Aug. 3, 1965 R. L. SAWIN 3,198,196

HAIR TREATING CONTAINER WITH A HAIR POSITIONING AND HOLDING PART

Filed Oct. 15, 1962

Fig. 1.

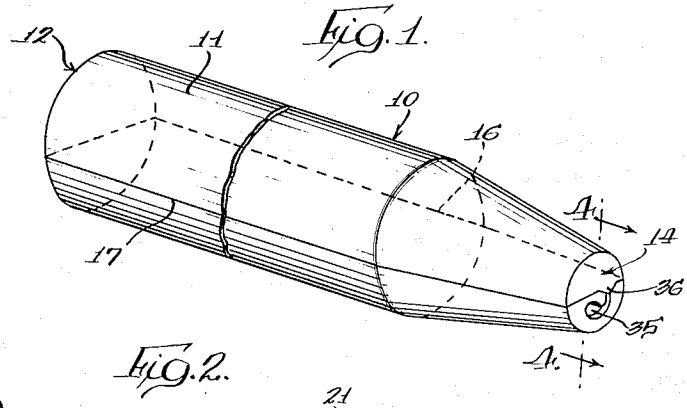


Fig. 2.

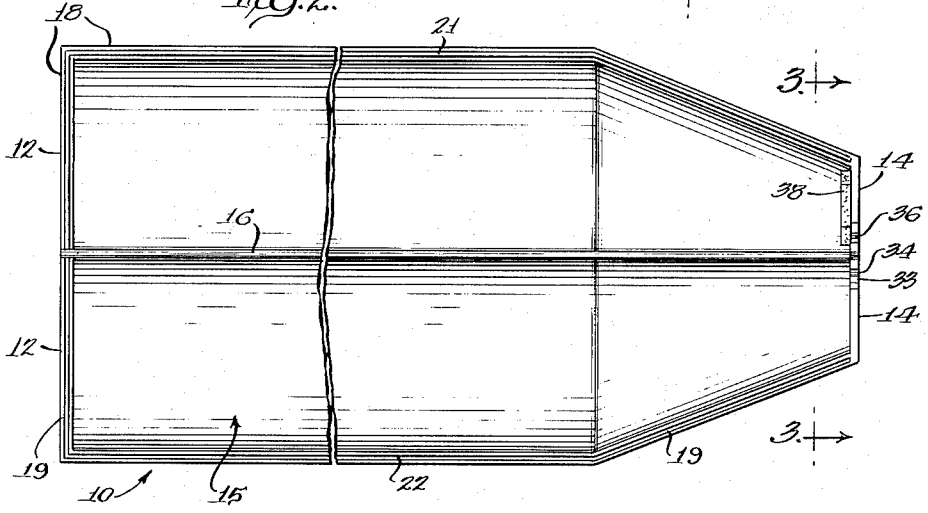


Fig. 3.

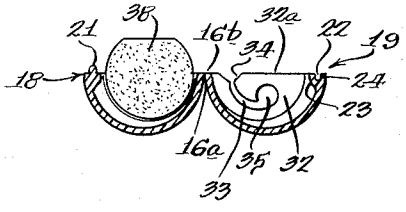
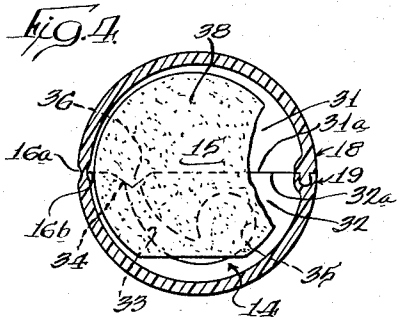


Fig. 4.



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HAIR TREATING CONTAINER WITH A HAIR POSITIONING AND HOLDING PART

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7 Claims. (Cl. 132—9)

This invention relates to treatment of hair or the like, and more particularly relates to devices for such treatment, especially with fluid substances such as liquid hair treating agents.

In the practice of a beauty operator or hair stylist it is often necessary to treat various strands of hair from various sections of the head, e.g. for frosting, dyeing, bleaching, or the like, in order to create the desired hair style. In present practice, makeshift means are often employed to effect such treatment of strands of hair. For example, the beauty operator or hair stylist may select a few strands of hair for treatment and lay the strands of hair onto a piece of aluminum foil. A piece of cotton is then wrapped around the ends of the hair closest to the scalp and the aluminum foil is formed around the piece of cotton. Thereafter the bleach or dye or other treating agent is poured onto the hair and the aluminum foil is wrapped around the hair in order to prevent the bleach from contacting neighboring strands or the scalp. Such a procedure is fairly laborious and it usually takes several hours to complete the hair treating process. Additionally, the ever-present possibility of the aluminum foil either unwrapping or leaking leaves much to be desired in the treating process in the way of dependability and safety.

It is a general object of my present invention to provied a new and useful device for treating hair and the like.

Further, it is an objective of this invention to provide a new and useful device for use in treatment of hair with liquid treating agents more conveniently, dependably and safely and in less time than often has heretofore been possible.

It is also an object of this invention to provide a new and useful device including an openable and closeable container for containing hair and liquid, which container has an opening or port through which the hair may protrude during treatment, the hair being attached at one end to a head, wig, or other object.

Various features or embodiments of the device of the above objects may include means for locking or locking and sealing the container in closed position, means directing hair laterally into the port, and/or hinge or other means for opening and closing the container.

A still further object of this invention is to provide such a container as described in accordance with any of the foregoing objects, features, or embodiment, which container may be a formed member, e.g. molded or pressed, as a unit including the means for opening and closing, the means for locking and sealing, and/or the port means and the means directing hair into the port.

Still another object is to provide a device in accordance with the foregoing which includes improved means sealing the port means through which the hair may project or extend.

Still other objects and features will become apparent from the following detailed description taken in connection with the accompanying drawings, in which:

FIGURE 1 is a perspective view of an embodiment of the device of this invention in closed position;

FIGURE 2 is a plan view of the embodiment of FIGURE 1 in open position;

FIGURE 3 is a section through the embodiment of FIGURE 1 along line 3—3 in FIGURE 2 showing the hinge means and locking means more clearly; and

FIGURE 4 is an enlarged sectional view of end 14 looking in the direction of arrows 4—4 of the embodiment of FIGURE 1 for more detailed illustration especially of the port and seal means.

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings and will herein be described in detail one embodiment of the invention with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated.

Referring first to FIGURES 1 and 2, a container indicated generally at **10**, composed of a resilient or flexible lightweight material such as polyethylene or a light aluminum alloy, constitutes the main body of the illustrated device. The container may have any internal diameter and/or length desired for a particular hair treating process, depending at least somewhat on the length and/or thickness of the strand of hair desired to be treated. Various containers of varying sizes can be provided in a set selection of the proper size by the hair stylist. The illustrated container is an elongate molded plastic container having an internal diameter of about ½ inch and an internal length of about 3 inches. The material of construction for the container is preferably plastic and, where it is desired to use the container to hold liquids exerting strong chemical action, it is preferred that the container be substantially inert toward the action of the treating agent. In any event, the container is adapted to contain such treating agents as hair bleaches, dyes, rinses, or other treating agents well known to those in the art, as will be more apparent hereinbelow. Container **10** is generally cylindrical and is formed of circular end **12**, generally cylindrical side **11** and circular end **14**, side **11** defining a taper of the container adjacent end **14** and toward end **14**. The sides and ends of the container define a chamber **15** within the container adapted for receiving and containing strands of hair. Means for opening the container are provided by hinge **16** which, in the illustrated embodiment, is formed of a pair of opposing grooves **16***a* and **16***b* (FIGURE 3) lengthwise in side wall **11**. Opposiing hinge **16**, closure snap seam **17** appears in side **11** and ends **12** and **14** with the container in closed position as illustrated in FIGURE 1.

The illustrated container **10** may be considered as being a formed member having two cooperating halves interconnected by hinge **16** and adapted to be brought together to form chamber **15**. The two formed halves have peripheral interlockable lips **18** and **19**, best seen in FIGURES 2 and 3. The cooperating halves are generally pivotable toward and away from each other for closing and opening the container.

Locking means are provided for locking container **10** in closed position. Accordingly, as illustrated, a snap closure is made up of cooperating interlocking elements along lips **18** and **19**. Lip **18** carries an elongate bulbous projection on end **12** and side **11**, the bulbous projection being indicated at **21** in FIGURE 3. Lip **19** is turned inward along the seam edge of end **12** and side **11** as indicated at **22**, providing a resilient inward projection of lip **19**. A second inward projection from side **11** is provided below lip **19**, indicated at **23**. Projection **23** is configurated to form receptacle **24** and to oppose projection **22** thereby forming a snap groove. The snap groove, i.e. receptacle **24**, is adapted to receive the bulbous projection **21**. The illustrated locking means is essentially a snap tongue-in-groove seal with projection **21** as the tongue and projections **22** and **23** forming a snap groove **24**. All of the projections **21** through **23** are resilient, permitting the forced and snapped insertion of tongue **21** into the groove.

Especially with reference to the enlarged view of FIGURE 4, end **14** is comprised of a pair of cooperating end plates **31** and **32**. The cooperating edges of end

plates 31 and 32 are designated 31*a* and 32*a* respectively. Port 35 is provided in end plate 32 for containing hair strands. Channel 33 is an opening through plate 32 and extends from edge 32*a* in a curvilinear, e.g. arcuate path to port 35, for passage of strands of hair laterally into port 35. A generally triangular opening or delta 34 connects channel 33 with edge 32*a* and functions to more readily direct strands of hair laterally into channel 33. A triangular guide member or plug for opening 34 is provided on edge 31*a* for cooperation with triangular opening 34 so that when the container is in closed position, member or projection 36 obstructs channel 33 against lateral removal of hair strands therefrom toward surface 32*a*.

A sealing member 38 is provided for sealing port 35 and channel 33 against substantial flow or seepage of liquids therefrom. The sealing member is a sponge rubber pad of plate-like configuration attached by suitable means such as adhesive to the interior surface of plate 31 adapted to seal port 35 and channel 33 with the container in closed position. Suitable adhesives, e.g. for adhering sponge rubber to polyethylene or other plastic or even metallic surfaces, are available and well known to those in the art. The tongue-in-groove locking means provides a seal against leakage of liquids around the closure of the two container halves except at end 14, i.e. between surfaces 31*a* and 32*a*. Thus, sealing member 38 is adapted to seal end 14 against substantial leakage. However, the seal at end 14 need not be complete because end 14 will be normally in a generally upward disposition during use of the device. However, where it is desired to use the device with end 14 in a generally downward disposition, edges 31*a* and 32*a* may be provided with more positive sealing means such as the tongue-in-groove lock means described above with reference to other cooperating edges of the container halves.

In use of the illustrated device, container 10 is opened and a strand of hair may be laid therein with the portion of the strand adjacent the scalp overlying edge 32*a* and directed into opening 34. The container may then be rotated, e.g. ¾ of a turn, along its longitudinal axis and the strand of hair is directed laterally to channel 33 into port 35. The container, still open, is then disposed with either of the container halves in a downward position adapted to receive and contain the hair treating agent. The hair treating agent is then poured into the downwardly disposed half and the container is snapped closed. The sponge rubber seal, being very elastic, is distorted by the hair strands during closure of the container and in effect pushes the hair strands outward in opening 35 and seals the remainder of the opening and additionally partially wraps around the hair strands to substantially isolate channel 33 from the liquid in the container. The sealing member 38 also serves to seal the line of juncture between edges 31*a* and 32*a* while the tongue-in-groove locking means, described above, seals the remainder of the closure edges of the container to prevent escape of liquid therethrough.

Where gaseous reaction products are produced by reaction within container 10, it may be desirable to provide a number of vents, not shown, to permit escape of gases, especially where such gases are produced in volumes sufficient to force container 10 open, e.g. where seal member 38 provides a fairly complete seal. In such cases it may be advantageous to construct the container of a configuration providing the vents through the container in an area normally disposed upwardly when the container is in use. The container may advantageously be designed to be self-positioning by providing a flat or substantially flat side which would normally be placed next to the scalp so as to leave the vent holes in upward disposition to prevent escape of the treating liquid therethrough.

It is apparent that the container portion of the device, including the cooperating halves, hinge means, locking means, port and channel, can be molded as a unit or can otherwise be constructed conveniently and inexpensively. However, the container is also reuseable and need notbe disposed of after each hair styling use. A sealing member for sealing the port may readily be incorporated in the molded article or may be formed separately and suitably attached thereto for association with the port by means of adhesives, heat seal, or other means.

Modifications of heat seals which may conveniently be incorporated include the use of a resilient member projecting inwardly from plate 31 and adapted to cooperate with the inner surface of plate 32 to force the hair downward and form a labyrinth through which the liquid would have to flow in order to leak from the container. The labyrinth may further be complicated by an additional projection from the inner surface of plate 32 inwardly over the projection from the inner surface of plate 31. As a modification of the port means omitting the channel, a simple depression in either of edges 31*a* or 32*a* may be employed. Other modifications of the device will be apparent to those in the art.

It is apparent from the foregoing that the present invention provides a reuseable snap-open/snap-shut type container which provides a significant saving in time in its use compared with other means customarily used in hair treating operations. The container prevents accidental contact between the treating agent and other strands of hair, i.e. strands decided to remain untreated, and/or the scalp. The operator can merely select the strands of hair, lay them in the container, pour in the bleach and snap the container shut. After the desired time, the container may conveniently be opened, e.g. by insertion of fingernails along line or seam 17, after the desired treating time has expired, and the hair may then be removed. The treating agent may be wiped out of the container and the container may be washed at the stylist's convenience, to remove any dye or bleach remaining therein.

I claim:

1. A hair treating device comprising shell means having walls forming an enclosure when closed, means for opening and closing said shell means along a seam line, means for locking and sealing the shell means in closed position, a port in a wall of said shell means displaced from said seam line, and a channel in said wall of said shell means connecting said port at a first end of the channel with said seam line at a second end of the channel, said channel including a portion thereof offset from said port.

2. The device of claim 1 wherein said second end of said channel is offset relative to said first end.

3. The device of claim 1 wherein said channel is curvilinear whereby the hair strand may be inserted laterally therethrough by placing the hair strand at the second end of the channel and generally rotating the container to direct the strand of hair through the curvilinear path of said channel and into said port.

4. The device of claim 1 including means at the second end of said channel for directing hair into said channel with said shell means open, and means blocking the passage of hair from said channel with said shell means closed.

5. The device of claim 1 including means contained within said enclosure and secured to the inner surface of a wall of said shell means in a position to be carried away from said channel and port during opening of said shell means and to be carried into engagement with the inner surface of the wall of said shell means having said port for sealing said channel and port upon closing said shell means.

6. A hair treating device comprising a pair of cooperating shells having walls including opposing end walls and forming an enclosure when closed against each other, hinge means interconnecting said shells for opening and closing said shells along a seam line, means for locking and

sealing the shell means in closed position, a port in one end wall of one of said shells displaced from said seam line for holding a strand of hair passing into the enclosure, and a curved channel in said one end wall having two ends offset relative to each other and communicating respectively with said seam line and said port.

7. A hair treating device comprising shell means having walls forming an enclosure for containing a strand of hair when closed, means for opening and closing said shell means along a seam line, means for locking and sealing the shell means in closed position, a port in a wall of said shell displaced from said seam line, channel means in said wall means connecting said port at a first end of the channel with said seam line at a second end of the channel for directing a strand of hair from the seam line laterally into the port, and means at the first end of the channel defining a hook element blocking the strand of hair against movement form said port toward said seam line.

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RICHARD A. GAUDET, *Primary Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,198,196

August 3, 1965

Robert L. Sawin

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

In the heading to the printed specification, lines 2 and and 3, and in the heading to the sheet of drawings, lines 2 and 3, title of invention, for "HAIR TREATING CONTAINER WITH A HAIR POSITIONING AND HOLDING PART", each occurrence, read -- HAIR TREATING CONTAINER WITH A HAIR POSITIONING AND HOLDING PORT --.

Signed and sealed this 8th day of March 1966.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents