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CARDIAC CATHETER PACKAGE

Filed June 26, 1968

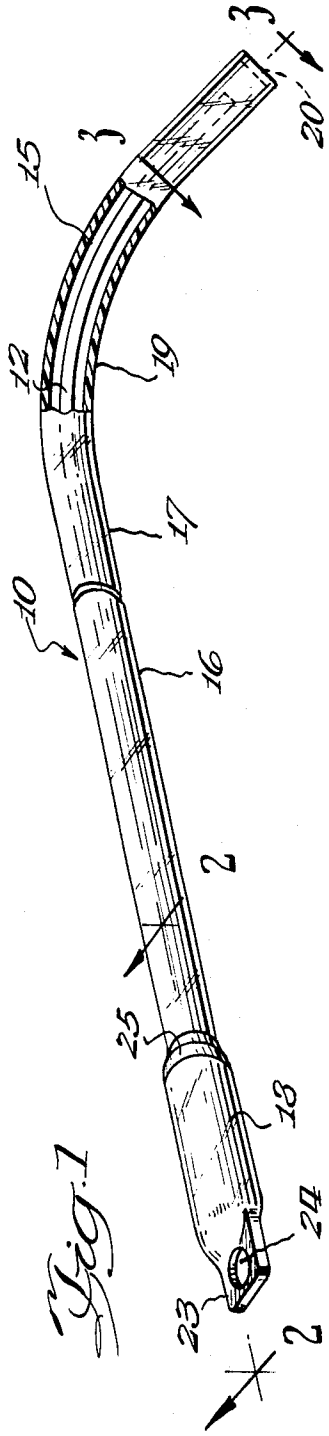


Fig. 1

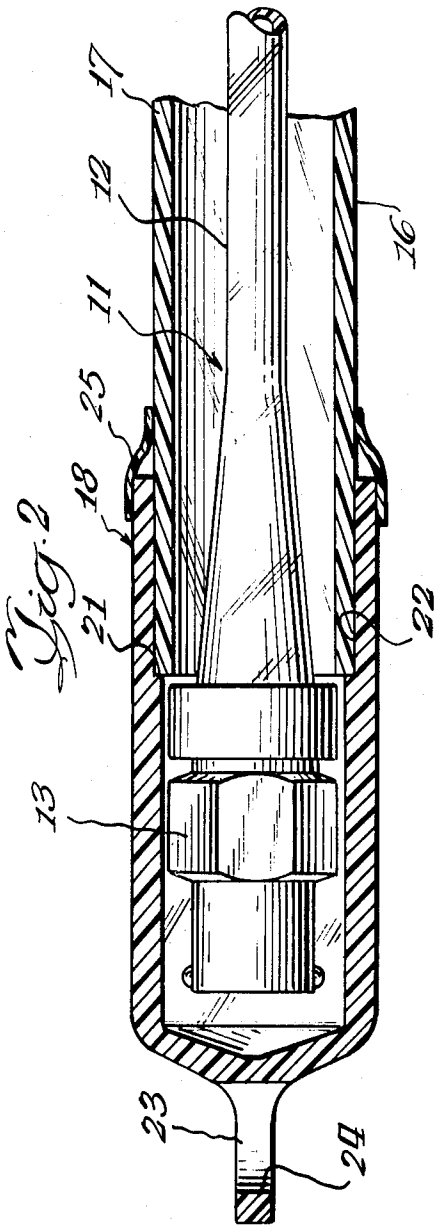


Fig. 2

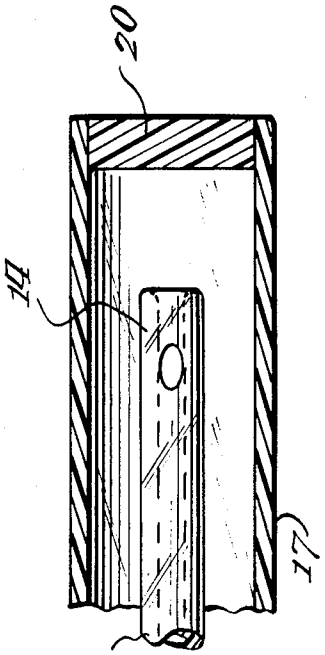


Fig. 3

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CARDIAC CATHETER PACKAGE

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ABSTRACT OF THE DISCLOSURE

A cardiac catheter package including a cardiac catheter having a relatively stiff body provided with a turned portion, and a relatively stiff container loosely receiving the catheter. The container has a turned configuration substantially conforming to the catheter configuration whereby the turned body of the catheter is freely received in the container in its use configuration thereby preventing undesirable bending and kinking of the catheter and facilitating use thereof in cardiac catheter insertions.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates to catheters and in particular to cardiac catheter packages.

Description of the prior art

In the medical field, a substantial number of different forms of sterile containers are provided for sealingly enclosing catheters and the like. Conventionally, catheters are provided in packages requiring the elongated body portion of the catheter to be rolled or bent to be accommodated in a relatively small size container. Such bending of cardiac catheters presents a serious problem of providing in the catheter an undesired deformation thereof from the desired preselected configuration.

SUMMARY OF THE INVENTION

The present invention comprehends an improved cardiac catheter package wherein the cardiac catheter is formed of a relatively stiff material. A container is provided for sealingly enclosing the catheter and preventing undesirable deformation of the catheter. The container is preferably formed of a stiff material having a configuration substantially conforming to the configuration of the catheter so that the catheter may be maintained substantially at all times in its use configuration thereby effectively precluding formation of undesirable bend or kink deformations therein.

Thus, more specifically, the invention comprehends an improved cardiac catheter package including a cardiac catheter having a stiff tubular body provided with a turned portion and a hub, and a stiff container loosely removably enclosing the catheter and having a turned configuration substantially corresponding to said catheter whereby the turned body is freely received in the container in its use configuration.

Further, more specifically, the invention comprehends such a cardiac catheter package wherein the container is formed of a material permanently deforming as an incident of bending the package sufficiently to damage the catheter thereby to provide a maintained indication of the bending.

Still further, more specifically, the invention comprehends such a cardiac catheter package wherein the container includes a cap having an undercut portion sealingly closing the container. Further, the invention comprehends the forming of the container of a transparent material such as a substantially stiff plastic. Further, the invention more specifically comprehends the provision on the container of a tab portion having an aperture for use in hanging the package on a support with the hub of the catheter uppermost.

Yet further, more specifically, the invention comprehends the provision of such a cardiac catheter package wherein the container is formed of rectilinear tubular material provided with a preselected set bend defining the turned configuration.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

FIG. 1 is a broken perspective view of a cardiac catheter package embodying the invention;

FIG. 2 is a fragmentary enlarged diametric section thereof taken substantially along the line 2—2 of FIG. 1; and

FIG. 3 is a fragmentary enlarged diametric section thereof taken substantially along the line 3—3 of FIG. 1.

DESCRIPTION OF THE PREFERRED EMBODIMENT

In the exemplary embodiment of the invention as disclosed in the drawing, a cardiac catheter package, generally designated **10**, is shown to comprise a catheter, generally designated **11**, having a body **12** provided at one end with a hub **13** and at the opposite end with a suitably apertured portion **14**. As best seen in FIG. 1, the body **12** is provided with a turned portion **15** adjacent the apertured end **14**. Illustratively, the turned portion may be turned at an angle of approximately 45 degrees.

The catheter **11** comprises a cardiac catheter formed of a relatively stiff plastic material. As discussed briefly above, it is desirable to maintain the catheter in its use configuration so that during installation of the catheter in a patient, the catheter will have the desired preselected configuration best suited for facilitated insertion. To this end, the catheter is maintained freely in a container, generally designated **16** having elongated tubular housing portion **17** and a cap **18**. As shown in FIG. 1, the housing portion **17** may be provided with a turned section **19** corresponding to the turned portion **15** of the catheter.

The housing may be closed at the distal end by a suitable plug **20**, as shown in FIG. 3, or, alternatively, by an internal closure formed by fusing the walls of the tubular housing **17** at its distal end.

In the illustrated embodiment, the container **16** is formed of a suitable plastic material which will permanently deform as an incident of bending of the package sufficiently to damage the catheter body thereby to provide a maintained indication of the undesirable deformation. Further, the container **16** may be formed of a transparent plastic to permit visual observation of the condition of the catheter therein.

As best seen in FIG. 2, the cap **18** comprises a cup-shaped element having an undercut shoulder **21** sealingly receiving the end **22** of the container body **17**. The hub **13** is fully received within the cap **18** so that upon removal of the cap the hub may be installed in a sterile manner. The cap may be provided with a tab portion **23** having an aperture **24** adapted to permit hanging of the package **10** on a suitable support, such as a peg of a pegboard, with hub **13** uppermost and resting on the end **22** of the container body **17**.

A sealing tape **25** may be provided to extend circumferentially about the inner end of the cap **18** and the tubular container body **17** to provide an indication of an opening of the package.

Thus, cardiac catheter package **10** provides an improved catheter package for facilitated sterilization and storage,

particularly well adapted for use with disposable plastic cardiac catheters. The catheter package **10** permits the catheter to be maintained in storage in the use configuration so as to eliminate undesirable deformation of the catheter such as occurs in packages requiring the catheter to be rolled or bent to be accommodated by the container. Thus, the catheter is maintained in the preselected desired configuration for facilitated manipulation and insertion.

The package provides means for facilitating selection and storage of the catheters in a readily selectible manner by means of the apertured cap permitting the catheters to be hung on pegboards for ready observation and selection. The cap **18** may be color coded for facilitated identification of the catheter size and a suitable label type tape **25** may be employed to identify further the catheter as well as to provide evidence of opening of the package.

As the catheter is disposed in the use configuration within the container, the need for tip wire stylets is eliminated while yet facilitated sterilization and storage may be provided. The use of a suitable plastic material for the container provides the desirable advantage of indicating deformations of the package which will alert the user to possible damage to the catheter. The cap configuration provides an improved means for effecting a sealed closure of the container while yet permitting facilitated manipulation of the catheter hub upon opening of the package.

While we have shown and described one embodiment of our invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claims.

We claim:

1. A cardiac catheter package comprising: a cardiac catheter having a stiff tubular body and provided with a turned portion and a hub; a stiff container loosely removably inclosing said catheter and having a turned configuration substantially corresponding to said catheter whereby said turned portion is freely received in said container in its use configuration; and a cup-shaped cap received on an end of said container, said hub being fully received in said cap.

2. The cardiac catheter package of claim **1** wherein said cap has an undercut portion sealingly closing the container.

3. The cardiac catheter package of claim **1** wherein said cap includes a tab portion having an aperture for use in hanging the package on a support with the hub of the catheter uppermost and resting on said end of said container.

4. A cardiac catheter package comprising: a cardiac catheter having a stiff tubular body provided with a turned portion and a hub; and a stiff container loosely removably inclosing said catheter and having a turned configuration substantially corresponding to said catheter whereby said turned portion is freely received in said container in its use configuration, said container being formed of a material permanently deforming as an incident of bending of said package sufficiently to damage said catheter thereby to provide a maintained indication of said bending.

5. A cardiac catheter package according to claim **4** wherein a cup-shaped cap is received on an end of said container and said hub is fully received in said cap; said cap further including a tab portion having an aperture for use in hanging the package on a support with the hub of the catheter uppermost and resting on said end of said container.

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