

[54] **DISPOSABLE TOURNIQUET COVER**

[72] Inventor: **Lewis F. Hazlewood**, Marlton, N.J.
[73] Assignee: **Walter Kidde & Company, Inc.**, Belleville, N.J.
[22] Filed: **Feb. 11, 1970**
[21] Appl. No.: **10,511**

[52] U.S. Cl. **128/327**
[51] Int. Cl. **A61b 17/12**
[58] Field of Search **128/327**

[56] **References Cited**
UNITED STATES PATENTS
1,366,121 1/1921 Dorsey 128/327
1,827,241 10/1931 Kempf 128/327

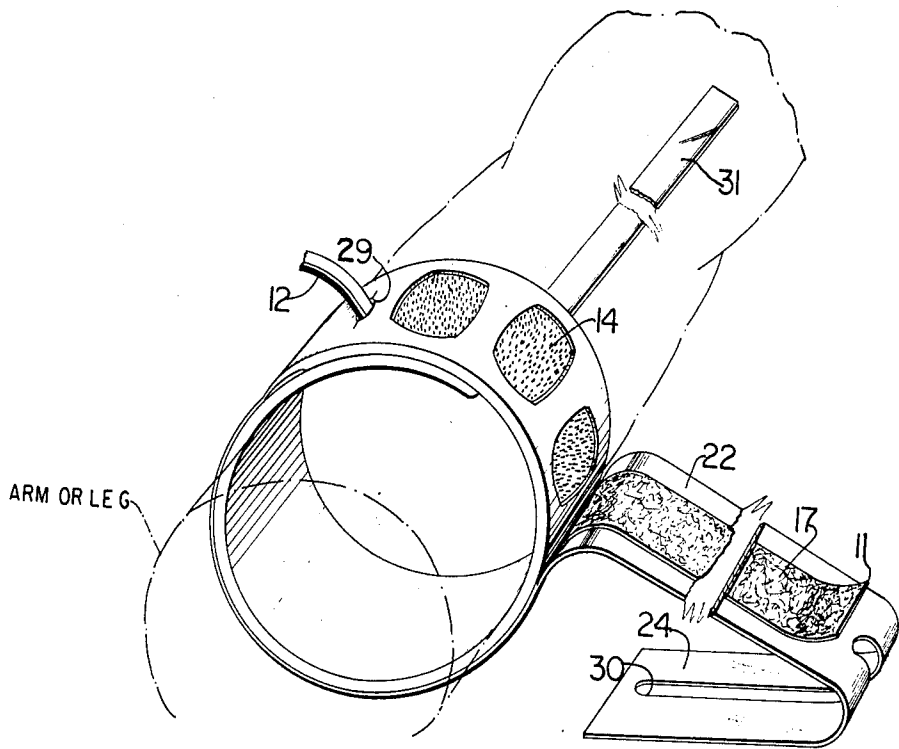
3,582,123 1/1952 Heitz 128/327 X
3,467,077 9/1969 Cohen 128/327 X

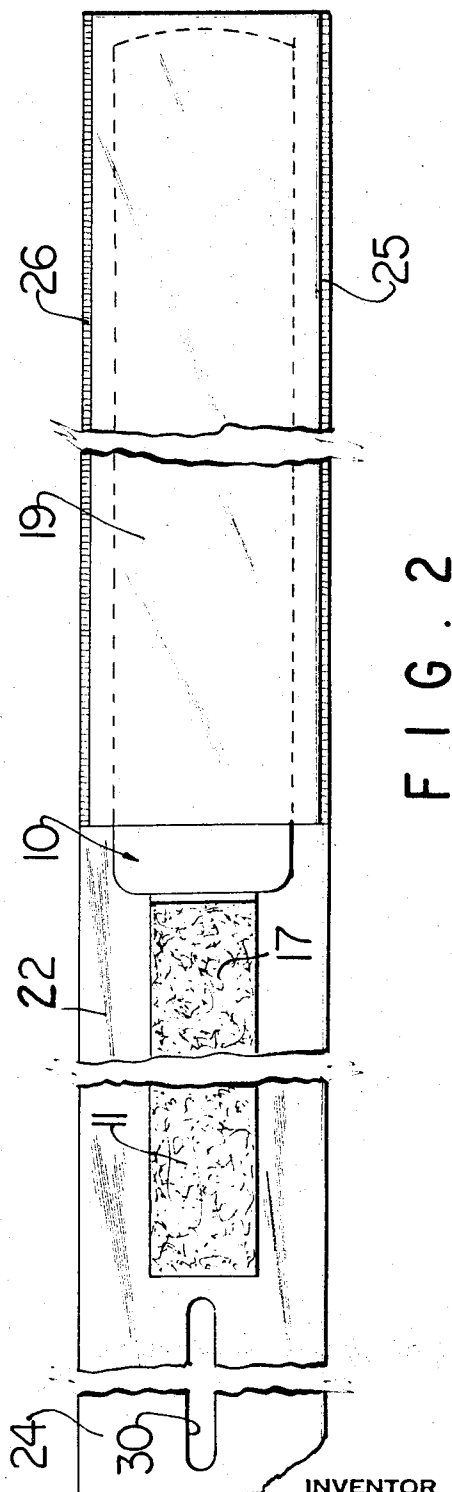
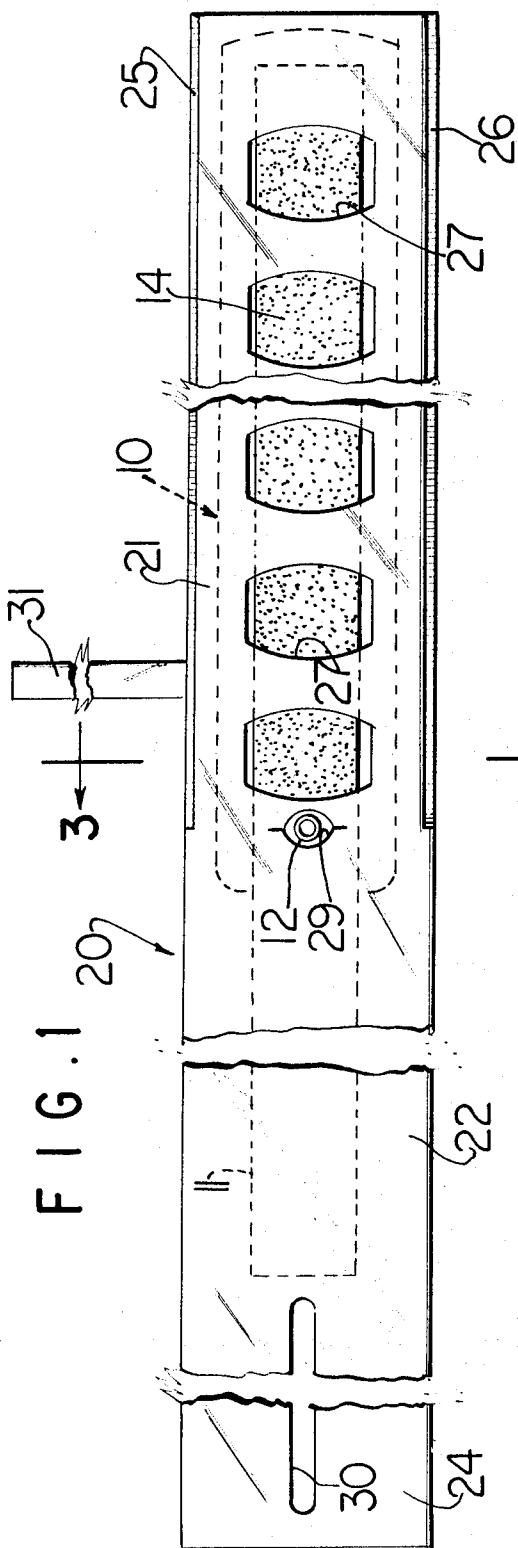
Primary Examiner—Channing L. Pace
Attorney—Mortimer, Relson, Keegan, Coplein & Dundine

[57] **ABSTRACT**

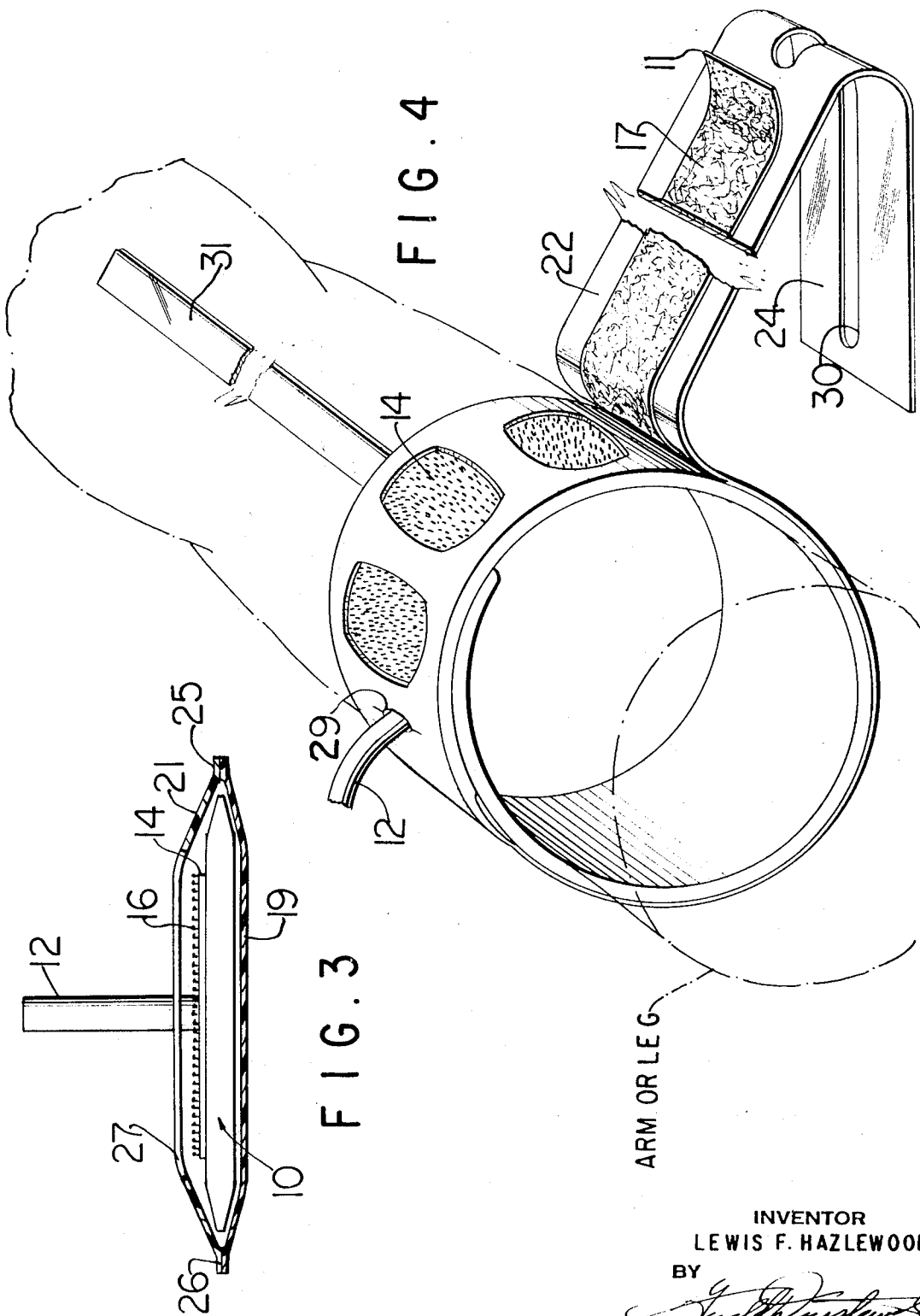
A disposable cover for an inflated tourniquet which has an elongated inflatable member and a tongue that wraps over and fastens to the outside of the inflatable member. The cover includes an elongated plastic envelope for receiving and covering the inflatable member and a plastic sheet extending from one end of the envelope for covering the tongue. The elongated envelope is provided with a plurality of spaced openings through which the tongue is fastened to the inflatable member.

8 Claims, 4 Drawing Figures





INVENTOR
LEWIS F. HAZLEWOOD
BY *[Signature]*
AGENT



INVENTOR
LEWIS F. HAZLEWOOD
BY *L. F. Hazlewood*
AGENT

DISPOSABLE TOURNIQUET COVER**BACKGROUND OF THE INVENTION**

The present invention relates to hemostatic devices, and, more particularly, to tourniquets of the type which are wrapped around a body member and are inflated to provide the pressure for controlling blood flow.

Normal hospital practice requires that any thing which contacts the patient be cleaned and sterilized before reuse. Inflatable tourniquets of the reusable type are generally constructed of materials which are susceptible to being soiled, particularly by blood.

Frequently the tourniquet is completely saturated with blood and must be discarded and at other times, the cleaning and sterilizing of these devices require considerable time and effort. Even under the best conditions, a significant amount of time must be spent in cleaning tourniquets which could be utilized in other ways.

SUMMARY

In view of the foregoing, it is an object of the present invention to provide an inexpensive and effective disposable cover for inflatable tourniquets.

The foregoing objects are accomplished by providing a disposable cover for inflatable tourniquets comprising in combination a plastic envelope for receiving substantially all of the inflatable portion of the tourniquet, and a plastic sheet extending from the envelope to lie over and cover the tongue portion of the tourniquet, the envelope being provided with a plurality of openings spaced along the length thereof for allowing cooperating fastening devices on the tongue and inflatable portion of the tourniquet to be interengaged.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the invention has been chosen for purposes of illustration and description, and is shown in the accompanying drawings, forming a part of the specification, wherein:

FIG. 1 is a top view of a disposable tourniquet cover positioned on an inflatable tourniquet.

FIG. 2 is a bottom view of the cover and tourniquet shown in FIG. 1.

FIG. 3 is a cross-sectional view of the cover taken along the line 3—3 on FIG. 1.

FIG. 4 is an isometric view of the device of FIGS. 1 and 2 wrapped about a body member (shown in phantom).

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in detail there is shown an inflatable tourniquet positioned within a disposable cover according to the present invention.

The tourniquet includes an elongated inflatable member 10 and a tongue 11 extending from the end of the inflatable member. A rubber gas supply tube 12 for inflating the member 10 is provided on the upper surface thereof adjacent to the end from which the tongue extends. A fastening strip 14 provided with a multitude of plastic hooks 16 (FIG. 3) is secured to the top surface of the inflatable member 10 between the tube 12 and the free end of the member. A second fastening strip 17 consisting of a layer of fleecy or pile-like material is secured to the under side of the tongue and is formed with a multitude of loops (not shown) for cooperating with the plastic hooks 16. When the layer 17 is pressed against the strip 14, the hooks engage the loops in the layer 17 and the tongue is held to the member 10. The tongue is removed from the member 10 by gripping the end of the tongue and stripping it away causing the plastic hooks to straighten out and release the loops along the line of separation. Cooperating fastening strips constructed in this manner are in common use and are generally known by the trade name "Velcro".

The disposable cover includes a lower plastic layer 19 of approximately the same length as the inflatable member and of

slightly greater width, and an upper plastic layer 20 of equal width and greater length. The upper layer 20 has a portion 21 which is co-extensive with the layer 19, a central portion 22 which covers the tongue 11, and an end position 24 which extends beyond the tongue 11.

The portion 21 of the layer 20 is heat sealed to the layer 19 along outer edge regions 25 and 26, and is provided with a plurality of openings 27 through which the fastening strips 14 and 17 can engage when the tourniquet is wrapped around a patient's limb. The upper layer 20 is provided with an opening 29 through which the tube 12 extends, and the end portion 24 is provided with a longitudinally extending opening 30 for receiving the tube 12 when the tourniquet is wrapped. A strip of adhesive tape 31 secured to the lower layer 19 extends transversely to the cover for securing the upper layer 20 in the wrapped condition.

Prior to use, the inflatable tourniquet is positioned in a sterile disposable cover as shown in FIGS. 1 and 2. The assembled unit is then wrapped around the patient's limb, as shown in FIG. 4, starting with the free end of the inflated member 10. The tongue 11 is wrapped over the top surface of the cover portion 21 and pressed down so that the hooks 16 on the fastening strip 14 engage the pile-like material of the fastening strip 17 through the openings 27. The cover portions 22 and 24 are wrapped over the tourniquet so that the tube 12 passes through the opening 30. The strip of adhesive tape 31 is wrapped over the plastic layer 20 to hold it in place.

A gas supply line is connected to the tube 12 and the member 10 is inflated to subject the limb to pressure and restrict the flow of blood through the limb.

It can be seen that only the sterile cover comes in contact with the limb of the patient and that the cover protects the tourniquet from becoming soiled. When the tourniquet is removed from the patient, the cover is removed from the tourniquet and discarded. The next time the tourniquet is used, a fresh sterile cover is employed minimizing or eliminating entirely the need to sterilize the tourniquet itself.

It will be seen from the foregoing that the present invention provides an inexpensive and effective disposable cover for inflatable tourniquets.

I claim:

1. In combination an inflatable tourniquet including an elongated inflatable member for wrapping around a body member, said inflatable member having a first surface adapted to lie adjacent to the body member and having an outer surface, a tongue extending from one end of the inflatable member to be wrapped over at least a portion of the inflatable member and having a first surface which lies adjacent to the outer surface of the inflatable member and having an outer surface, cooperating fastening devices on the outer surface of the inflatable member and first surface of the tongue, and an inlet means extending from the outer surface of the inflatable member adjacent the end thereof from which the tongue extends, a cover formed as an envelope receiving substantially all of the inflatable member, said envelope having first and outer walls respectively covering the first and outer surfaces of the inflatable member, said outer wall of said envelope being provided with at least one opening in the area of the fastening devices on the outer surface of said inflatable member, the cooperating fastening devices on the tongue and the inflatable member being interengageable through said opening.

2. The combination of claim 1, wherein said envelope has a portion extending from the outer wall thereof making said outer wall longer than said inner wall, said extending portion being of a length at least equal to the length of said tongue of said inflatable member.

3. The combination according to claim 2 wherein said extending portion of said envelope is of greater length than the tongue said extending portion being provided with an opening for permitting the inlet fitting to pass therethrough.

4. The combination according to claim 3, wherein said inlet fitting of said inflatable member includes a hose, said opening of said extending portion of said envelope being elongated and

3

extending longitudinally of said extending portion and receiving said hose.

5. The combination according to claim 4 wherein said longitudinally extending opening terminates short of the free end of said extending portion of said envelope.

6. The combination of claim 1, wherein there are a plurality of spaced openings in the outer wall of said envelope along a substantial portion of the length of the area of the fastening devices on the outer wall of said inflatable member.

4

7. The combination according to claim 1, wherein said cover member is made of plastic sheet material.

8. The combination according to claim 7, wherein said cover has first and second sheets of plastic material which respectively correspond to said first and outer walls of said envelope, said sheets of plastic material being heat sealed together along the edges thereof.

* * * * *

10

15

20

25

30

35

40

45

50

55

60

65

70

75