ABSTRACT OF THE DISCLOSURE

A heat treatment cap that includes two pieces of material heat sealed together at their outer edges and circumferentially a short distance therefrom to form two separate pockets therebetween. An elastic binding is provided in one of said pockets and liquid is inserted into the other of said pockets, said last mentioned pocket being provided with interconnecting compartments for equalizing the liquid therein. A holding member is also provided to hold the cap when it is filled with the liquid.

Background of the invention—Field of the invention

This invention relates to a cap used for heat treatments for the hair and scalp.

Description of the prior art

In the treatment of a person's hair and scalp, caps containing a heated liquid have been proposed as shown in U.S. Patent No. 2,783,806. The cap in said patent is made of two pieces of material having different diameters, said pieces being heat sealed together circumferentially a short distance from the edge of the smaller of said two pieces of material. The two pieces of material thus form a pocket therebetween which contains a liquid permanently sealed therein. The overlapping portion of the larger of said two pieces of material is turned inwardly and gathered and the edge is covered with an elastic binding for sealing said cap upon the head of the user. In addition, a series of heat sealed lines between said circumferential sealing line provide a series of interconnecting compartments for equalizing the liquid in such compartments.

A disadvantage of the hot oil treatment cap of Patent No. 2,783,806 is that the liquid is permanently sealed within the pocket formed by the two pieces of material. Since hot water must be used in treatments for the hair and scalp, the cap has to be dropped into a pot of boiling water to heat the liquid within the cap every time it is used. When the cap is taken out of the boiling water, it has to be wiped dry with a towel before it is placed upon the head of the user. However, removing the cap from said boiling water and wiping it dry are difficult operations because there is no convenient way to hold said cap when performing the above operations. Accordingly, a person has to wear gloves when handling the cap to prevent being burned.

The present invention is an improvement on U.S. Patent No. 2,783,806 that eliminates the above difficulties and disadvantages by providing a cap having closure means for filling and removing liquid therefrom. There is also provided means to facilitate the handling of said cap when it is filled with boiling water.

While other caps have been suggested that enable liquid to be inserted and removed therefrom, such as shown in U.S. Patent Nos. 1,769,186 and 2,049,725, the cap of the present invention is more efficient, easier to use and less expensive to fabricate.

Summary of the invention

The heat treatment cap of the present invention includes two pieces of non-porous circular cut material that are heat sealed together at their outer edges and circumferentially a short distance therefrom to provide two separate pockets between said two pieces of material. An elastic binding is provided in the pocket formed by the circumferential sealing line and the outer edge sealing line for sealing said cap upon the head of the user, said binding being relatively fixed in position by a series of circumferentially spaced heat sealed spots. Boiling water is inserted into the other pocket formed by said circumferential sealing line by means of a closure assembly centrally provided in the outer piece of material encompassing said other pocket. The closure assembly is heat sealed to said outer piece of material and is provided with a plastic ring therebetween to facilitate handling of the cap when it is filled with water. In addition, a series of heat sealed lines is provided between the circumferential sealing line and the closure assembly to form a series of interconnected compartments for equalizing the water in said other pocket.

Accordingly, an object of the present invention is to provide an inexpensive cap which comprises a closure assembly for inserting a heated liquid into a plurality of interconnected compartments formed in said cap, and having handling means for holding said cap when it is filled with the heated liquid.

Another object and feature of the present invention resides in the simplified heat sealing operations wherein essentially all said sealing operations are performed at the same time in one operation.

The above and other features and advantages of the present invention will become more apparent from the consideration of the following detailed description when taken in conjunction with the accompanying drawings.

Brief description of the drawings

FIG. 1 is a top plan view, with parts cut away, showing the elements of the cap of the present invention in position for heat sealing the same together;
FIG. 2 is a sectional view taken through line 2—2 of FIG. 3;
FIG. 3 is a top plan view of the cap of the present invention;
FIG. 4 is a sectional view taken through line 4—4 of FIG. 1;
FIG. 5 is a sectional view taken through line 5—5 of FIG. 1; and
FIG. 6 is a sectional view, similar to that of FIG. 5, showing the elastic binding in its normal position.

Description of the preferred embodiment

Referring to the drawings, numeral 10 represents a cap, preferably made of a plastic non-porous and waterproof material, such as vinyl. The cap 10 is made of outer and inner pieces of circular cut vinyl material 11 and 12 respectively, while the outer piece having a centrally located opening 13; said opening being provided with a closure assembly 20 fitted therein. The closure assembly is preferably made of elastomeric material, such as rubber and the like, and comprises a neck member 14 having an annular flange 15 extending radially from the bottom part thereof. A closure plug 16, having a lift tab 17 extending radially therewith, is attached to flange 15 by means of flexible arms 28 and is adapted to be frictionally received in neck member 14. It will be appreciated that other types of closures can be provided to close neck member 14, such as screw threaded plugs and the like. The closure assembly is heat sealed to said outer piece of material 11 by means of flange 15 which fits over opening 13 in said piece of material. Before sealing flange 15 to said piece of material, a thin flexible plastic ring 29 is provided therebetween to facilitate handling of the cap when it is filled with boiling water, said ring 29 extending radially beyond flange 15 and having an opening there-in which is in registry with opening 13.
The outer and inner pieces of material, preferably having equal diameters, are then positioned one on top of the other so that holes 18 and 19 in the respective pieces are in substantial registry, said holes also serving to secure said pieces to assembly jig pins 21. An elastic binding 22 is positioned between the outer and inner pieces 11 and 12, and is held under tension by means of pins 24. A cap 25 is then assembled by heat sealing said pieces together at their outer edges 23 and circumferentially a short distance therefrom, as shown at 23'. There is thus formed between said pieces of material, two separate pockets 24 and 25 that retain respectively therein the elastic binding 22 and the liquid that is later inserted through closure assembly 26.

When the cap is assembled, as heretofore stated, a series of heat sealed lines 26' is further provided to seal material 11 to material 12 to form interconnected compartments 27 in pocket 25. The sealed lines 26' permit the liquid to flow between the interconnected compartments 27 and equalize to a great extent the liquid in such compartments. Additional sealing lines 26' may be provided to form sub-compartments therein. It is evident that any form of design may be made with the heat sealed lines which will permit the liquid to flow between such lines.

A further series of circumferentially spaced heat sealed spots 31 is provided to seal material 11 to material 12 for positioning elastic binding 22. Thus, when the assembled cap is removed from assembly jig pins 21, the elastic binding abuts said spots 31 and gathers the edges of said cap for sealing it upon the head of the user. It will be appreciated that aside from heat sealing the closure assembly to outer piece 11, all remaining heat sealing operations referred to above are performed at the same time in one operation. By thus simplifying the heat sealing operation, a more efficient and less expensive fabricating procedure is obtained.

The cap of the present invention enables the user to obtain a hair set in approximately 6 to 10 minutes. After setting the hair with rollers for the particular hair style desired, the cap is held by the plastic ring and 4 cups of hot water are poured into the cap by means of the closure assembly. The cap is then placed over the rollers and is worn for 6 to 10 minutes depending on the length and thickness of the hair. Upon removing the cap, the rollers are let down and the hair is combed into the desired hair set.

In using the cap for heat treatments of the hair and scalp, the user merely applies hair conditioning cream or oil to the moistened hair and rubs it into the scalp thoroughly. The cap is filled with hot water, as noted above, and is worn for approximately 10 minutes. The heat of the cap will recondition the hair by helping the beneficial oils absorb into the hair and scalp. Upon removing the cap, the hair is shampooed in the usual manner. If, at this point, the user also wishes a quick and long lasting hair set, then the hair is towel dried and the hair set procedure outlined above is followed. The result is as fine a heat treatment and hair set as can be obtained in a beauty parlor at a fraction of the cost.

The heat of the cap can also be used to greatly accelerate the time it takes to bleach or dye a person's hair.

While a specific embodiment of the invention has been shown and described in detail, it will be readily understood and appreciated that various changes or modifications thereof may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

I claim:

1. In combination with a heat treatment cap for the scalp and hair comprising two pieces of nonporous circular cut plastic material connected together to form a pocket therebetween and an elastic binding for setting said cap upon the head of the user, wherein the improvement comprises two pieces of material that are heat sealed together at their outer edges and circumferentially a short distance from said edges to provide first and second pockets between said two pieces of material, said elastic binding being positioned in said first pocket and being moveable relative to the walls thereof, and a closure assembly in one of the pieces of material for inserting liquid into said second pocket.

2. The cap in accordance with claim 1, and a series of heat sealed lines between said circumferential sealing line and said closure assembly providing a series of interconnected compartments for said liquid.

3. The cap in accordance with claim 1, said two pieces of material being of substantially equal diameter.

4. The cap in accordance with claim 1, and a plastic ring between said closure assembly and said material to facilitate handling of said cap.

5. The cap in accordance with claim 1, and a series of circumferentially spaced heat sealed spots between said circumferential sealing line and the outer edges of said pieces of material providing positioning means for said elastic binding.

6. The cap in accordance with claim 1, wherein said closure assembly comprises a neck member having an annular flange extending radially from the bottom part thereof and a closure plug to be frictionally received in said neck member.

7. The cap in accordance with claim 6, wherein said closure plug has a lift tab extending radially therefrom, and flexible means connecting said closure plug to said flange.

References Cited

UNITED STATES PATENTS

1,028,826 6/1912 Miller 2--68
1,144,121 6/1915 Guinzburg 2--68
1,675,395 7/1928 Whilier 150--8
2,049,723 8/1936 Pomeranz 150--2 3
2,101,734 12/1937 Chapple 2--68
2,324,735 7/1943 Spanel 161--7
2,738,806 3/1957 Andreadis 150--2 3
2,838,768 6/1958 Fischett 150--8 X
3,051,960 9/1962 Rendlich 2--68

JOSEPH R. LECLAIR, Primary Examiner.
FRANKLIN T. GARRETT, Examiner.
D. F. NORTON, Assistant Examiner.