

[54] **DEVICE FOR TEMPORARILY
ATTACHING ARTIFICIAL HAIR TO
THE SCALP**

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[22] Filed: **Feb. 22, 1972**
[21] Appl. No.: **227,854**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 844,988, July 25,
1969, abandoned.

[30] **Foreign Application Priority Data**

April 22, 1971 Japan46/26271

[52] U.S. Cl.132/9, 209/401
[51] Int. Cl.A45d 1/00
[58] Field of Search132/9, 1, 53, 54; 300/10, 11,
300/21; 209/233, 355, 315, 237, 397, 392,
401, 402, 399

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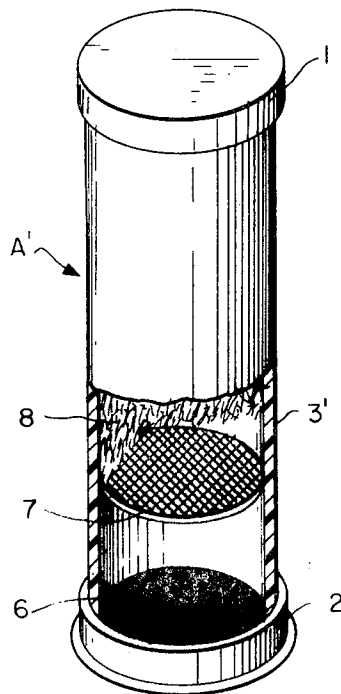
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[57] **ABSTRACT**

An elongated hollow container has open opposite ends. At least one shelf-like member having a network of apertures therein defining a mesh is transversely positioned within the elongated hollow container. The size of the apertures of the members increases from bottom to top when more than one member is used. Artificial hairs of a substantially uniform length are supplied to the container through the upper end thereof. This end is then closed by a lid, and the device is shaken up and down, whereby the hairs are fed through the mesh in a uniform and upright manner.

10 Claims, 14 Drawing Figures



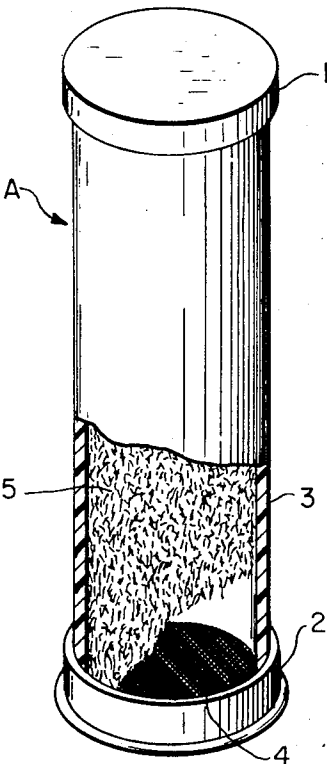


FIG. 1

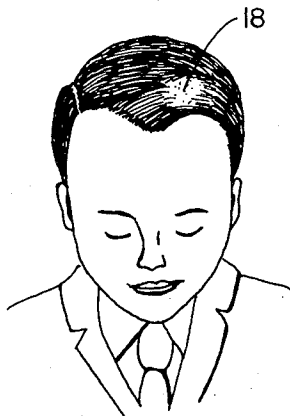


FIG. 2

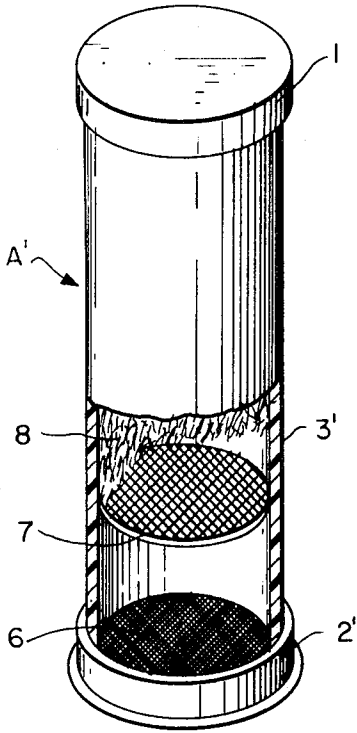


FIG. 3

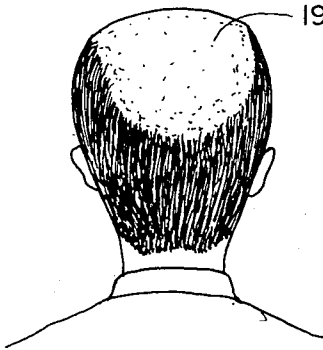


FIG. 4

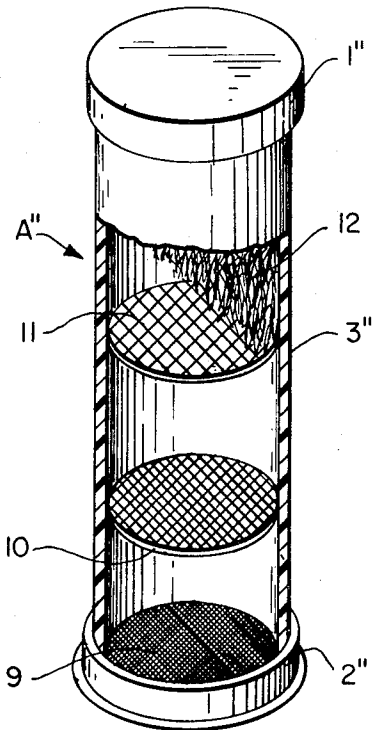


FIG. 5

FIG. 6

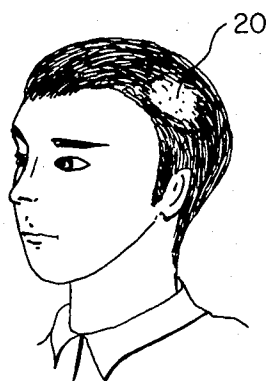


FIG. 7

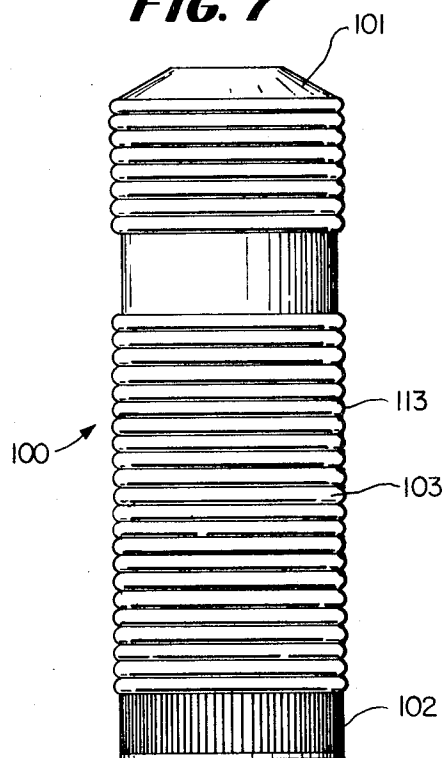


FIG. 8

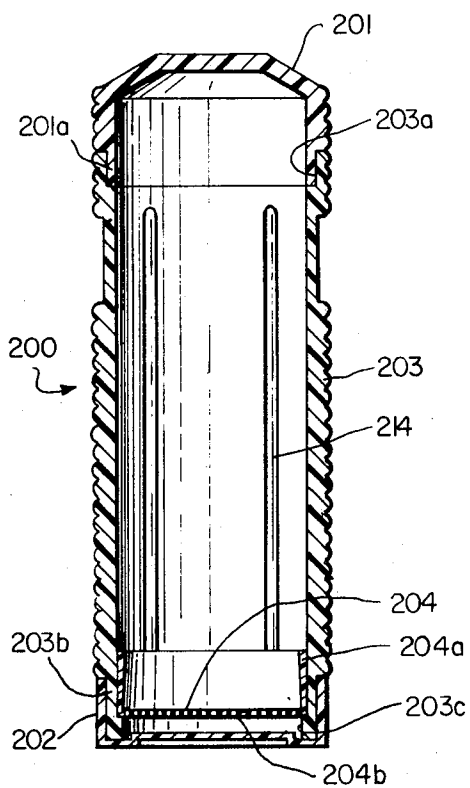
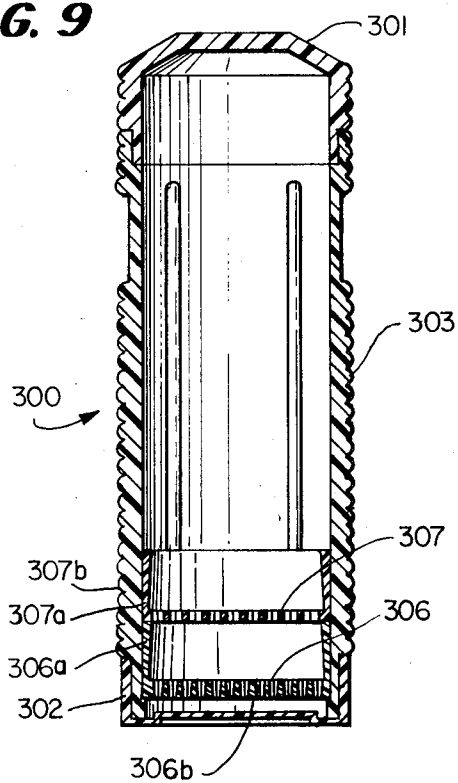


FIG. 9



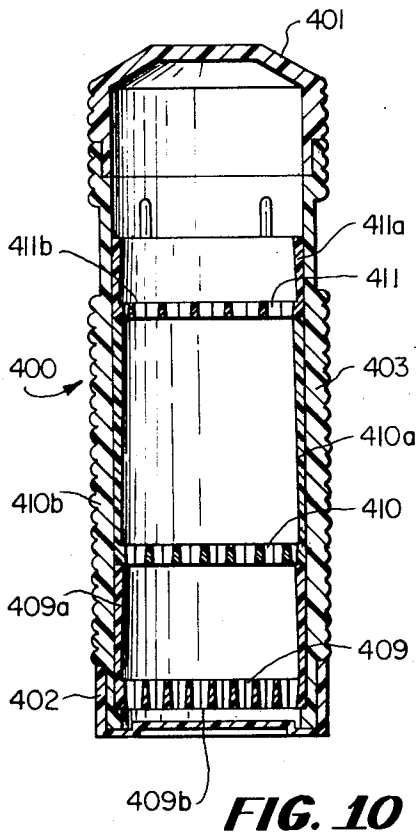


FIG. 10

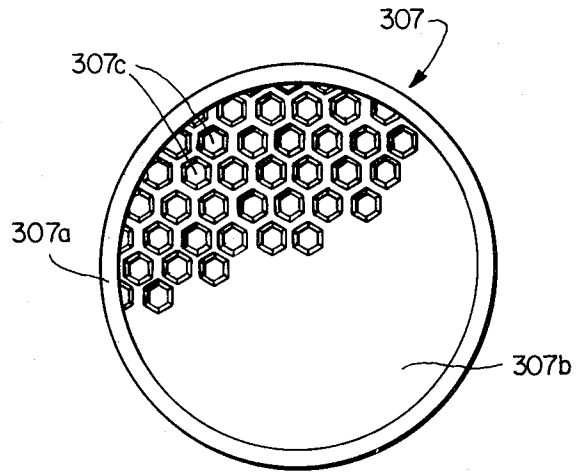


FIG. 11

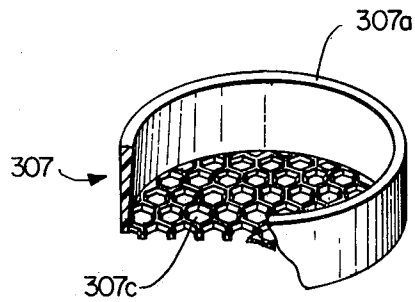


FIG. 12

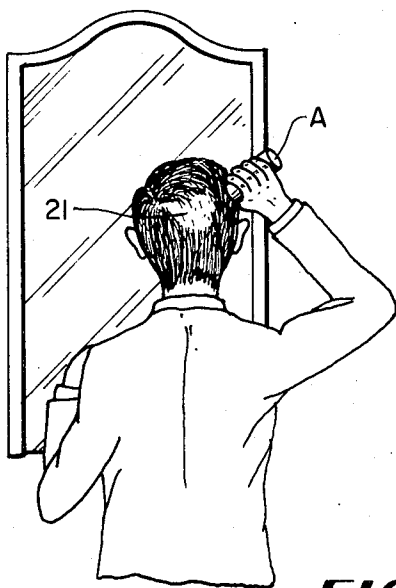


FIG. 14

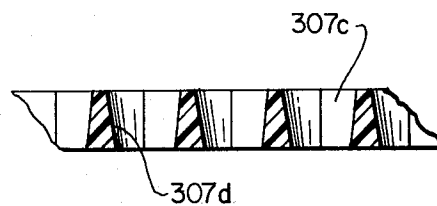


FIG. 13

DEVICE FOR TEMPORARILY ATTACHING ARTIFICIAL HAIR TO THE SCALP

This is a continuation-in-part application of Ser. No 844,988, filed July 25, 1969 now abandoned.

BACKGROUND OF THE INVENTION

The present invention relates to devices for temporarily attaching artificial hair to the sebum region of the scalp which is bald or which has thin natural hair. More particularly, the present invention relates to such devices which may be selectively employed to attach varying lengths of artificial hair.

DESCRIPTION OF THE PRIOR ART

In the past, attempts to hide or disguise balding or thinning hair have involved the use of wigs, hair pieces and supplementary hair attachments. These devices primarily require attachment by hairpins, strings or threads, or adhesives. Further, these devices all cover the scalp which may yet contain some natural hairs. This obviously prevents these yet remaining hairs from receiving air, and thus in many cases hastens the degeneration of such natural hairs. Furthermore, the sudden use of these prior art devices is obviously apparent when the user has had an area of thinning natural hair for sometime.

OBJECTS AND BRIEF DESCRIPTION OF THE INVENTION

With the above discussion in mind, it is a primary object of the present invention to provide devices which may be used to temporarily attach artificial hair to the sebum region in an area of the scalp which is balding.

It is a further object of the present invention to provide such devices which may selectively be used to attach artificial hair of varying length, suited to the needs of the particular individual and to the particular type and location of baldness.

It is a still further object of the present invention to provide such devices which may be used in combination to attach artificial hairs in any desired quantity, such quantity being gradually changeable.

It is an even further object of the present invention to provide such devices for attaching artificial hair which may be readily and easily washed off as desired.

It is yet a further object of the present invention to provide such devices which are inexpensive to manufacture and compact and easy to store.

The above objects are achieved in accordance with the present invention by the provision of devices including an elongated hollow container with open opposite ends. At least one shelf-like member having a network of apertures therein defining a mesh are adapted to be transversely positioned within the elongated hollow container. The finer of the plurality of shelf-like members is positioned adjacent a first lower open end of the elongated hollow container. A lower lid is provided for closing this open end when the device is not being used. When more than one shelf-like member is used, the additional shelf-like members are spaced above the first lower shelf-like member by predetermined distances. An upper lid is provided for closing the upper open end of the elongated hollow container except when artificial hairs are supplied thereto. The apertures are preferably hexagonal, and

the side surfaces thereof are inclined at an angle of from 75° to 80° to facilitate movement of therethrough of the artificial hairs. When relatively short artificial hairs are to be used, only a single shelf-like member having a very fine mesh is needed. When artificial hairs of moderate length are to be used, it is desirable to use two shelf-like members, the lower member having a finer mesh than the upper member. When relatively long artificial hairs are to be used, three or even more shelf-like members may be used, the mesh of the members being progressively larger from bottom to top.

In using the devices of the present invention, the upper lid is removed and hairs of a substantially uniform desirable length are supplied to the upper end of the hollow elongated container. The upper lid is then replaced. The lower lid is removed, and the device is shook up and down over the bald region. Artificial hairs are caused to be fed in an upright and uniform fashion through the hexagonal apertures. The artificial hairs, upon contacting the sebum, or the oily secretion of the sebaceous glands of the scalp, will stick thereto.

Other objects, features and advantages of the present invention will be made more clear from the following detailed description taken together with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective illustration, with portions broken away, of a device in accordance with the present invention employing a single shelf-like member;

FIG. 2 is an illustration of a type of baldness to which the device of FIG. 1 is particularly adapted;

FIG. 3 is a perspective illustration, with portions broken away, of a device in accordance with the present invention employing two shelf-like members;

FIG. 4 is an illustration of the type of baldness for which the device of FIG. 3 is particularly adapted;

FIG. 5 is a perspective illustration, with portions broken away of a device in accordance with the present invention employing three shelf-like members;

FIG. 6 is an illustration of the type of baldness to which the device of FIG. 5 is particularly adapted;

FIG. 7 is a side view of a particular preferred embodiment of the devices in accordance with the present invention;

FIG. 8 is a longitudinal cross-sectional view of a particular preferred embodiment of a device in accordance with the present invention employing a single shelf-like member;

FIG. 9 is a longitudinal cross-sectional view of a particular preferred embodiment of a device in accordance with the present invention employing two shelf-like members;

FIG. 10 is a longitudinal cross-sectional view of a particular preferred embodiment of a device in accordance with the present invention employing three shelf-like members;

FIG. 11 is a plan illustration, partially illustrating the hexagonal apertures of one of the shelf-like members in accordance with the present invention;

FIG. 12 is a perspective view, with portions broken away, of one of the shelf-like members in accordance with the present invention;

FIG. 13 is a longitudinal section of a portion of one of the shelf-like members of the present invention illustrating the angle of inclination of the side walls of the apertures; and

FIG. 14 is an illustration of the manner in which the devices of the present invention are used.

DETAIL DESCRIPTION OF THE INVENTION

With reference to the drawings, the devices of the present invention will now be described in more detail. In FIG. 1 there is illustrated a device A in accordance with the present invention employing a single shelf-like member having a network of apertures therein defining a mesh. The device includes an elongated hollow container 3 with open opposite ends. Upper lid 1 and lower lid 2 are adapted to fit over the elongated hollow container 3 to close the ends thereof. A single shelf-like member 4 having a relatively fine mesh is positioned transversely across elongated hollow container 3 adjacent the lower end thereof. Removal of upper lid 1 allows a plurality of artificial hairs 5 of a substantially uniform short length to be supplied to the elongated hollow container.

In FIG. 2 there is illustrated the type of baldness for which the device of FIG. 1 is particularly adapted. Specifically, baldness 18 illustrated in FIG. 2 illustrates a thinning of the hair in the forehead region of the scalp.

In FIG. 3 there is illustrated a device A' which is similar to the device A shown in FIG. 1, with the exception that two shelf-like members 6 and 7 are employed, the second member 7 being spaced above the lower member 6. The mesh of member 7 is larger than that of member 6. A plurality of natural hairs 8 of substantially uniform length are supplied to the upper end of device A'. The hairs 8 of FIG. 3 are longer than the hairs 5 of FIG. 1, and as such tend to become matted and entangled. Accordingly, by providing a second shelf-like member 7 having a larger mesh than member 6, when the device is shaken up and down, the hairs become sorted and untangled by shelf 7 so that they may be uniformly supplied through member 6.

In FIG. 4 there is illustrated a region of gerontomorphic baldness in the back region of the head for which the device of FIG. 3 is particularly suited.

FIG. 5 illustrates a device A'' which is similar to the devices of FIGS. 1 and 3, except that three shelf-like members 9, 10 and 11 are employed, the meshes of these three members being increasingly larger from bottom to top. Artificial hairs 12 of substantially uniform length are supplied to the device A'' through the top thereof. The hairs 12 are of longer length than the hairs 5 or 8 of FIGS. 1 and 3, respectively. By the provision of the two upper members 11 and 10, the tendency of the hairs 12 to become entangled is eliminated. That is, when the device is shook up and down, hairs tend to be sorted through the relatively large apertures of member 11. This process is again repeated through the smaller apertures of middle member 10, such that the hairs may be uniformly passed through the relatively small apertures of lower member 9.

In FIG. 6 there is illustrated a bald region 20 due to an injury. The device of FIG. 5 employing relatively long artificial hairs, is particularly suited for use with the type of bald region 20 illustrated in FIG. 6.

It is to be understood that as used in the present application, the term baldness is meant to be any degree of thinning of the hair.

It is of course to be understood that the types of baldness illustrated in FIGS. 2, 4 and 6 are meant to be exemplary only. That is, each of the devices of FIGS. 1, 3 and 5 may be used to treat any particular type of baldness.

With reference now to FIGS. 7-13 of the drawings, more detailed structure of preferred embodiments of the present invention will be described.

In FIG. 7 the outer appearance of the devices according to the preferred embodiments is illustrated. The device 100 includes the elongated hollow container 103 and upper and lower lids 101 and 102, respectively. The outer surface of the container may be knurled or rounded as illustrated at 113 to provide a suitable appearance as well as to achieve a better grip.

The specific preferred embodiment shown in FIG. 8 corresponds to the general embodiment of FIG. 1. The device 200 includes an elongated hollow container 203 having open opposite ends. The upper end of container 203 has an annular increased diameter portion 203a at the inner periphery thereof adapted to securely receive the annular reduced diameter section 201a at the outer periphery of upper lid 201. Thus, it will be apparent that lid 201 is snugly connectable to container 203. It is of course to be understood that lid 201 may be attached to container 203 in any other suitable manner. The lower end of container 203 has an annular reduced diameter portion 203b around the outer periphery thereof to receive lower lid 202. It is of course further to be understood that lid 202 may be attached to container 203 in any other suitable manner.

The lower end of container 203 has a further annular reduced diameter portion 203c on the inner periphery thereof. A cylindrical shelf-like member 204 includes an upstanding portion 204a and a mesh portion 204b of a suitable dimension to be inserted from the upper end of container 203 and to abut against the step portion formed by reduced diameter portion 203c, such that mesh portion 204b extends transversely across container 203 adjacent the lower end thereof. The dimension of the outer periphery of upstanding portion 204a is approximately the same as or slightly less than the inner diameter of container 203. Ribs 214 may be provided longitudinally to extend inwardly from the inner periphery of container 203 to insure that shelf-like member 204 is securely held in position when the device 200 is shaken up and down during the use thereof.

With reference now to FIG. 9, a specific preferred embodiment of the present invention employing two shelf-like members, similar to the general embodiment of FIG. 3 will be described in more detail. The device 300 shown in FIG. 9 is similar to the device 200 illustrated in FIG. 8. However, the device of FIG. 9 has two shelf-like members 306 and 307. Lower shelf-like member 306 has an upstanding portion 306a, and a mesh portion 306b. The second shelf-like member 307 has an upstanding portion 307a and a mesh portion 307b and abuts against the top of upstanding portion 306a of the lower shelf-like member 306. The spacing between meshes 306b and 307b is predetermined by the height of upstanding portion 306a. The apertures forming the mesh 307b are larger than the apertures forming the mesh 306b.

With reference now to FIG. 10, the specific structure of a preferred embodiment of the present invention employing three shelf-like members similar to the general arrangement of FIG. 5 will be described in more detail. The device 400 is similar to the devices 200 and 300 illustrated in FIGS. 8 and 9, respectively. However, device 400 is provided with three shelf-like members 409, 410 and 411. Lower shelf-like member 409 has an upstanding portion 409a and a mesh portion 409b. Second shelf-like member 410 has an upstanding portion 410a and a mesh portion 410b and abuts against the top of upstanding portion 409a of lower shelf-like member 409. The top shelf-like member 411 has an upstanding portion 411a and a mesh portion 411b and abuts against the top of upstanding portion 410a of the second shelf-like member 410. The spacing between mesh portions 410b and 409b is determined by the height of upstanding portion 409a. The spacing between mesh portions 411b and 410b is determined by the height of upstanding portion 410a. The apertures of mesh portion 410b are larger than the apertures of mesh portion 409b, and the apertures of mesh portion 411b are larger than the apertures of mesh portion 410b.

With reference now to FIGS. 11-13, the shelf-like members illustrated in FIGS. 8-10 will be described in more detail. The specific shelf-like member illustrated in FIGS. 11-13 is the upper member 307 shown in FIG. 9. However, it is to be understood that the general construction of all of the various shelf-like members shown in FIGS. 8-10 is similar to that illustrated in FIGS. 11-13. As shown, the mesh portion 307b of the shelf-like member has therein a plurality of apertures 307c. These apertures are preferably hexagonally shaped to aid in passage of the artificial hairs through the member. It is of course to be understood that the present invention contemplates aperture shapes other than hexagonal. However, hexagonally shaped apertures have been found to be particularly desirable. It is further to be understood that the number of apertures in each shelf-like member is generally determined by the use to be made of the shelf-like member. As discussed previously, and as will be exemplified in more detail below, the apertures of the shelf-like members generally increase in size from bottom to top. Furthermore, as is particularly illustrated in FIG. 13, the sides of the apertures are generally inclined at an angle of from 75° to 80° to the horizontal, such that the upper aperture opening is greater than the lower aperture opening. This provision greatly facilitates efficient sorting and passing of the artificial hairs through the shelf-like member.

Although the various elongated hollow containers and shelf-like members above described have been illustrated as being generally cylindrical, it is to be understood that the scope of the present invention includes shapes other than cylinders. For instance, these items could easily be cylindroid, quadrangular, etc. in transverse cross-section.

Further, suitable materials for the various elements of the devices described may be virtually any convenient material, such as polyethylene, other plastics, strong paper, various metals, etc. The desirable features are of course that the devices be made of a material which is relatively light in weight, attractive in appearance and durable.

The artificial hairs used in the above devices may be any of those conventionally known, such as human hair, animal hair, textile threads, and hairs made from synthetic fibers. It should of course be further understood that since the epidermis of human hair and animal hair are hard, they would normally be treated by chemicals or other means to remove the epidermis. It will be further understood that virtually every type of material known to be used for artificial hair may be used in accordance with the present invention.

The artificial hairs employed in the devices of the present invention are preferably fine, i.e., generally from one-fifth to one-third the thickness of natural hair. However, it is to be understood that the scope of the present invention includes the use of artificial hairs of any convenient thickness.

With reference once more to FIGS. 8-10, specific examples of the devices will be described.

With specific reference to FIG. 8, mesh portion 204b of shelf-like member 204 may be 0.8 mm in thickness. The bottom openings of the apertures in mesh portion 204b may be 0.8 mm. The angle of inclination of the side walls of the apertures are 80° to the horizontal. The length of the artificial hairs used in the device 200 may be approximately 0.3 to 0.8 mm, and such hairs are uniformly fed in an upright manner from the device when it is used in the manner described below.

With specific reference to FIG. 9 of the drawings, mesh portion 306b may be 3 mm thick, and the bottom openings of the apertures thereof may be 1.5 mm. The angle of inclination of the side walls of the apertures may be 80° to the horizontal, and upstanding portion 306a may be 10 mm in height. Mesh portion 307b may be 2 mm thick, with the bottom openings of the apertures being 3 mm. The angle of inclination of the side wall of the apertures may be 78° to the horizontal. The length of the artificial hairs used in the device 300 may be 1 to 3 mm, and such hairs are uniformly fed in an upright manner from the device when it is used in the manner described below.

With reference to FIG. 10 of the drawings, mesh portion 409b may be 5 mm thick, with the bottom openings of the apertures being 3 mm. The angle of inclination of the side walls of the apertures may be 80° to the horizontal, and upstanding portion 409a may be 20 mm in height. Mesh portion 410b may be 4 mm thick, with the bottom openings of the apertures being 4 mm. The angle of inclination of the side walls of the apertures may be 78° to the horizontal, and upstanding portion 410a may be 40 mm in height. Mesh portion 411b may be 3 mm thick, with the bottom openings of the apertures being 5 mm. The angle of inclination of the side walls of the apertures may be 75° to the horizontal. The length of the artificial hairs used in the device 400 of FIG. 10 may be 5 to 8 mm, and such hairs are uniformly fed in an upright manner from the device when it is used in the manner described below.

Suitable dimensions for the overall size of the device of the present invention are obviously variable. However, it has been found that the length of the device may conveniently be from 5 to 15 centimeters, with the diameter from 2 to 5 centimeters.

Although the above dimensions have been given, they are meant to be entirely exemplary, and not limiting. It should be readily apparent to one skilled in the

art that other various dimensions of artificial hairs may be used with other various dimensions of shelf-like members and apertures thereof as well as spacings between members and thickness thereof.

With reference now to FIG. 14 of the drawings, the operation of the devices of the present invention will now be described. Depending upon the particular type of baldness of the user and the length of artificial hair desired, the user will select one of the above described devices. He will then remove the upper lid from the device and fill the same with the chosen length of hair, thereafter replacing the upper lid. The lower lid is then removed and the device is shaken up and down over the user's bald area 21. If very short hairs are used, a device having only a single shelf-like member is employed, and the very short fine hairs are fed in an upright and uniform fashion through the apertures of the shelf-like member and directed onto the bald area 21. The ends of the hairs are caused to stick to the sebum or oily secretion coming from the sebaceous glands of the scalp. If the use of a longer hairs is desired, then a device having more than a single shelf-like member is employed. The tendency of the longer natural hairs to become entangled in the device is overcome by the spaced shelf-like members of varying mesh size. The hairs are caused to be untangled and fed in an upright and uniform fashion from the lowest shelf-like member. It is of course to be understood that depending upon the desire of the user, more than one of the above devices may be used to add artificial hairs of more than a single length to a given bald area. It is furthermore to be understood that the artificial hairs may be easily removed from the bald area by selective washing or shampooing of the head.

Although specific preferred embodiments of the present invention have been described in detail, such description is intended to be illustrative only and not restrictive, since many specific details of the devices may be altered or modified without departing from the spirit or scope of the invention.

What is claimed is:

1. A device for temporarily attaching artificial hair to the sebum of a scalp, said device comprising a hollow elongated container having open opposite ends; an upper lid for selectively closing the opening at the upper of said ends; a lower lid for selectively closing the opening at the lower of said ends; and a shelf-like member transversely positioned within said container adjacent said lower end, such that a space is provided between said member and said upper lid for positioning artificial hairs of a substantially uniform length, said member having means for feeding said hairs in an upright and uniform fashion from said device, whereby said member eliminates matting of said hairs and allows

said hairs to pass therethrough and be attached to said sebum.

2. A device as claimed in claim 1, wherein said means for feeding comprises a network of hexagonal apertures in said member defining a mesh.

3. A device as claimed in 2, wherein said member comprises a transverse mesh portion including said apertures and an upstanding portion having an outer periphery securely positioned with respect to the inner periphery of said container.

4. A device as claimed in claim 3 wherein said apertures extending through said mesh portion have sides inclined at an angle of from 75° to 80° to the horizontal, such that the upper openings thereof are larger than the lower openings thereof.

5. A device as claimed in claim 3, further comprising a second shelf-like member transversely positioned within said container a predetermined distance above said first member, said second member having therein a second network of hexagonal apertures defining a mesh, said apertures of said second member being larger than said apertures of said first member.

6. A device as claimed in claim 5, wherein said second member comprises a second transverse mesh portion including said second network of apertures and a second upstanding portion, said second member abutting the top of said first upstanding portion, said predetermined distance being determined by the height of said first upstanding member.

7. A device as claimed in claim 6 wherein said apertures extending through said second mesh portion have sides inclined at an angle of from 75° to 80° to the horizontal, such that the upper openings thereof are larger than the lower openings thereof.

8. A device as claimed in claim 6 further comprising a third shelf-like member transversely positioned within said container a predetermined distance above said second member, said third member having therein a third network of hexagonal apertures defining a mesh, said apertures of said third member being larger than said apertures of said second member.

9. A device as claimed in claim 8, wherein said third member comprises a third transverse mesh portion including said third network of apertures and a third upstanding portion, said third member abutting the top of said second upstanding portion, said determined distance above said second member being determined by the height of said second upstanding portion.

10. A device as claimed in claim 9, wherein said apertures extending through said third mesh portion have sides inclined at an angle of from 75° to 80° to the horizontal, such that the upper openings thereof are larger than the lower openings thereof.

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