May 21, 1963 H. L. HURST 3,090,045

THERMAL HEAD APPLIANCE

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FIG. 1

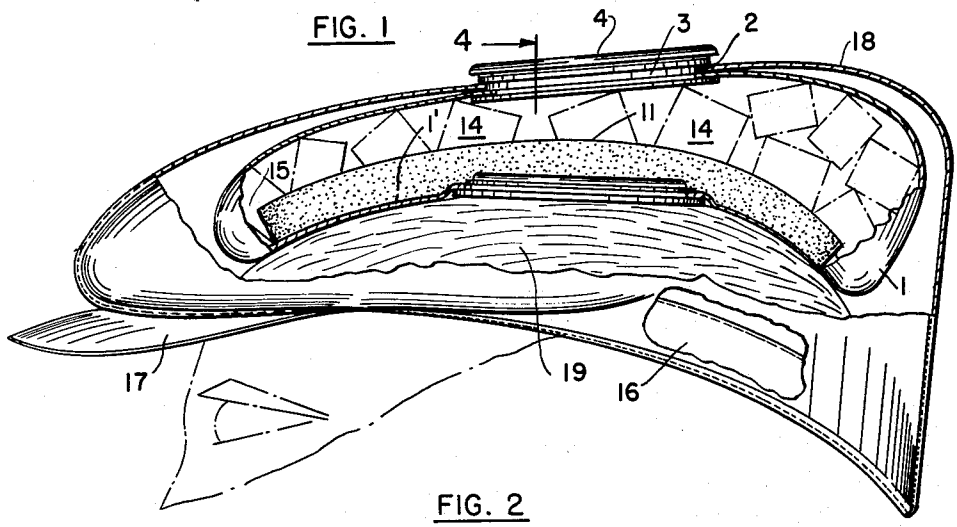


FIG. 2

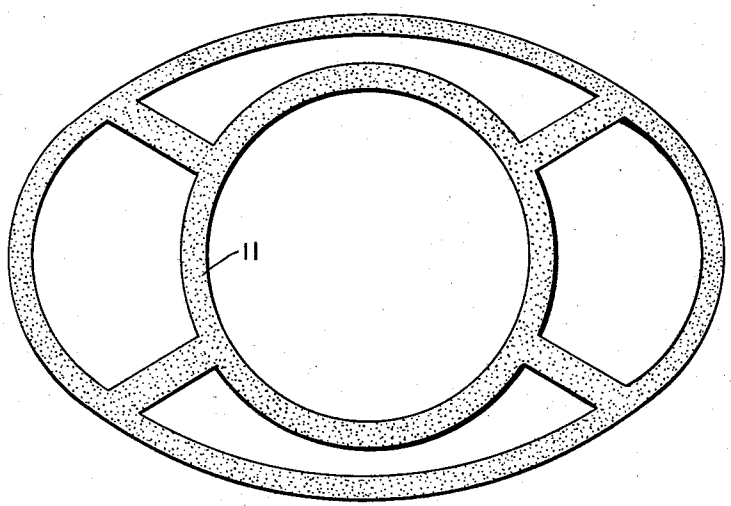


FIG. 3

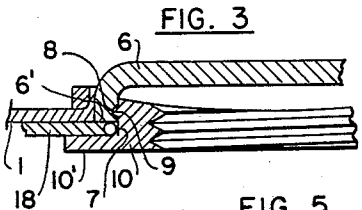


FIG. 4

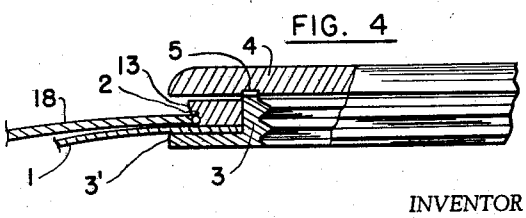
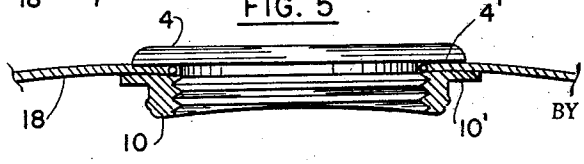


FIG. 5



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FIG. 6

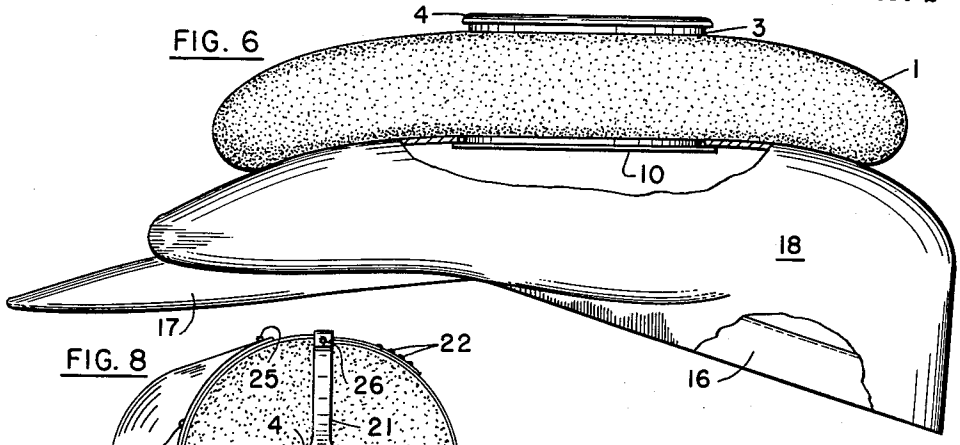


FIG. 8

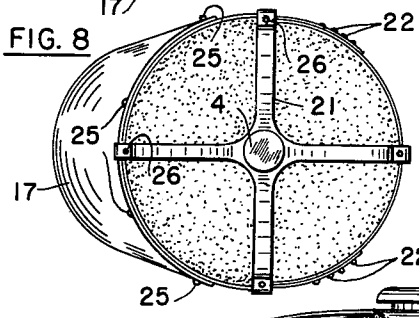


FIG. 7

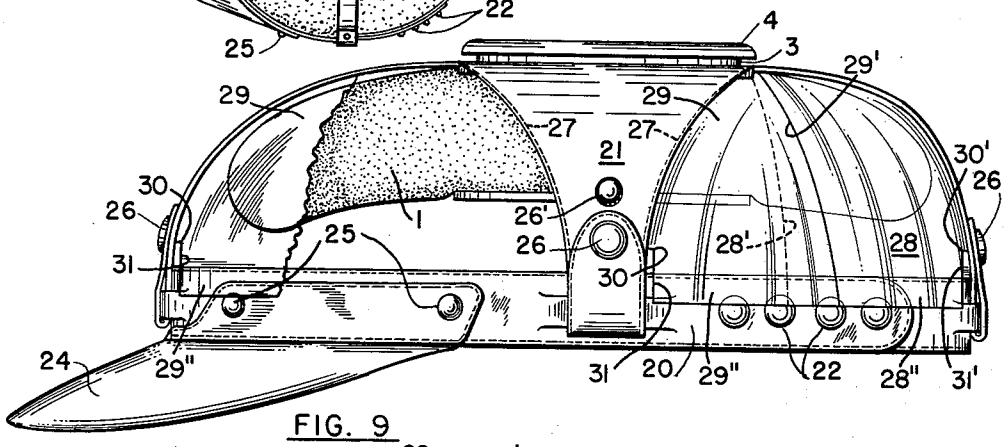


FIG. 9

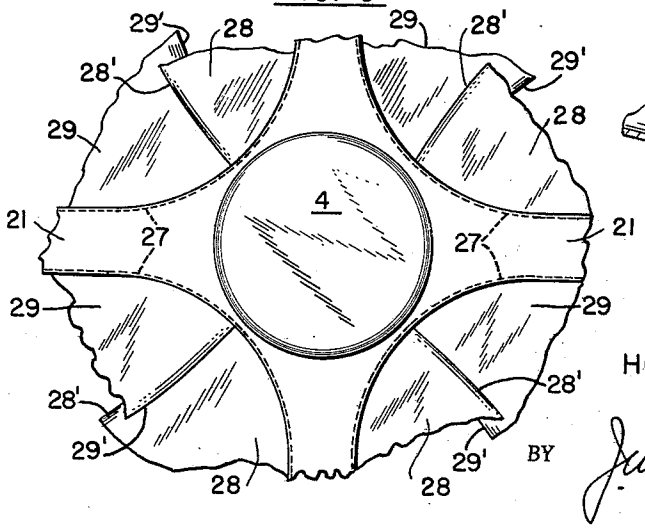
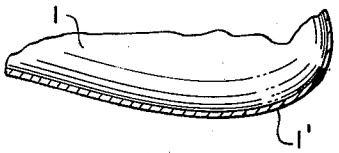


FIG. 10



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3,090,045
THERMAL HEAD APPLIANCE

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3 Claims. (Cl. 2—7)

The present invention relates to a thermal head appliance, particularly to one in the form of a cap or similar means for holding an ice bag in position on the head of a wearer.

There are other types of ice bag or container holders in this general field, but they are too impractical for general use, and it is with this in mind that the present design has been developed.

One object of the invention is to provide an article of this character in which a cooling element such as an ice bag may be incorporated into a cap or similar holding means.

Another object of the invention is to provide an article in which the cooling element may be readily attached and removed from the cap, or similar support, as the case may be.

A further object of the invention is to provide means of adjusting the cooling element relative to the band of the head dress.

While several objects of the invention have been pointed out, other objects, uses and advantages will become more apparent as the nature of the invention is more fully disclosed, which consists in its novel construction, combination and arrangement of its several parts as shown in the preferred embodiments in the accompanying drawings and described in the specifications to follow and particularly pointed out in the appended claims, in which:

FIGURE 1 is an elevational view partly in section of a cap showing the detachable cooling element attached thereto.

FIGURE 2 is a plan view of one of the elements of the cooling element.

FIGURE 3 is an enlarged fragmentary sectional view of the means carried on the bottom side of the cooling element for attaching the same to the cap in the position shown in FIGURE 6.

FIGURE 4 is an enlarged fragmentary sectional view of the opening in the top of the cooling element through which a cooling medium such as, ice or other liquids may be inserted.

FIGURE 5 is an enlarged fragmentary sectional view showing means for closing the opening in the cap crown when the cooling element is not being used.

FIGURE 6 is an elevational view partly in section showing the cooling element attached to the outside of the cap cover.

FIGURE 7 is a view in elevation partly in section showing a modified form of cap or support for supporting the cooling element.

FIGURE 8 is a plan view, on a reduced scale, of the form shown in FIGURE 7.

FIGURE 9 is an enlarged fragmentary plan view of the center portion of the cooling element holding means, as shown in FIGURE 7.

FIGURE 10 is an enlarged fragmentary sectional view of the bottom portion of the cooling element showing the bottom of the container being of greater thickness than the remaining portion of the container wall.

In describing the invention like reference numerals are used to point out like and similar parts throughout the several views.

As disclosed in the accompanying drawings, the improved appliance comprises a cap or the like having a

flexible crown portion for supporting a substantially flat cooling element in the form of a pliable bag or container 1 having an opening 2 adjacent its center. Within the opening there is hermetically sealed therein an open rigid internally threaded ring 3 and within the ring 3 is a threaded closure 4 which is adapted to screw into the ring and seal the opening in the ring and to the container. To insure the sealing between the ring and cover 4 there is a sealing washer 5. The ring 3 is provided with a flange 3' and a second ring 13 adapted to press over the ring 3 for engaging the edges of the opening 2 in the container.

The bag or container 1 may also have means on its bottom to secure the container to the cap. This means comprises an internally threaded cup-shaped member 6 of substantially the same size as the ring 3. This member 6 is hermetically sealed into a similar opening 7 formed in the bottom of the container 1. Within the edge of the member 6 is a recess 8 for receiving a bead 9 of an open end attaching member 10 to form a snap-in connection. This arrangement being for the purpose of snapping the attaching member 10 into place and holding it for ready removal which will be referred to later on.

The container is adapted to receive crushed or small cubes of ice and fluid such as ice water, etc. Within the container 1 there is a died out member 11, preferably made of a spongy material. This member 11 is to retard the ice and fluid from shifting about in the container when the cap is being worn, that is, when the container is moved in various positions. The ice cubes 14 and the fluid 15 are inserted through the opening in the ring 3 by removing the closure 4.

In the form shown in FIGURE 1 the bag or cooling element 1 is used in combination with a cap which includes a supporting band 16, a visor 17 and a crown member in the form of a flexible cover 18. The bag or container 1 may be provided with a slightly curved bottom wall 1' which is slightly more rigid than the remainder of the wall 1 of the container in order that it may be formed to fit the head 19 of the wearer.

The cooling element may be worn outside the cap cover 18 as shown in FIGURE 6. When the cooling element is to be worn in this fashion it is secured in the opening 2 by the cup-shaped element 6 and the member 10 as illustrated in FIGURE 3. The crown portion 18 is positioned and held between the rim 6' of the cup-shape portion 6 and the flange 10' of the member 10. This is done by removing the member 10 (as shown in FIGURE 3) from the cup-shaped member 6 and inserting the member 10 through the opening 2 in the crown portion 18 and snapping it into position into the cup-shaped member 6, as previously described, by use of the recess 8 and the bead 9.

In FIGURE 5 there is illustrated the method used in closing the opening 2 in the crown portion 18 when the bag or cooling unit is not being used. This is done by removing the member 10 from the cup-shaped member 6 from the bottom of the container and reversing its position as shown in FIGURE 5 and taking the closure 4, extending it through the opening 2 in the crown portion and screwing the closure 4 down into the member 10 gripping the edges of the opening 2 between the flange 10' of the member 10 and the flange 4' of the closure 4. This closes the opening in the crown portion 18 when the cooling element is not being used.

A modification of the bag holding head-dress is illustrated in FIGURES 7 to 10 inclusive. In FIGURE 7 bag holding cap or apparatus is provided with a band 20, similar to the band in the cap, having flexible crown bands extending upwardly from the band 20 and over the head of the wearer 21 for engaging and positioning the con-

tainer on the head. The band 20 is adjustable for size by the snap buttons 22. The band is also provided with a detachable visor 24, held to the band by the snap buttons 25. The top portions of the band members 21 are extended in width in order that a hole may be made of sufficient size to accommodate the ring 3 for attaching the bag or container 1 to the bands as previously described for the form shown in FIGURE 1. The flexible bands 21 is also detachable and adjustable by means of the snap fasteners 26 and 26'. This modified form may also be provided with a lining, preferably of a transparent plastic material. This lining is foldable or slidable upon itself as shown at 28' in order to allow for adjusting the size of the head band 20.

The liner for the modified form is shown in FIGURES 7 and 9 and is constructed of a transparent material and preferably formed in two like pieces 28 and 29 for each open section lying between the upwardly extended bands 21. These liner pieces are shown with overlapping edges 28' and 29' adjacent a line substantially central of the opening between the bands 21 (see FIGURES 7 and 9). Each piece of transparent material is stitched, or otherwise bonded to the adjacent edges of the band members 21, such as, by stitches 27. The liner pieces are not attached to the head band 20. Therefore, when the head band 20 is lengthened or shortened the overlapped surfaces of the two pieces are readily movable relative to each other. Further, the liner pieces are not bonded throughout the entire length of the band members 22, but terminated at a point 30 and 31', as shown in FIGURE 7 which leaves small flaps 28'' and 29'' adjacent the bottom of each of the liner pieces which extend over the outer surface of the head band 20. The liner pieces are also cut away as shown at 31 and 31'. This cut away portion together with the flaps overlapping the head band 20 provide a means to prevent the liner pieces from interfering with the shortening or lengthening of either the head band 20, or the upwardly extending bands 21.

As all of the liner elements are of the same construction and operation, it is not believed necessary to describe those covering the other areas.

While the liner elements are shown as slidable one upon the other it is not intended that this present structure shall necessarily be followed. The liner pieces may be constructed so that they may be folded when the length of the band is changed, or they may be constructed of elastic material which will stretch, or contract to comply with the length of the head band, which generally is not very great.

The invention has thus been described specifically and in detail embodying the features of the invention in its preferred form in order that the nature, construction and operation may be clearly understood; however, the specific terms herein are used descriptively and not in a limited sense, the scope of the invention being defined in the appended claims.

I claim:

1. A thermal head appliance comprising, in combination, a substantially flat flexible container having sufficient depth and volume to receive a quantity of crushed ice and a cooling fluid, the container having an enlarged opening in the upper side thereof adjacent the center for inserting the ice and liquid and a closure therefor, a support for the container comprising a cap having a band adapted to extend around the head of the wearer and having a flexible crown portion extending upwardly from the band adapted to extend over the head, said cap having a relatively large opening therethrough in the crown portion thereof and means adjacent the center of the container cooperating with the edges of the opening in the cap for securing the container in position on the cap.

2. A thermal head appliance as claimed in claim 1 wherein the crown portion comprises a plurality of flexible bands connected to the head band and extending upwardly and over the head of the wearer and having an opening at the uppermost point of the extended bands cooperating with the edges of the opening in the container for securing the container in position on the upwardly extended bands.

3. A thermal head appliance as claimed in claim 2 wherein the ends of the upwardly extended bands connected to the head band are provided with means cooperating with means carried by the head band for adjusting the length of the upwardly extended bands relative to the head band and means for adjusting the length of the head band.

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