Jan. 21, 1964 S. E. TENGQUIST 3,118,446

NON-ADHERENT MEDICAL DRESSING

Filed April 24, 1961

FIG.1

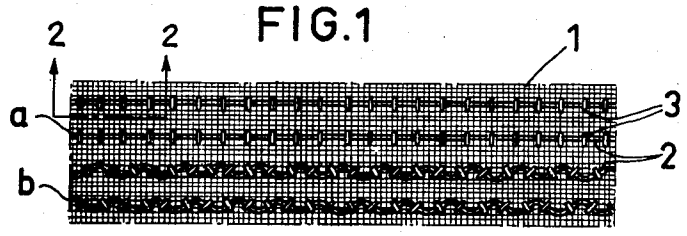


FIG.2

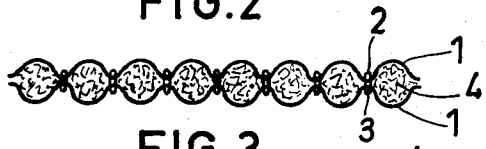


FIG.3

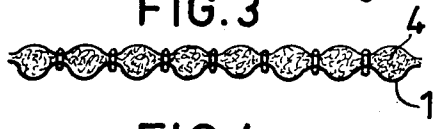


FIG.4

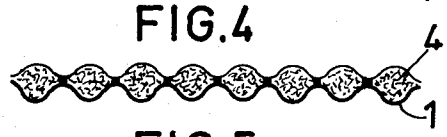


FIG.5

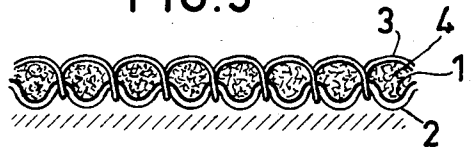
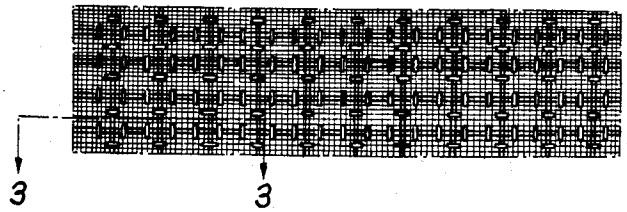


FIG.6



INVENTOR.

BY

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3,118,446

NON-ADHERENT MEDICAL DRESSING

Sven Ebbe Tengquist, Alvenas, Valberg, Sweden, assignor to Svenska Rayon Aktiebolaget, Alvenas, Valberg, Sweden, a joint stock company of Sweden

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3 Claims. (Cl. 128—156)

This invention relates to a medical dressing suitable for application to a wound, comprising a layer of absorbent material which at least on one side is connected to a fabric-like textile layer, said dressing being adapted for being applied with the textile material on to the wound surface.

Dressings of conventional type comprise a layer of folded gauze made of spun fibre yarn, for application onto a wound and, on top of the gauze, a layer of absorbent material, generally cotton or wool. This type of dressing suffers from the disadvantage that the gauze has a tendency to adhere to the wound surface such that, when the dressing is removed or replaced, new tissue formed in the wound is damaged or torn off. Conventional dressings, moreover, suffer in many cases from the incapability of absorbing and retaining fluids in satisfactory quantities.

It is an object of the present invention to provide an improved dressing with greatly reduced tendencies to adhere to a wound.

It is another object of the present invention to provide a dressing which has excellent properties for absorbing and retaining fluids in large quantities.

It is still another object of the present invention to provide a dressing wherein the material in contact with the wound has a reduced tendency to adhere to the wound and has excellent capacity to absorb and retain fluids in large quantities.

The dressing according to the invention eliminates the aforesaid drawbacks and furnishes the advantages that it rapidly absorbs water, wound secretions, blood and other wetting fluids while retaining the same in considerable amounts, and while showing an insignificant tendency to adhere to the wound.

The dressing according to the invention is characterized in that the layers are secured to one another at intervals of from 3 to 15 mm., suitably from 5 to 12 mm. and preferably from 6 to 7 mm., and in such a manner that the points of attachment are preferably arranged to form substantially parallel rows, and more preferably in the form of two systems of mutually intersecting rows. The layers may be secured to each other point-wise or in the form of more or less continuous joints. From a cost point of view, the textile material is preferably attached only to one side of the absorbent material, but may, from a functional view, be applied as well to both sides.

The textile material is preferably in the form of a fabric made of mono- or multifilament artificial silk yarn which, owing to its smooth surface has very little tendency to adhere to the wound. As the textile material preferably should be of the absorbent type, materials such as absorbent artificial silk, particularly rayon, are preferably used.

The absorbent layer may be made of any material which is characterized by its absorbent capacity, for example any surgical wool, cellulose wadding, viscose sponge, gauze fabric or other textile material, but is preferably absorbent rayon fibre, or surgical wadding of rayon fibre.

The textile material and the absorbent material may be secured to one another by different means. For example,

they may be glued or welded together, or they may be sewn together by conventional sewing thread. Preferably the sewing thread is artificial silk (filamentary yarn) having a smoother surface than spun yarn. The sewing thread may be shrinkable thread or a combination of conventional thread and shrinkable thread. The function of the dressing according to the invention is, however, independent of the shrinkability of the thread, so that normally a non-shrinkable thread is used.

The textile material and the absorbent material are secured to each other, by fastening connections extending in rows in a first embodiment in only one direction of the material and in a second embodiment in mutually intersecting rows.

The invention will now be described in greater detail, reference being had to the accompanying drawing, wherein:

FIG. 1 is a plan view of a dressing showing at *a* a first manner of connection between respective layers of the dressing and at *b* a second manner of connection between respective layers of the dressing,

FIG. 2 is a side view of the dressing along the line 2—2 in FIG. 1 wherein the textile material is applied to both sides of the absorbent layer,

FIG. 3 shows another form of the dressing as taken along the line 3—3 in FIG. 6 wherein the textile material is applied to only one side of the absorbent layer,

FIG. 4 shows the textile material secured to the absorbent layer such, that the materials are adhered together without stitching,

FIG. 5 is a side view of the dressing on an enlarged scale and in greater detail, and

FIG. 6 is a plan view showing the layers secured in rows extending in two intersecting directions.

Referring to FIG. 1, 1 designates a rayon fabric, of a mesh size as large as possible but effective to prevent the fibres of a layer of absorbent material 4 adjacent the fabric from passing, even partially, through the meshes thereof. Reference numerals 2 and 3 designate different threads in the seams. The same numerals are used to designate corresponding elements in FIGS. 2–4.

In FIG. 5, an absorbent layer 4 of rayon wadding, for example a surgical wadding of rayon fibres, is secured by rayon threads 2 and 3 to the fabric 1, the stitches of thread preferably being arranged in parallel rows which are advantageously spaced, for example by 6 to 7 mm.

According to FIG. 6 wherein the textile material and the absorbent material are connected along rows of fastening connections which intersect one another, there is only a point-wise contact with the wound surface resulting in an adhering tendency of the dressing which is even considerably less than that of the embodiment according to FIG. 1.

The dressing according to the invention is laid upon the wound with the fabric side facing the wound, and on top of the dressing the usual wound dressing is attached, the entire dressing is then attached in conventional manner by means of gauze or the like.

What I claim is:

1. A medical dressing comprising a layer of absorbent material, a fabric-like textile layer on at least one side of the first said layer, the dressing being adapted for being applied to a wound with the textile layer in contact with the wound and the absorbent layer substantially isolated from the wound, the fabric-like textile layer being of artificial silk material, and means establishing rows of fastening connections between the respective layers to secure

the same together to define bounded areas in the textile layer; said bounded areas being of a magnitude of about 9 to 225 sq. mm. and adapted to make less than full contact with the wound, the rows of fastening connections being spaced at intervals of between 3 and 15 mm.

2. A medical dressing as claimed in claim 1 wherein the rows of fastening connections are arranged in parallel relation.

3. A medical dressing as claimed in claim 2 wherein the

rows of fastening connections are arranged in two sets of mutually intersecting parallel rows.

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