

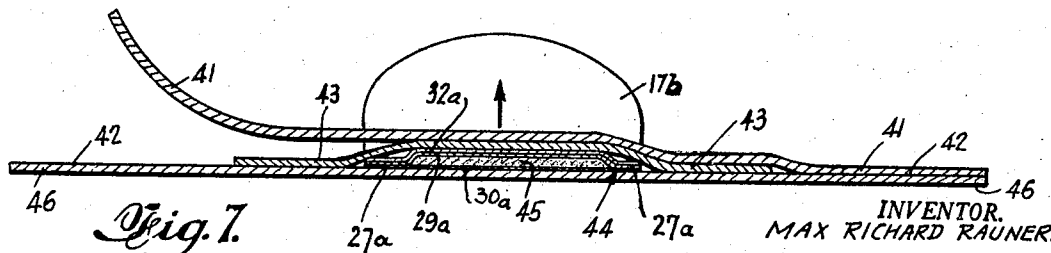
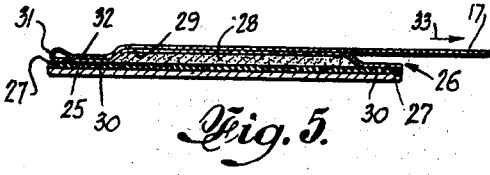
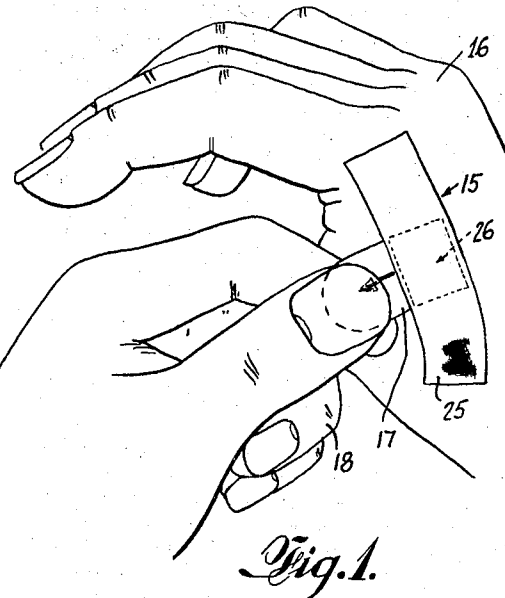
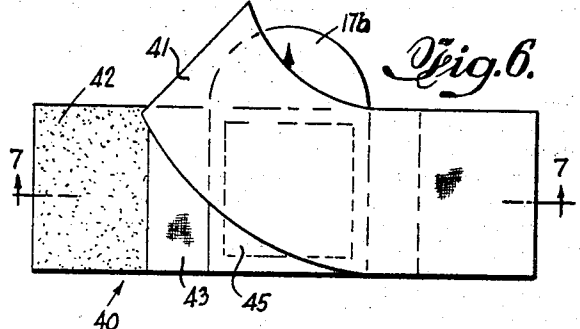
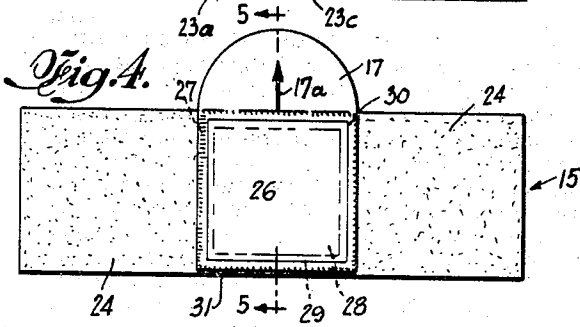
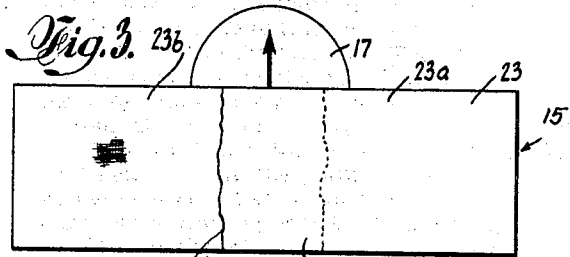
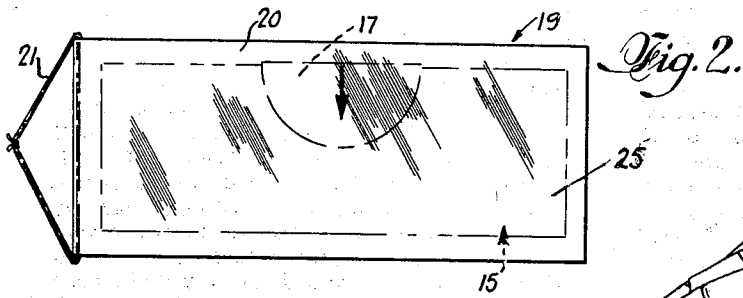
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2,340,142

SURGICAL DRESSING

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## UNITED STATES PATENT OFFICE

2,340,142

## SURGICAL DRESSING

Max Richard Rauner, New York, N. Y.

Application May 11, 1942, Serial No. 442,484

9 Claims. (Cl. 128—268)

This invention relates to surgical dressings and more particularly to surgical dressings or bandages adapted in particular for application in substantially moist condition to a wound, such as described in and disclosed by my copending application Serial No. 429,094, filed January 31, 1942, in which there has been set forth for the first time such novel structure and type of medical or surgical dressing.

It is an object of the present invention to provide a flexible carrier in the form of a gauze bandage or adhesive strip, plaster and the like, in combination with a flexible envelope or receptacle sealingly containing therein a liquid or liquid-like substance or any medicament for treatment of wounds.

It is another object of the present invention to provide in combination with a flexible envelope a pad having incorporated therein an ointment or other viscous and wetting substance normally enclosed by said envelope and made up for rapid use by direct application to a wound.

A further object of the present invention is to provide means to open said receptacle or envelope either partly or wholly to make the content thereof directly accessible to wound treatment and immediately prior to its application.

Yet, another object of the present invention is to provide a dressing or bandage having incorporated liquid means for direct application to a wound of a body part to be treated, said liquid means being so arranged relatively to said bandage or the like that said means are readily applicable to said body part either before, during or after said dressing or bandage has been placed in position on said body part.

Still a further object of the present invention is to provide a substantially sterile and air-tight receptacle or envelope of flexible material, the latter being impervious to liquid and being adapted to hold liquid or liquid-like substance therein; the envelope is preferably of such character as to be securely held on or within a pad, bandage or any suitable carrier for use in conjunction with wound treatments.

Another object of the present invention is to provide tab or extension means forming part of the envelope and adapted to be grasped by a hand of the injured person for facilitating discharge of the liquid-like substance or similar wound treating matter from said envelope onto the wound.

Yet, a further object of the present invention is to provide tab means in crosswise relationship to the length or extension of the bandage, carrier or the like, to which the envelope may be joined,

whereby discharge of the content of said envelope may be readily and rapidly effectuated.

Still another object of the present invention is to provide means for sealing a prepared medicinal dressing, preferably in wet condition and in sterile form, within an envelope, and to provide means forming part of said envelope for facilitating tearing off or opening up of said envelope when said dressing is to be applied to the wound.

Yet, another object of the present invention is to provide a method for preparing surgical dressings of the aforesaid type or character, the steps of the method being very simple and resulting in a very economical, inexpensive and very efficient wound or surgical dressing which has unusual properties and does away with the many known disadvantages and inefficiencies inherent in dry and substantially unsterilized dressings having an absorbent pad or filling which has to be specifically prepared before the same can be applied to any wound.

These and other new and useful objects may be attained as will appear from the following disclosure of the invention, which consists in the features of novelty in construction, combination and arrangement of the several parts, hereinafter more fully described and shown in the accompanying drawing illustrating this invention.

In the drawing:

Fig. 1 illustrates the surgical dressing or device according to the invention in the stage of operation.

Fig. 2 shows a plan view of the dressing wrapped and placed in a package.

Fig. 3 shows a top plan view of the dressing.

Fig. 4 shows a top plan view with the protecting cover strips removed.

Fig. 5 is an enlarged cross-sectional view along line 5—5 of Fig. 4.

Fig. 6 shows a modified form of a surgical dressing made in accordance with the invention, the protecting cover strips being in the stage of removal.

Fig. 7 shows an enlarged longitudinal sectional view taken along line 7—7 of Fig. 6.

In that form of embodiment of the present invention shown in Figs. 1 to 5, inclusive, of the drawing numeral 15 designates the surgical dressing as applied to a hand 16, the fingers of another hand 18 grasping and being in the process of pulling tab on extension 17 of the dressing envelope or receptacle 26 to facilitate opening of the latter.

As can be seen from the drawing, the surgical dressing 15, when not in use, is preferably placed

and enclosed in a package or wrapper 18 which may be made of waxed or other water-repellent cellulose material 20 sealed around its edges and provided with a pulling strip 21 for facilitating removal of the dressing 15 from said wrapper 18. Fig. 3 shows a top plan view of the dressing with the conventional protecting gauze cover 23 consisting of parts or strips 23a, 23b which overlap each other at 23c, in this instance, part 23a being positioned on top of part 23b.

Fig. 4 shows dressing 15 with those protecting cover strips removed thus exposing to view adhesive layer 24 of web or tape 25 and envelope or receptacle 26 hereinafter more fully described.

Envelope 26 is preferably made of a flexible, substantially water-repellent material, which may be so closed and sealed in any suitable known manner that a medicament in substantially liquid, semi-liquid or viscous form may be encased and preserved in said envelope for a considerable length of time. As a suitable material for the purpose intended may be selected Cellophane, Pliofilm or similar waterproof substance, oil silk or the like.

In the embodiment shown in Figs. 4 and 5, a gauze pad 28 containing or prepared with an ointment, salve or other liquid-like medicament is encased in envelope 26 consisting of a relatively strong base wall 30 facing the adhesive layer 24 of tape 25, and of a relatively thin top wall 29 sealed with or otherwise intimately connected to said base wall 30 around its edges 27, said top wall 29 having an extension 32 forming a loop at 31 and overlying the surface of said wall 29 and projecting therebeyond, as clearly seen in Fig. 5. The free end of extension 32 forms a tab 17 provided with an indicator or arrow 17a, said tab being adapted to be turned over tape 25, as illustrated in Fig. 2.

As can be observed from the foregoing explanation, dressing 15 may be easily and most rapidly made ready for use. After removal of wrapper 19 and protecting gauze cover 23 from dressing 15, adhesive tape 25 together with envelope 26 may be applied to a wound, envelope 26 being thereby directly placed upon the wound proper. By pulling tab or similar extension means 17 in the direction of arrow 33 (Fig. 5) and crosswise to tape 25, the loose extension 32 providing a lever for rupturable top wall 29 facilitates ready removal of the latter from base wall 30 at its sealed edges 27 and thus exposing enclosure 28 of opened envelope 26 directly for contact with the wound (Fig. 1).

Figs. 6 and 7 show a modified form embodying the invention. Tape 40 having the adhesive layer 42 is covered by a single piece of protecting strip 41. Directly underneath strip 41, there is positioned and fixed to a portion of the adhesive layer 42 a pad 43 of gauze or like absorbent material, which in turn overlies an envelope 44, as can be clearly seen in Fig. 7.

Envelope 44 is of a construction substantially similar to that indicated in Fig. 5. However, top wall 29a and base wall 30a sealed to one another along edge 27a are made of equally strong water-repellent material, said top wall 29a being provided with extension 32a and adjoining tab 17b for the same function, as hereinabove described with reference to Figs. 4 and 5. Envelope 44 preferably holds a medicament 45 in liquid form. It can thus be easily realized that upon manipulation of tab 17b envelope 44 may be opened, so that the liquid or semi-liquid content may penetrate into and through the absorbent

material 43 which may contain or may be prepared with another dry or powdered medicament adapted to be dissolved by or reacting with said liquid content, which material 43 is covering and is in contact with the wound under treatment.

It is to be noted that instead of an adhesive plaster or tape any other carriers suitable for wound treatment may be employed, such as bandage, gauze bandage, f. e. battle dressing (Carlisle model), and the like, the envelope sealingly containing the liquid or semi-liquid medicament being either disposed within the gauze dressing proper or connected thereto in any other way.

It may be further realized that the process of manufacturing the new style of wound or surgical dressing may be carried into effect in a relatively simple manner.

The envelopes after being prepared and filled with preferably sterilized liquid medicament, an ointment carrying pad or the like, are sealed and may be intermittently delivered from a station provided with a stack of prepared envelopes crosswise to an adhesive tape continuously fed from a roll of tape, predetermined lengths of said tape carrying one or more envelopes which are pressed against or fixed in any other way to said adhesive tape being then severed from the continuous tape during further steps of the process.

While there has been shown and described and pointed out the fundamental novel features of the invention as applied to the above embodiments, it will be understood that various admissions and substitutions and changes in the form and details of the means illustrated and its operation may be made by those skilled in the art without departing from the spirit of the invention.

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

1. A surgical dressing comprising a substantially flexible sealed envelope, a fluid medicament contained in said envelope, an elongated support carrying said envelope and adapted to be placed adjacent a wound, and tab means connected to and overlying said envelope, said tab means extending transversely of said support, whereby upon manipulation of said tab means access of said medicament to said wound may be caused while said support is applied at said wound.

2. A surgical dressing comprising a substantially sealed envelope having a top wall, medicament holding means encased in said envelope, an elongated carrier for supporting said envelope, and tab means connected to said top wall of said envelope and overlying the latter for manipulation to tear off said envelope and to thereby expose said medicament holding means for application to a wound of a body part, said tab means extending transversely of said carrier.

3. A surgical dressing comprising an elongated member for application on a wounded body part, a sealed, airtight, flexible envelope having a base wall and a rupturable top wall, said envelope being fixed with its base wall to said member and enclosing wound treating matter between said base wall and said top wall, and a tab forming part of said top wall and extending loosely along said top wall from one of its ends beyond the opposite end thereof, said tab being arranged transversely of said elongated member, whereby upon application of said member to said body part and placing said envelope above the wound of the body part the tab may be pulled trans-

versely of said member thus rupturing the top wall for discharge of the wound treating matter directly on the wound.

4. A surgical dressing comprising an elongated member for application on a wounded body part, a sealed, airtight, flexible envelope having a base wall and a rupturable top wall, said envelope being fixed with its base wall to said member and enclosing a sterile, moist bandage pad between said base wall and said top wall, and a tab forming part of said top wall and extending loosely along said top wall from one of its ends beyond the opposite end thereof, said tab being arranged transversely of said elongated member, whereby upon application of said member to said body part and placing said envelope above the wound of the body part the tab may be pulled transversely of said member thus rupturing the top wall for exposing said bandage pad directly on the wound.

5. A surgical dressing comprising a carrier for attachment to a body part adjacent a wound thereof, a substantially airtight envelope including a rupturable top, said envelope having sealed therein wound treating matter, a pad, said envelope and said pad being supported by said carrier for application to said wound, and tab means connected to one end of said top of said envelope and loosely engaging said top at the outside of said envelope for facilitating grasping of the tab means by the fingers of a person, width and length of said tab means corresponding substantially to width and length of said top, whereby upon pulling of said tab means by the fingers of a person the top will be ruptured thus discharging from said envelope said treating matter through said pad on said wound, while said carrier is attached to said body part.

6. A surgical dressing comprising a carrier for attachment to a body part having a wound, a substantially airtight envelope including a rupturable top wall, liquid wound treating matter sealed in said envelope, a pad placed above said envelope and fixed to said carrier, and tab means connected to one end of said top wall of said envelope and loosely extending at the outside of said envelope and beyond said top wall for facilitating grasping of the tab means by the fingers of a person whereby upon pulling of said tab means the top wall will be ruptured thus discharging from said envelope said liquid treating matter through said pad on said wound, while said carrier is attached to said body part.

7. A surgical dressing comprising in combination a substantially sealed envelope having a top wall of rupturable material, a carrier supporting said envelope and adapted for application to a body part adjacent a wound, said envelope being adapted to hold a wound treating matter therein, and extension means having a free end, said extension means loosely overlying said top wall and being connected to one of the edges of said top wall and projecting with said free end beyond the opposite edge of said top wall, said extension means permitting said top wall to be displaced relatively to the remainder of said envelope by pulling said extension means at said free end, whereby to rupture said envelope for applying said wound treating matter to said body part.

8. A surgical dressing comprising in combination a substantially sealed envelope having a top wall of rupturable material, a carrier supporting said envelope and adapted for application to a body part adjacent a wound, said envelope being adapted to hold a wound treating matter therein, and extension means connected with one of its ends to one of the edges of the top wall of said envelope and projecting with the other end beyond the opposite edge of said top wall, said extension means completely overlying the surface of said top wall and permitting said top wall to be displaced relatively to the remainder of said envelope by pulling said extension means at said other end, whereby to rupture said top wall for applying said wound treating matter to said body part.

9. A surgical dressing comprising a substantially sealed envelope having a top wall provided with opposed edges, a medicament holding pad encased in said envelope, an elongated carrier for supporting said envelope and adapted for application to a body part having a wound, and extension means connected to one of said edges of said top wall and completely and loosely overlying said envelope and projecting beyond the opposite edge of said top wall and in transverse direction to said carrier, said extension means being adapted for manipulation to open up said envelope by pulling said extension means to thereby rupture said top wall of said envelope and to expose said medicament holding pad directly on said wound, while said carrier is applied and fixed to said body part.

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