

[54] **METHOD OF CLOSING LACERATIONS AND CLAMP THEREFOR**

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[51] Int. Cl. **A61b 17/04**

[58] Field of Search..... 128/76 B, 334 R, 128/335, 337, 346; 132/41, 48; 24/248 SL, 255 H, 262 R, 262 A, 255 A

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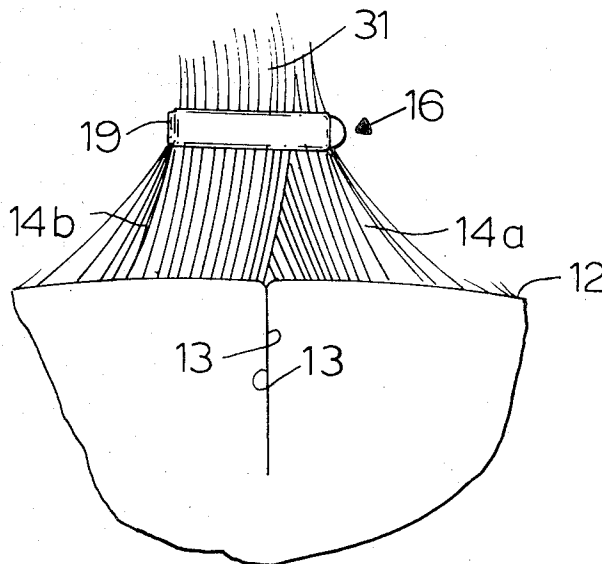
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[57] **ABSTRACT**

Lacerations of the scalp are closed by pulling the hair on opposite sides of the laceration perpendicular to the skin and then together directly above the laceration, thus pulling the skin together so that the edges are in close proximity. A clamp is applied to the hair, holding the skin in place with the edges close enough to heal together. Thus, use of sutures and necessity of shaving hair adjacent the wound is avoided. The clamp has two pivoted jaws lined with a friction material which resists slippage and securely grips the hair when the jaws are closed and latch means for holding the jaws closed. The clamp is preferably of materials which may be sterilized.

4 Claims, 7 Drawing Figures



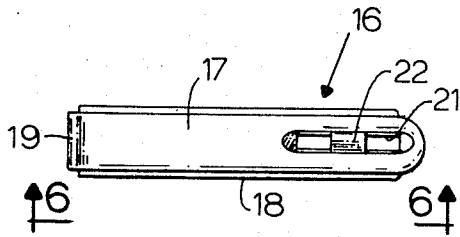


FIG. 4

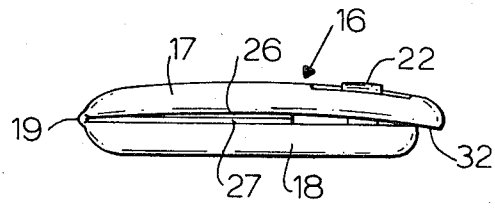


FIG. 6

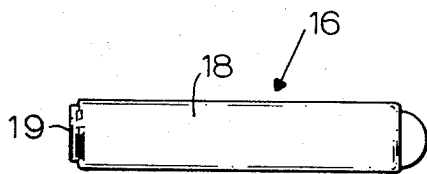


FIG. 5

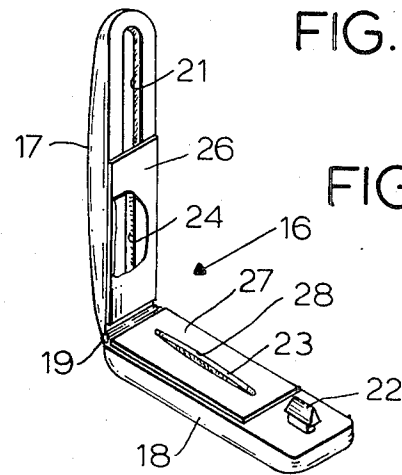


FIG. 3

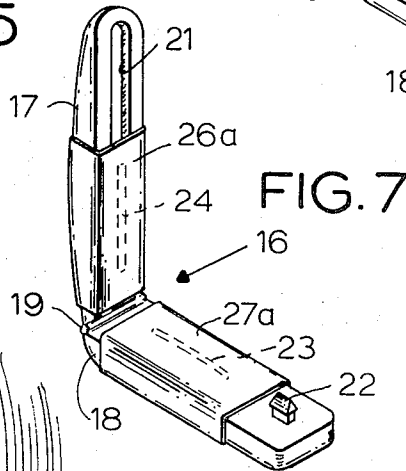


FIG. 7

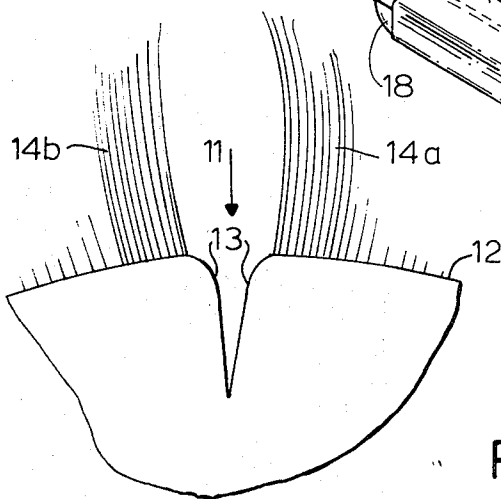


FIG. 1

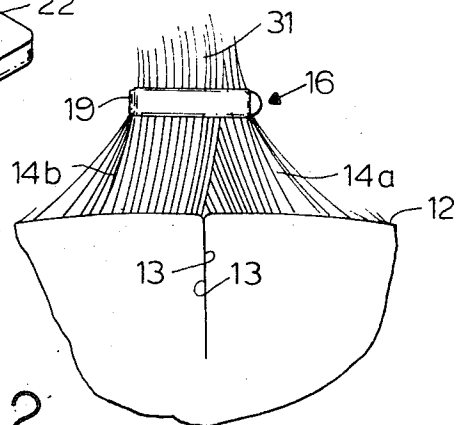


FIG. 2

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METHOD OF CLOSING LACERATIONS AND CLAMP THEREFOR

This invention relates to a new and improved method of closing lacerations and to a clamp for making such closures. More particularly, the method involves closing lacerations which occur in the scalp or similar areas where the skin has hair long enough to be bunched together. The hair on either side of the laceration is pulled outward of the skin and bunched and drawn together, thereby simultaneously drawing the edges of the laceration together sufficiently so that over a period of time the skin will normally heal. A clamp is applied to the bunched hair at a distance above the laceration to hold the skin in place so that the wound will heal.

Accordingly, a principal purpose of the present invention is to simplify the closing of lacerations which heretofore have required shaving the hair, anesthetizing the skin area around the laceration and then suturing the laceration. The number of steps is reduced and the discomfort to the patient is likewise greatly reduced.

It will be understood that especially where small children have been injured, there is great fright associated with suturing scalp wounds. The present invention eliminates the unpleasantness of suturing, both from the standpoint of the patient and the surgeon.

The present invention provides an inexpensive clamp which is used by the surgeon to close a laceration in far less time than has heretofore been conventionally required and further eliminates the necessity of a subsequent visit of the patient to remove the sutures. The clamp is sufficiently cheap so that it may be discarded. On the other hand, it may be made durable so that it may be sterilized and re-used.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings in which similar characters of reference represent corresponding parts in each of the several views.

In the drawings:

FIG. 1 is a schematic, fragmentary view showing a scalp laceration.

FIG. 2 is a view similar to FIG. 1 showing the laceration closed in accordance with this invention.

FIG. 3 is a perspective view of the clamp of the present invention, partly broken away to reveal internal construction and shown open.

FIG. 4 is a top plan thereof shown closed.

FIG. 5 is a bottom plan thereof.

FIG. 6 is a side elevational view thereof.

FIG. 7 is a perspective view of a modification.

Directing attention to FIG. 1 of the drawings, a laceration 11 of the scalp 12 or other area where hairs grow is shown. The edges 13 of the laceration have spread apart. In order to heal the laceration it is necessary to bring the edges 13 into proximity so that the natural healing processes will close the wound. Heretofore it has been necessary to shave the hair 14a, 14b on either side of laceration 11, anesthetize the area and then suture the laceration closed. The present invention eliminates the shaving, anesthetizing and suturing steps as well as the subsequent step of removing the suture. As viewed in FIG. 2, the hair 14a on one side of laceration 11 is bunched together by pulling perpendicular to the skin and the hair 14b on the opposite side is similarly bunched together, and the two bunches of hair are drawn together in opposite directions directly above

the laceration 11, causing the edges 13 to be drawn close enough together so that with the passage of time the laceration will heal.

To hold the hair together, a clamp 16 is applied to the bunched hair at a position spaced above the scalp 12 about half the length of hairs 14a, 14b, so that a single clump 31 of hair exists above the clamp.

Clamp 16 consists of a first jaw 17 and a second jaw 18 which are each substantially rectangular in plan and are joined together at one end by an integral plastic hinge 19. It will be understood that other hinge means may be employed. Preferably, as is shown in FIG. 6, one end of one of the jaws, such as jaw 17, is longer than the other so that there is a projection 32 beyond the end of jaw 18 which facilitates opening the clamp.

Various means may be employed to hold the clamp closed. In the accompanying drawings, a longitudinal slot 21 is formed adjacent the free end of jaw 17 and a tang 22 is formed integrally with the outer end of jaw 18, said tang 22 being approximately triangular in cross-section. When the two jaws are pressed together, there is sufficient flexibility in the plastic material from which the jaws are fabricated so that the slot 21 will resiliently spread apart slightly and enable the tang 22 to lock in place as shown in FIG. 6 with its shoulder resting on the outside of jaw 17 to either side of the slot.

To assist in holding clump 31 secured, preferably a longitudinal ridge 23 is formed in jaw 18 and a complementary groove 24 is formed in jaw 17 extending adjacent to hinge area 19 towards the slot 21. Hair is formed in a slight kink by reason of the protrusion of ridge 23 and the groove 24 when the jaws are closed on the clump 31.

To hold the hair even more securely in place, preferably a piece of sheet rubber or other friction material 26 is installed on the inner surface of jaw 17 by adhesive or vulcanization. The rubber 26 will deform sufficiently to accommodate the shape of groove 24 when the jaws 24 are closed. Similarly, a piece of rubber or similar material 27 is fixed to the inner surface of jaw 18 and formed with a slit 28 through which the ridge 23 projects.

In the use of the clamp 16, by using the projection 32 the jaws are spread apart and the hair 14a, 14b formed into clump 32 and inserted between the jaws. Thereupon, the jaws 17 and 18 are pressed together until the tang 22 slips through the slot 21 and locks the jaws in place. The rubber 26, 27 deforms to accommodate the ridge 23 and groove 24. The clamp is retained in place until the edges 13 are knitted together. Thereupon the clamp 16 may be discarded. If made of suitable material, the clamp may be sterilized and re-used.

In the modification of FIG. 7, the friction material 26a and 27a are wrapped around each of the jaws 17a and 24a and secured thereto by adhesive or vulcanization. The friction material preferably extends from adjacent hinge 19a to adjacent tang 22a and slot 21a. Omission of the equivalent of slit 28 may be omitted in this modification. In other respects, the modification of FIG. 7 resembles that of FIGS. 2-6, and the same reference numerals, followed by subscript a, are used to designate corresponding elements.

What is claimed is:

1. A method of closing lacerations of the scalp and other areas where hair surrounds the laceration comprising pulling the hair from areas outside the opposite side edges of the laceration approximately perpendicu-

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lar to the skin, then crossing the hair from opposite sides of the laceration approximately directly above the laceration, and thereby pulling the edges of the laceration together, providing a clamp having a pair of jaws hinged together at one end, having friction material in the inner faces of the jaws intermediate the ends, and jaw latching means at the ends opposite the hinge, applying said clamp to the hair disposed parallel to the skin at a distance substantially above the skin to restrain movement of the hair and hold said edges together, and maintaining said clamp in place until said edges have healed sufficiently to remain together without said clamp, and then removing said clamp.

2. The method of claim 1 in which said applying said clamp secures the hair so that longitudinal movement of the hair transverse to the scalp is restrained.

3. A clamp for use in closing lacerations of the skin in the scalp having hair surrounding the laceration, comprising a first jaw, a second jaw, said jaws being rectangular in plan and relatively long, thin and nar-

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row, hinge means at one end of said jaws, first latch means on said first jaw, and second latch means on said second jaw cooperable with said first latch means to hold said jaws closed, first and second layers of friction material, one such layer on the inner surface of each of said jaws to restrain slippage of said hair clamped between said jaws, longitudinally extending projection on the inner surface of said first jaw, a cooperating longitudinal depression in the inner surface of said second jaw directly opposite such projection when said clamp is closed with said projection extending partially into said depression, said hair being sharply bent by said projection and said depression when clamped between said jaws, said layer of friction material on said first jaw being formed with a slit for protrusion of said projection.

4. A clamp according to claim 3 in which said layers of friction material extend circumferentially around each of said jaws.

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