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S. LOEWENSOHN

2,372,330

HAIR NET

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FIG 1

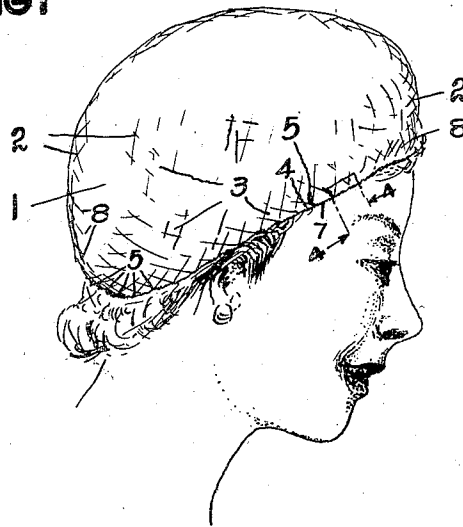


FIG 2

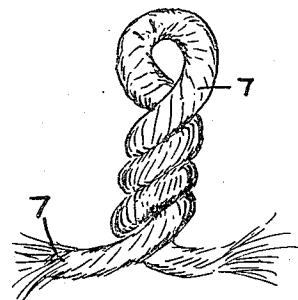


FIG 3

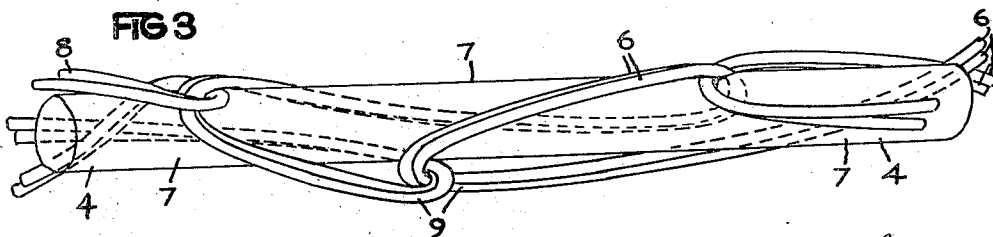


FIG 4

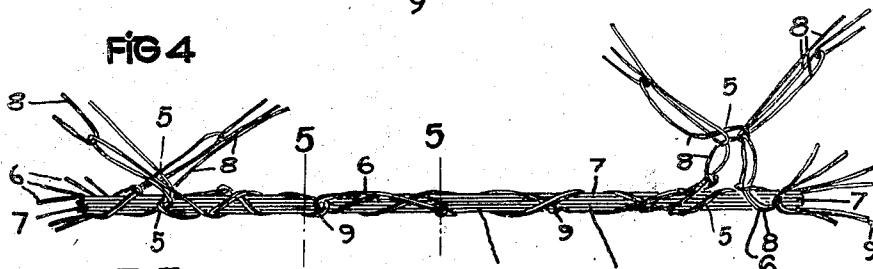
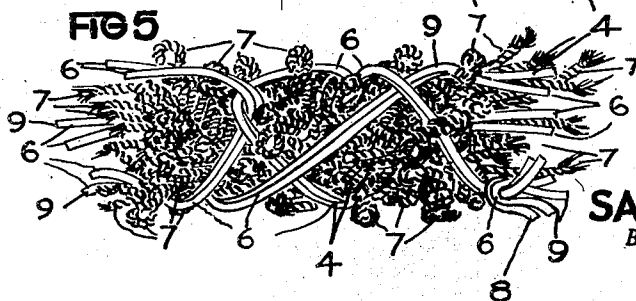


FIG 5



INVENTOR.
SAMUEL LOEWENSOHN.
BY **Paul A. Talbot.**
ATTORNEY.

UNITED STATES PATENT OFFICE

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HAIR NET

Samuel Loewensohn, Brooklyn, N. Y.

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6 Claims. (Cl. 132-49)

My invention relates to a hair net and particularly to the elastic marginal member for hair nets. Among the objects and purposes of my invention are to provide:

A substitute marginal elastic member in which no rubber is used.

A new application of high twist yarn in hair nets.

A means of surrounding and encasing the elastic members of the margins of hair nets.

A knitted casing around the marginal elastic members of hair nets.

A loop stitch knitted hair net in which the strands are knitted around the margin throughout its length.

A loop stitch net having the strands stitched around the elastic members to hold them together in a casing formed by the strands of the net.

A knitted casing covering high twist yarn ends in the margin of a hair net.

I accomplish these and other objects by the construction herein described and shown in the drawing forming a part hereof in which:

Fig. 1 is a perspective view showing the application of my device.

Fig. 2 is an enlarged view of one of the high twisted elastic marginal strands after releasing the twist.

Fig. 3 is a diagrammatic view showing how the loop stitch encompasses the elastic strands in the margin of the hair net showing the parts as though they were solid rather than fibrous.

Fig. 4 is a typical fragment such as indicated at 4-4, Fig. 1.

Fig. 5 is a fragment of the margin after release between the connections to the mesh of the net as at and between 5-5, Fig. 4.

Similar reference characters refer to similar parts throughout the several views of the drawing and in the specifications.

General description

The use of yarn having high twist strands which are treated to hold the twist while being processed or handled and which, when moistened or released, becomes kinked and deformed, is well known. Such yarn may be rayon, having strands of about 150 denier and 55 turns per inch for the purpose of providing the elastic margin for my hair net; eight or ten strands being used together.

These high twist strands combine to provide the desired elasticity suitable for hair nets, and although various attempts have been made to use this type of yarn as a substitute for rubber

and the like (lastex), the principal difficulties are that the yarn becomes tangled in the mesh of the net as well as in its kinks.

Cords having right and left turns and strands formed into a cord, and strands in themselves loop-stitched, only overcome the difficulty in part because cords and/or twisted pairs or groups of strands limit the stretchability of the margins.

I overcome the "wild" nature of this yarn by encasing a plurality of the strands of the yarn in a loop stitch from strands used in the mesh of the net. Double or triple strands are also carried in the marginal casing to add strength in holding the eight or ten strands of high twist yarn which becomes greatly expanded when the twist is released as may be seen in Figs. 2 and 5 of the drawing.

The several highly twisted strands need not be twisted right or left in pairs nor a cord of such strands used, nor is it desirable to secure the several strands together by laying in a cord or by knitting. The marginal elastic edge is held in a confined encasement where it may be stretched when under tension and spring back when the tension is released. The twisted kinks are kept substantially within confined limits and do not catch in the mesh of my hair net nor become tangled up by themselves except in the restricted area within the casing.

In the detailed specification to follow, I have described an embodiment of my invention. The preciseness of the specification and drawing are not intended to restrict the scope of my invention as the detailed construction herein described is intended to illustrate rather than to limit. Many modifications are possible; for instance, the number and size of the strands of highly twisted material; the number of strands in the marginal loop stitch which surrounds the highly twisted strands as well as the uniting stitches which connect the marginal casing and high twist strands to the mesh of the hair net to the margin while encasing the high twist strands may surround the margin and are not to be confused with the casing between these limited points. The casing is continuous and confines the high twist strands to a restricted area within the casing at all places so that when the high twist strands are released as by applying moisture, the kinks, which are themselves twisted, cannot assume uncontrolled deformities in and between the points or zones of connection to the mesh of the hair net.

The term "strand" or "strands" herein is to be understood as meaning a unit as contrasted with

a plurality of such units twisted into a thread or cord. The plurality of strands used in my margin are straight units of high twist strands lying parallel until released.

Specifications

Referring to the drawing, I have shown my hair net 1 comprising the usual knitted mesh of strands preferably connected at the points 2 throughout the mesh to provide elastic rectangular spaces 3 between the strands and to form an encompassing dome to conform to the head of the wearer in the usual manner common to most hair nets. The mesh of the hair net, like most hair nets, is connected to the elastic margin 4 at zones or points 5.

Between the points of connection 5, I have provided a casing 6 which surrounds a plurality of strands of highly twisted yarn 7 which are well known to those skilled in the knitting art. These highly twisted strands normally are treated so that they will not kink or become deformed while being handled in the operations of manufacture of the hair net until moisture is applied, whereupon the strands 7 become deformed and changed from a unit having the general appearance of ordinary threads to a very different structure in which twisted loops or kinks form at frequent intervals, and it is these deformities which, when tension is applied, tend to become untwisted, thus causing the length of each strand to again increase and to again become a straight thread when sufficient tension is applied and to again curl up into twisted loops when tension is released.

The strands 7 are not stretched as an elastic rubber band stretches, but the rayon fibers used are springy and the high twist of the strand, when released, kinks and a twisted loop forms so that a plurality of such strands contract in length and expand in diameter; each twisted loop crowds against the twisted loops of adjacent ends causing the whole to increase in size and when under tension, to decrease.

The strands at the zones or points 5 are carried by a loop stitch around and along the strands 7 to the succeeding zone 5 as may be seen particularly in Fig. 4 in which the strands 7 are shown in their straight, unreleased condition. In Fig. 5, an enlarged fragmentary portion of the margin is shown after the strands 7 have been moistened and released; the casing 6 is shown as though the strands 8 of the net, and the additional strands 9 carried in the loop stitch with the strands 8, were solid as a wire so that they may be more easily seen in contrast with the strands 7.

The strands 7 lie in substantially parallel relation in a group without being twisted, in much the same manner as the strands in a warp preparatory to weaving; each high twist strand is straight and independent of each other strand. Thus, the maximum amount of kinking and twisting is obtained when the strands are moistened or released and each strand is thus permitted to kink independent of the other of the strands. The increasing of the stretchability or resilience of the margin may be increased by moistening not only after the completion of the manufacture of the hair net but at any time throughout its life and use by the wearer.

The word "kink" as used herein is not to be limited to any particular form of kink but to a breadth or scope, the meaning of which includes any deformation of the high twist strands 7, which may be accomplished by releasing the springiness of the fibers or subdivisions of the

strand, such as by moistening. The kink may be a slight bend from the relatively straight strands as it is laid in the margin around the edge of my hair net together with the several other strands 7 of high twist yarn, or the kink may become a twist as illustrated in Fig. 2 of the drawing. Under tension, the kinks may be substantially removed and the strands 7 may be again substantially straight.

The meaning of the word strand does not mean that they are a cord, line, or rope which would comprise several of the strands twisted together.

The body or mesh of my hair net may be the shape common to hair nets or of other designs and shapes, and the margin may define the edge which forms a peripheral border on the user, or may be any band near the margin which may be resilient and stretchable.

In Fig. 3, a section, such as shown in Fig. 5, shows all of the strands solid; the strands 7 being straight and unreleased, are shown as a single solid mass instead of a plurality of eight or ten strands so that the lines of the drawing may be so simplified that the strands forming the casing 6 may be followed.

The margin 4 is thus comprised of the strands 7 and the casing 6 between the points 5. In Fig. 2 of the drawing, I have shown one of the twisted kinks in one of the strands 7; this may be regarded as typical of the many kinks which form at intervals throughout the length of each of the several strands 7; however, they may be much longer or shorter in many cases. They may also combine with kinks in one or more of the other strands 7 to snarl the margin if they were not encased and restricted by the casing 6.

The number of the strands in the net may vary and the relative number of strands in the casing may vary from the number in the net, and preferably the strands in the casing are double the number in the net when the common, simple loop stitch is used in knitting my hair net. The casing may be formed in much the same way when more complicated stitches are used without departing from the encasement of highly twisted strands in the margin.

It is to be noted that the strands forming the casing lie diagonally girthwise as they are positioned to form the casing, thus permitting the casing to be extended or contracted when the highly twisted strands are extended by tension or contracted when the tension is released. The margin of my hair net may be increased in girth or diameter, and when released, will snugly fit the head.

Having thus described an embodiment of my invention, what I claim as new and desire to secure by Letters Patent is set forth in the following claims.

I claim:

1. In a hair net having a mesh of strands and relatively highly twisted strands in the margin of the hair net which become kinked when moistened to reduce the length of the margin, a casing enclosing said highly twisted strands throughout their length to confine the enlargement of said kinks within said casing, said casing being formed by the strands from said mesh and being diagonally disposed girthwise around said highly twisted strands to permit said margin to be lengthened and contracted.

2. In a hair net having a mesh of strands and relatively highly twisted strands in the margin of the hair net which becomes kinked when moistened to reduce the length of the

margin, a casing enclosing said highly twisted strands throughout their length to confine the enlargement of said kinks within said casing, said casing being formed by the strands from said mesh and being diagonally disposed girthwise around said highly twisted strands to permit said margin to be lengthened and contracted and additional strands uniting with said strands from said net to increase the number of strands in said casing.

3. In a hair net having a mesh and a stretchable margin secured thereto adapted to yieldingly surround the head of the wearer, a plurality of substantially straight strands of high twist which become kinked when moistened to increase the stretchability of said margin and a casing surrounding said strands of high twist comprising threads from the mesh of the hair net.

4. In a hair net having a mesh and a stretchable margin secured thereto adapted to yieldingly surround the head of the wearer, a plurality of substantially straight strands of high twist which become kinked when moistened to increase the stretchability of said margin and a casing surrounding said strands of high twist comprising threads from the mesh of the hair net, whereby the kinks of said high twist are substantially restricted in length by said casing and each strand of said high twist is permitted to kink independent of each other strand.

5. In a hair net having a mesh and a stretchable margin secured thereto adapted to yieldingly surround the head of the wearer, a plurality of substantially straight strands of high twist which become kinked when moistened to increase the stretchability of said margin and a casing surrounding said strands of high twist comprising threads from the mesh of the hair net, whereby the kinks of said high twist are substantially restricted in length by said casing and each strand of said high twist is permitted to kink independent of each other strand, said strands becoming unkinked and straightened by tension applied to said margin.

6. In a hair net having a mesh and a stretchable margin secured thereto adapted to yieldingly surround the head of the wearer, a plurality of substantially straight strands of high twist which become kinked when moistened to increase the stretchability of said margin and a casing surrounding said strands of high twist comprising threads from the mesh of the hair net, whereby the kinks of said high twist are substantially restricted in length by said casing and each strand of said high twist is permitted to kink independent of each other strand, said strands becoming unkinked and straightened by tension applied to said margin and again kinked when the tension is released from said margin.

SAMUEL LOEWENSOHN.