May 14, 1963 B. ZIMMERMANN 3,089,147

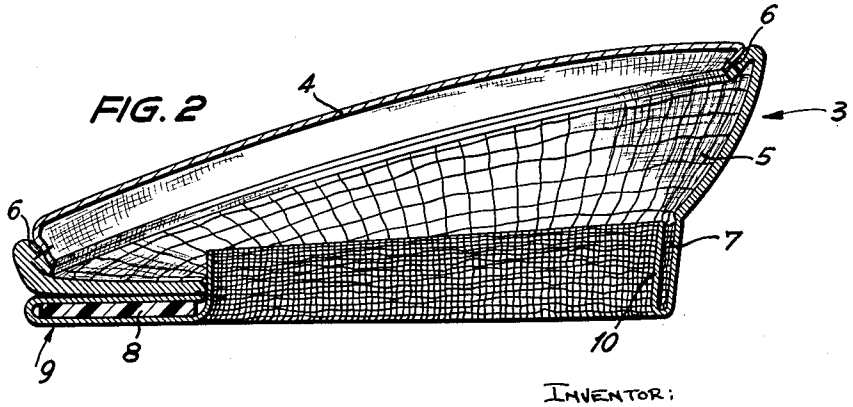
CAP

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FIG. 1



FIG. 2



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CAP

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2 Claims. (Cl. 2—197)

This invention relates to a cap, such as a jockey cap, sports cap or the like, which is made entirely or partially of knitted fabric.

The known caps of this type have the advantage that they can be used not only for a fixed head size but also for different head sizes since the parts of the caps made of knitted fabric are expansible within certain ranges. On the other hand, these known caps involve the disadvantage that their expansibility decreases in the course of time. To overcome this disadvantage, it has already been suggested to work rubber threads into the cap parts made of knitted fabric. This improves the expansibility, however, the improvement is achieved with the aid of additional means, i.e. the rubber threads worked into the knitted fabric. Moreover, in these caps, there exists the risk of some of the rubber threads breaking especially when they are overstressed or when the caps have been used for a long time. This has a disadvantageous effect upon the expansibility of the caps.

It is the object of the present invention to improve the caps of the aforementioned kind with the aid of simple and inexpensive means and particularly, to eliminate the disadvantages of the known types of caps set forth above.

This object is achieved by providing a cap which comprises a cap top, an upper side portion joined to said cap top, and a lower side portion joined to said upper side portion, at least said upper side portion and said lower side portion consisting of knitted fabric, and said knitted fabric being manufactured from elastic threads.

These elastic threads may be overtwisted threads which may consist of synthetic plastic material for example of polyamides.

The cap according to the invention has the advantage that it fits different sizes of human heads within a relatively wide range without additional means, such as rubber threads worked into the knitted fabric, being required for this purpose. Furthermore, the parts of the cap made of knitted fabric which is manufactured from the elastic threads, keep their elasticity even over a long period of time. Particularly, fatigue phenomena of the expansible cap parts cannot occur since a failure of rubber threads has not to be apprehended. It is noted that the elasticity of the threads used for manufacturing the cap may be produced by overtwisting the threads and/or by subjecting same to a heat-treatment.

The cap may have a known form. For example, it may have the form of a jockey cap or may have the appearance of a simple flat sports cap. In these cases a peak-like insert must be provided in the region of the knitted parts of the cap. The lower side portion of the cap may have an extension which is foldable. It is also possible to provide the cap with a protection for the ears and/or the neck of a wearer for using the cap in winter, for example.

A preferred embodiment of the invention will now be described by way of example and with reference to the accompanying drawing, in which:

FIG. 1 is a perspective view of the head of a wearer with a cap according to the invention, and

FIG. 2 is a longitudinal vertical section through the cap shown in FIG. 1.

Referring now to FIGS. 1 and 2, the embodiment of a

cap according to the invention shown is based on a known flat sports cap 3 which is composed of several parts. According to the invention the sports cap 3 has a cap top 4 consisting of fabric. An upper side portion 5 consising of knitted fabric which may be manufactured on a circular or flat knitting machine, is joined to the cap top 4 by means of seams 6. Joined to the upper side portion 5 is a lower side portion 7 consisting of similar knitted fabric. Whereas the upper side portion 5 consists of a relatively wide-meshed knitted fabric to favor the access of air to the head of a wearer in this region, the lower side portion 7 consists of a closer meshed knitted fabric and is laid with its forward end portion around an insert 8. The insert 8 is substantially sickle-shaped and forms, together with the forward end portion of the side portion 7 laid around it, a peak 9, the insert 8 being securely held in its position by means of seams or the like (not shown).

The side portion 7 has an extension 10 which is folded inwardly. The extension 10 is so dimensioned that when folded outwardly, it covers the wearer's ears. If desired, the sports cap 3 may be provided in its region adjacent the wearer's neck with a further part of longer dimensions which is capable of being folded outwardly and may serve as a protection for the wearer's neck.

The knitted fabric of which the side portions 5 and 7 of the sports cap 3 are made is manufactured from "self-elastic" threads, such as overtwisted threads. Thus, the side portions 5 and 7 are not rendered elastic by working particular rubber threads into them but they are what might be termed, as above and in some of the appended claims, "self-elastic."

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein. For example, the cap may be given another known form instead of that shown. Furthermore, in contrast to the embodiment shown, also the cap top 4 may consist of knitted fabric. In this case the entire cap would be made of knitted fabric.

I claim:

1. A cap comprising a generally inelastic cap top constructed of a woven fabric material, an elastic knitted fabric upper side cap portion having generally circular upper and lower peripheral edges, said woven fabric cap top being of generally circular configuration and being joined by a seam, extending completely around the rounded peripheral edge of said cap top to said upper peripheral edge of said knitted fabric upper side cap portion, said cap further including an elastic knitted fabric lower side cap portion having a generally circular upper edge integral with and extending completely around said generally circular lower peripheral edge of said knitted fabric upper side cap portion, both said upper side and lower side cap portions consisting of a knitted fabric manufactured substantially entirely from a self-elastic thread material whereby said cap is adapted to fit a number of different head sizes, said upper side cap portion being knit in a substantially looser mesh than said lower side cap portion to facilitate the ingress of air to the interior of said cap via said upper side cap portion, a generally horizontally and forwardly extending peak-like insert member of substantially planar configuration disposed adjacent the front of said cap, a forward end portion of said more tightly knit lower side cap portion extending across the bottom surface of said peak-like insert member, said forward end portion of said lower side cap

portion then being wrapped around the front edge of said peak-like insert member and rearwardly across the top surface of said peak-like member and being held in position by seams thereby to enclose said peak-like insert member and to form a visor-like structure for said cap, said cap top being relatively widely spaced by said upper side cap portion from said lower side cap portion adjacent the rear of said cap, said cap top being relatively flat and being inclined generally downwardly from the rear of said cap toward the front of said cap with the forward edge of said cap top lying relatively closely adjacent to said enclosed peak-like insert at a position overlying both the upper surface of said peak-like insert member and the portion of said lower side cap portion which overlies the upper surface of said peak-like insert member, said more loosely knit upper side cap portion being shaped adjacent the front of said cap also to overlie at least a portion of the upper surface of said visor-like structure at a position between said cap top and said visor-like structure, said more tightly knit lower side cap portion including a portion folded back upon the remainder of said lower cap portion adjacent the bottom of said cap and into the interior of said cap to define a free edge for said lower side cap portion located within said cap at a position adjacent the junction of the

upper edge of said lower side cap portion and the lower edge of said upper side cap portion, thereby to provide an extensible lower periphery for said cap adapted optionally to be folded downwardly from the interior of said cap thereby to cover selectively at least a portion of a wearer's ears and neck.

2. The cap of claim 1 wherein said self-elastic thread material forming said upper and lower side cap portions consists of over-twisted threads of a synthetic plastic material.

References Cited in the file of this patent

UNITED STATES PATENTS

408,934	Schwarz	Aug. 13, 1889
473,427	McLaughlin	Apr. 19, 1892
1,379,142	Wallace	May 24, 1921
2,143,265	Goldstein	Jan. 10, 1939
2,259,537	Wengen	Oct. 21, 1941
2,564,245	Billion	Aug. 14, 1951
3,035,273	Krystal	May 22, 1962

FOREIGN PATENTS

561,581	Belgium	Oct. 31, 1957
562,317	Belgium	Nov. 30, 1957