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(71) Applicant  
E.R. Squibb & Sons Inc  
  
(Incorporated in the USA - Delaware)  
  
Lawrenceville-Princeton Road, Princeton,  
New Jersey 08540-400, United States of America

(72) Inventors  
Keith G.M. Hollands  
Graham Emery Steer

(74) Agent and/or Address for Service  
D Young & Co  
10 Staple Inn, London, WC1V 7RD,  
United Kingdom

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A5R RGA

(56) Documents cited  
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UK CL (Edition J) A5R RGA  
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(54) Catheter attachment device

(57) There is a need for a simple and inexpensive catheter attachment device which permits a catheter to be readily attached to the body of a patient in any one of a plurality of orientations relative to the patient.

A catheter attachment device comprises a first pad of medical grade adhesive 10 having one surface covered by a removable protective layer, a second surface covered by a plastic film 12, and, attached to the film, a circular or near-circular pad of 14 medical grade adhesive. A surface of this circular pad which faces away from the first pad is covered by a removable protective layer 24 and has a plastics film 16 on its other surface. The two plastics films are attached to each other over a central region 18 substantially smaller in area than the areas of both the first and second pads.

The visible surface of the second pad, or the visible surface of a removable protective layer thereon may carry a number of arrows pointing in radially outward directions. The purpose of these arrows is to indicate to the user that the catheter can be oriented relative to the catheter attaching device in any radial direction.

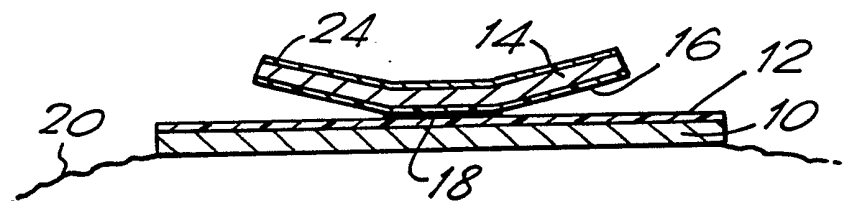


FIG. 1.

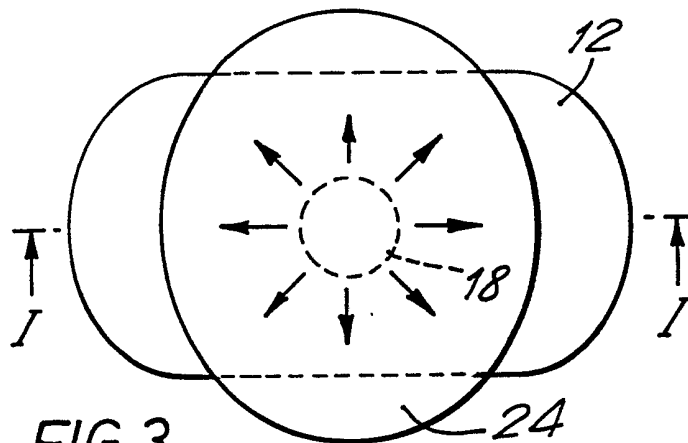


FIG. 3.

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

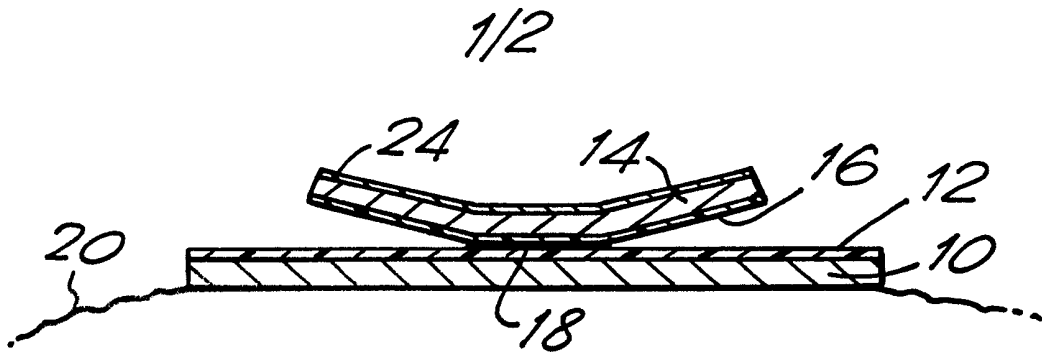


FIG. 1.

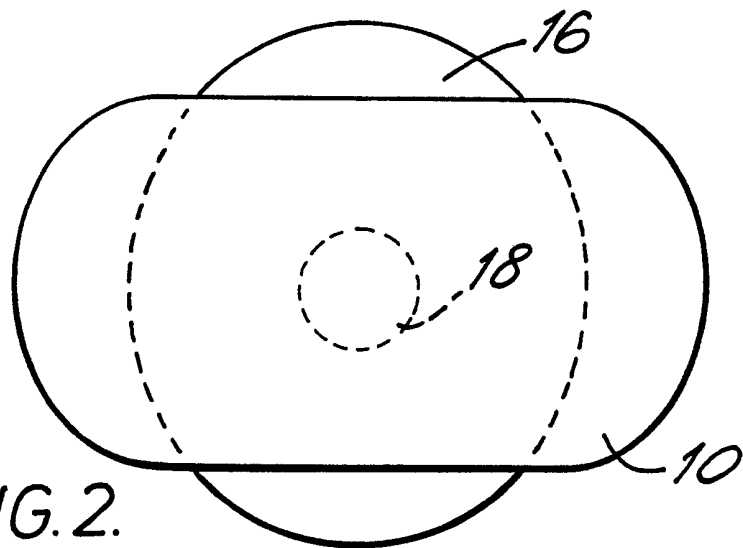


FIG. 2.

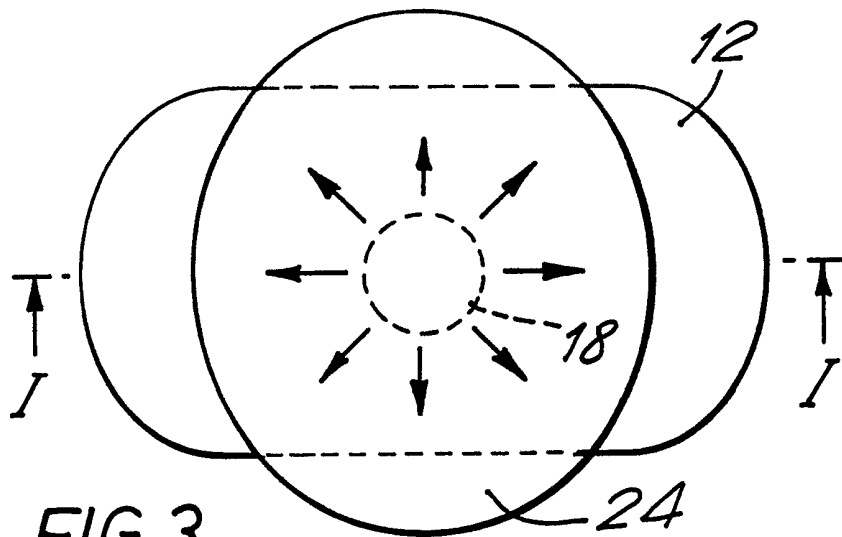


FIG. 3.

FIG. 4.

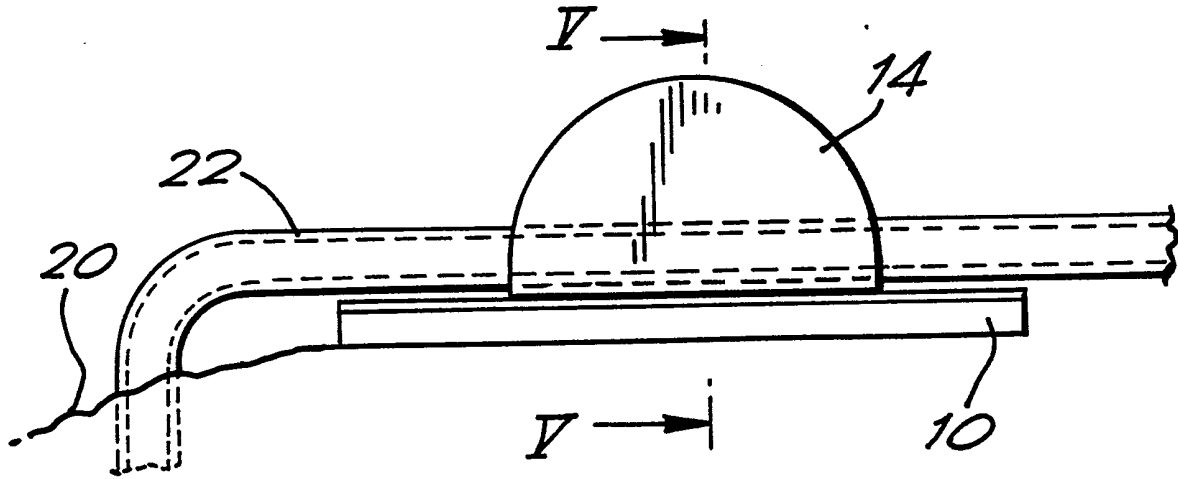
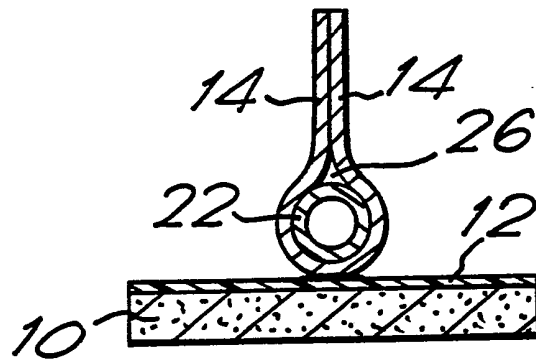


FIG. 5.



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CATHETER ATTACHMENT DEVICE

This invention relates to a catheter attachment device.

There is a need for a simple and inexpensive catheter attachment device which permits a catheter to be readily attached to the body of a patient in any one of a plurality of orientations relative to the patient. In contrast to the present invention, all simple conventional catheter attachment devices, once attached to the skin, permit only one stable orientation for the catheter.

According to the present invention, there is provided a catheter attachment device comprising a first pad of medical grade adhesive having one surface covered by a removable protective layer, a second surface covered by a plastics film, and, attached to the film, a circular or near-circular pad of medical grade adhesive (herein called a second pad) having its surface which faces away from the first pad covered by a removable protective layer and a plastics film on its other surface, the two plastics films being attached to each other over a central region substantially smaller in area than the areas of both the first and second pads.

In an advantageous embodiment of the invention, the visible surface of the second pad, or the visible surface of a removable protective layer thereon carries a number of arrows pointing in radially outward directions. The purpose of these arrows is to indicate to the user that the catheter can be oriented relative to the catheter attaching device in any radial direction.

The invention will be better understood from the following illustrative description of one example thereof, given with reference to the accompanying drawings, in which:-

Figure 1 is a vertical cross-section through one example of catheter attaching device according to the invention, taken on the line indicated I-I in Figure 3;

Figure 2 is an underplan view of the device shown in Figure 1 but with the removable protective layer removed from the undersurface of the

first pad;

Figure 3 is a plan view of the device shown in Figures 1 and 2;

Figure 4 is a side elevation view showing the catheter attaching device according to this embodiment of the invention in a typical position of use; and

Figure 5 is a cross-sectional view of the device taken on the line V-V in Figure 4.

The illustrated catheter attaching device includes a first pad 10 of medical grade adhesive material which has on one surface a removable protective layer (not shown) and a second surface covered by a plastics film 12. A circular or near-circular pad of medical grade adhesive material is shown at 14 and has on one surface a removable protective layer and on the other surface a plastics film 16. These pads are permanently connected to one another in any suitable manner over a join zone 18. For example, the two plastics films 12 and 16 may be heat welded or radio frequency welded together, or the two pads may be secured by an adhesive over the join zone 18 which is strong enough to connect them permanently. As will be seen, the join zone 18 occupies a central region of each pad and the central region is substantially smaller in area than the areas of both the first and the second pads. A consequence of this is that the marginal regions of the second pad can readily be lifted away from the film 12 on the first pad. Although as illustrated in Figure 1 the join area is shown as a central region having a diameter about one third the diameter of the second pad 14, in many practical constructions of catheter attaching device, the join area will be smaller than illustrated in Figure 1.

One example of a suitable material from which either or both of the medical grade adhesive pads 10 and 14 may be made is the adhesive bonding composition disclosed in U.S. Patent 3 339 546 of J.L. Chen. Such adhesive bonding compositions comprise a water soluble or swellable hydrocolloid or mixtures thereof, such as polyvinylalcohol, powdered pectin, gelatin, carboxymethylcellulose high molecular weight carbowax, carboxypoly-methylene and other like substances, which hydrocolloids or mixtures

thereof are incorporated in a natural or synthetic viscous gum-like substance such as natural rubber, silicone rubber, acrylonitrile rubber, polyurethane rubber, polyisobutylene, sucrose acetate isobutylate and other like substances. As an alternative, a medical grade adhesive material such as is disclosed in U.S. Patent 3 972 328 may be employed. As yet another alternative, the dressing disclosed in U.S. Patent 4 538 603 may be employed.

Referring now to Figures 4 and 5, there is shown a medical grade adhesive pad 10 attached to the skin 20 of a patient, and a catheter 22, draining body fluid (e.g. urine) from the patient is shown at 22. The patch 10 is attached to the skin of the wearer in any desired orientation as may be convenient for the nurse, after the removable cover layer has been stripped off. Thereafter, the catheter is laid over the second adhesive pad 14. It is to be particularly noted that the catheter 22 can extend in any radial direction with reference to the second pad 14, without necessitating a change of the positioning or orientation of the first pad 10 on the skin of the patient. This is a considerable advantage to nurses in practice. Then, the nurse places her fingers under the marginal regions of the second pad 14 and lifts and pinches it together (after the removable cover layer has been removed) so that it takes up the position indicated in Figure 5 with the two exposed surfaces of the medical grade adhesive sticking firmly to one another and firmly holding the catheter in position. If it is later desired to remove the catheter then by inserting one blade of a scissors through the space indicated at 26 in Figure 5 a cut may be made in the pad 14 and the catheter readily removed. Since the catheter attachment device disclosed and illustrated is very simple in design and very cheap to manufacture, such devices can be thrown away after use.

As will be appreciated, it is a considerable advantage that the nurse or other person caring for the patient does not have to take special care in positioning the first pad 10 on the skin of the patient. It may be located in any orientation because the catheter can be arranged to extend across the second pad 14 in any desired radial direction. Irrespective of the direction,

the catheter can be firmly retained by pinching together the two portions of the second pad 14 as illustrated in Figure 5.

A man skilled in the art will appreciate that it is possible to make modifications to the device particularly disclosed and illustrated without departing from the invention. While the pad 10 has been illustrated as generally rectangular with rounded corners, it could be oval or any other desired shape. While the pad 14 has been illustrated as circular or near circular, it could be oval providing the length of the minor axis is about 75% or more of the length of the major axis. For some medical adhesive materials, the plastics layers 12 and 16 may be omitted.

CLAIMS

1. A catheter attachment device comprising a first pad of medical grade adhesive having one surface covered by a removable protective layer, a second surface covered by a plastics film, and, attached to the film, a circular or near-circular pad of medical grade adhesive (herein called a second pad) having its surface which faces away from the first pad covered by a removable protective layer and a plastics film on its other surface, the two plastics films being attached to each other over a central region substantially smaller in area than the areas of both the first and second pads.
2. A device according to claim 1 in which the visible surface of the second pad, or the visible surface of a removable protective layer thereon carries a number of arrows pointing in radially outward directions.
3. A device according to claim 1 or 2 in which the two plastics films are connected over the central region by adhesive.
4. A device according to claim 1 or 2 in which the two plastics films are connected over the central region by heat welding.
5. A device according to claim 1 or 2 in which the two plastics films are connected over the central region by radio frequency welding.
6. A catheter attachment device substantially as herein described with reference to and as illustrated in the accompanying drawings.
7. Any novel combination or sub-combination disclosed and/or illustrated herein.