March 22, 1960 E. H. STERLING ET AL 2,929,071

HEADBAND FOR EXCLUDING WATER FROM BATHING CAPS

Filed Aug. 5, 1957 2 Sheets-Sheet 1

FIG. 1.

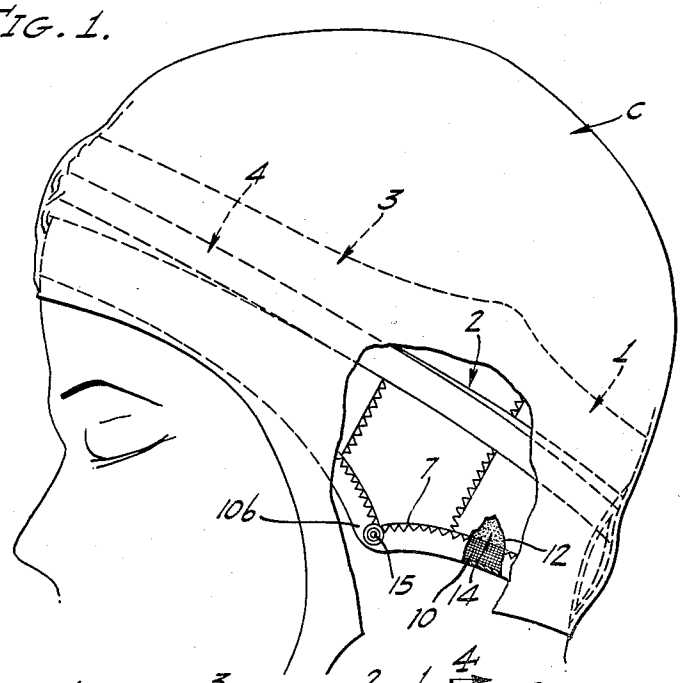
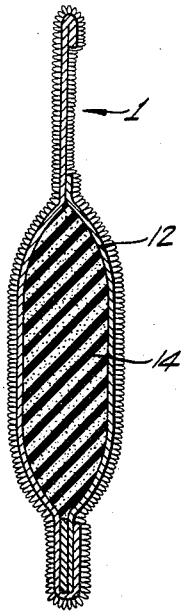


FIG. 4.



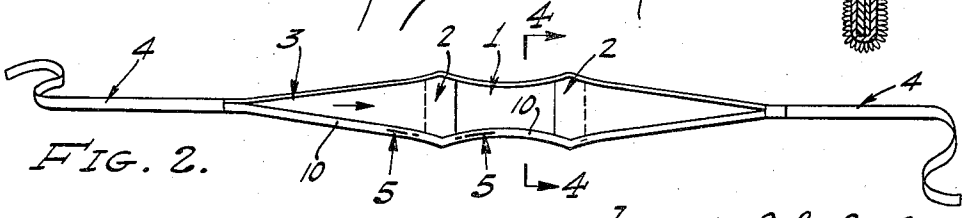


FIG. 2.

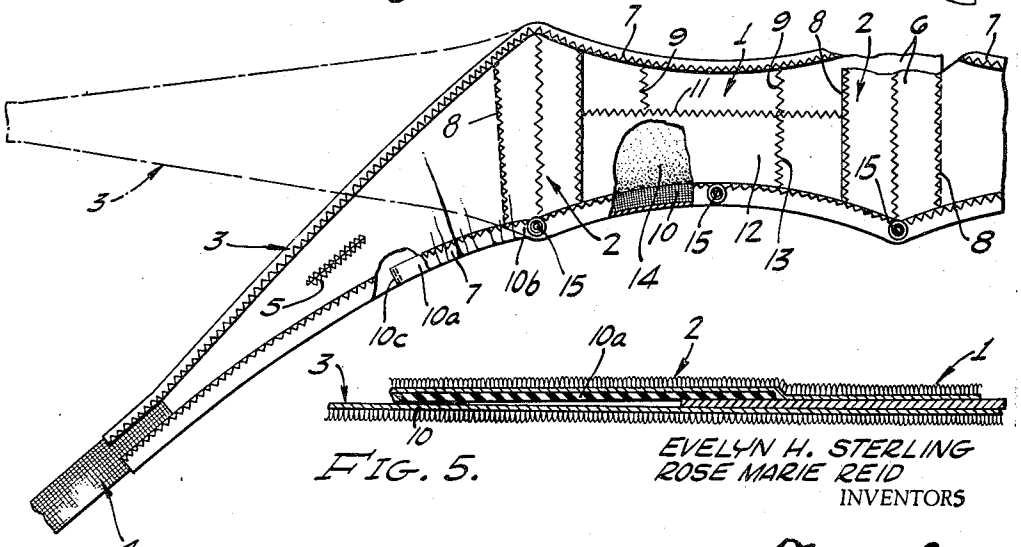


FIG. 5.

FIG. 3.

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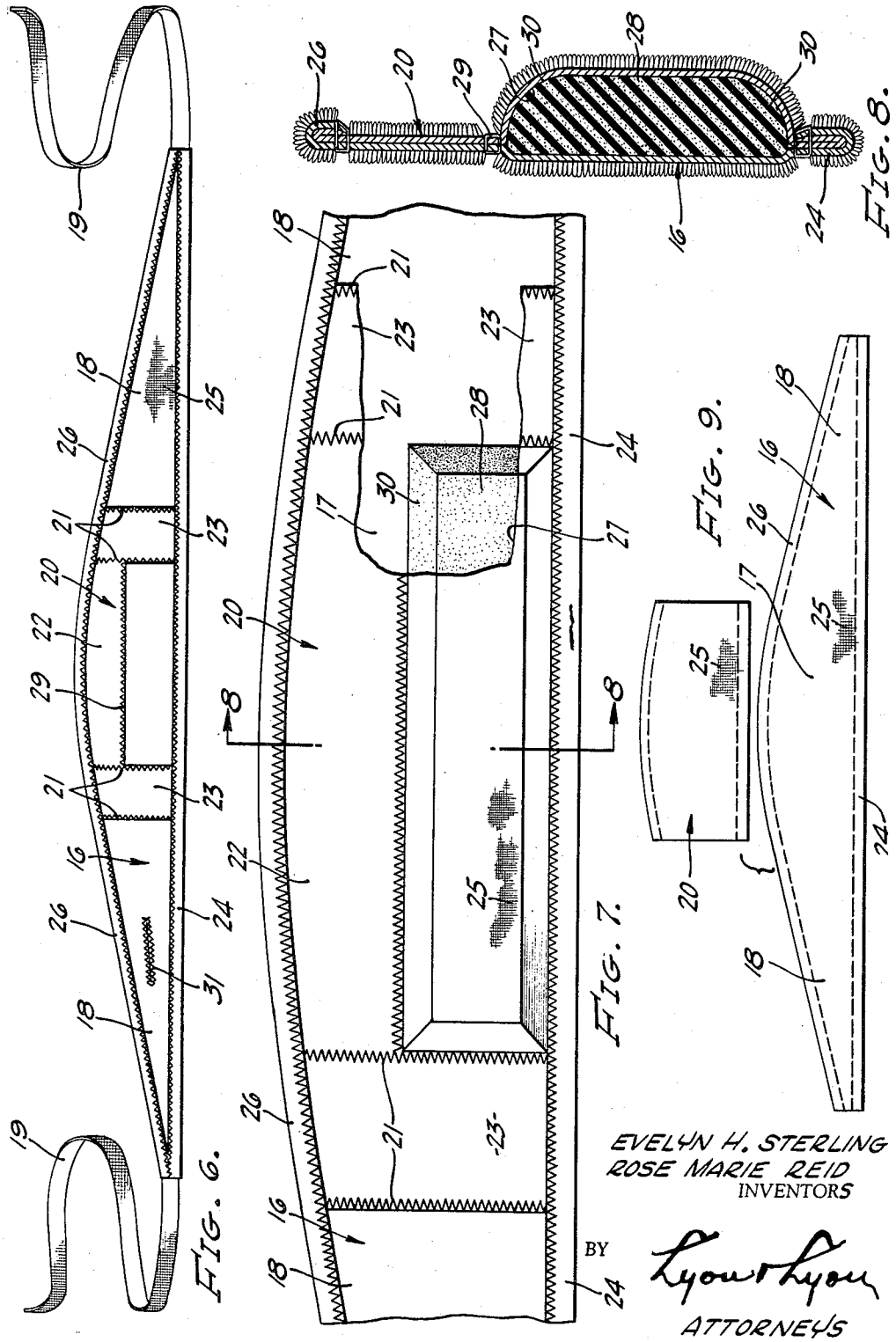
BY Lyon & Lyon

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HEADBAND FOR EXCLUDING WATER FROM BATHING CAPS

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2,929,071

HEADBAND FOR EXCLUDING WATER FROM BATHING CAPS

Evelyn H. Sterling and Rose Marie Reid, Los Angeles, Calif.; said Reid assignor to said Sterling

Application August 5, 1957, Serial No. 676,213

5 Claims. (Cl. 2—68)

This invention relates to headbands for excluding water from bathing caps, and is a continuation-in-part of the copending application Serial No. 601,773, filed August 2, 1956, entitled "Headband for Excluding Water from Bathing Caps," now abandoned.

Included in the objects of this invention are:

First, to provide a headband formed of water-absorbent material, such as toweling or terry cloth, or of fibrous material such as chamois, so arranged as to be wrapped about the head to define a zone approximately corresponding with the lower margin of a bathing cap, so as to form a barrier against the entrance of water under the margin of the bathing cap; and thus prevent wetting the hair even when used when diving or jumping into the water, swimming back stroke, or other swimming activity, which usually results in wetting the hair.

Second, to provide a headband which incorporates an elastomer having closed pores which forms, soft pad adapted to conform to the nape of the neck to aid in sealing out water.

Third, to provide a headband of this type which includes means for causing the headband to fit closely under the ears of the wearer to ensure against entrance of water in this region, without excessive pressure across the ears.

Fourth, to provide a headband of this type which is comfortable to wear and is easily fitted on the head, and which conforms readily to the head, so that a swimming cap may be readily fitted over the headband.

With the above and other objects in view, as may appear hereinafter, reference is directed to the accompanying drawings in which:

Figure 1 is a side view showing by broken lines the headband positioned within a bathing cap;

Fig. 2 is a greatly reduced view of a headband in its open or extended position, with the headband as it appears when under tension;

Fig. 3 is an enlarged, fragmentary view of the headband showing the main body portion thereof; indicating by solid lines the relaxed position of a temple and forehead-covering portion, and indicating by broken lines its position under tension;

Fig. 4 is a transverse sectional view through 4—4 of Fig. 2;

Fig. 5 is a diagrammatical, fragmentary, longitudinal, sectional view along the line of 5—5 of Fig. 2;

Fig. 6 is a reduced view of a modified form of the headband shown in its open or extended position;

Fig. 7 is an enlarged, fragmentary view showing the central portion thereof and with an overlying or partial band member broken away to show the pad;

Fig. 8 is a still further enlarged, sectional view through 8—8 of Fig. 7;

Fig. 9 is a developed view showing the main and partial band members.

Reference is first directed to Figs. 1 through 5.

The headband is preferably formed of terry cloth or toweling, or other cloth having the ability to absorb water; or chamois may be used.

The headband includes a central or neck-covering portion 1, the margins of which diverge from each other. The extremities of the neck-covering portion 1 merge into ear-covering portions 2 of greater width. The ear-covering portions in turn merge into end or forehead-covering portions 3. The opposite margin of the forehead-covering portions converge so that these portions are essentially triangular. Secured to the remote extremities of the end-covering portions 3 are tie straps 4 formed of cloth or plastic material.

The length of the headband is such that it may be wrapped completely about the head with the forehead-covering portions 3 overlapping each other. One of these portions is provided with a slit 5 which admits the tie strap 4 and the other forehead-covering portion, so that the tie straps 4 may be wrapped in opposite directions over the outside of the headband and tied together at any convenient place, such as at the neck or at the forehead of the wearer.

The entire headband may be formed of a single piece of cloth. However, it is preferred to use separate pieces for the neck-covering portion 1 and the forehead-covering portions 3, and overlapping these pieces in the region of the ear-covering portions 2, so that the ear-covering portions have two-ply thickness, as indicated by 6 in Fig. 3. The margins of the headband are preferably folded and stitched, as indicated by 7, and similarly the extremities of the double ply 6 may be stitched as indicated by 8.

The stitching is preferably two-needle stitching wherein the threads form a zigzag pattern. The stitching also serves to restrain the cloth against excessive stretching. Additional cross-stitching, such as indicated by 9 in Fig. 3, may be provided to reinforce the neck portion 1 and ear-covering portions 2. Also the lower margins of the neck-covering portion 1, extending to the ear-covering portions 2, may have sewn therein a tension tape 10 which resists stretching, as shown in Figs. 1, 3 and 5.

In addition, an elastic tape 10*a* is inserted along the lower folded margin 7 of the forehead-covering portion 3, extending from the center of each ear-covering portion 2 at 10*b* to approximately the location 10*c*, as indicated in Fig. 3. The elastic tapes cause the lower margins of the forehead-covering portions 3 to draw or pucker, as shown best in Fig. 3.

Secured over the lower half of the neck-covering portion 1, by stitching 11 around its periphery, is a closed pad-retaining pocket cover 12 which may also have cross-stitching 13, and which may be formed of chamois or terry cloth. The pocket thus formed is adapted to receive a pad 14 of soft foam rubber, or similar plastic material, preferably of the type having closed or sealed pores, so that although the pad is quite soft and readily compressible it has little tendency to hold water. The pocket cover 12 is placed next to the head. The use of chamois in this location is particularly effective to exclude water.

The headband is employed as follows:

The headband is wrapped around the head, as shown in Fig. 1, so as to position the ear-covering portions 2 over the ears of the wearer with the pad 14 at the lower side and extending around the neck between the ears. It will be observed that the pad may be readily compressed until quite flat. One of the tapes 4 is inserted through the slot 5 of the opposite portion 3 so that the headband may be drawn snugly and caused to lie flat against the head. The tapes 4 may be tied at the wearer's forehead or at the back of the head above the pad 14.

After wrapping the headband about the head, the tie straps 4 are tied together, whereupon a conventional

bathing cap C may be fitted over the head. The lower margin of the headband may conform approximately to the bathing cap, preferably along the forehead and neck of the wearer; the bathing cap, however, projecting below the headband, at least at the back of the head.

It should be noted that while the pocket may be closed so as to hold the pad **14** permanently in place, one margin of the pocket may be open to permit removal or replacement of the pad **14**.

By reason of the elastic tapes **10***a*, which stretch when the headband is under tension, the lower margin of the headband is drawn snugly under the ears and across the temples of the wearer while relieving undue pressure over the ears; that is, the elastic draw tape tends to cup the headband over the ears of the wearer. As a consequence, effective exclusion of water in the region of the ears is attained.

If desired, one or more snaps **15** may be provided at the lower margin of the headband, preferably at the ear-covering portions **2** or at the middle of the neck-covering portion **1**. The snaps **15** mate with complementary snaps, not shown, provided at the lower margin of the bathing cap C.

The use of a pad **14** having a high degree of compressibility is important, particularly when the headband is worn for diving, underwater swimming, or backstroke swimming. Should the back of the swimming cap lift from the neck, as it apparently does at times, the pad expands to maintain the space closed.

By reason of the reinforcing tapes **10** positioned along the lower margins of the portions **3**, and the elastic webs **10***a*, the lower margin of the entire headband between the tapes **4** may be drawn snugly against the head without undue constrictive pressure.

The vertical zigzag stitching in the region of the ear-covering portions **2** aid in causing the ear-covering portions to hold their shape for a more comfortable enclosure of the ears.

Terry cloth or toweling because of the inherently soft nature of the cloth and the presence of a nap, in addition to its water-absorbing qualities, renders this material uniquely suitable for use in the headband. However, chamois has also proved satisfactory. In fact, a portion or all of the neck-covering and ear-covering portions may be formed of chamois, or may be two-ply in thickness with the inner ply of chamois and the outer ply of terry cloth.

Reference is now directed to Figs. 6 through 9.

The construction here shown is particularly suitable for manufacture from terry cloth and includes a main band member **16** having a relatively wide central portion **17** intended to cover the back of the neck as well as the ears of the wearer, and tapered end portions **18** which wrap about the forehead of the wearer. The extremities of the tapered end portions **18** are joined to tapes **19** corresponding to the tapes **4** of the first described structure.

Secured to the central portion **17** of the main band member **16** is a partial band member **20** which is preferably joined to the main band member by vertical rows of two-needle stitching **21** which divide the headband into a central neck-covering portion **22** and ear-covering portions **23**.

An essential feature of the modified structure consists in providing a straight lower margin **24** which is folded upon itself and stitched. This margin is parallel to the warp or woof of the terry cloth, as indicated by **25**, so as to withstand tension without distortion. This lower margin is strengthened or reinforced by being folded and double needle stitched.

The upper margin **26** is also folded and stitched upon itself. The upper margin slopes upwardly from the extended ends of the tapered portions **18**, and then parallel with the lower margin throughout the central portion **17**.

The double ply thickness of cloth formed by the main band member **16** and the partial band member **20** forms a pocket **27** in the neck-covering portion **22** between the ear-covering portions **23**. This pocket receives a pad **28** of foam rubber or the like, preferably of the type which is provided with sealed cells rather than interconnected cells, so that the pad has a minimum effect as a sponge. The pad **28** is preferably more than half the height of the pocket **27** and is held in the lower portion thereof by stitching **29**.

It is preferred to bevel one side of the pad **28**, as indicated by **30**, and to provide sufficient slack or excess material in the partial band member **20** so that the pad **28** and main band member **16** are relatively flat; that is, the pad projects mainly from the side provided with the partial band member **20**, as shown best in Fig. 8.

The modified headband is applied to the head in much the same manner as the first described structure. By reason of the straight line connection between the tapes **19** afforded by the straight lower margin **24** the band may be brought snugly around the head of the wearer with the lower margin **24** passing under the ears.

By reason of the fact that the sloping upper margin **26** of the tapered portions **18** is not parallel with the warp or woof of the cloth, this margin is not under the same tension as the lower margin **24** and permits the headband to conform to the shape of the head and fit over the ears of the wearer without excessive pressure.

The band is applied to the head with the bulging or projecting side of the pad **28** facing outward.

As in the first described structure, one of the tapered portions **18** is provided with a slit **31** which receives the tape **19** as well as part of the other tapered end portion **18**. When the headband is worn, the slit **31** occupies a position in the region of the wearer's forehead. Normally, the tapes **19** are wrapped about the neck-covering portion **22** above the pad **28** and may be tied in the back or at the forehead of the wearer.

By reason of the fact that the modified band is formed from terry cloth and provided with a straight lower margin **24** parallel with the warp or woof and by reason of the fact that this margin is reinforced by doubling and stitching the cloth, the need for the elastic construction shown in the first described structure is avoided, and the manufacturing costs are correspondingly reduced.

While particular embodiments of this invention have been shown and described, it is not intended to limit the same to the exact details of the constructions set forth, and it embraces such changes, modifications, and equivalents of the parts and their formation and arrangement as come within the purview of the appended claims.

What is claimed is:

1. A head band for use under a bathing cap, comprising: a band member formed of relatively inelastic water-absorbent material including a neck covering portion, ear covering portions, and forehead covering portions; tie straps continuing from the ends of said forehead covering portions and adapted to be wrapped about the head of the wearer over said band member, the lower edge of said neck, ear and forehead covering portions defining a substantially straight line between said straps; the lower margin of said band adapted to conform approximately to and be covered by a bathing cap; and a relatively thick pad of foamed elastomer having closed pores for the exclusion of water disposed along said neck-covering portion and terminating adjacent the ear covering portions, and adapted to cover the back of the neck between the ears, the lower edge of said pad being disposed adjacent the lower edge of said neck-covering portion, the neck-covering portion having a part thereof extending above the said pad, the said tie straps adapted to be tied together above said pad on said part to hold said head band in position on the wearer.

2. A head band as set forth in claim 1 wherein said forehead covering portions overlap and one of said forehead covering portions is provided with a longitudinally

extending slit to receive the tie strap continuing from said other forehead covering portion.

3. A head band as set forth in claim 1 wherein said material is provided with a nap whereby said band tends to cling to the underlying hair of the wearer and hold itself in position.

4. A head band as set forth in claim 1 wherein substantially non-stretchable reinforcing is provided along the straight lower edge of said neck, ear and forehead covering portions between said tie straps.

5. A head band for use under a bathing cap, comprising: a band member formed of relatively inelastic water-absorbent material including a neck covering portion, ear covering portions, and forehead covering portions; fastening means at the ends of said forehead covering portions and adapted to be interengaged to hold the head band about the head of the wearer, the lower edge of said neck, ear and forehead covering portions defining a substantially straight line; the lower margin of said band adapted to conform approximately to and be covered by a bathing cap; and a relatively thick pad of cellular elastomer for the exclusion of water from under said bathing cap and being disposed along said neck-covering portion and terminating adjacent the ear covering portions, and adapted to cover the back of the neck between the ears, the lower edge of said pad being disposed adjacent the lower edge of said neck-covering portion, the neck-covering portion being of a width sufficient to cover the nape of the neck and base portion of the head and having an upwardly convex part thereof extending upwardly above the pad, the upper edges of said ear and forehead covering portions tapering with respect to said lower edge portions thereof toward the ends of said head band to define relatively narrow ends for said forehead covering portions.

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