

April 17, 1962

J. W. HENSCHÉL
WATER-COOLED HEADWEAR

3,029,438

Filed Sept. 26, 1957

2 Sheets-Sheet 1

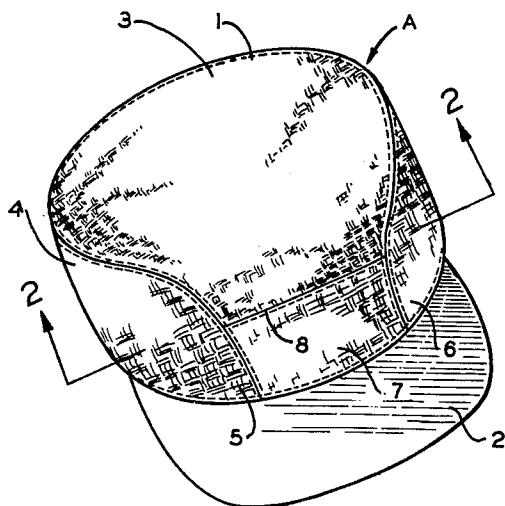


FIG. 1

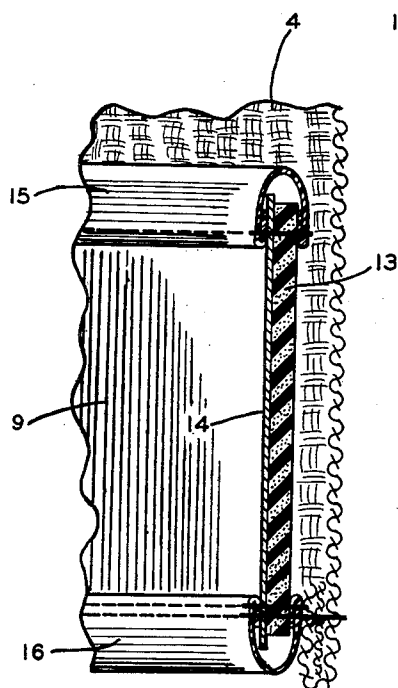


FIG. 3

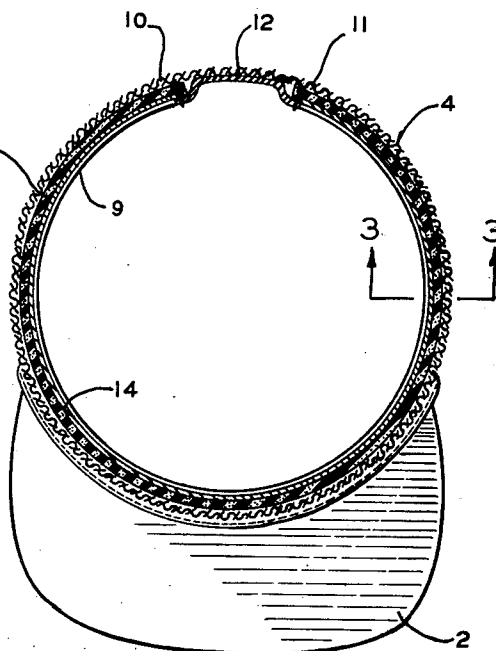


FIG. 2

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2 Sheets-Sheet 2

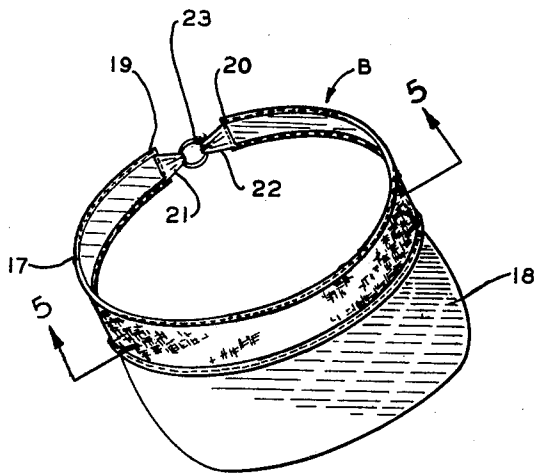


FIG. 4

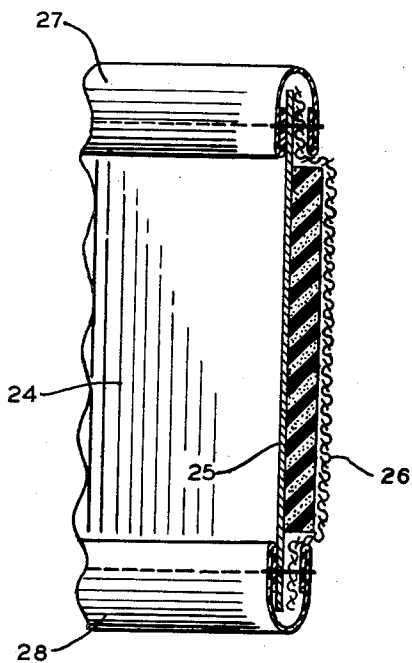


FIG. 5

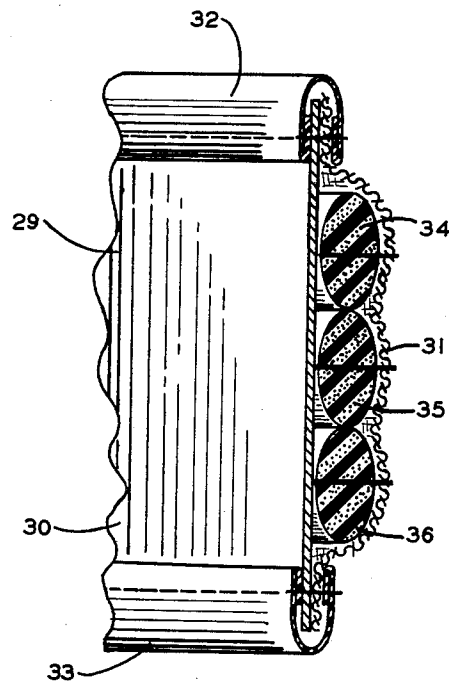


FIG. 6

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1

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WATER-COOLED HEADWEAR
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2 Claims. (Cl. 2-7)

This invention relates to certain new and useful improvements in headwear and, more particularly, to headwear having a water-cooled sweat-band.

Farmers, workmen, sportsmen, golfers, tennis players, and all other types of persons who are out in the sun during summer weather can become dangerously overheated if the head is not adequately protected. To this end, various kinds of headwear has been developed ranging from pith helmets or toppees to uniform caps with insets of mesh fabric or wire in the sidewalls. All such headwear, however, is designed on the basis of providing adequate ventilation or air circulation through the crown. Unfortunately, these expedients are not particularly effective, and are of little or no value on very hot humid days. Furthermore, the sweat-band in such headwear lies directly against the forehead of the wearer in an area where perspiration is the heaviest. Consequently, the sweat-band quickly becomes soaked with stale perspiration and is both odoriferous and uncomfortable.

It is one of the objects of the present invention to provide a cap or similar item of headwear having a sweat-band therein which is capable of cooling the head of the wearer for a relatively long period of time.

It is also an object of the present invention to provide an item of headwear of the type stated, which is capable of storing a substantial quantity of water so that evaporation of the water will provide cooling to the head of the wearer.

It is an additional object of the present invention to provide an item of headwear of the type stated, wherein the sweat-band may be conveniently and easily saturated with water when desired.

With the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts presently described and pointed out in the claims.

In the accompanying drawings (two sheets)—

FIG. 1 is a perspective view of a cap constructed in accordance with and embodying the present invention;

FIG. 2 is a sectional view taken along line 2—2 of FIG. 1;

FIG. 3 is a fragmentary sectional view taken along line 3—3 of FIG. 2;

FIG. 4 is a perspective view of a headband constructed in accordance with and embodying the present invention;

FIG. 5 is a fragmentary sectional view taken along line 5—5 of FIG. 4; and

FIG. 6 is a fragmentary sectional view similar to FIG. 5 and showing a modified form of sweat-band.

Referring now in more detail and by reference characters to the drawings, which illustrate a practical embodiment of the present invention, A designates a sport cap having a crown 1 and a forwardly extending bill or visor 2. The crown 1 consists of a top panel 3 of closely woven porous fabric marginally stitched around its outer periphery to an annular side wall 4, which is preferably of a coarsely woven open mesh plastic fabric. The side wall 4 terminates in spaced forwardly presented margins 5, 6, to which is stitched a front panel 7, the latter being of the same material as that of the side wall 4. The front panel 7 is, furthermore, stitched at its upper margin 8 to the top panel 3.

Stitched at its lower margin to the side wall 4 and front panel 7 is an annular sweat-band 9 having spaced opposed ends 10, 11, located at the rear of the cap and

2

joined together by means of an elastic band 12, which expands so as to compensate for small variations in head sizes. The sweat-band 9, furthermore, includes an annular water-absorbent sponge strip 13 which normally rests facewise against the annular wall 4 and front panel 7. Secured to, and substantially co-extensive with, the sponge strip 13 is a thin aluminum head-contacting strip 14 and the strips 13, 14, are stitched together at their longitudinal margins by means of upper and lower hems 15, 16, respectively, the hem 16 being stitched to the lower margin of the annular wall 4 and front panel 7, as best seen in FIG. 3.

In use, the sponge strip 13 is saturated with water by pouring a small amount of water through the coarse woven fabric forming the annular wall 4 and front panel 7 so as to thoroughly saturate the sponge strip 13. Alternatively, if desired, the cap A may be immersed in water to saturate the sponge strip 13. The cap is then worn in the usual manner, in which case the aluminum strip fits snugly against the head of the wearer, and the sunlight will cause the water to evaporate from the sponge layer 13, thereby cooling the aluminum strip 14, which, being highly heat conductive, in turn cools the head of the wearer. Caps manufactured in accordance with the present invention have been found to retain sufficient water so as to provide noticeable cooling for several hours, and, upon complete evaporation of the water within the sponge 13, it is merely necessary to resaturate the sponge strip 13 in the manner previously described. Furthermore, by using relatively coarsely woven fabric in the annular wall 4 and front panel 7, the sponge strip 13 can be quickly and easily saturated with water, and, moreover, the coarsely woven fabric permits a rapid evaporation of the water therethrough, and, consequently, a comfortable and prolonged cooling is obtained.

It is also possible to provide a modified form of the present invention as shown in FIGS. 4 and 5, wherein B designates a headband comprising an annular sweat band 17, having stitched thereto a forwardly extending bill or visor 18. The band 17 terminates in opposed margins 19, 20, which are connected by short fabric strips 21, 22, which, in turn, are looped about an elastic ring 23, the latter being utilized to compensate for small variations in head sizes. The sweat-band 17 comprises an aluminum strip 24 and a sponge strip 25 similar to the aluminum strip 14 and sponge strip 13 previously described. The outer face of the sponge strip 25 is covered by a fabric layer 26 preferably of a highly water-absorbent closely woven material and the layer 26 and aluminum strip 24 are stitched together at their longitudinal margins by means of hems 27, 28. If desired, however, the fabric layer 26 may be of the coarsely woven fabric used in the annular wall 4. The headband B is used in the same manner as that of the cap A previously described and the sponge strip 25 is saturated by immersing the headband B in water or by merely pouring water over the fabric strip 26.

It is also possible to provide a modified form of sweat-band 29 which is similar to the sweat-bands 9, 17, previously described, and includes an aluminum strip 30, a fabric cover strip 31 and opposed longitudinal hems 32, 33. Stitched to the fabric layer 31, and confined between the layer 31 and aluminum strip 30, are a plurality of annular adjacent elongated tubular sponge elements 34, 35, 36, which may be saturated with water so that evaporation therefrom will cool the aluminum strip 30. It will be apparent that the sweat-band 29 may be utilized with either the cap A or headband B.

It should be understood that changes and modifications in the form, construction, arrangement, and combination of the several parts of the water-cooled headwear may be made and substituted for those herein shown and described.

3

without departing from the nature and principle of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A headband comprising a visor, an annular sweatband marginally secured to said visor, said sweatband including an annular strip formed of thin malleable metal foil and having an inwardly presented face and an outwardly presented face, said inwardly presented face being adapted for contact directly against the brow and head of the wearer, a water saturable sponge layer positioned facewise against the outwardly presented face of said strip and being slightly narrower than said strip so that its longitudinal margins extend in inwardly spaced parallel relation to the longitudinal margins of the strip, a fabric layer disposed against the outwardly presented face of the sponge layer and extending inwardly around the longitudinal margins thereof for flatwise overlying contact against the projecting portions of the strip, and a pair of hems extending enclosingly around and being stitched to the fabric layer and strip in the region where said fabric layer and strip are in overlying engagement.

2. An article of headwear comprising a head-contacting band, said band having a heat-conductive strip formed of thin malleable metal foil having an inwardly presented surface and an outwardly presented surface, said inwardly presented surface being adapted for direct contactive engagement with the brow and head of the wearer, a plurality of elongated water-retentive sponges of substantially elliptical cross-sectional shape secured directly to

4

the outer face of the strip in tangent relation thereto and also in tangent relation to each other, the combined width of said sponges being somewhat smaller than the width of the strip so that the strip extends marginally beyond the combined width of the sponges, thereby forming outwardly projecting longitudinal flanges therealong, an outwardly presented covering fabric layer enclosing the outer surfaces of the sponges and extending around the opposite longitudinal margins of the outermost sponges into facewise overlying engagement with the flanges formed by the strip, and hems enclosingly disposed around and stitched to the strip and the fabric layer in the region of said flanges for securing the sponges in tangent contactive relationship to the strip and to each other and also for holding the sponges in such a manner as to enclose elongated air channels between the sponges and the strip to facilitate the cooling effect resulting from the evaporation of moisture held within the sponges.

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