

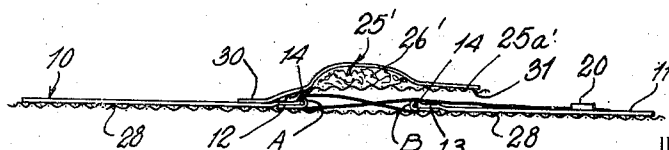
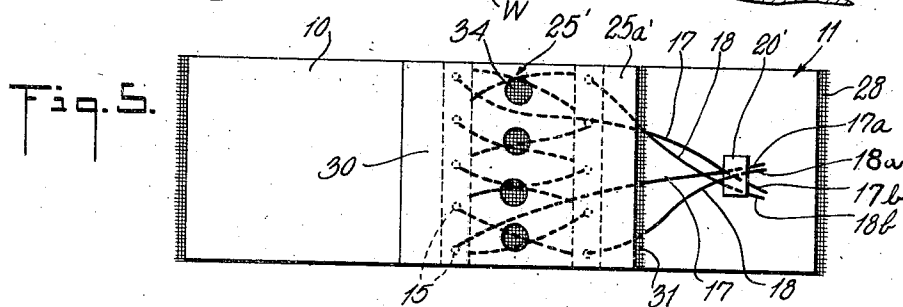
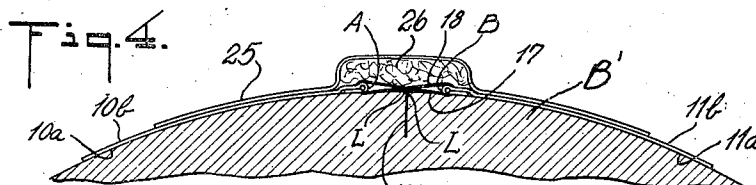
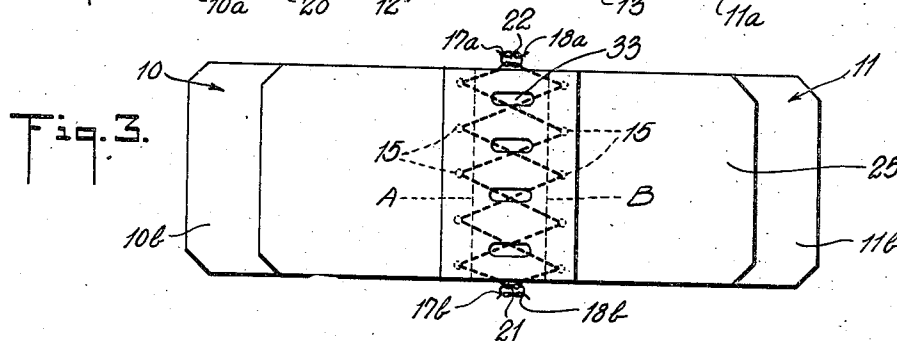
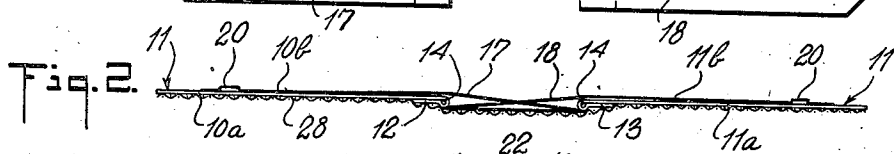
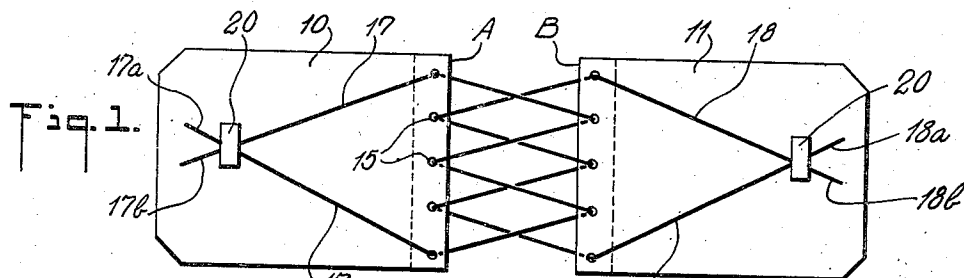
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2,387,131

INDIRECT SEAM OR SUTURE FOR WOUNDS

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INDIRECT SEAM OR SUTURE FOR WOUNDS

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1 Claim. (Cl. 128—335)

This invention relates to means for indirectly suturing wounds without requiring perforation of the skin adjacent to the wound. The application of the device embodying the invention promotes cicatrization and curing or healing of wounds and eliminates ordinary sutures or stitches which require perforation of the skin of the injured patient. The device embodying the invention is adapted to be applied directly to the skin adjacent the wound and comprises, generally, adhesive members joined by a suitable lacing that can be tightened. These adhesive members are applied to the skin adjacent the lips of the wound. The lacing is then tightened. This draws the adhesive members toward each other and consequently closes the lips of the wound. The ends of the lacing are then tied together and the wound left to heal. The device thus comprises an indirect suture or seam for a wound. It is readily removable with a minimum of discomfort to the patient.

It is a principal object of the invention to provide a device that will close a wound effectively, eliminating the necessity for perforating the skin by suture needles.

Another object of the invention is to provide an extremely simple device of this character that can be applied effectively and quickly to a wound.

A further object is to provide means in conjunction with the device whereby medication or antiseptic may be applied to the wound while its lips are held closed by the device.

Still another object of the invention is to provide reinforcing means in conjunction with the adhesive members to prevent pulling out of the lacing during the healing process.

To the accomplishment of the foregoing and such other objects as may hereinafter appear, this invention consists in the novel construction and arrangement of parts hereinafter to be described and then sought to be defined in the appended claims, reference being had to the accompanying drawing forming a part hereof, which shows merely for the purposes of illustrative disclosure preferred embodiments of the invention, it being expressly understood, however, that changes may be made in practice within the scope of the claim without digressing from the inventive idea.

In the drawing in which similar reference characters denote corresponding parts:

Fig. 1 is a top plan view of one form of the device showing the adhesive members in extended position of non-use;

Fig. 2 is a side elevation of the device of Fig. 1;

Fig. 3 is a top plan view of the device showing the adhesive members as they would appear when the lacing is tightened and also showing means in conjunction with the device for applying medication or antiseptic over the wound;

Fig. 4 is a sectional illustration of the application of the device of Fig. 3 over a wound on a body;

Fig. 5 is a plan view of a somewhat modified form of the device; and

Fig. 6 is a side elevation of the device of Fig. 5.

Referring to the drawing, 10 and 11 are two pieces of flexible material, preferably of waterproof adhesive tape, or other impermeable pieces of cloth having adhesive surfaces and being of any desired size depending upon the size of the wound to be treated. The facing edges A, B of these pieces of material have folded or doubled over portions 12 and 13. These folded over portions have any desired width and each carries in the fold along the respective edges A and B a reinforcing member 14. The reinforcing members 14 may be of thread or other suitable material. The reinforcing members 14 serve to reinforce the edges A and B of members 10 so that the lacing presently to be described will not pull out through said edges. The folded over portions 12 and 13 are provided with spaced apart perforations 15 adjacent the reinforcing threads 14. These spaced apart perforations are of any suitable diameter, for example, 1 mm., or larger or smaller. Likewise, the spacing between these perforations 15 may be anything desired, for example, the perforations may be 8 mm. apart, or more or less.

The two members 10 and 11 are joined by suitable lacing means. In the embodiment shown, the lacing means comprises a pair of threads 17, 18 which are laced through alternate ones of the openings or perforations 15 as shown in Fig. 1. The threads 17, 18 may be of any suitable material such as Cellophane or suture material or other suitable material. The free ends 17a, 17b, 18a, 18b of the lacings or threads 17, 18 are temporarily secured to the respective members 10 and 11 by securing members or patches 20 of adhesive tape or the like.

When it is desired to use the device the adhesive surfaces 10a, 11a of the members 10 and 11 are adhered adjacent the lips L of a wound W on a body B. The patches 20 are removed and the ends 17a, 17b, 18a, 18b of the lacing threads 17, 18 are drawn tight and knotted at 21, 22 as

shown in Fig. 3. The members 10 and 11 are so positioned with respect to the lips L of the wound W that tightening of the lacing threads draws the facing edges A and B toward each other but not into contact, leaving a space over the closed lips of the wound which is crossed by the lacing threads 17 and 18 only. In other words, an open seam is provided over the wound even when the lacing threads have been tightened and knotted.

Suitable medication or antiseptic thus may be applied over the wound. To this end a member 25 is provided. This member 25 is preferably of waterproof adhesive tape or other suitable material and is secured adhesively to the upper or outer surfaces 10b, 11b of the members 10 and 11. A pad 26 bearing medication or antiseptic of any desired kind is secured to this member 25. The pad 26 is so positioned that it overlies the wound W and is in contact with the latter through the tightened lacing threads 17, 18.

In order to permit ready and quick use of the device a removable protective covering 28 is provided for the adhesive faces 10a, 11a of the members 10 and 11. This covering 28 of coarse netting or starched cloth or other suitable material spans both members 10 and 11 and helps to keep them together in unused position. When the device is to be used, covering 28 is stripped from the adhesive surfaces 10a, 11b in well known manner to expose the latter so that they may be applied to the wound as described herein.

In the modified form of construction shown in Figs. 5 and 6, the members 10 and 11 are identical with the members 10 and 11 of Figs. 1 to 4 and are provided with the same reinforcement threads 14 in folded over portions 12 and 13 serving the same purpose. They are also provided with the same perforations 15 for the lacings 17 and 18. The ends 17a, 17b, 18a, 18b of the lacings 17, 18 are all brought over and temporarily secured under a single adhesive holding or securing member 20' to one of the members 10 or 11', for example, the member 11.

The medication bearing part 25' is adhered at 30 to the upper or outer face 10b of member 10. This part 25' which is preferably of waterproof adhesive tape or other suitable material has a medicated pad member 26' corresponding to the medicated pad 26 and similarly positioned. The adhesive surface 25a' of the member 25' is covered by a removable protective covering 31 of material similar to the protective covering 28 which prevents adherence of the member 25' to the member 11 until the covering 31 is removed.

This modified device of Figs. 5 and 6 is supplied as a unit. In use the protecting covering 31 is stripped from the members 10 and 11 and their adhesive surfaces are applied to the skin

surface adjacent the wound as illustrated in Fig. 4. The strip or holding member 20 is removed and the lacing threads 17, 18 are drawn tight to close the lips of the wound, as in the earlier described form, and knotted. Then the protective covering 31 is removed from the part 25' and the latter adhered to the member 11 by its adhesive surface 25a'. The medicated portion 26' then overlies the tightened lacings 17 and 18 in the space between the edges A and B and serves to medicate the wound during the healing process.

Both the members 25 and 25' may be suitably perforated as at 33 and 34 to permit air to reach the wound through the pads 26 or 26'.

All the elements herein described are, of course, sterilized before application to a wound so as to prevent infection. The unit device of Figs. 5 and 6, for example, may be conveniently sterilized and packaged for use in the home or elsewhere in case of emergency.

The devices described form indirect sutures or seams for wounds that eliminate the necessity for perforating the skin of the wounded patient. They are handy, easily applied and very effective, and can be simply manufactured quantitatively and possess many other advantages.

While specific embodiments of the invention have been disclosed, it is to be understood that many changes may be made in practice without departing from the spirit of the invention. There is no intention of limitation to the exact details shown and described.

What is claimed is:

35 An indirect suture or seam for wounds comprising a pair of adhesive strips adapted to be adhered respectively adjacent opposite lips of a wound, a portion of each said strip being folded along an edge, a reinforcing thread within each folded over portion, said portions having spaced apart perforations adjacent the reinforcing thread, lacing threaded through said perforations and joining said strips and having ends adapted to be tightened to draw the adhered strips toward each other and thereby to close the lips of said wound, removable means to secure the ends of said lacing to at least one of said members to prevent entanglement of said ends and separation of said members prior to use of said suture or seam, an adhesive member attached to at least one of said strips, a medication bearing part adhered to said member, and a protective covering for said medication bearing part, said medication bearing part being positioned to overlie the lacing in contact with the wound, and said adhesive member being admeasured to adhere to a portion of said strips when said protective covering is removed.

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