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B. C. GINDES

3,621,837

METHOD OF IMPLANTING HAIRPIECE ANCHOR

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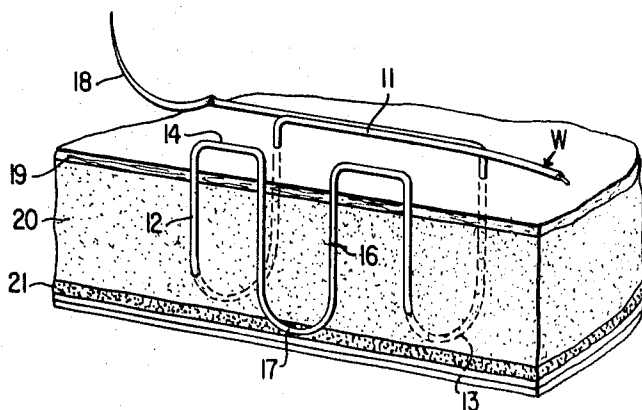


FIG. 1

FIG. 2

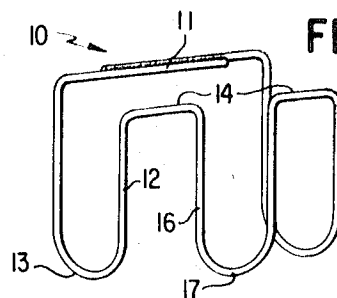
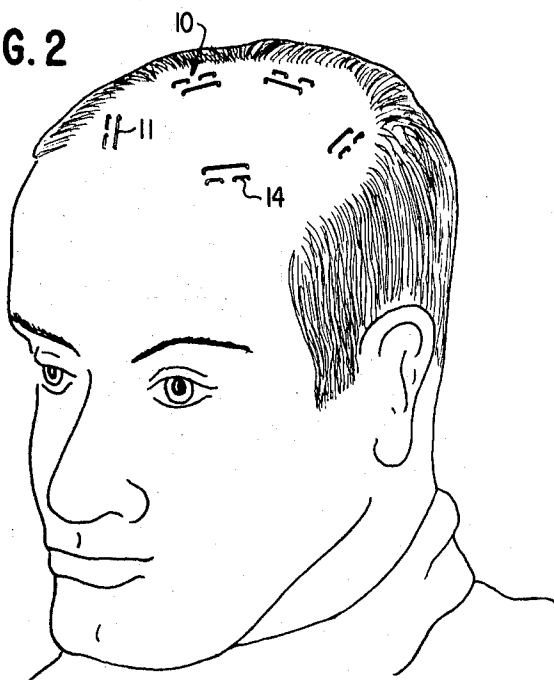


FIG. 3

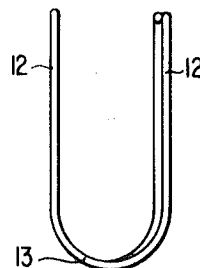


FIG. 4

FIG. 5

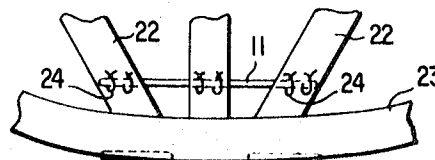
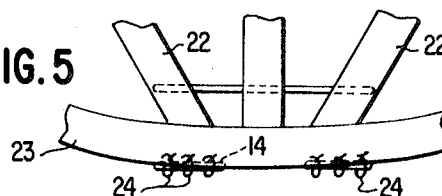


FIG. 6

INVENTOR

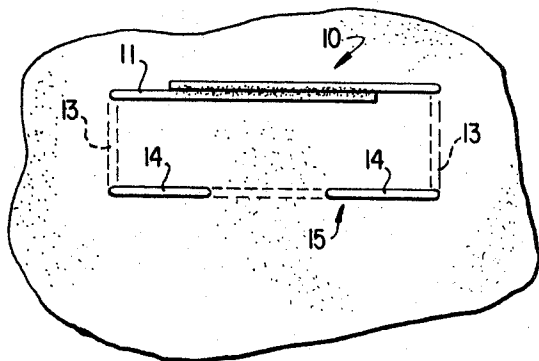
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ATTORNEYS

FIG. 7



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METHOD OF IMPLANTING HAIRPIECE ANCHOR

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Continuation-in-part of application Ser. No. 9,748, Feb. 9, 1970. This application July 23, 1970, Ser. No. 57,453

Int. Cl. A61b 17/00; A61F 1/00

U.S. Cl. 128—330

2 Claims

ABSTRACT OF THE DISCLOSURE

A length of Teflon coated stainless steel surgical suture wire is sewn into the scalp and brought through the aponeurosis layer thereof at locations constituting the corners of a triangle. Portions of the wire are trained above the skin and provide anchorage for a hairpiece attached thereto. The leading and trailing end portions of the wire protrude above the skin and are welded together, thus making the suture wire a closed loop of irregular formation permanently implanted in the scalp.

CROSS REFERENCE

This application is a continuation-in-part of the application of Bernard C. Gindes for Method and Apparatus for Permanent Hair Replacement for Bald and Balding Heads, Ser. No. 9,748, filed Feb. 9, 1970.

BACKGROUND

Field of the invention

The present invention is concerned primarily with the problem of attaching a bald area concealing hairpiece to the head of a wearer. The method and means of attachment disclosed in this and also in the aforesaid prior application involve the use of surgical suture wire anchors permanently implanted separately in the scalp of the wearer, to which a hairpiece is secured.

The prior art

A known method of providing scalp-implanted hairpiece attachment means consists in surgically laying down a continuous hemstitch suture of wire around the scalp. The suture wire stitched into the scalp is a permanent anchorage to which a hairpiece may be attached. It has disadvantages. If the attached hairpiece were accidentally or violently pulled, large portions of the scalp would be avulsed or torn. Hair growing beneath the continuous suture would not extricate itself, and because large areas of the skin are covered by suture material there is only limited access to these portions for cleaning, thus establishing sites for possible infection. Also, the suture line in the frontal area across the forehead becomes the hair line and is subject to exposure whenever the front of the hairpiece is lifted by wind. Furthermore, as the suture is continuous, there is danger that a comb may get caught in the suture and cause tearing of the scalp tissue.

Although the use of separate, mutually independent suture wire anchors implanted in the scalp at prescribed locations as taught by the aforesaid prior application avoids the disadvantages of the known continuous suture, it has been found that when the anchor is under tension it tends to elongate and begin to pull out of the skin, causing scalp irritation, soreness, and eventual failure to hold.

SUMMARY OF THE INVENTION

The present invention is an improvement upon the hairpiece anchor and method of making it disclosed in my aforesaid prior copending application, Ser. No. 9,748,

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filed Feb. 9, 1970. An object of this invention is to prevent the elongation and displacement of suture wire anchors implanted in the scalp. A further object is an improvement in the manner of attaching hairpiece webs to scalp-implanted anchors as disclosed in that copending application.

DESCRIPTION OF THE DRAWING

FIG. 1 is an enlarged sectional view in perspective illustrating the structure and method of application of an embodiment of a scalp-implanted suture wire anchor in accordance with the present invention.

FIG. 2 is a perspective view of a human head with hairpiece anchors implanted in the scalp in accordance with the present invention.

FIG. 3 is a perspective view of an anchor constituting a part of this invention.

FIG. 4 is an end view of the anchor member shown in FIG. 3.

FIG. 5 is a fragmentary top plan view illustrating one manner of sewing an attachment portion of the lattice work web base web of a hairpiece to an anchor member.

FIG. 6 is a view similar to FIG. 5, but illustrating an alternative manner of sewing the base web to an anchor member.

FIG. 7 is a fragmentary top plan view of a portion of the scalp with an anchor implanted therein; the stitch courses being indicated by dotted lines.

DESCRIPTION OF PREFERRED EMBODIMENT

In the embodiment of the invention herein disclosed, each anchor member, indicated generally by reference character 10, consists of a length of conventional Teflon-coated stainless steel suture wire formed in situ with a back course 11 which merges at each end into a depending, substantially U-shaped, stitch course having its arms 12 and bight 13 disposed in a plane perpendicular to the longitudinal axis of the back course 11 and directed forwardly thereof. The front arm of each end stitch course merges into its respective adjacent section 14 of a front course designated generally as 15 which runs parallel to the back course 11. In this context the terms "front" and "back" denote direction relative to the scalp; the "front" being toward the periphery of the scalp and the "back" being toward its center. Each front section 14 is approximately one-third the length of the back course 11, and the inner ends of these sections are connected by a third substantially U-shaped stitch course having arms 16 and a bight 17 similar to those of the two end stitch courses, but lying in a plane perpendicular to the planes in which the end stitch courses lie. The back course 11 of the anchor is comprised of the free ends of the wire overlapped and connected together to form a joint.

The method of implanting the anchors in the scalp of a wearer is best understood from FIG. 1. A predetermined length of conventional Teflon-coated stainless steel suture wire, designated generally as W, is secured to the eye of a curved surgical suture needle 18 having a cutting edge point. Starting at a point on the scalp selected as the beginning of the anchor, the entrant point of the needle is inserted through the surface layer of skin 19 and passed down through the subcutaneous tissue layer 20 into the aponeurosis layer 21 through which it is curved upwardly to pass upward in reverse order until it exits above the skin. In making this stitch the needle is directed from back to front. When the wire exits above the skin one end stitch course, assumed to be the right end in FIG. 7, will have been implanted in the scalp. The wire is then pulled above and over the skin surface toward the location selected for the other end stitch course, and at a point about one-third of the pro-

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jected length of the anchor the needle is again passed down through the scalp layers, curved through the aponeurosis layer, and brought up to exit above the skin at a point about two-thirds of the projected length of the anchor, continuing its front line as seen in FIG. 7 and completing the central stitch course therein.

After completing the central stitch course, the wire is again drawn above and over the skin until it reaches the location selected for the end stitch course of the anchor. At this point the needle is directed from front to back at a right angle relative to the front line of the anchor and is again passed down through the scalp layers, curved through the aponeurosis layer, and brought up through the skin, completing the stitch course at that end of the anchor. For the point of exit above the skin the wire is drawn above and over the skin toward the point of initial entry of the needle and parallel to the front line of the anchor. It will be understood that a trailing end portion of the suture wire will remain protruding above the skin at the initial point of penetration of the needle. The length of this trailing end portion should be at least two-thirds of the length of the anchor. Pull on the needle is continued until the length of the protruding leading end portion of the wire is at least equal to the length of the protruding trailing end portion of the wire, and the leading end of the wire is detached from the needle. The Teflon coating is removed from each protruding end portion of the wire for a distance equal to at least one-third of the length of the anchor. The exposed portions of the wires are overlapped in contact side by side and spot welded together at several points, thus completing the back line of the finished anchor. It is apparent from FIG. 7 that the three stitch courses are so located that they constitute the corners of a triangle, thus securing the anchor in the scalp at three points; thereby holding the anchor against shifting in the scalp and preventing any turning of the above skin portions 14 and stitch course 16 out of the planes in which they are initially set.

The number of anchors used normally ranges from three to five, but may be more. The number and location of the anchors depend upon the type and area of the baldness to be covered by the hairpiece. In the embodiment of the invention disclosed herein the hairpiece (which is the subject of a separate application) includes a lattice work base web of ribbon-like nylon strips 22 secured to a peripheral edge strip 23 of the same material. This web is attached to the implanted anchors by sewing as shown in FIGS. 5 and 6. In the method of attachment shown in FIG. 5, the edge strip 23 of the hairpiece web is sewn to the above skin sections 14 at the front of the anchor by nylon or other suitable thread stitches 24. In the method shown in FIG. 6 the thread stitches 24 are sewn to the back of the anchor through those of the web strips 22 which overlie it. Whenever feasible, both methods are used in the same installation. In both methods the sewing is accomplished by passing a needle (not shown) to which the thread is attached through the contiguous portion of the lattice work web

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and under the adjacent portion of the anchor, and the thread is wrapped around itself in a loop-like fashion so that a knot is created. Then another entry is made into the web, perhaps an eighth of an inch away, and the thread is brought under the suture and secured.

It will be apparent from the foregoing description that the salient features of the invention are (a) the inclusion in a single closed loop of at least three sutured stitch courses at different locations, and (b) the embedding of the sutured courses in the aponeurosis layer of the scalp at locations constituting the three corners of a triangle, thus giving the loop a three-point anchorage in the toughest layer of the scalp—the one best suited to resist strain.

I claim:

1. A method of forming a hairpiece-attachable anchor in situ on the scalp of a wearer, which comprises:

- (a) penetrating the scalp with a curved suture needle having a length of suture wire attached thereto;
- (b) passing the needle and wire down and up through a subcutaneous layer of the scalp to an elevation above the surface of the skin and thus forming a first U-shaped stitch course implanted in the scalp;
- (c) pulling the wire horizontally across the scalp at an angle relative to the vertical plane of said stitch course;
- (d) reinserting the needle in the scalp at a point spaced from its first point of entry;
- (e) again passing the needle and wire down and up through a subcutaneous layer of the scalp to an elevation above the surface of the skin and thus forming a second implanted U-shaped stitch course;
- (f) pulling the wire horizontally across the scalp to a selected third point of needle entry;
- (g) reinserting the needle at said third point of entry and passing it with the wire down and up through a subcutaneous layer of the scalp to an elevation above the surface of the skin and thus forming a third implanted U-shaped stitch course;
- (h) detaching the needle;
- (i) overlapping the leading and trailing end portions of the wire protruding above the skin; and
- (j) connecting the overlapped end portions of the wire together, thus completing a closed loop of the wire constituting the anchor.

2. In the method defined in claim 1, said subcutaneous layers being in each instance the aponeurosis layer of the scalp.

References Cited

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CHANNING L. PACE, Primary Examiner

U.S. Cl. X.R.