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M. T. BASSECHES

3,163,162

SURGICAL TAPE

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FIG. 1

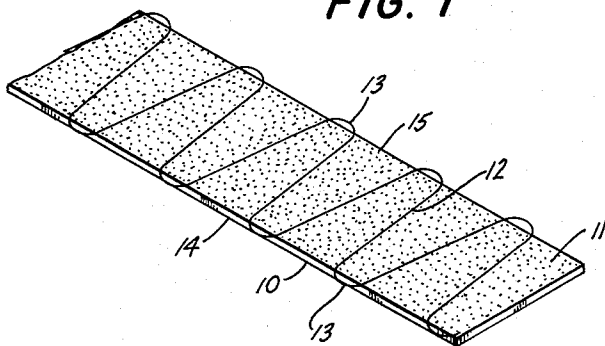


FIG. 2

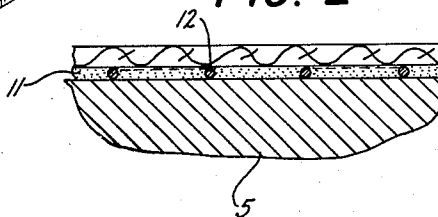


FIG. 3

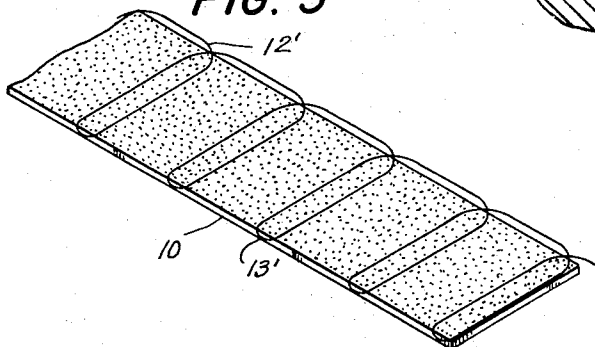


FIG. 4

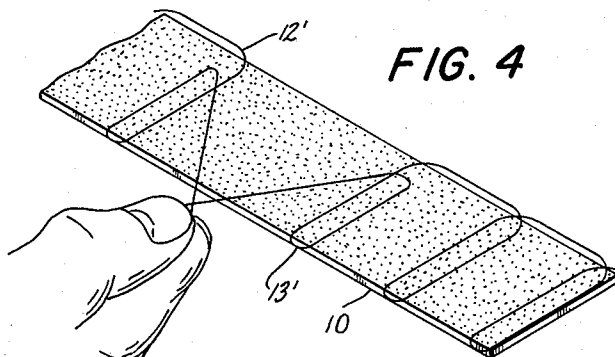
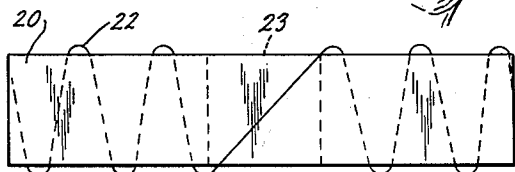


FIG. 5



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SURGICAL TAPE

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7 Claims. (Cl. 128—156)

This invention relates to a surgical tape, and to what is commonly referred to as "adhesive tape," such as is used primarily in conjunction with the preparation of bandages. Tape of this sort is also frequently used by athletes for reinforcing an articulated joint to prevent sprains, and for other analogous purposes.

The problem which has heretofore inhered in the use of so-called adhesive tapes has been the difficulty with which such tapes are removed from the area of application. Specifically, in the case of tapes applied to the skin, removal involves acute discomfort, particularly where the tape is applied to a hirsute area.

Where frequent changes of dressing are required, the tearing influence encountered in removing the tape from the skin, unless carefully controlled, may result in re-opening of the wound and consequent delay of healing.

When the tape is used by athletes or the like as a joint reinforcement or immobilizing expedient, it is necessary to apply and remove the same frequently. In many instances, athletes must have an ankle or wrist, for example, taped before each game and practice session, the tape being removed after each application. In such cases, with the tapes heretofore known, repeated removal of the tape has caused the area to become highly sensitive, with consequent discomfort.

Accordingly, it is an object of the present invention to provide a surgical or adhesive tape which may be readily removed from the skin, with a minimum of discomfort and dislocation of the skin.

A further object of the invention is the provision of a tape of the class described which may be removed from hirsute areas of the body with a minimum of painful pulling of the hairs which underlie the tape.

Still a further object of the invention is to provide a preformed dressing, frequently referred to as a "band-aid" wherein the adhesive portions have the desirable characteristics aforesaid.

To attain these objects and such further objects as may appear herein or be hereinafter pointed out, reference is made to the accompanying drawings, forming a part hereof, in which—

FIGURE 1 is a perspective view of a length of adhesive tape in accordance with the invention;

FIGURE 2 is a cross-sectional view of an adhesive tape in accordance with the invention applied to a skin surface;

FIGURE 3 is a perspective view of a further embodiment of the invention;

FIGURE 4 is a perspective view of the embodiment of FIGURE 3, with preliminary operations for facilitating removal having been carried out;

FIGURE 5 is a plan view of a preformed bandage incorporating the invention.

In accordance with the invention, a web or backing 10 of any appropriate material, such as fabric or plastic, is coated on the surface with the usual pressure sensitive adhesive layer 11. Applied to the layer 11 is an extended thread 12 which is disposed in a criss-cross relation in contact with the adhesive layer 11. The thread or filament 12 is so disposed with respect to the tape that loops or bights 13 extend laterally so as to be exposed at the side edges 14, 15 of the tape.

It will be understood that the section illustrated in FIGURE 1 preferably forms part of an extended roll, the adhesive layer 11 normally being directed toward the inner diameter or core of the roll.

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The thread or filament 12 is preferably absorbent of solvents for the adhesive 11, although such condition of absorbency is not required. Natural threads, such as cotton or flax, are suitable, as are threads of synthetic materials, such as nylon, rayon or the like.

While the thread or filament 12, in the illustrated embodiments, is shown applied to the outer surface of the adhesive layer 11, it will be understood that in certain circumstances it may be desirable to cause this material to be embedded within the said material or to be disposed between the material and the backing 10, although a light overlying relationship atop the surface 11 is preferred.

When the tape has been applied, as to a skin area S, FIGURE 2, the thread or filament 12 is disposed between the skin and the web 10. To remove the tape from the skin, it is merely necessary to grasp one or more of the loops or bights 13 which are exposed at the side edges 14 and 15 of the tape and draw said loops or bights laterally outwardly from the tape. This operation is clearly shown in conjunction with the embodiment of FIGURES 3 and 4, which differs from the embodiment of FIGURE 1 only in the fact that the thread 12' of FIGURES 3 and 4 has been applied to the adhesive layer 11 in a different configuration from that of FIGURE 1.

As best seen in explanatory FIGURE 4, to facilitate removal, the bights 13' are grasped, as between the thumb and the forefinger, and drawn laterally or laterally upward, thus serving to free the web from the skin.

It will be observed that if the filament is disposed adjacent the web, portions of the adhesive may be left on the skin, although in the preferred embodiment, i.e. where the filament is laid on the outer surface of the adhesive, the adhesive and the web will be released as a unit from the skin.

In the embodiment of FIGURE 1, it will be observed that drawing on the loops or bights in the manner aforesaid will not draw the filament between all areas of connection between the film and the skin whereas in the embodiment of FIGURE 3, drawing any one of the bights 13' will cause the extended filament to effect a complete separation of all areas of connection.

Where the tape is applied to a hirsute area, some discomfort may be experienced in drawing on the filament in the manner aforesaid. In such instance, a solvent for the adhesive may be wiped on the backing of the web, particular care being taken to contact the exposed loops or bights 13 or 13' with the solvent. When the filament is thus contacted, the solvent is absorbed into the filament, which acts as a wick. It will be readily recognized that the saturated filament will facilitate removal of the tape by enabling the filament to be drawn between the skin and the web with a lesser degree of pressure than where no solvent is employed.

In FIGURE 5 there is shown a further embodiment where a discrete length 20 of the tape, coated on its undersurface with an adhesive layer, has a filament or thread 22 applied to the outer surface of the adhesive. The usual gauze pad 23 is secured to the adhesive surface. The filament 22 is wound in such manner that the sterility of the gauze pad 23 will not be compromised since the layer 22 lies over the back, uncoated surface of the tape in the area corresponding with the gauze pad.

The provision of a plurality of bights or loops exposed at the edge or edges of the tape makes snaring of the filament easy.

Where a waterproof tape is desired, the loops or bights should be wound in such manner that they do not extend beyond the edges of the tape but, rather, may be located just inward of the edges of the tape so that the marginal edges of the tape may lay against the skin. In such instance, the filaments may be made accessible by prying up

the marginal edge of the tape at one point to snare a loop or bight.

The term "exposing" as used in the claims should be broadly construed to include the foregoing construction.

It will be observed that by the use of the device, much of the tearing out of hairs normally experienced in the removal of adhesive tape will be obviated by drawing on the thread or filament, since such drawing results in a shearing action on the hairs rather than in uprooting of the hairs.

The tape of the present invention provides for easy and comfortable removal, whether or not a solvent is employed in connection with the removal process.

The removal of the tape may be effected without disturbing tender skin areas or partially healed wounds, since an almost complete separation of the tape from the skin may be effected as the pulling force on the filament is concentrated substantially parallel with the skin's surface, in contrast to the dislocating forces required to remove tapes as presently constituted.

Having thus described the invention and illustrated its use, what is claimed as new and is desired to be secured by Letters Patent is:

1. An adhesive tape or the like comprising a backing web, a pressure sensitive adhesive layer on one face of said web and an extended strand member releasably secured to said layer, said strand extending both longitudinally and transversely of said tape and including a plurality of spaced bight portions exposed at the side edges of said web, manual tension applied to said strand member being effective to release said strand from said layer.

2. A tape in accordance with claim 1 wherein said strand is absorbent when secured to said layer, whereby when a solvent for said layer is contacted with a portion of said strand, said solvent will be conducted along said strand to points remote from said portion.

3. An adhesive tape or the like comprising a backing web, a pressure sensitive adhesive layer on one face of said web, an extended thread member releasably carried

by the exposed surface of said layer, said thread criss-crossing said tape and having lengthwisely spaced-apart portions extending to the side edges of said web.

4. A tape in accordance with claim 3 wherein said thread is absorbent when carried by said layer.

5. An adhesive tape or the like comprising a backing web, a pressure sensitive adhesive layer on one face of said web, an extended absorbent thread releasably secured to said layer, said thread criss-crossing said tape having lengthwisely spaced-apart portions extending beyond the side edges of said tape.

6. An adhesive bandage comprising a backing web, a pressure sensitive adhesive layer on the front face of said web and a gauze pad disposed over a portion of the length of said layer, an extended thread releasably secured to said layer, said thread criss-crossing said tape and exposing lengthwisely spaced-apart bight portions at the side edges of said web, the criss cross pattern by which said thread is joined to said tape being such that lateral tension applied to said thread will draw said thread across substantially the entire surface of said layer.

7. An adhesive bandage comprising a backing web, an adhesive layer on the front face of said web and a gauze pad disposed over a portion of the length of said layer, an extended thread secured to said layer, said thread criss-crossing said tape and exposing lengthwisely spaced-apart bight portions at the side edges of said web, said thread being disposed on the rear face of said web at the portions of said web in registry with said pad.

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