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(54) **REUSABLE POUCH FOR TREATING A LOCK OF HAIR**

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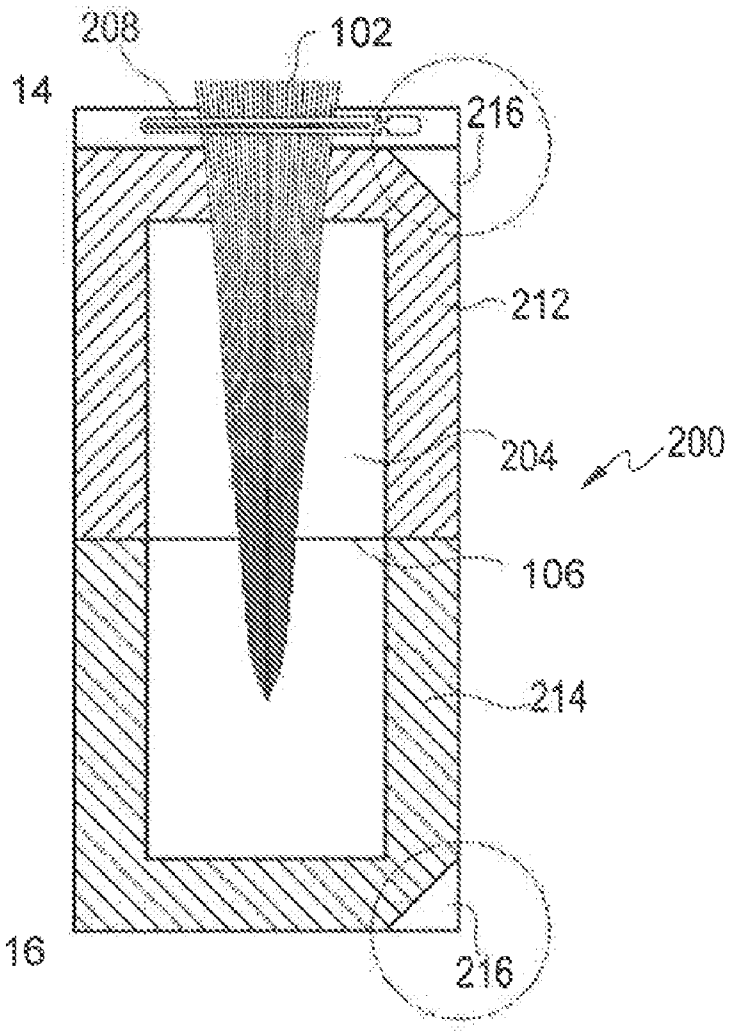
USPC **132/208**; 132/270; 132/317

(57) **ABSTRACT**

A device is provided that allows a user to apply a hair treatment chemical to hair. The device comprises an impervious sheet which can be folded along a transverse axis to form an envelope for retaining a lock of hair and a dose of hair treatment chemical. A releasable fastener is arranged around peripheral regions of the sheet to engage the sheet to fasten together opposing portions of the sheet. A region of the fastener engages the device to the lock of hair to retain the device to the hair while the sheet is unfolded, to permit the user to apply a chemical with the device in the open position. The fastener may consist of a layer of grip material comprising a self-engaging three dimensional structure wherein opposing portions of said grip material are capable of releasably fastening together when urged together and of releasably engaging a lock of hair.



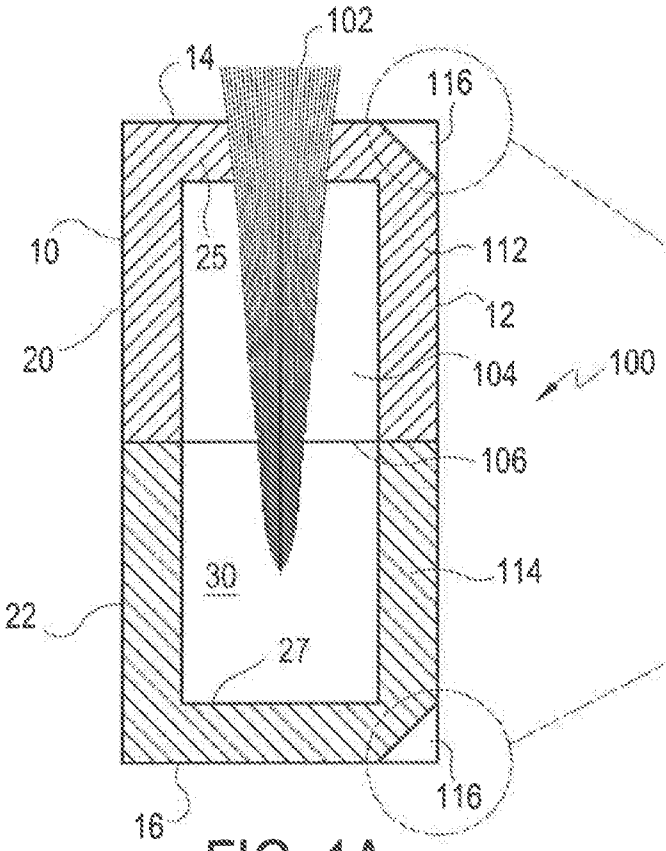


FIG. 1A

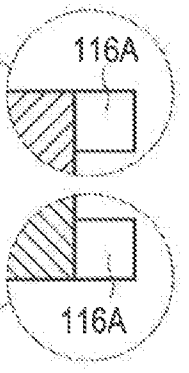


FIG. 2A

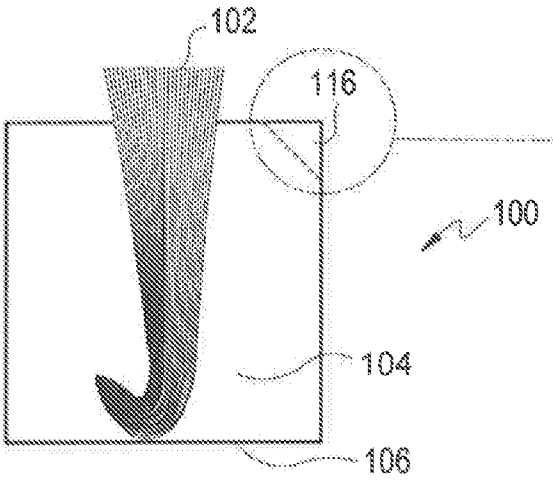


FIG. 1B

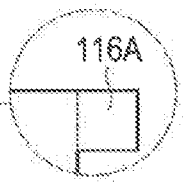


FIG. 2B

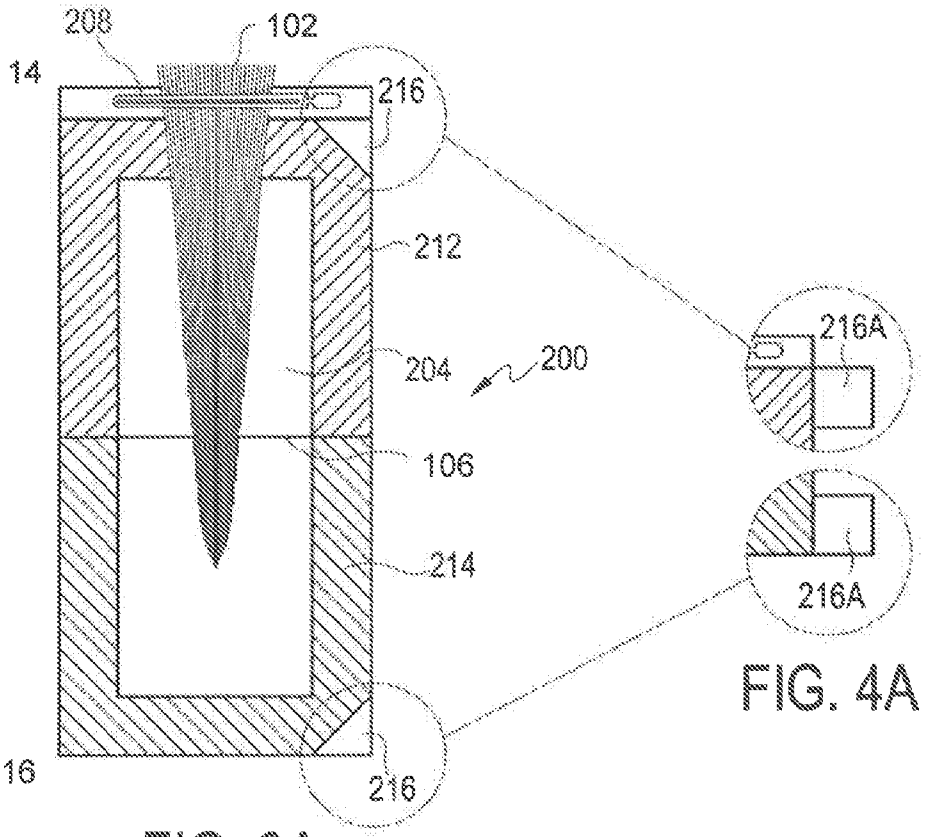


FIG. 3A

FIG. 4A

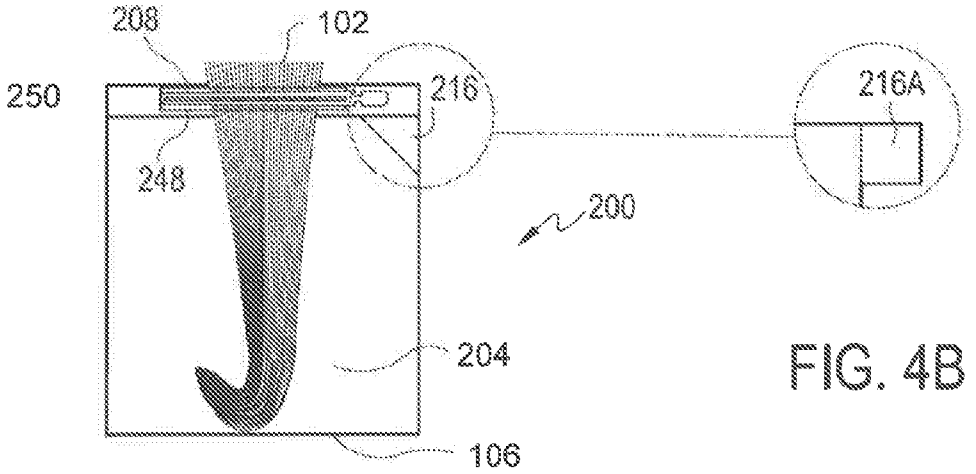


FIG. 3B

FIG. 4B

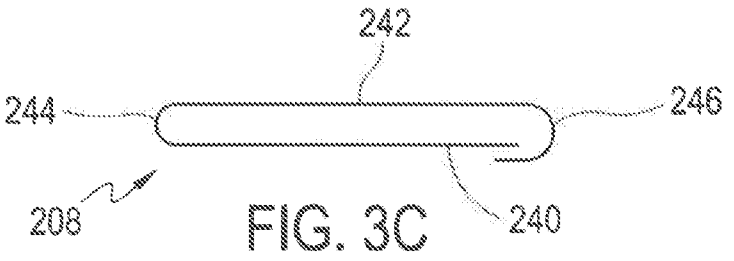


FIG. 3C

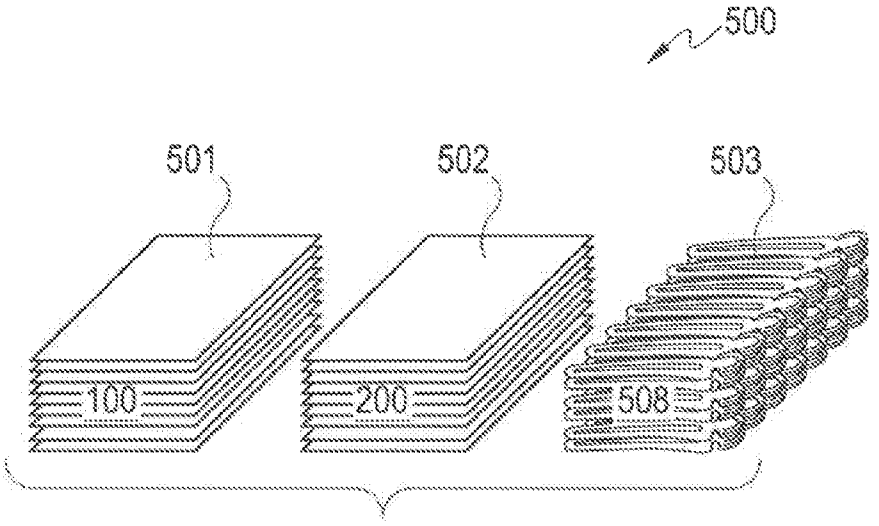


FIG. 5

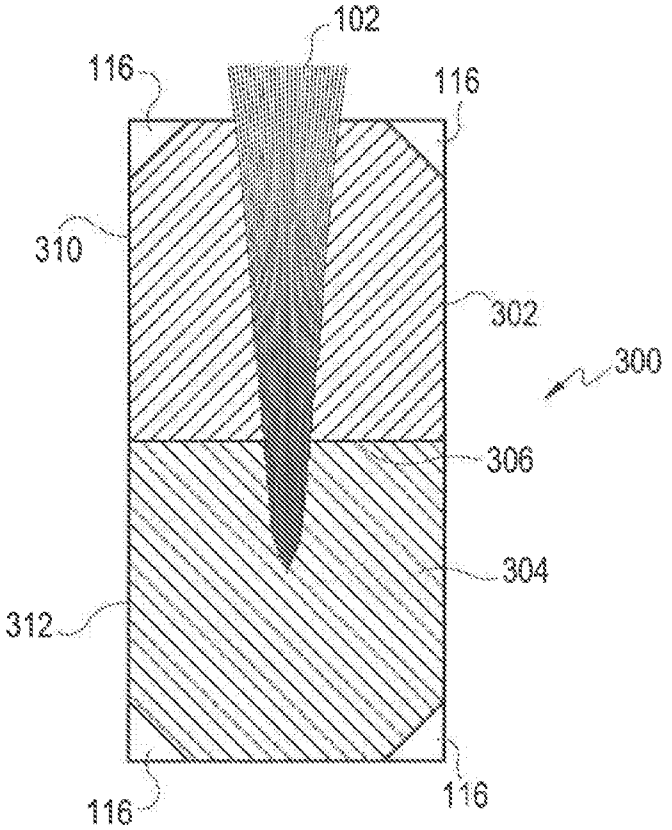


FIG. 6

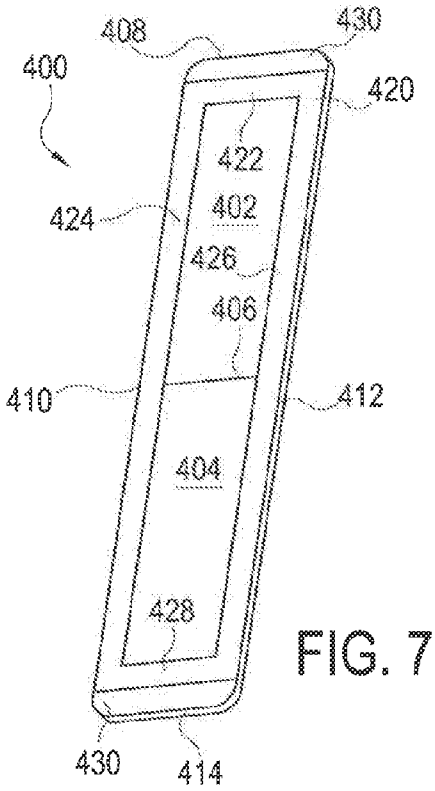


FIG. 7

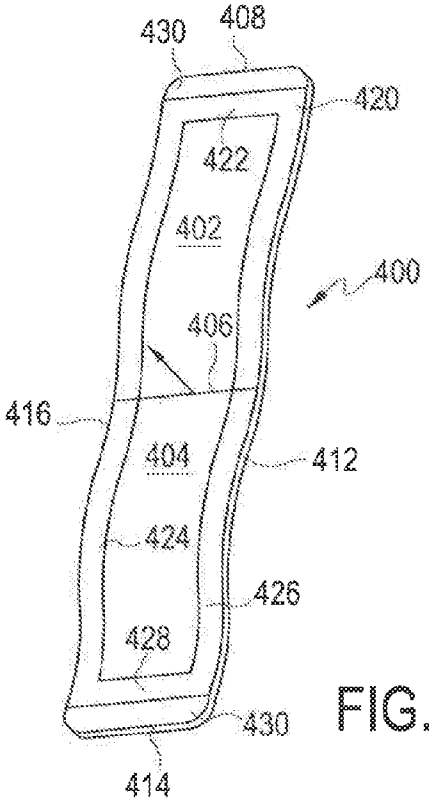


FIG. 8

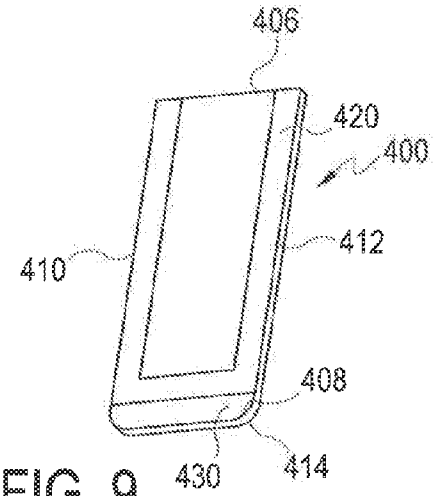


FIG. 9

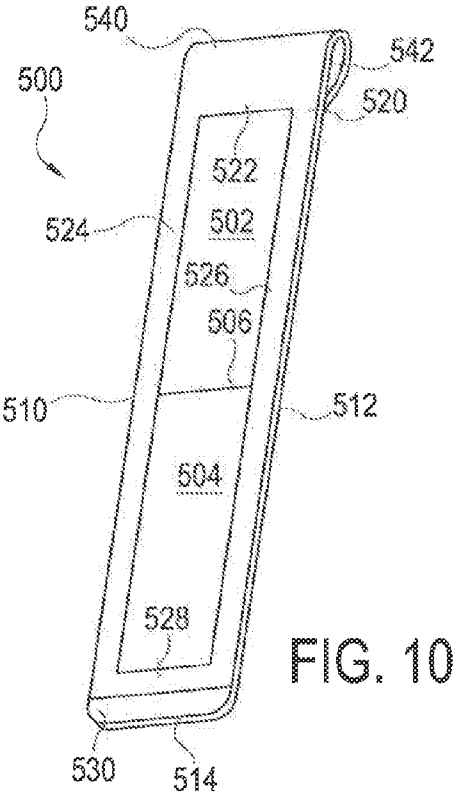


FIG. 10

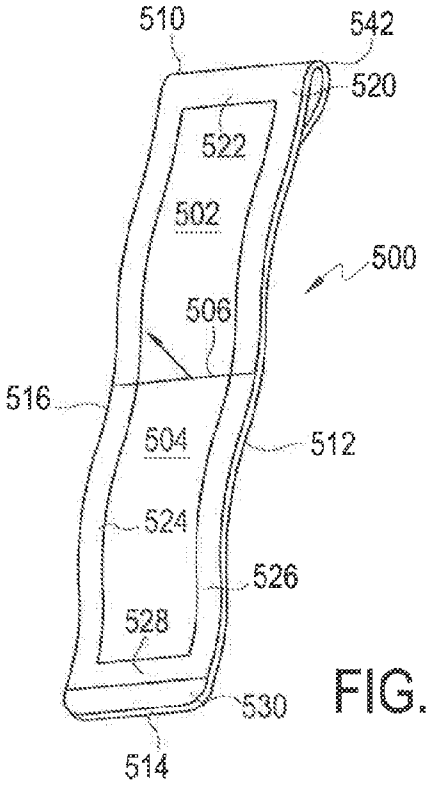


FIG. 11

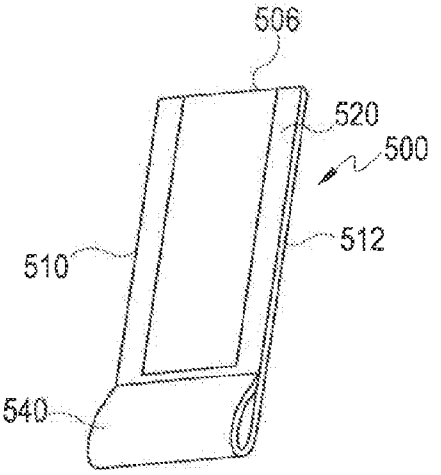


FIG. 12

REUSABLE POUCH FOR TREATING A LOCK OF HAIR

CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims Convention priority to U.S. application No. 61/769,894 filed on Feb. 27, 2013. The contents of said application are incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present invention relates to cosmetic treatment of hair. In particular, the invention relates to an apparatus in the form of a reusable envelope or pouch for applying a chemical such as dye or bleach to human or animal hair and a method for using such a pouch.

BACKGROUND OF THE INVENTION

[0003] Chemical treatment of human or animal hair, for example by highlighting, low lighting or bleaching, is traditionally performed by separating individual locks of hair, placing aluminum foil under each lock, applying hair dye or other chemical to the locks and wrapping the foil around each lock to temporarily seal in the chemical. When properly performed, this method allows the chemical to contact the hair for a prolonged period to treat the hair. However, this traditional method is laborious and requires a degree of expertise. Unless carefully performed, the hair treatment chemical can ooze out of the aluminum foil wrap. Aluminum foil is also opaque, requiring a user to open the wrap to check for hair color changes and/or to have sufficient expertise to determine the appropriate treatment time.

[0004] An alternative treatment involves the use of a plastic masking sheet, such as that described in UK patent no. GB 2426447 and U.S. Pat. No. 5,287,864. The masking sheet is generally rectangular with a pressure sensitive contact adhesive along one edge. A lock of hair can be placed on the sheet and adheres to the selected adhesive. A chemical is applied to the hair, normally in the form of a paste or other viscous formulation. The sheet is then folded over to cover the lock of hair and the adhesive layer retains the sheet in the folded over position with the treated lock of hair sandwiched between the two layers of the sheet. The folded structure is open at the sides. Unless carefully performed, the chemical can escape from the sides of the structure and the device can dislodge from the hair with movement.

[0005] For these reasons, these treatments are usually performed in a beauty parlor and are relatively costly and time-consuming.

SUMMARY OF THE INVENTION

[0006] An objective of the present invention is to provide an improved method and apparatus for applying a chemical treatment to hair.

[0007] One aspect of the invention relates to a device for applying a chemical to a lock of hair. According to this aspect, the device comprises:

[0008] a sheet comprising a liquid-impervious material having opposing lateral edge regions, a top edge region and a bottom edge region opposed to the top edge region. The sheet is configured to be folded along a transverse axis wherein the top and bottom edge regions are brought together to form an envelope configuration for retaining a lock of hair and a dose of hair treatment chemical within the interior of the envelope; and

[0009] grip material adjacent to the top, bottom and lateral edge regions facing the interior of the envelope when folded. The grip material consists of a self-engaging three dimensional structure that self-engages when two opposing layers are brought into contact, such as Velcro™ or Dual Lock™. The grip material is arranged on the sheet such that opposing layers of the material grip each other when the sheet is folded to secure the top, bottom and side edge regions together to form a substantially sealed envelope structure. Furthermore, at least one layer of the grip material (such as, in specific embodiments, the hook layer of a hook and loop material or either layer of a "Dual Lock" material) can releasably engage a lock of hair to retain said lock of hair to said sheet when the sheet is in an unfolded configuration. This permits the user to secure the device to a lock of hair and apply a chemical thereto while the sheet is open. The sheet may then be folded over to form an essentially sealed envelope which retains the hair and chemical with the interior.

[0010] The device may further comprise a clip for fastening a lock of hair to the sheet prior to folding the sheet into an envelope configuration.

[0011] In another aspect, a layer of the grip material substantially fully cover a portion of the sheet that corresponds to one side of the envelope, such that one interior face of the envelope is fully or substantially covered with the grip material. This embodiment provides a relatively large surface area on the open sheet for gripping the lock of hair prior to folding the sheet into an envelope.

[0012] The impervious material can be flexible and foldable along said transverse axis or it can be rigid whereby the sheet is hinged along said transverse axis. The impervious material can also be transparent.

[0013] According to one embodiment, at least one of said top edge region or bottom edge region comprises a sleeve extending transversly between the lateral edge regions. The sleeve has open ends to permit insertion of a manipulation tool therein to permit manipulation of the device against the user's scalp.

[0014] According to another aspect, the invention relates to a kit for hair treatment comprising at least one device as described herein and a hair treatment chemical in a dispenser or other convenient container for application to a lock of hair.

[0015] According to another aspect, the invention relates to a method for applying a chemical to a lock of hair, comprising:

[0016] placing a lock of hair on a sheet of liquid-impervious material which can be folded along a transverse axis to form an envelope. The sheet is as described above and has opposing lateral edge regions, a top edge region, a bottom edge region opposed to the top edge region with grip material as described above, adjacent the top, bottom and lateral edge regions facing the interior of the envelope when folded;

[0017] contacting the lock of hair to the layer of grip material on the top edge region to thereby retain the lock of hair to said sheet, while the sheet is open;

[0018] applying a dose of a hair treatment chemical whereby the chemical contacts the hair;

[0019] folding the sheet about the transverse axis whereby opposing layers of said grip material contact each other to

form an envelope wherein the lock of hair is retained within said envelope, to retain the hair and chemical within the interior of the envelope; and

[0020] separating said opposing portions after the lock of hair has been treated to release the lock of hair from the sheet.

[0021] The grip material, as mentioned, is a three-dimensional structure whereby two opposing layers, which may be the same or different, engage each other when brought into contact. Such materials are well known, such as Velcro and Dual Lock. In general terms, they are characterized by a structural configuration that provides interlocks for releasable engagement. A hook and loop fastener comprises a first layer with hook-shaped projections and a second layer with looped material that engages the hooks. A self-engaging "stem" fastener system consists of two identical layers of stems, each having a neck and enlarged head in a mushroom-like configuration that releasably engage when brought into contact.

[0022] In the present invention, the grip material provides two functions: a single, unopposed layer of the grip material engages a lock of hair to the sheet, and two opposed layers of the grip material may physically engage together to retain the sheet in a folded configuration.

[0023] A strip of said grip material can extend substantially around the periphery of the entire sheet wherein the grip material is configured to self-engage to retain opposing regions of said sheet together to form said envelope structure wherein the central portion of the envelope is free of the grip material. Alternatively, one of the upper or lower portions of the sheet, corresponding to one face of the envelope, may have a strip of grip material adjacent to the side and upper or lower edge regions and the other of the upper or lower portions may be substantially fully covered with an opposing layer of the grip material. According to this embodiment, the central portion of the envelope has one clear face and one face fully covered by grip material within the envelope interior. The fully covered face provides a larger surface for engaging the lock of hair when placed on the sheet in the open configuration.

[0024] According to another aspect, at least one of the top edge region or bottom edge region of the sheet comprises a sleeve extending transversely between the lateral edge regions. The sleeve has open ends to permit insertion of a manipulation tool through the sleeve, such as a skewer or rod, to permit manipulation of the device against the user's scalp. This optional configuration permits a user to more easily position the sheet close to or in contact with the user's scalp to ensure that the lock of hair is treated as close to the roots as possible.

[0025] Directional references used herein such as "upper", "lower", "side" and the like are used purely for convenience of description and are intended to refer to the device when in an upright position as shown in the figures. It is evident that the invention may be used in any orientation.

[0026] The term "sealed" as used herein in reference to the envelope structure is not intended to describe a completely leak-proof seal. Rather, the term is intended to be used in the context of the intended use of the device, which requires only that the device only be leak-proof to a degree. It is understood that if pressure is applied to the device when in use, fluids contained therein may leak.

[0027] The terms "impervious" or "liquid-impervious" in reference to the sheet refer to a property whereby the sheet substantially prevents passage of conventional hair treatment chemicals through the sheet. It will be understood that such a sheet is not necessarily impervious to non-conventional hair treatment chemicals or other substances, nor that it be completely impervious to materials. Rather, the term is used in the context of the intended use of the invention whereby it is sufficient to substantially prevent leakage or seepage of hair treatment chemicals through the device.

[0028] The invention will now be further illustrated by reference to particular embodiments thereof. The described embodiments are not intended to limit the scope of the present invention, which is to be understood by reference to this specification as a whole including the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0029] FIG. **1**A is a plan view, from above, of a device according to a first embodiment of the invention shown in an open configuration with a lock of hair positioned on the device;

[0030] FIG. **1**B shows the device according to the invention, in a closed configuration enclosing a lock of hair;

[0031] FIG. **2**A shows a portion of an embodiment of the device showing finger grip tabs in an open configuration;

[0032] FIG. **2**B is a similar view to **2**A, showing the tabs in a closed configuration;

[0033] FIG. **3**A is a plan view, from above, of a device according to a second embodiment shown in an open configuration, with a lock of hair secured therein;

[0034] FIG. **3**B shows the second embodiment in a closed configuration;

[0035] FIG. **3**C shows a cross-section the clip portion of the device;

[0036] FIG. **4**A shows the grip tab portion of the second embodiment in an open configuration;

[0037] FIG. **4**B is a similar view to **4**A, in a closed configuration; and

[0038] FIG. **5** shows a kit consisting of first and second embodiments of the device and a supply of clips for securing the devices together when in use.

[0039] FIG. **6** is a plan view of a third embodiment, in the open position.

[0040] FIG. **7** is a perspective view of a fourth embodiment of the invention, in the fully open position.

[0041] FIG. **8** is a perspective view of the fourth embodiment, showing a partially folded position.

[0042] FIG. **9** is a perspective view of the fourth embodiment in a fully folded closed position.

[0043] FIG. **10** is a perspective view of a fifth embodiment of the invention, in the fully open position.

[0044] FIG. **11** is a perspective view of the fifth embodiment, showing a partially folded position.

[0045] FIG. **12** is a perspective view of the fifth embodiment in a fully folded closed position.

DETAILED DESCRIPTION

[0046] FIGS. **1**A to **2**B illustrate a first embodiment of a device **100** for applying a chemical to a lock of hair **102** according to the invention. Device **100** comprises a foldable sheet **104** of material. Sheet **104** is rectangular and comprises lateral sides **10** and **12** and upper and lower edges **14** and **16**. Sheet **104** comprises a transparent or translucent material that is impervious to hair treatment chemicals. In one aspect, the material comprises a flexible plastic such as plastic. A suitable plastic can be almost any type that is unaffected by

conventional hair treatment chemicals, which in general are not significantly reactive since such chemicals must not attack the hair or scalp of the user. As such, Polyethylene Terephthalate (PET) polyvinylchloride (PVC), polyethylene (PE) or polypropylene (PP) can be used, as well as others. The thickness of sheet **104** may fall within a broad range; for example, 4 to 10 mils provide a suitable range of thickness for sheet **104**. Sheet **104** is symmetrical about a midline **106** that extends along a transverse axis joining lateral sides m and **12** of sheet **104**. Midline **106** may be defined visually by a visible marking, or it may comprise a region of thinner material to facilitate folding, or it may comprise a virtual line. Preferably, a visual cue of the location of midline **106** is provided to make it easy for the user to fold sheet **104** at the midline. Sheet **104** defines identical opposing regions **20** and **22** on either side thereof. Region **20** comprises an upper region and region **22** is a lower region when the sheet is vertical, with midline **106** being horizontal. While in the present example sheet **104** is rectangular and is evenly bisected by midline **106**, sheet **104** may also comprise other shapes that may be conveniently folded to form an envelope, as described below; as well, midline **106** need not be located precisely midway between upper and lower edges but may be offset from this location whereby a portion of upper region **20** protrudes above lower region **22** when the sheet is upright.

[0047] Sheet **104** may have a surface suitable for marking, for example to provide directions to users or to allow a user to indicate the chemical that is in use or the time for removing the device. Preferably, the surface permits an erasable form of marking to be applied. As well, the device **100** is preferably washable and reusable.

[0048] Sheet **104** can comprise a broad range of sizes depending on the desired application. In one aspect, sheet **104** ranges from 6 cm to 9 cm in width, preferably about 7.5 cm and from about 10 cm to about 18 cm, preferably about 15 cm in length. However, the dimensions and configuration of the device **100** may vary considerably.

[0049] Sheet **104** can be folded in on itself along midline **106** to form an envelope configuration composed of upper and lower opposing portions **20** and **22** of sheet **104**. When thus folded, midline **106** forms a sealed edge of device **100**, and the remaining three sides are initially open. The lateral sides **10** and **12** are then fastened together by hook-and-loop fasteners **112** and **114**; it will be seen that other fasteners or fastening means may be employed to fasten the respective portions together along or adjacent to lateral sides **10** and **12**. However, as discussed below a hook and loop fastening system provides particular advantages. Fasteners **112** and **114** are releasable whereby they may be readily pulled apart or otherwise released to unfold sheet **104** to release the lock of hair **102**. When fastened, fasteners **112** and **114** close the opposing sides of sheet **104** along lateral sides **10** and **12**. Since hair treatment chemicals that are typically used with the device **100** are usually in the form of a paste, it is not necessary for the closure to be fully sealed, provided that it is sufficient leak-proof to prevent or substantially prevent leakage of paste.

[0050] Additional fastener portions **25** and **27** are provided adjacent to upper and lower edges **14** and **16** respectively. Fastener **25** located on upper edge **14** is the hook portion of the fastener, which serves to grip a lock of hair **102** that is pressed against fastener **25**. This allows the user to temporarily retain the device **100** in the open position to the lock of hair **102**, whereby the sheet **104** is held in an open position to the lock of hair **102**. For this purpose, while many hook and loop fastener systems will work, it can be desirable to select a hook and loop fastener that is specifically adapted for engaging hair. This feature permits the user to apply a chemical to the hair **102** while sheet **104** is open and a lock hair **102** rests against the inside surface of sheet **104**. When sheet **104** is folded in half and the respective fasteners are fastened along the lateral and upper/lower edges, sheet **104** forms an essentially fully enclosed envelope structure that is substantially closed along all four sides. Fasteners **25** and **27** retain edges **14** and **16** together to grip the user's hair **102** for secure retention with the interior of sheet **104**, as folded into an envelope. In this embodiment, fasteners **112**, **114**, **25** and **27** comprise strips arranged around the periphery of sheet **104** and that may range in width from about 1 cm to 3 cm and preferably are about 2 cm in width. The respective fastener strips surround an uncovered region **30** of sheet **104**. When sheet **104** is folded in half, region **30** provides a pocket that retains the lock of hair and the hair treatment chemical, as described below.

[0051] Hook and loop fasteners **112** and **114** may be replaced with other releasable fasteners or fastening means that provide a similar function of fastening the opposing portions of sheet **104** together for forming an envelope. The fasteners may also serve to engage a lock of the user's hair **102** to the envelope to permit the user to apply a chemical while the envelope is open. Suitable fastening means include, without limitation, mechanical fastening means such as hook and loop fasteners as described above or zipper-type fasteners, as well as non-mechanical fasteners such as magnetic fastening means or other substances that engage on contact and readily disengage by peeling apart, and which are suitable for repeated use and are relatively unaffected by contamination. The latter types of mechanical fasteners may not provide the second function of retaining the user's hair, and can be used in conjunction with a clip or other means to retain the user's hair to the envelope prior to closing the envelope.

[0052] As an alternative to a flexible, foldable material that can be folded over to form an envelope, sheet **104** may comprise a rigid material that is hinged along midline **106**. In this embodiment, the opposing portions of the sheet are spaced apart when folded so as to form an interior space at central region **30** within the envelope to accommodate the lock of hair **102** and hair treatment chemical. The fasteners may serve to space apart the respective portions of the sheet **104** in this embodiment.

[0053] One or more corner regions **116** of sheet **104** are uncovered by fasteners **112** and **114**. This feature permits opposing layers of sheet **104** to be easily separated at corner regions **116**, to allow a user to separate the respective layers to open the device **100** from the closed position. Corner regions **116** may comprise recessed portions of fasteners **112** and **114**, as seen in FIGS. **1**A and **1**B. Alternatively, corner regions **116**A may comprise projecting tabs that extend outwardly from sheet **104**, as seen in FIGS. **2**A and **2**B.

[0054] In use, a lock of hair **102** is placed on sheet **104** with the device **100** in an open (unfolded) position, as in FIG. **1**A. Contacting the hair with fastener **25** temporarily engages the device **100** to the lock of hair **102** and holds the device **100**, in an open position, to the hair **102** without the need to hold device **100** in place by hand. A dose of a hair treatment chemical is then applied to the lock of hair **102**. The chemical may comprise any substance suitable for treating hair.

[0055] The term "chemical" as used herein is not restricted to a chemical compound, but is used broadly to include without limitation essentially any substance that may be placed within a pouch to treat hair by contact with a lock of hair for an extended period. For example, suitable chemicals for this purpose may comprise individual compounds, compositions, mixtures, colloids, and emulsions. The chemical may be in any form or phase that permits application to hair, such as a paste, cream, gel, foam or liquid. It may also be in the form of a powder or other solid phase. Preferably, the chemical comprises a liquid that is relatively viscous to minimize leakage and which the user can work into the hair before closing the device. Examples include hair dyes, bleaches, lighteners and darkeners. The chemical may be applied by any suitable means including without limitation brushing, spraying, dripping or any other suitable means of application. Alternatively, a lock of hair **102** may be dipped in a bath of the chemical prior to placement on sheet **104**.

[0056] After the chemical is applied to the lock of hair **102**, sheet **104** is closed to form a substantially sealed and leak-proof envelope around the lock to allow for an extended period of contact with the chemical. For this purpose, sheet **104** is formed into an envelope by folding along the midline **106** and engaging fasteners **112** and **114**. As well, fasteners **25** and **27** are engaged to close the upper and lower edges **14** and **16** of sheet **104** together to thereby form a substantially sealed envelope wherein the only openings are where the lock of hair **102** enters the envelope, as seen in FIG. **1**B. A benefit of the use of a transparent or translucent material for sheet **104** is that a user can visually check the effect on his or her hair without opening the closed device **100**. After the lock of hair **102** has been treated by the chemical, opposing portions of sheet **104** are separate to release the lock of hair **102**.

[0057] FIGS. **3**A-**4**B illustrate a second embodiment of device **200**. Device **200** comprises a sheet **204** and fasteners **212** and **214** similar to the first embodiment. A hair clip **208** is secured to a top edge **14** of the sheet **204**. Clip **208** comprises any suitable clip that may be opened to receive a lock of hair **102** and closed to securely retain the lock **102** by friction and/or a forming a contorted path for the hair **102**. In this embodiment, clip **208** comprises a U-shaped resilient member composed of opposing arms **240** and **242** joined by a bridge **244** at one end. Bridge **244** resiliently biases arms **240** and **242** towards an open position. Second arm **240** terminates in a U-shaped retainer **246**. The first arm **242** is configured to slip under retainer **246** to be retained in the closed position, wherein the resilient biasing urges first arm **242** upwardly against the underside of retainer **246** to be held in the closed position. When closed, arms **240** and **242** are spaced to tightly grip a lock of hair **102**. Arms **240** and **242** may be coated with a material having a high coefficient of friction to improve the frictional grip on a lock of hair **102** when clamped onto the lock **102**. Clip **208** can be either removable from the sheet **204** or permanently fastened on the sheet **204**.

[0058] Clip **208** can be fastened to sheet **204** by a sleeve **248** adjacent to upper edge **14** of sheet **204**. First arm **242** slides into the sleeve **248** to be retained thereby. An alternative means to fasten clip **208** to sheet **204** is to provide clip **208** with sufficient length to exceed the width of sheet **204**, which permits the user to close clip **208** on a portion of sheet **204** adjacent its upper edge **14**, along with a lock of hair **102**. For this purpose, it can be useful to locate the fold in sheet **204** at a non-central position whereby upper edge **14** will protrude above lower edge **16** when sheet **204** is folded, to provide a protruding portion **250** comprising a single layer of sheet **204** where clip **208** can fasten to sheet **204**. The protruding portion can also be provided with the sleeve configuration **248** described above.

[0059] In use, clip **208** and sheet **204** are initially both placed in the open position and a lock of hair **102** is placed on sheet **204** between arms **240** of **242** of clip **208**. Clip **208** is then closed to secure hair **102**, as seen in FIG. **3**A. The chemical is then applied to the lock of hair **102** as in the first embodiment and sheet **204** is folded over on itself to form an envelope that encloses the lock of hair **102**. Sheet **204** is then sealed along its periphery with fasteners **212** and **214** to retain the chemical within the envelope interior for prolonged contact with hair **102**, as seen in FIG. **3**B. Corner regions **216**, **216**A uncovered by fastener material are provided as in the first embodiment to permit opening of the device **200**. In this embodiment, clip **208** securely retains the device **200** to the user's hair **102** so that the user may safely handle the closed device **200**, perform household chores or otherwise engage in activities that might otherwise dislodge such a device **200**, without risk of it slipping out of position.

[0060] FIG. **5** shows a kit **500** for treating locks of hair with a chemical. Kit **500** comprises a supply **501** of devices **100** or a supply **502** of devices **200**. Kit **500** may comprise different sizes of the devices **100** or **200**. Kit **500** further comprises a supply **503** of loose clips **508**. Clips **508** may be used for clamping together several closed devices **100** or **200** to make is easier for the user to treat multiple locks of hair **102**.

[0061] FIG. **6** shows a further embodiment in which sheet **300** comprises opposing portions **302** and **304** located on opposing sides of midline **306**. Portion **302** is substantially fully covered with a layer **310** comprising the hook portion of a hook and loop fastener. The full coverage of the hook portion provides an improved grip on the user's hair when a lock **102** is placed on sheet **300** in the open position. Opposing portion **304** can be fully covered with an opposing layer **312** of the loop portion of hook and loop fastener, as shown in FIG. **6**. Alternatively, the loop portion can be limited to the side and bottom edge regions to provide fasten the opposing sheet solely in these regions to improve the ease of opening the device.

[0062] FIGS. **7-9** show a further embodiment of the invention comprising an elongate sheet **400** having opposing portions **402** and **404** located on opposing sides of midline **406**. Sheet **400** comprises upper edge **408**, lateral (side) edges **410** and **412** on opposing sides of midline **406** and lower edge **414**. When folded into an envelope configuration along midline **406**, upper and lower edges **408** and **414** are brought together, and lateral edges **410** and **412** are folded in on themselves as in the embodiments described above to form the sealed side edges of the resulting pouch. A strip **420** of grip material extends around the periphery of sheet **400** facing the interior of the device when folded in on itself to form an envelope, as seen in FIG. **9**. Strip **420** comprises a first segment **422** adjacent to upper edge **408**, second and third segments **424** and **426** adjacent to lateral edges **410** and **412** and fourth segment **428** adjacent to lower edge **414**. Strip **420** may comprise a continuous strip as seen in FIGS. **7-9** or alternatively discrete segments. The grip material comprises a self-engaging structure that provides two functions. First, a single, unopposed later of the material can grip a lock of hair **102** in a relatively weak grip engagement. This permits the user to place a lock of hair **102** against sheet **400** when sheet **400** is open. Slight pressure on the lock of hair **102** loosely fastens the lock of hair

102 to one of segments **422** or **428** to hold sheet **400** against the user's head. The second function of the grip material is self-engagement wherein opposing layers of the material can be engaged together by urging the layers together. This function permits the segments to engage opposing portions of sheet **400** together to form an envelope structure.

[0063] The grip material that forms segments **422**, **424**, **426** and **428** comprises a physical structure that is self-engaging. That is, opposing sheets of the same material can grip each other when pressed together. The term "self-engaging" as used herein refers to the property wherein the same material can form two opposing faces and grip together when brought into contact. The term "physical structure" refers to a three dimensional configuration that provides such a function by its physical structure, as distinct from a gripping property provided by a non-structural material such as an adhesive. An example of such a material is a layer of material that comprises an array of fingers protruding from a substrate, each finger comprising a stem with an outwardly projecting head at the free end thereof. The fingers are spaced sufficiently closely whereby when mated to a layer of similar material, the respective heads interlock for releasable engagement between the opposing layers. The fingers can comprise a mushroom-shaped configuration having a rounded upper surface and a flat or concave lower surface for contact with an opposing flat or concave surface. An example of such material is Dual Lock™ by 3M.

[0064] It is the surprising discovery of the inventor that a single unopposed layer of a self-engaging material of this type can provide sufficient retention of a lock of hair **102** to retain a sheet in an open position to the lock of hair **102**, to permit treatment of the hair **102** prior to folding the sheet into an envelope. The device may thus comprise a region having a single layer of such material to hold the hair **102** in place or, in another embodiment, opposing regions of such material for also fastening the device into an envelope configuration, in addition to releasably retaining a lock of hair **102**.

[0065] In the present example, a lock of hair **102** is held against sheet **400** when in the open position. A hair treatment material is applied to the lock of hair **102**. Sheet **400** is then be folded in on itself to form an envelope as seen in FIG. **9**. When folded, first and fourth segments **422** and **428** contact each other and second and third segments **424** and **426** are folded in on themselves whereby portions of each of these segments contact each other. When urged together, these opposing portions of the grip material releasably fasten together to form the envelope shown in FIG. **9**.

[0066] In alternative embodiments, only segments **422** and **428** comprise the self-engaging material described above. In this embodiment, lateral segments **424** and **426** may comprise a different type of engageable material such as a hook and loop or other mechanical fastener or a non-mechanical fastener such as an adhesive. Alternatively, segments **424** and **426** may be absent and lateral edges **410** and **412** may be unfastened. In a still further alternative, only one of segments **422** and **428** comprises the self-engaging material described above, whereby this segment is unopposed when folded into an envelope. In a still further embodiment, the entire surface of sheet **400** or a substantial portion thereof is covered with the self-engaging material, in the manner shown in FIG. **9**.

[0067] In a further aspect, the device further comprises opposing regions of said sheet uncovered by said grip located to permit a user to grip said uncovered portions for unfastening said opposing portions. The uncovered portions may be located at corners of the device, as described above, or form strips **430** adjacent to the upper and lower edges **408** and **414**.

[0068] A further embodiment is shown in FIGS. **10**, **11** and **12**, wherein device **500** comprises an elongate sheet similar in configuration to the embodiment of FIGS. **7-9**, having opposing portions **502** and **504** located on opposing sides of midline **506**. Sheet **500** comprises lateral (side) edges **510** and **512** on opposing sides of midline **506** and lower edge **514**. An upper edge **540** of sheet **500** consists of a sleeve having an interior space **542**, the opposing ends of which are open to accept a manipulation tool such as a rod or other relatively thin, elongate member which may be inserted into sleeve **540**. Sleeve **540** may either be permanently formed by securing a flap of the material of sheet **500** over on itself, or formed in an openable fashion by providing a fastener such as a strip of Velcro (not shown) to temporarily fold a flap of sheet **500** over onto itself to form sleeve **540**.

[0069] When folded into an envelope configuration along midline **506**, sleeve **540** and lower edge **514** are brought together wherein sleeve **540** protrudes past edge **514**. Lateral edges **510** and **512** are folded in on themselves as in the embodiments described above to form the sealed side edges of the resulting pouch. A strip **520** of grip material extends around the periphery of sheet **500** as in the above embodiment, comprising a first segment **522** adjacent to sleeve **540**, second and third segments **524** and **526** adjacent to lateral edges **510** and **512** and fourth segment **528** adjacent to lower edge **514**.

[0070] In use, a lock of hair is secured to sheet **500** when open, in the same fashion as in the embodiment of FIGS. **7-9**, and a hair treatment substance is applied. Sheet **500** is then folded to form a pouch wherein the lock of hair is retained within the pouch. A manipulation tool such as a thin skewer or the like can be inserted into sleeve **540**, which allows the user to manipulate sheet **500** to contact or nearly contact the wearer's scalp, to an extent that would be difficult without the tool. This manipulation step may be performed at any suitable time during the above process and need not be performed after the lock of hair has been enfolded within the closed pouch. The tool can then be removed from the sleeve for use with the next device **500**.

[0071] It will be seen that sleeve **540** may be provided on one or both of the top edge region or bottom edge region of sheet **500**.

[0072] The scope of the invention is not limited to the preferred embodiments illustrated and described by way of example in this document. The scope of the claims should not be limited by the preferred embodiments set forth in the examples, but should be given the broadest interpretation

1. A device for applying a chemical to a lock of hair, comprising:

a sheet comprising a liquid-impervious material, said sheet comprising opposing lateral edge regions, a top edge region and a bottom edge region opposed to the top edge region, said sheet being configured to be folded along a transverse axis wherein the top and bottom edge regions are brought together to form an envelope configuration for retaining a lock of hair and a dose of hair treatment chemical within said envelope between opposing portions of said sheet when folded; and

grip material adjacent to the top, bottom and lateral edge regions facing the interior of the envelope when folded, said grip material comprising a self-engaging three dimensional structure which is configured on said sheet

to secure said top and bottom edge regions together to form said envelope structure and wherein at least one layer of said grip material releasably engages a lock of hair to retain said lock of hair to said sheet when the sheet is in an unfolded configuration.

2. The device of claim **1** wherein said grip material comprises one of a hook and loop fastener material or an array of mushroom-shaped stems.

3. The device of claim **1** wherein said grip material comprises Velco™.

4. The device of claim **1** wherein said grip material comprises Dual Lock™.

5. The device of claim **1** further comprising a clip for fastening said lock of hair to said sheet prior to folding said sheet into said envelope configuration.

6. The device of claim **5** wherein a portion of said sheet is unopposed when folded and said clip is engageable to said unopposed portion.

7. The device of claim **6** wherein said sheet comprises a sleeve for engaging said clip.

8. The device of claim **1** wherein said grip material comprises a strip adjacent to the periphery of said sheet whereby a central region of said envelope is free of said grip material.

9. The device of claim **1** wherein said grip material substantially covers at least one half of said sheet whereby a central region of said envelope is covered by said grip material on one interior face thereof.

10. The device of claim **1** wherein said impervious material is flexible and foldable along said transverse axis.

11. The device of claim **1** wherein said impervious material is rigid and said sheet is hinged along said transverse axis.

12. The device of claim **1** wherein said impervious material is transparent.

13. The device of claim **1** wherein at least one of said top edge region or bottom edge region comprises a sleeve extending transversly between the lateral edge regions, said sleeve having open ends to permit insertion of a manipulation tool therein to permit manipulation of the device against the user's scalp.

14. A kit for hair treatment comprising at least one device according to claim **1** and hair treatment chemical in a container for application to said lock of hair.

15. A method for applying a chemical to a lock of hair, comprising:

placing a lock of hair on a sheet of liquid-impervious material, said sheet being foldable along a transverse axis and comprising opposing lateral edge regions, a top edge region, a bottom edge region opposed to the top edge region, and grip material adjacent the top, bottom and lateral edge regions facing the interior of the envelope when folded, said grip material comprising a self-engaging three dimensional structure;

contacting the lock of hair to the layer of grip material on said top edge region to thereby retain the lock of hair to said sheet;

applying a dose of a hair treatment chemical whereby the chemical contacts the hair on said sheet;

folding the sheet about said transverse axis whereby opposing layers of said grip material contact each other to form an envelope wherein the lock of hair is retained within said envelope; and

separating said opposing portions after the lock of hair has been treated to release the lock of hair from the sheet.

16. The method of claim **15** wherein said grip material comprises one of a hook and loop fastener material or an array of mushroom-shaped stems.

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