

[54] **NON-SLIP RETENTION MEANS FOR USE ON A WEARER'S HEAD**

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Related U.S. Application Data

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[51] Int. Cl. **A45d 8/00**

[58] Field of Search **132/46 R; 128/163-164, 171, 260, 268, DIG. 15, 76 B; 2/171.2**

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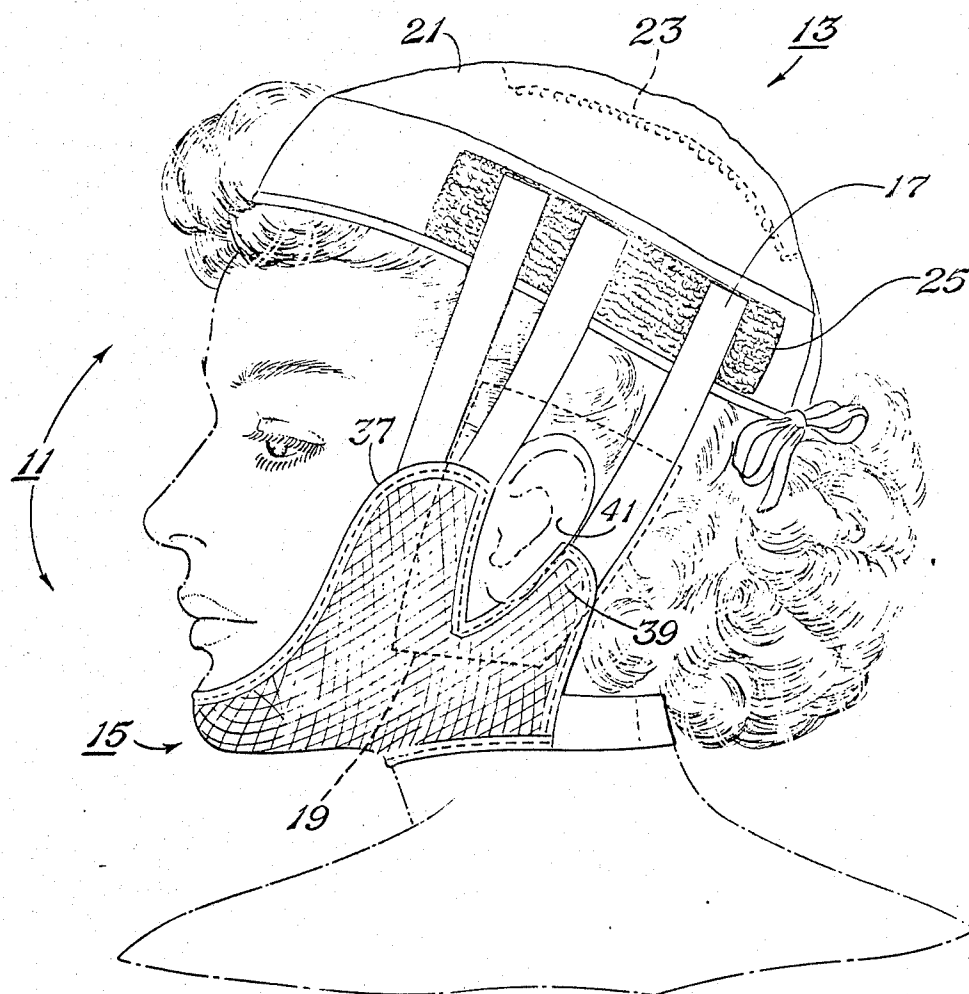
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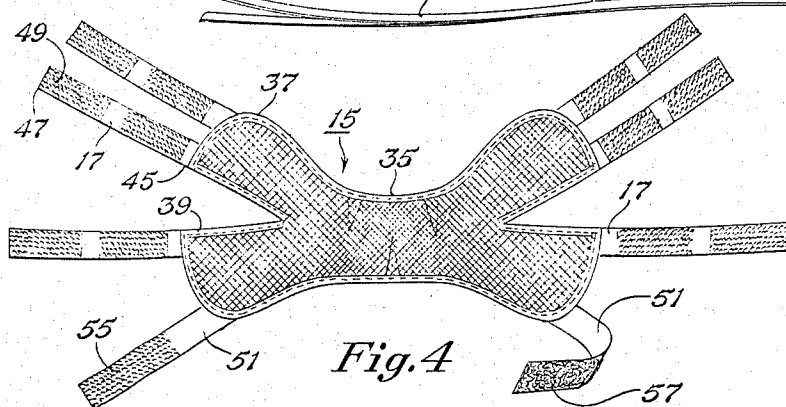
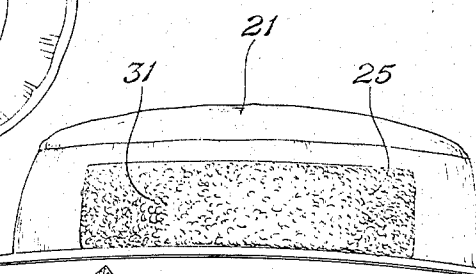
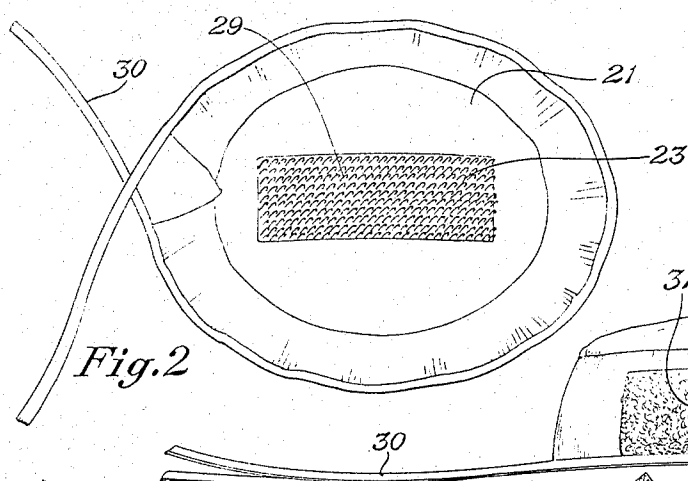
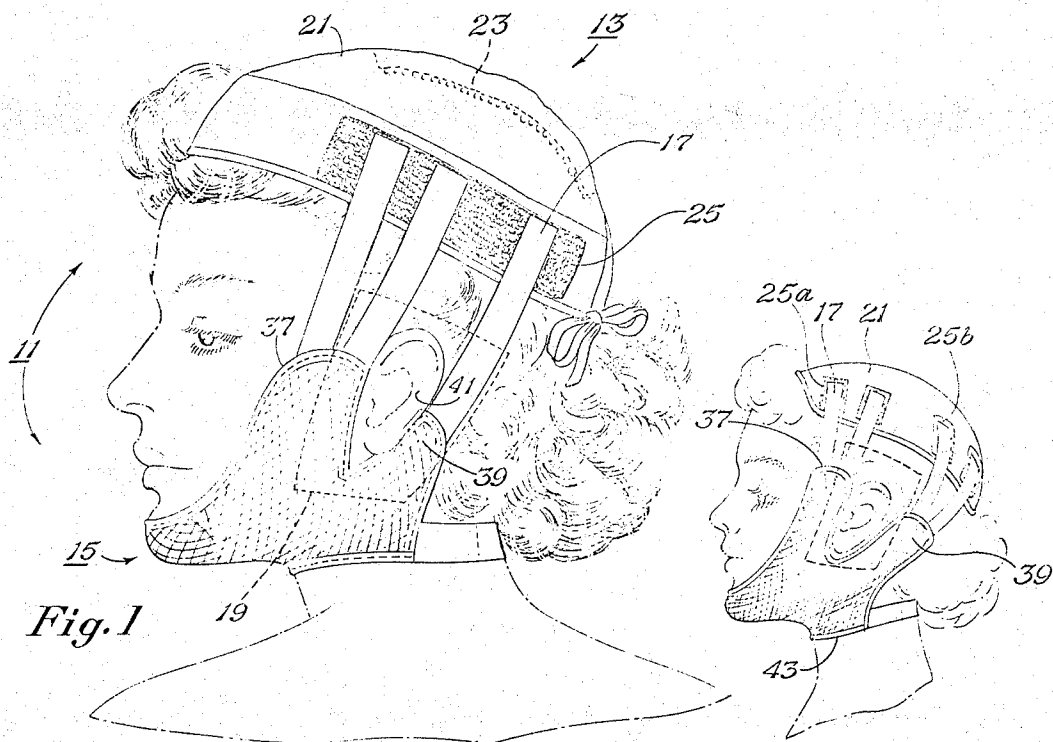
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[57] **ABSTRACT**

A non-slip head gear and a retainer employing the same, the head gear being characterized by a cap means having a hook strip on its interior surface with its tiny hooks protruding interiorly for engagement with the hair of the wearer and having an exterior strip of pile strap with its loops protruding exteriorly for receiving mating hook strips that are connected with other elements such as a retainer body. The retainer body is characterized by net material that is elastic along the fiber of the net and is even more elastic along the bias of the fiber for conforming to irregular contours. Also disclosed are preferred embodiments in which the exterior strips of pile strap are extensive enough to allow attachment of a wide variety of hook strip configurations; wherein a plurality of hook strips are fixedly disposed at predetermined locations for a predetermined hook strip configuration; and wherein neck straps are attached to the retainer body for tensioning it rearwardly toward the rear of the neck, the neck straps having mating hook strips and pile straps on their respective free ends.

7 Claims, 5 Drawing Figures





NON-SLIP RETENTION MEANS FOR USE ON A WEARER'S HEAD

This is a division of application Ser. No. 58,435, filed July 27, 1970 now abandoned.

BACKGROUND OF THE INVENTION:

1. Field of the Invention: This invention relates to retention means for use of the head of a wearer. More particularly, it relates to non-slip head gear; and a retainer that is a combination of the non-slip head gear and a retainer body means; for use in applications such as supporting in cosmetic applications, and retaining bandages in place following surgery on or about the head and face of a patient.

2. Description of the Prior Art: A wide variety of cosmetic retainers and of bandage structures and retainers have been employed for emplacing about a wearer's head. These structures have ranged from the difficulty affixed tape and absorbent material that are emplaced following surgery, through head halters for use in cervical traction devices, to elaborate beauty masks of a three-piece hood with elastic nets, chin pieces and the like; and have included correctors for correcting mouth breathers and snorers. None of the prior art devices have been totally satisfactory in that they had one or more of the defects of (1) encompassing the face and head of the wearer with attendant discomfort, (2) requiring elaborate straps and buckle arrangements for adjusting to the size of the head and neck of the wearer, or causing difficulty in emplacement and removal.

Moreover, the structures of the prior art were prone to slip unless they were connected to an external source such as a weight for cervical traction. If the prior art structures were holding a bandage and allowed slipping, there was a danger of opening a wound, and possibly ultimately causing an undesirable scar following cosmetic surgery. Such a potential liability has required stringent safety precautions by the surgeons and made a slip-proof bandage retainer of practical significance.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of the combination retainer in accordance with one embodiment of this invention.

FIG. 2 is a bottom view of a head gear means of the embodiment of FIG. 1.

FIG. 3 is a side elevational view of the head gear of the embodiment of FIG. 1.

FIG. 4 is a plan view from the top of the retainer body means of the embodiment of FIG. 1.

FIG. 5 illustrates another embodiment of the invention employing a simple skull cap means and a plurality of fixedly disposed exterior strips of pile strap on the cap means.

DESCRIPTION OF PREFERRED EMBODIMENTS

It is a primary object of this invention to obviate the disadvantages of the prior art structures and to provide a head gear having the structure that facilitates attachment of additional elements and that may be emplaced on a wearer's head to support the additional elements without slipping.

It is also an object of this invention to provide a retainer that may be employed in a wide variety of uses; such as, cosmetic applications, and retaining bandages in place following surgery; the retainer having a head gear that may be emplaced on a wearer's head and en-

gage the wearer's hair to prevent slipping; a conformably shapable retainer body means; and interconnecting straps that can be removably attached to the head gear at a plurality of locations for size and tension adjustment by simply pressing to attach or pulling to release; the straps thereby facilitating emplacement regardless of the size of the wearer's head and facilitating removal, yet leaving a large portion of the wearer's head exposed for greater comfort.

Referring to the figures and particularly to FIG. 1, retainer 11 comprises non-slip head gear 13; retainer body means 15 and a plurality of straps 17 that are connected at one end with the retainer body means and have, at their other end, first hook strips for removably engaging the head gear 13. As can be seen in FIG. 1, the retainer 11 may be employed for cosmetic applications such as uplift of the chin and sagging facial muscles or for retaining a bandage in place following surgery on or about the face and head of the wearer. For example, sutiable bandages may be emplaced around the lower portion of the face following cosmetic surgery and held in place. Alternatively, bandages such as ear bandages, illustrated by dashed line 19, may be held in place following ear surgery.

Referring to FIGS. 1-3, the head gear 13 comprises a cap means 21; at least one hook strip 23 fixedly disposed on the interior surface of the cap means and at least one exterior strip of pile strap 25 fixedly disposed on the exterior of the cap means 21. The cap means 21 may take any form but preferably has an area of at least about 8 square inches to minimize the concentration of stress in supporting the retainer body means and alleviating a tendency to give the wearer a headache. Preferred forms of construction of the cap means are illustrated in FIGS. 1 and 5. In FIG. 1 the cap means comprises a conventional surgical cap onto which the hook strip 23 and the pile straps 25 have been sewed. The surgical cap may have drawstrings 30 for being drawn to fit a particular head size. On the other hand, as illustrated in FIG. 5, a skull cap that covers the top and rear portion of the head may be employed. It is preferable that the cap means have a pseudo-spherical structure as effected by having darts sewed into a flat piece of material of the desired dimensions.

The cap means has either a hook strip disposed on its interior or a pile strap disposed on its exterior. Preferably it has both. Specifically, the cap means has at least one hook strip 23, FIG. 2 disposed on the interior surface of the cap means. The hook strip 23 includes a fabric backing; such as, dimensionally stable woven nylon fabric backing; with a plurality of tiny hook elements 29 protruding interiorly for engagement with hair of a person wearing the head gear for preventing slipping of the head gear. If desired, a plurality of hook strips may be employed, scattered on the top and sides of the cap means for more effectively engaging the hair of the wearer and preventing slipping. Ordinarily, however, a single hook strip in the top of the cap is sufficient. The absence of the hook strips on the side of the cap means alleviates the problem of disengaging the cap means from the wearer's hair. At least one exterior strip of pile strap 25, FIG. 3, is disposed on at least one exterior side of the cap means. Preferably, at least one exterior strip of pile strap is disposed along each side of the cap means and the strip of pile strap is extensive enough to afford a continuous band for receiving a wide variety of hook strip configurations to allow utmost flexibility

in adjusting the tension on a retainer body means 15. As illustrated in FIG. 3, the pile strap extends along the entire side band along each side of the cap means 21. Each of the pile straps may be sewed or otherwise attached to the side of the cap means. The pile straps include a dimensionally stable woven nylon fabric backing having a plurality of upstanding loops 31 of fine threads or other filamentary material extending outwardly for receiving a hook strip of another element in removably fastened relationship. The loops 31 are adapted to engage the hook elements 29 when pressed together to prevent relative motion laterally along the respective backing elements. Because of the somewhat resilient construction of the hook elements 29 and the loops 31, however, the hook strips may be readily pulled outwardly to disengage the pile straps about as easily as they were pushed together for being fastened together. The hook strips and pile straps are commercially available under the trade name Velcro and are described in U. S. Pat. No. 2,717,437 issued September 13, 1955. Accordingly, no further detailed description is necessary herein.

Instead of having a substantially continuous pile strap along the cap, a plurality of individual pile straps may be fixedly disposed along the sides of the cap means at predetermined locations, as illustrated in FIG. 5, to facilitate removably affixing straps by less experienced personnel when the straps are part of a predetermined configuration such as may be employed for relatively standardized operations.

Referring to FIG. 4, the retainer body means 15 has a mid section 35 that is adapted for being emplaced about and beneath the wearer's chin. The body means 15 has connected with the mid section 35 at least one bifurcated end structure defining two terminal strips 37 and 39 for being emplaced on both forward and rearward sides of an ear 41. Preferably, the retainer body means 15 is formed of a net-like material that is aerated to prevent unnecessary restriction to the escape of moisture, that has elasticity along the respective fibers making up the net, and has greater elasticity along the bias of the fibers for being conformed to the irregular contours of the face and head of the wearer. A suitable net material for forming the retainer body means is available commercially under the trade name Spandex. Other suitable net materials are known in the art. For some applications, as for throat surgery, it is preferable that the retainer body means 15 have a mid section 35 that is extensive enough to effect a neck portion 43, as illustrated in FIG. 5, for extending downwardly on the wearer's neck.

The plurality of straps 17 are connected at one of their ends 45 with the retainer body means 15, as by sewing, and have disposed at their other end 47 at least one hook strip 49 for removably engaging the exterior pile strap 25 on the cap means 21. The hook strip 49 may be extended along the strap as far as necessary; or, if desired, a plurality of hook strips may be affixed at discrete locations; to fit both adults and children. There is at least one strip 17 affixed to each of the terminal strips 37 and 39 to facilitate shaping the retainer body means to best do its support job on the particular wearer, be the job cosmetic support or bandage retention.

If desired, a plurality of straps 17 may be affixed to the forward terminal strip 37 and only a single strap 17 affixed to the rearward terminal strip 39, as illustrated

in FIG. 1. On the other hand, as illustrated in FIG. 5, a plurality of straps 17 may be affixed to both the forward terminal strip 37 and the rearward terminal strip 39 for better establishment of the requisite tension and contour. With the plurality of straps 17 connected with each of the terminal strips of the bifurcated ends, it is advantageous to have a continuous exterior strip of pile strap 25 for greatest flexibility; although, as indicated hereinbefore, where certain relatively standardized operations are to be performed, a plurality of fixed exterior strips of pile strap, illustrated by pile straps 25a and 25b, may be employed.

It is ordinarily necessary that at least one pair of neck straps 51 be connected at one of their ends with the retainer body means at the lower side of its ends for pulling the retainer body means 15 toward the rear of the neck to obtain the desired conformity with facial contours. One of the pair of neck straps 51 will have a hook strip 55 disposed at its free end and the other of the pair of neck straps will have a pile strap 57 disposed at its free end.

The hook strip 55 and the pile strap 57 are so disposed on their respective neck straps 51 that the pair of neck straps can be removably fastened together by pressing them together. The hook strip and neck strap are extensive enough in coverage and so located on respective neck straps 51 as to enable effecting a desired degree of tension in the retainer body means rearward toward the rear of the neck for a plurality of sizes of necks. This may advantageously be effected by having the more extensive area of either the hook strip or the pile strap on the exterior of the internal neck strap 51, illustrated by pile strap 57, to prevent the internally protruding hooks or loops from irritating the neck of the wearer.

The elements of the head gear, the retainer body means, the straps, and the hook strips and pile straps may be assembled as illustrated by any conventional method. Ordinarily, sewing is an economical and satisfactory method of assembling the respective elements, since they can be thus laundered or cleaned without having to disassemble mechanical components such as snaps or buckles. Other than the special materials described hereinbefore, materials ordinarily employed in this art are satisfactory in manufacturing this invention.

From the foregoing descriptive matter and the drawings, it can be seen that this invention obviates the disadvantages of the prior art and accomplishes the objects enumerated hereinbefore. Specifically, it provides a head gear that has an internal structure for engaging the hair of the wearer and preventing slipping and that has an external means facilitating attachment of additional elements by merely pushing to attach and pulling to detach. Furthermore, this invention provides a retainer that may be employed in a wide variety of applications; such as, cosmetic applications and retaining bandages in place following surgery; the retainer having a head gear:

1. that may be emplaced on a wearer's head and engage the wearer's hair to prevent slipping, having a conformably shapable retainer body means, and having interconnecting strap means that leave a large portion of the wearer's head unencumbered for greater comfort, and
2. that can be removably attached to the head gear at a plurality of locations for size and tension adjustment by simply pressing to attach or pulling to release,

thereby facilitating emplacement regardless of the size of the wearer's head, and facilitating removal for replacement of bandages or the like.

Although the invention has been described with a certain degree of particularity, it is understood that the present disclosure is made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention.

I claim:

1. Non-slip head gear for emplacement on a wearer's head for use in conjunction with other elements such as bandage retainers comprising:

- a. a cap means adapted for fitting a plurality of head sizes;
- b. at least one hook strip disposed on the interior surface of said cap means; said hook strip having a plurality of tiny hook elements protruding interiorly for engagement with hair of a person wearing said head gear for preventing slipping thereof; and
- c. at least one exterior strip of pile strap disposed on at least one exterior side of said cap; said pile strap having a plurality of upstanding loops of filamentary material extending outwardly for receiving a hook strip of another element in removably fastened relationship.

2. The head gear of claim 1 wherein said cap means has a plurality of hook strips disposed on its interior for

engagement with the wearer's hair.

3. The head gear of claim 1 wherein said cap means has a plurality of pile straps disposed on its exterior.

4. The head gear of claim 3 wherein said cap means has at least one said exterior strip of pile strap disposed along each side and extensive enough to afford a continuous band for receiving a wide variety of hook strip configurations.

5. The head gear of claim 3 wherein said cap means has a plurality of exterior strips of pile strap disposed along each side at predetermined locations for receiving a predetermined hook strip configuration.

6. The head gear of claim 1 wherein said cap means has an area of at least 8 square inches for being disposed over the top and rearward portion of the wearer's head for minimizing concentrations of stress and alleviating the tendency to cause headaches.

7. Non-slip head gear for emplacement on a wearer's head for use in conjunction with other elements such as bandage retainers comprising:

- a. a cap means adapted for fitting a plurality of head sizes; and
- b. at least one hook strip disposed on the interior surface of said cap means; said hook strip having a plurality of tiny hook elements protruding interiorly for engagement with hair of a person wearing said head gear for preventing slipping thereof.

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