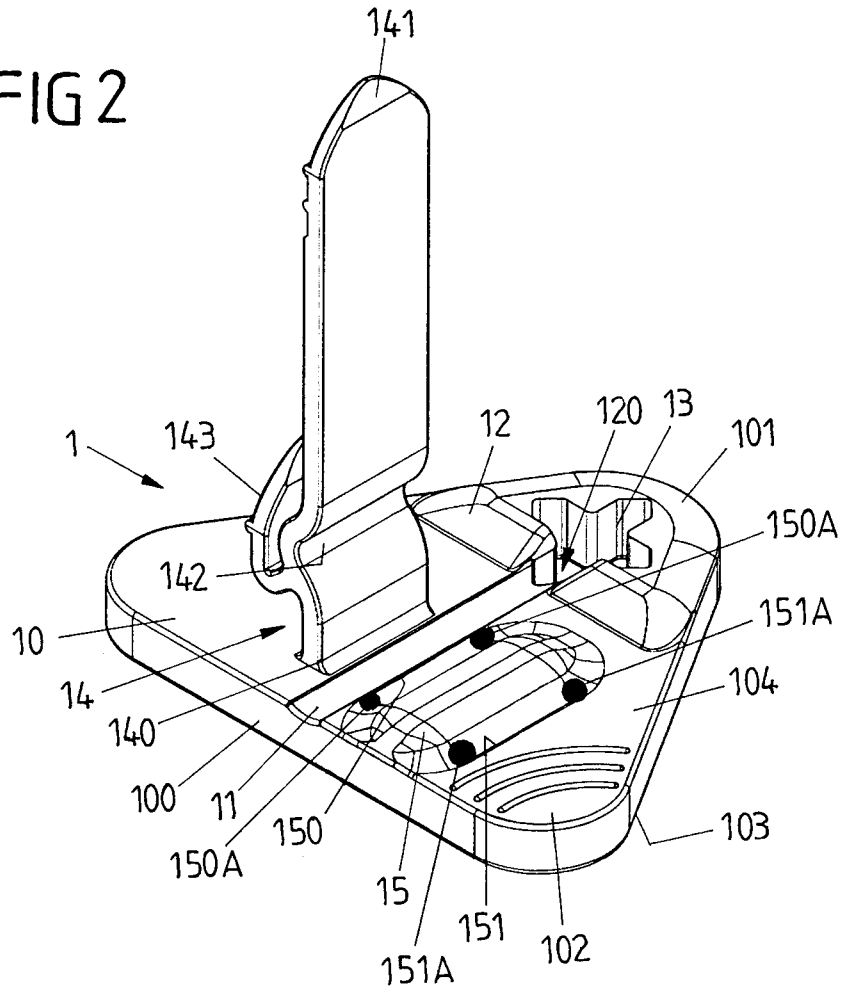


FIG 3

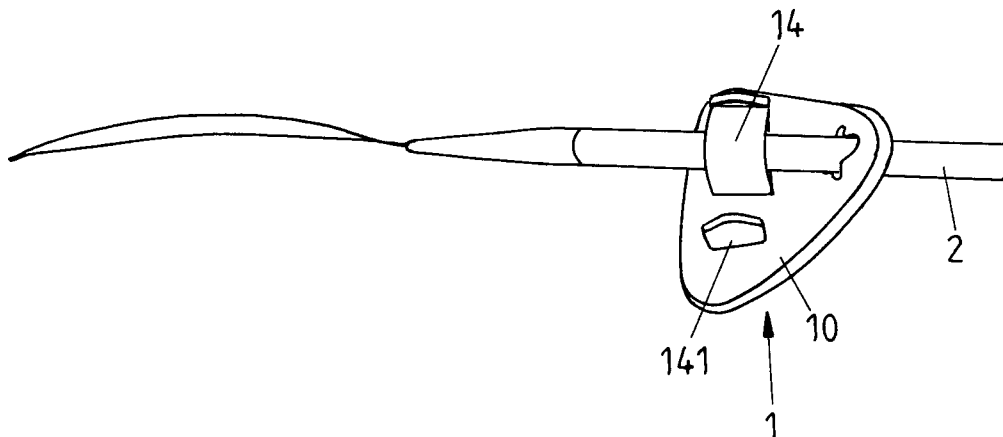


FIG 4A

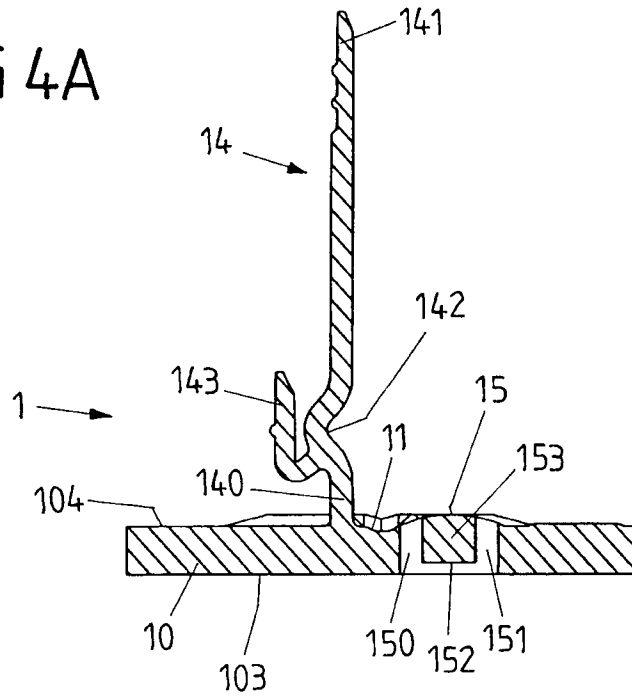


FIG 4B

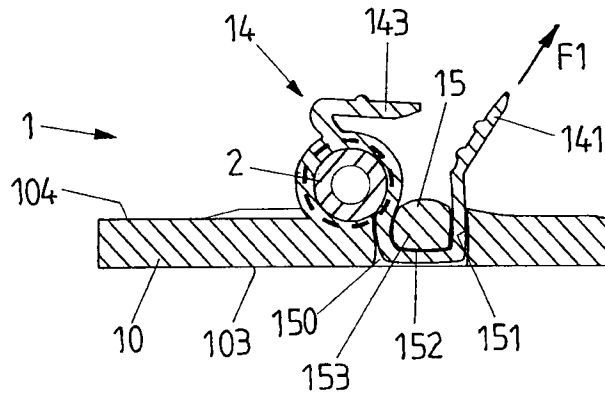


FIG 4C

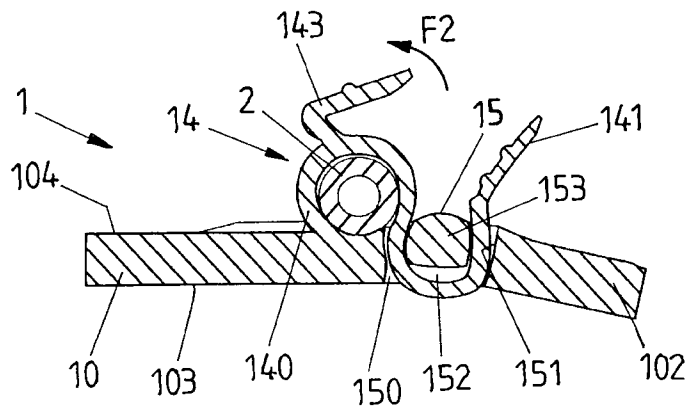


FIG 5A

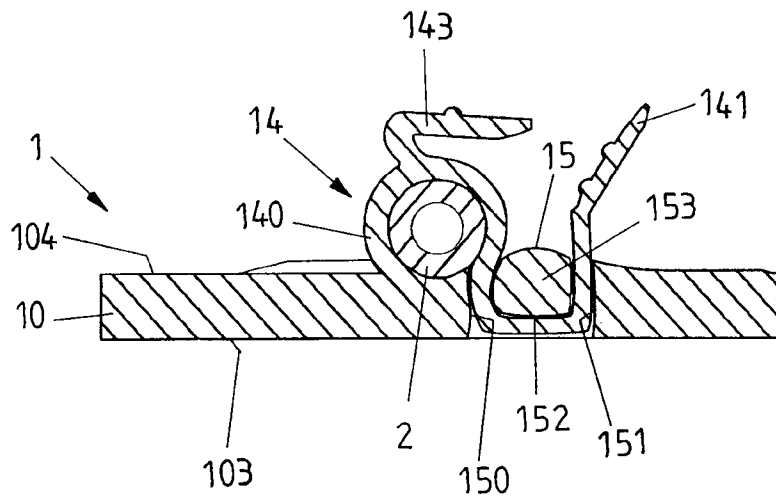


FIG 5B

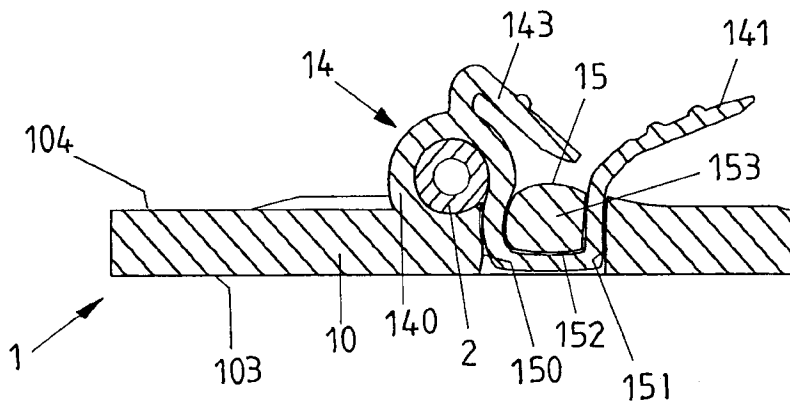


FIG 6

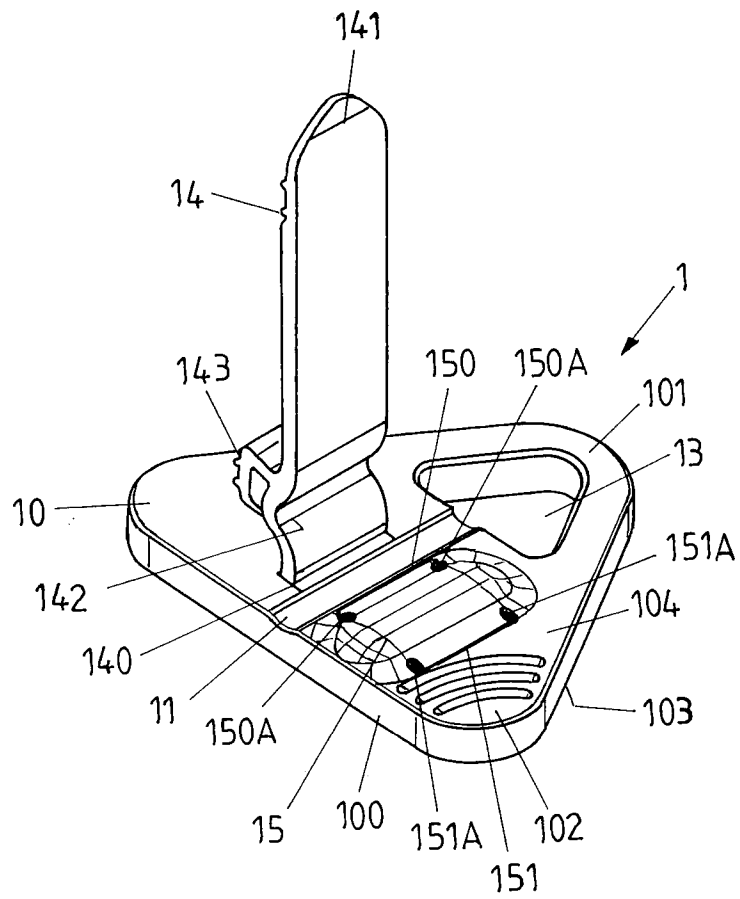
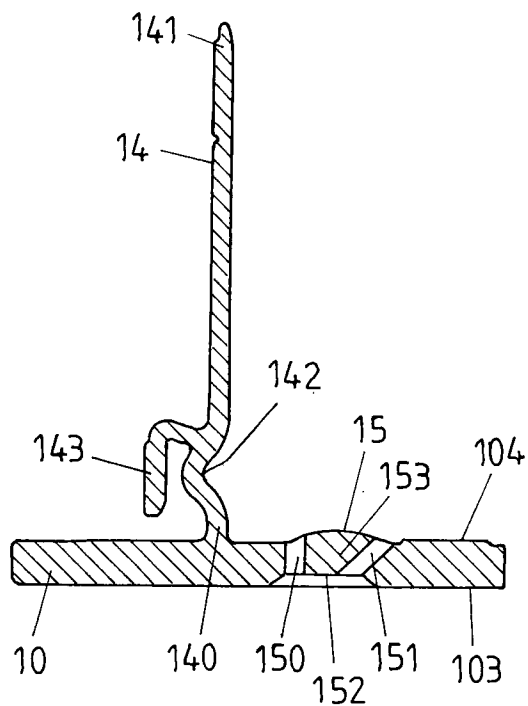


FIG 7



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/050371

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61M25/02
ADD.
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
A61M
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 198 989 A (HAWKE DAVID [US] ET AL) 22 April 1980 (1980-04-22) the whole document -----	1-7,13, 14
X	EP 0 574 163 A1 (HOLLISTER INC [US]) 15 December 1993 (1993-12-15) columns 1-5; figures 1-3 -----	1,13 14
Y	US 5 527 293 A (ZAMIEROWSKI DAVID S [US]) 18 June 1996 (1996-06-18) columns 13,14; figures 24-30 -----	1,2,8-12 13,14
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A		
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 3 April 2017	Date of mailing of the international search report 10/04/2017
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Rodrigues, Elodie
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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/050371

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 698 368 A1 (UNOMEDICAL LTD [GB]) 6 September 2006 (2006-09-06) the whole document -----	8,10-12
Y	EP 2 833 497 A2 (MURR ELEKTRONIK GMBH [DE]) 4 February 2015 (2015-02-04) the whole document -----	14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2017/050371

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-14

Retention member for securing a catheter on a patient comprising a base with at least one opening and a ribbon

1.1. claims: 1-7, 13, 14

Retention member with a ribbon/opening arrangement for securing a catheter onto a base.

1.2. claims: 8-12

Retention member with a guide hole arrangement for allowing a catheter to go through a base.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2017/050371

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