

Sept. 28, 1971

R. J. BARRY

3,608,095

METHOD OF FIXING HAIR PIECES TO SCALPS

Filed March 5, 1970

2 Sheets-Sheet 1

FIG. 1.

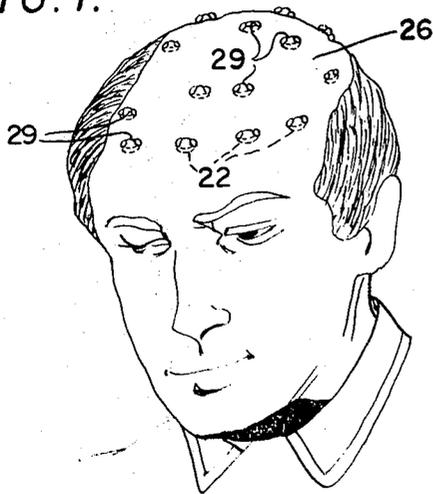


FIG. 2.



FIG. 3.

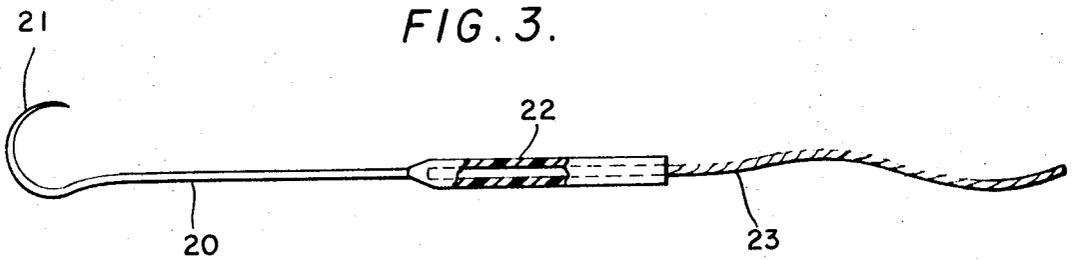
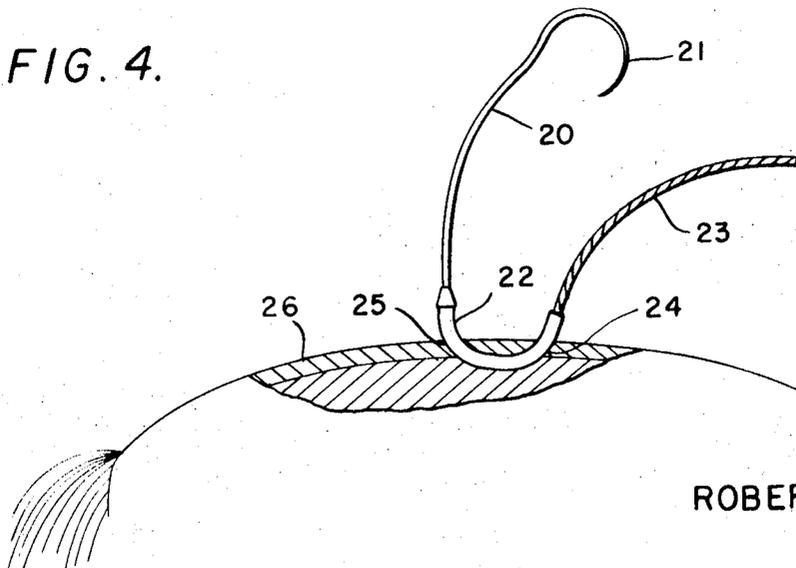


FIG. 4.



INVENTOR
ROBERT J. BARRY

BY *B. P. Fillion, Jr.*
ATTORNEYS

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FIG. 5.

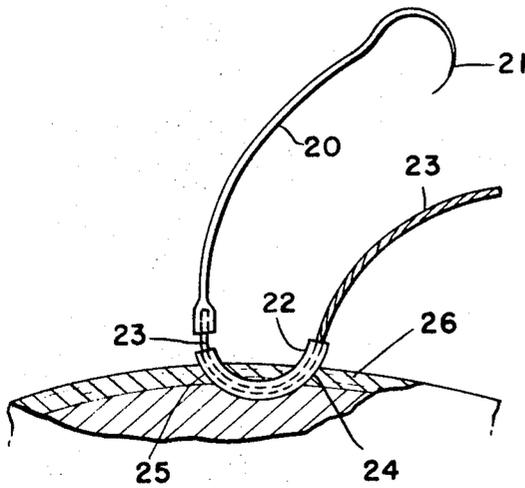


FIG. 6.

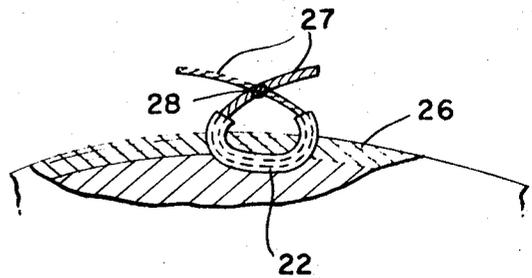


FIG. 7.

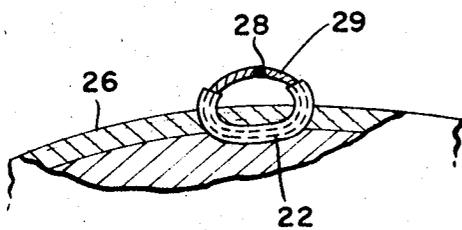


FIG. 8.

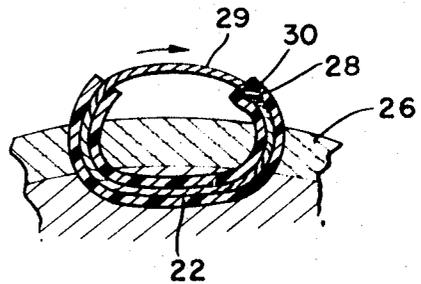


FIG. 9.

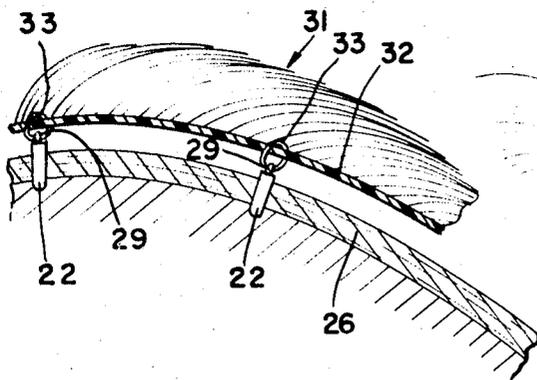
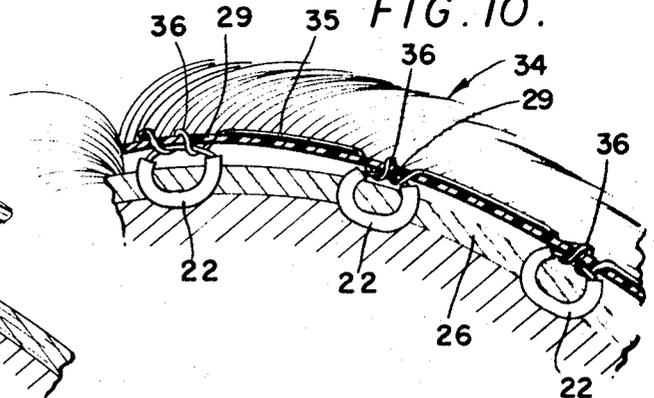


FIG. 10.



INVENTOR
ROBERT J. BARRY

BY *B.P. Fiskum, Jr.*
ATTORNEYS

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3,608,095

METHOD OF FIXING HAIR PIECES TO SCALPS
Robert J. Barry, Cedar Grove, N.J., assignor to Federal
Tool Engineering Co., Cedar Grove, N.J.
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7 Claims

ABSTRACT OF THE DISCLOSURE

A sterile needle with a small trailing Teflon tube extension is forced through the scalp with end portions of the Teflon tube projecting from the scalp. The Teflon tube extension is adapted to receive a weldable wire which need not be sterilized. The needle is cut off and discarded and the wire is threaded through the Teflon tube now anchored in the scalp and the ends of the wire are welded and trimmed to produce a closed loop or ring to which the hair piece may be anchored by a lacing wire or another ring.

A prior art method for fixing hair piece permanently to the scalp is known and has been practiced. This method involves penetrating the scalp with a Teflon-coated stainless steel or platinum wire terminating at one end in a suitable needle. The coated unit must be sterilized. The Teflon coating is employed because the scalp will not react to or reject the Teflon as it would react to or reject metal. The needle is forced through the scalp at the proper location and angle until its curved point emerges from the scalp and along with it the attached coated wire. When the wire is pulled through the scalp openings for a proper distance, the projecting end portions of the wire must be scraped to remove the Teflon coating. This scraping operation is essential for subsequent welding to close the wire loop. After welding, the wire ends are trimmed off so as to leave a closed ring permanently anchored to the scalp. When a selected number of rings are thus installed in the scalp, the prepared hair piece or pieces are positioned and secured to the head by lacing wires through the loops or rings and welding. Welding is required because other means, such as knotting or crimping, is unsafe due to metal memory.

Scraping the Teflon insulation from the wire, as above described, is a tedious and costly operation and if not done properly can result in a poor weld, or at worst, can cause the wire to burn or break during welding, necessitating redoing the entire operation.

The present invention covers a method and technique which is a great simplification of the prior art method, completely eliminating the scraping or stripping of the Teflon coating from the wire. The invention method is safe within the limits of sterilization, permitting repair and replacement of the metal rings without the necessity for a second penetration of the scalp. The entire method of the invention is less tedious and costly due to the elimination of the delicate scraping operation.

Another nice feature of the method allows the ring or loop to be rotated within the Teflon tube section after welding and trimming of the wire to assure that any rough or sharp points are enclosed by the tube and are not exposed above the scalp. This rotating of the ring is not possible where a Teflon-coated wire is employed.

Other features and advantages of the method over the prior art will be apparent during the course of the following description.

BRIEF DESCRIPTION OF DRAWING FIGURES

FIG. 1 is a perspective view of a head and scalp equipped with hair piece anchoring loops produced in accordance with the method.

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FIG. 2 is a similar view of the head after the hair piece is permanently attached.

FIG. 3 is an enlarged elevational view of a needle and Teflon tube extension adapted to receive a weldable wire.

5 FIG. 4 is a fragmentary cross section of the scalp showing the initial step of the method where the needle is passed through the scalp and emerges so that the Teflon tube may have opposite ends projecting from the scalp.

10 FIG. 5 is a similar sectional view showing the next method step where the needle is severed from the Teflon tube.

FIG. 6 shows the next step of the method where the wire has been pulled through the tube and welded.

15 FIG. 7 shows the completed wire loop or ring after welding and trimming.

FIG. 8 is an enlarged cross sectional view through the scalp and tube showing the wire rotated until the point of welding is inside of the Teflon tube.

20 FIGS. 9 and 10 are cross sectional views showing how prepared hair pieces may be attached to the metal rings anchored in the scalp by the invention method.

DETAILED DESCRIPTION

Referring first to FIG. 3 of the drawings, a suitable sterilized needle 20 is employed having a curved or hook-like pointed terminal 21 adapted to penetrate the scalp. The shank of the needle 20 is suitably attached to a Teflon tube section 22 which has a bore capable of slidably receiving a weldable wire 23 formed of stainless steel, platinum or the like. This wire preferably has a snug fit within the Teflon tube section but is capable of being axially moved therein. The tube section 22 may, in some cases, be a trailing extension of a Teflon thread which is attached to the needle. The intervening thread may also be formed of a different material with its ends secured respectively to the metal needle and to the tube section of Teflon or the like. The techniques for producing the needle and tube unit are known.

The initial method step for forming a permanent loop or ring in the scalp is depicted in FIG. 4. The needle 20 is caused to penetrate the scalp at a proper angle through a first scalp opening 24 and the needle emerges from the scalp through a second opening 25, the human scalp being shown at 26. The needle and the trailing small tube 22 are sufficiently flexible to assume the shape shown in FIG. 4 where the tube 22 is bent into a roughly semi-circular configuration. When the needle 20 emerges from the scalp, the following tube 22 is pulled through the openings 24 and 25 sufficiently to allow approximately one-quarter inch of tube length to project beyond the scalp at the two scalp openings. The tube will be rather firmly anchored in the scalp and along with the entire needle has been sterilized. The wire 23 may also be sterilized prior to use, if desired, although this is not essential since only the needle and Teflon tube come in contact with the open tissue of the scalp. Teflon is employed for the tube 22 because it is a material which does not react with and is not rejected by the scalp tissue as would be the case if bare metal were employed.

60 Referring next to FIG. 5, the Teflon tube 22 is cut near one end close to the needle 20 and without severing the wire 23. This cutting may easily be accomplished with a conventional stripping tool. The entire needle may now be pulled off and discarded. Final adjustment of the tube 22 can be made if necessary to equalize its projecting end portions outside of the scalp and the wire 23 may now be threaded a further distance through the anchored Teflon tube to equalize the wire ends 27 projecting from the tube 22 as shown in FIG. 6. Following this, the wire ends are welded together as indicated at 28, using a welding tweezer or the like, and usually the wire ends 27 are trimmed off to produce a closed metal loop or

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ring 29 inside of the tube 22 as clearly shown in FIG. 7.

Referring to FIG. 8, the metal ring or loop 29 is now shifted or rotated somewhat in the direction of the arrow and will slide through the tube 22 to move the weld 28 and any possible sharp elements or rough portions inside of the projecting end portion 30 of the Teflon tube. FIG. 8 shows the completion of the method insofar as the formation and anchorage of the rings in the scalp are concerned.

It might be mentioned, referring back to FIG. 6, that the wire ends 27 are not trimmed off in some instances and may be utilized for lacing the prepared hair piece to the rings 29 in the scalp. FIG. 1 of the drawings shows a bald area of the scalp having installed therein a number of the loops or rings 29 and the protective tubes 22 in accordance with the described method.

Two methods of attaching hair pieces to the rings 29 are depicted in FIGS. 9 and 10. In FIG. 9, the hair piece 31 including an artificial scalp 32 carries closed eyelets or rings 33 which engage through and interlock with the scalp anchored rings 29, similar to the connection between the links of a chain. In this manner, the hair piece is effectively and permanently anchored to the head and can be combed, brushed and styled while on the head.

In FIG. 10, another hair piece 34 is attached to the metal rings 29 by means of lacing wires 35 which are looped through the rings at 36 and then have their ends tack welded to selected rings. The overall effect is the same in either case, FIG. 9 or 10, and other methods of attaching the preformed hair piece to the rings 29 may be devised.

A further important advantage in the method is the fact that should the wire loop 29 become broken during use, it may be easily replaced by removing the broken wire from the Teflon tube 22 and rethreading a new wire through the tube, followed by welding and trimming. No further penetration of the scalp is required. A suitable ball pointed needle may be used to lead the replacement wire smoothly into and through the bore of the Teflon tube.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size and arrangement of parts may be resorted to, without departing from the spirit of the invention or scope of the subjoined claims.

I claim:

1. A method of attaching to the scalp ring elements used to anchor hair pieces, said method comprising penetrating through the scalp with a curved needle having attached thereto a trailing, somewhat flexible, non-metallic, inert material tube to form entrance and exit openings in the scalp, withdrawing from the exit opening of the scalp the trailing end of the needle and pulling the tube through said entrance and exit opening sufficiently to cause opposite end portions of the tube to project beyond the scalp at said openings, severing the needle from the tube completely and leaving the tube anchored within said openings of the scalp, threading a wire through the bore of the tube sufficiently to cause ends of the wire to project beyond the exposed ends of the tube, and welding said ends of the wire together to form a closed loop of wire slidable within said tube.

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2. The method as defined by claim 1, and the additional steps of trimming off the wire ends adjacent the point of welding and sliding the completed wire loop circumferentially in said tube sufficiently to enclose the weld in the bore of the tube, whereby sharp or rough portions on the exposed loop are eliminated.

3. The method as defined by claim 1 wherein the step of threading said wire into the bore of said tube is performed before the passage of the needle and said tube into the scalp.

4. A method of attaching a hair piece permanently to the scalp comprising inserting a section of somewhat flexible sterile tissue compatible tubing into the scalp so that opposite end portions of the tubing project beyond the scalp, passing a wire through the bore of the tubing while the latter is anchored in the scalp, and welding end portions of the wire to form a permanently closed wire loop which is circumferentially slidable through the bore of the tubing, and attaching a hair piece to said closed wire loop.

5. The method as defined by claim 4, and said attaching of the hair piece comprising lacing a wire element carried by the hair piece through a plurality of the closed wire loops produced by the method and spaced on the scalp, and welding the lacing wire to one or more of the closed wire loops.

6. The method as defined by claim 4, and said attaching of the hair piece comprising interlocking spaced eyelets on the hair piece with a corresponding number of the closed wire loops in the scalp produced by the method.

7. A method of attaching a hair piece permanently to the scalp comprising inserting a section of somewhat flexible sterile tissue compatible tubing into the scalp so that opposite end portions of the tubing project beyond the scalp, passing a wire through the bore of the tubing while the latter is anchored in the scalp, and welding end portions of the wire to form a permanently closed wire loop which is circumferentially slidable through the bore of the tubing.

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CHANNING L. PACE, Primary Examiner

U.S. Cl. X.R.

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