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Leoci

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[54] **HAIRDRESSING DEVICE**

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[52] **U.S. Cl.** **132/9**

[51] **Int. Cl.** **A45d 1/00**

[58] **Field of Search** ..... 132/9, 40, 42, 43 R, 39, 132/36, 37, 38

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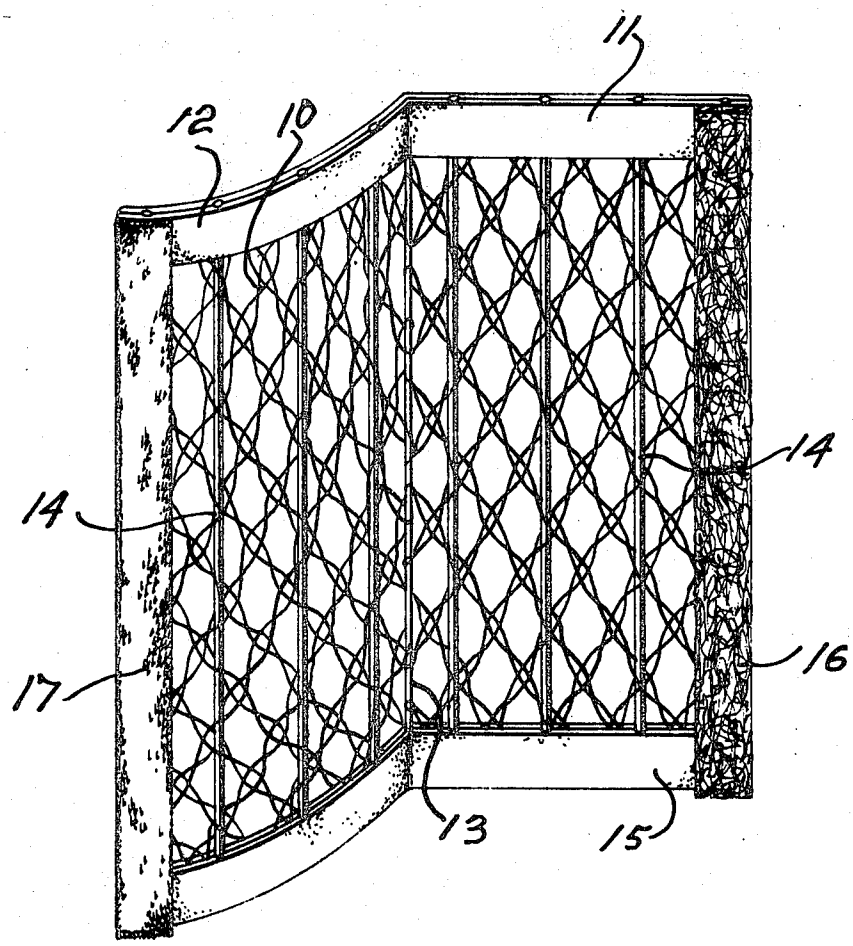
[57] **ABSTRACT**

A hair dressing device is disclosed for hair styling. This device is suitable for setting strands of hair in a curled or straight condition unlike roller devices which always set the hair in a particular size of curl. The finishing device has a flexible pad and a flexible cover with a means for securing the pad to the cover so that the strands of hair are retained therein. There are openings in the pad and the cover adapted to admit air to the strands of hair to set and dry them. There are a plurality of malleable members in one plane of the pad and the cover which allow the pad and cover when secured together to be deformed in the one plane and retain that deformation during the setting step. The device may be returned to its original shape after use.

19 Claims, 8 Drawing Figures



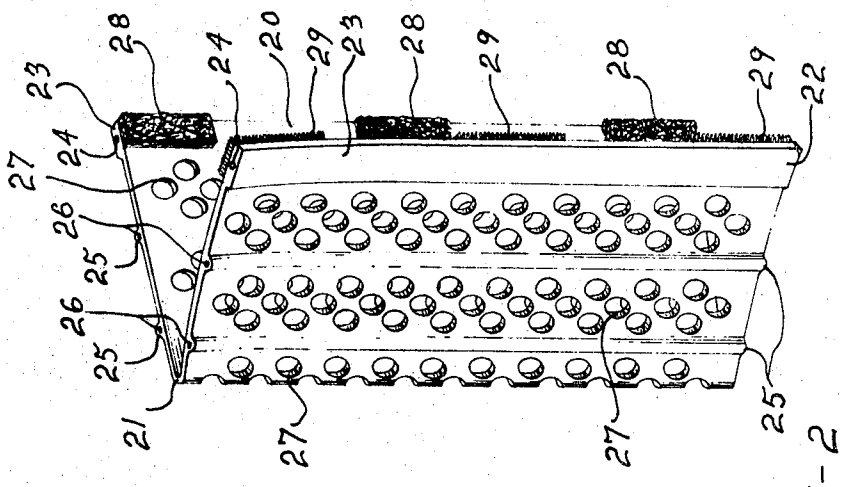

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Fig - 2

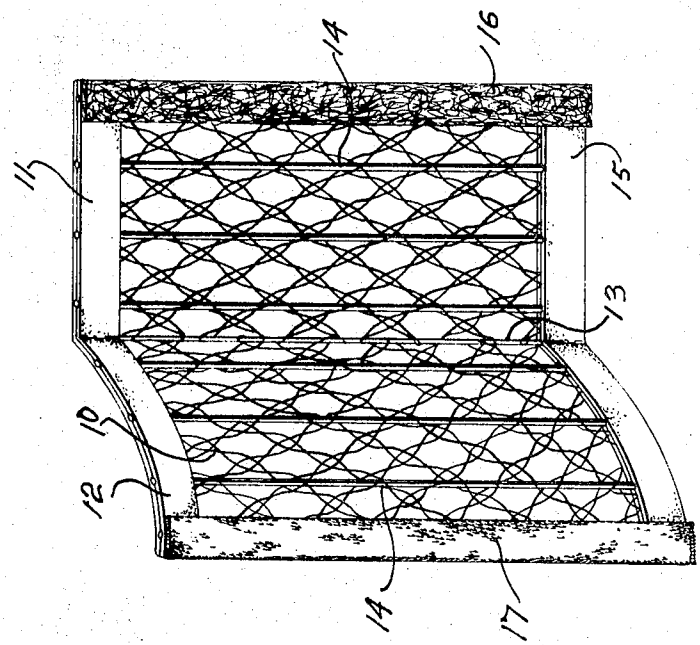
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Fig - 1

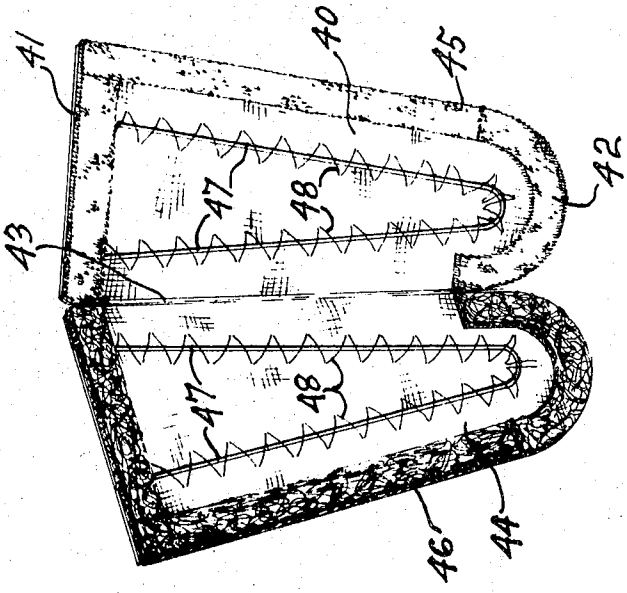

Fig - 4

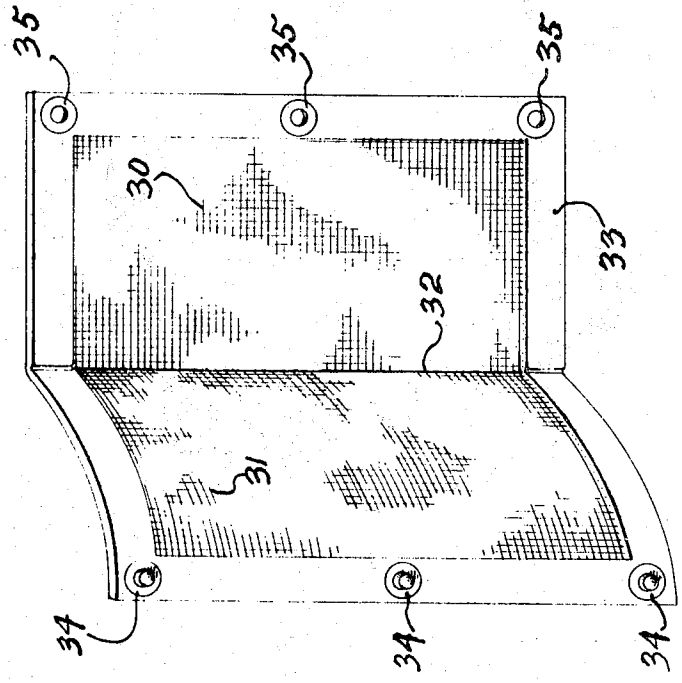

Fig - 3

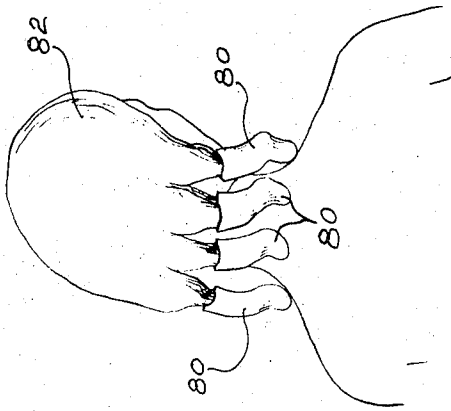

Fig - 8

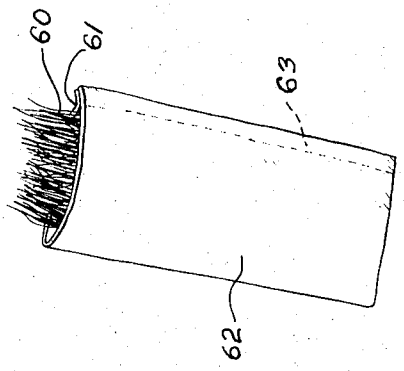

Fig - 6

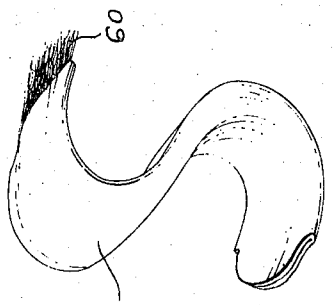

Fig - 7

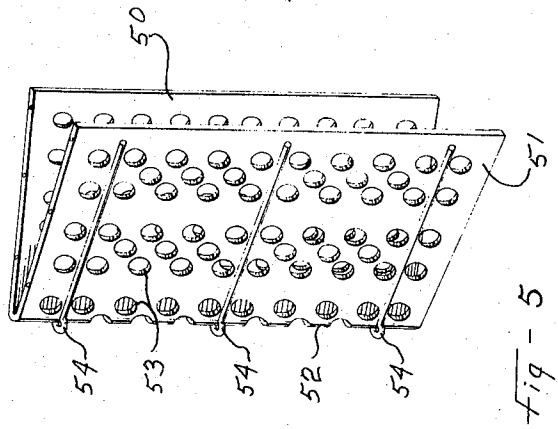

Fig - 5

HAIRDRESSING DEVICE

This invention relates to a device for hair styling and more particularly, this invention relates to a finishing device for setting strands of hair in a curled or straight condition.

In the styling or dressing of hair, it is common practice to set curls at different locations about the head by means of rollers. These rollers can be of different diameters depending on the size of the curl required. There is a need however, in hair styling for a device not only to curl hair but also to straighten it. Such a device is particularly useful in styling hair that is naturally curly.

In the final stage, or finishing of the hair styling operation, there is sometimes a requirement to form strands of hair into curls or ringlets sometimes referred to as pin curls. These curls are located at the nape of the neck or at the side or back of the head. Today this is performed primarily by pin curlers, however these curlers form tight curls which are not always desired in hair styling, thus some limitations exist with regard to the particular style that can be achieved by the use of these curlers.

It is an object of the present invention to provide a device for setting strands of hair in either a straight configuration or in a curl as required.

It is a further object to provide a device for setting strands of hair in varying sizes and shapes of curls as required.

It is a still further object to provide a device suitable for styling or dressing the hair of both men and women which is used in finishing the style and may be applied to certain strands of hair at different locations on the head.

These objects and others are attained primarily by a finishing device for setting strands of hair comprising a flexible pad, a flexible cover, means for securing the pad and the cover together such that strands of hair may be retained therein, openings in the pad and cover adapted to permit air to the strands of hair and a plurality of malleable members in one plane of the pad and the cover adapted to allow the pad and cover when secured together, to be deformed in the one plane and retain that deformation.

With the foregoing objects and features in view and such other objects and features that may become apparent as this specification proceeds, the invention will be understood from the following description of a preferred form thereof, taken in conjunction with the accompanying drawings which illustrate embodiments of the invention,

FIG. 1 is a perspective view of one embodiment of the finishing device of the present invention having a flexible large mesh net with malleable members extending therethrough.

FIG. 2 is a perspective view of a further embodiment of the finishing device of the present invention formed from a flexible plastic material.

FIG. 3 is a perspective view of a still further embodiment of the finishing device of the present invention formed from a mesh of malleable material.

FIG. 4 is a perspective view of yet a further embodiment of the finishing device of the present invention having a different overall shape.

FIG. 5 is a perspective view of a further embodiment of the finishing device of the present invention having spring clips to hold the device closed.

FIG. 6 illustrates a finishing device of the present invention holding strands of hair.

FIG. 7 illustrates the finishing device of FIG. 6 bent to allow the strands of hair to set in a particular configuration.

FIG. 8 illustrates the back of a woman's head showing a number of finishing devices of the present invention holding strands of hair in different locations.

Referring now to the drawings, the finishing device shown in FIG. 1 is formed from a flexible large mesh net **10** preferably woven from plastic monofilaments. The plastic monofilaments may be polypropylene, nylon or polyester, or any other suitable material which is flexible. Alternatively, the mesh may be formed from multi-filament threads of natural or synthetic fibres, the only condition being that the material is sufficiently heat resistant to withstand heat from a hair dryer.

The finishing device is formed in two parts, a pad **11** and a cover **12.** Both of these parts are the same size, rectangular in shape and are joined along one of their long edges to form a hinge **13** so that the cover **12** may be folded over and closed down on the pad **11.** The mesh net **10** extends through both the pad **11** and the cover **12.** The pad **11** and the cover **12** both have four malleable members **14** which are preferably wires of a malleable metal such as iron, aluminum, copper or alloys thereof, which being pliable may be bent and retain their bent shape, but which may also be returned to their original shape without breaking. These malleable members **14** are interwoven between the threads of the mesh net **10** and extend substantially parallel to the hinge **13.** A protective border **15** extends around the open edges of the pad **11** and the cover **12.** This border **15** is preferably formed from two layers of cloth which surround the edge of the mesh net **10** and prevent the malleable members **14** from extending beyond the open edges of the pad **11** and the cover **12.** The border **15** also gives support to the mesh net **10.**

A means is provided to hold the cover **12** and the pad **11** together such that strands of hair may be retained therein. This means preferably consists of at least one Velcro detachable contact strip. Velcro is a registered trade mark for a detachable contact seal formed from two mating strips, the surface of one strip having an infinite number of flexible nylon hooks and the surface of the other strip having an infinite number of flexible nylon loops. when the two surfaces meet, many of the hooks connect themselves to loops. As these hooks are flexible, they may be pulled open to separate from the loops, but return to their hook configuration for resealing. One strip of the Velcro detachable seal is attached to the inside surface of the outer edge of the pad **11** opposite the hinge **13** and the other strip **17** is attached to the inside surface of the outer edge of the cover **12.**

A finishing device is shown in FIG. **2** preferably molded from a plastic such as polyvinyl chloride. The pad **20,** rectangular in shape, has a hinge **21** at one of its long edges connecting to a cover **22.** On the outside of the outer edge of the pad **20** and the cover **22** is a broad rib **23** which extends along the edge on the outside surface of the pad **20** and cover **22.** Each of these broad ribs **23** contain a malleable wire **24** embedded therein which extends through the middle of the rib **23,** and is substantially parallel to the hinge **21** and the outer edge of the cover **22** and pad **20.** Two other ribs **25** are located on the external surfaces of the pad **20** and the cover **22,** spaced between the broad rib **23** and

the hinge **21.** Inside the ribs **25** there is embedded a malleable wire **26** which extends for the length of the pad **20** and cover **22** substantially parallel to the hinge **21.** Between the ribs **25** and the broad rib **23** there are aeration holes **27** sufficiently large and of sufficient number to allow air to dry strands of hair retained within the device. These aeration holes **27** extend right across the hinge **21.** Three Velcro detachable contact seals are provided spaced down the open edge of the pad **20** and the cover **22.** As shown in the drawing, the Velcro hook strips **28** are attached to the inside surface of the outer edge of the pad **20** and the Velcro loop strips **29** are attached to the inside surface of the outer edge of the cover **22.** In another embodiment, the Velcro detachable contact seals are replaced with dowel pins and holes molded into the pad **20** and cover **22** respectively. The dowel pins are adapted to fit tightly into the holes to hold the pad and cover together.

In a preferred embodiment, the malleable wires **24** and **26,** which may also be strips or rods of a malleable material such as iron, aluminum, copper or alloys thereof, are completely embedded in the plastic material of the broad ribs **23** and other ribs **25** and are specially treated so that they adhere to the plastic material. Thus there is no tendency for the wires to separate from the plastic material and work their way out of the pad **20** or cover **22.** Furthermore, in another preferred embodiment, the polyvinyl chloride plastic material may have an additive added to impart a pleasant fragrance to the finishing device to overcome the rather strong smell of the polyvinyl chloride.

The finishing device shown in FIG. **3** is formed from a sheet of malleable metal screening material, the pad **30** and cover **31** both being rectangular in shape, formed from the same sheet with a hinge **32** at the center. The malleable metal screening material may be of the kind used for fly screens and the like which is pliable and may be bent but which would not break during bending and which could be returned to its original shape without breaking. A protective border **33** surrounds the mesh made from a flexible material, preferably cloth, and three snap fasteners having one portion **34** attached to the inside surface of the outer edge of the cover **31** and the mating portion **35** attached to the inside surface of the outer edge of the pad **30.** Two snap fasteners are considered a sufficient minimum for small finishing devices. In another embodiment, the snap fasteners are replaced with a standard button and button hole in the pad **30** and cover **31** respectively.

Referring now to FIG. **4,** a pad **40** has a wider top edge **41** than the bottom edge **42,** the bottom edge being formed in a curve. The pad **40** is joined by means of a hinge **43** at one side to a cover **44.** The top edge **41,** the bottom edge **42** and the outer edge of the pad **40,** all have hook strips **45** of Velcro detachable seals on the inner surface, and loop strips **46** are provided on the inner surface of the cover **44** to mate with the hook strips **45.** Malleable metal strips or wires **47** shaped in the form of a U with the arms substantially parallel to the sides of the pad **40** and the cover **44** are attached to the pad **40** and the cover **44** by means of zig-zag stitches **48.** The pad **40** and the cover **44** are preferably made from a loose weave material having sufficient openings therein to allow air to pass through the material to dry strands of hair retained therein. In some situations when it is required to use such a finishing device with very coarse hair it is preferable to make the pad and the cover of a Velcro detachable seal, the pad being made from hook strip, and the cover from a loop strip or vice versa. Thus, when the cover is secured to the pad, strands of hair are held in position not only by the outer edges of the seal but also by the mating of the hooks and loops in the pad and cover respectively. When a Velcro detachable seal is employed, then it is necessary to have ventilation openings to ensure that air can reach the strands of hair for drying.

A finishing device is shown in FIG. **5** made from a rectangular flexible plastic pad **50** and a rectangular flexible plastic cover **51** of the similar size. The pad **50** and the cover **51** join at a hinge **52** along one of the long sides of the pad **50** and cover **51.** Aeration holes **53** are provided throughout the pad **50** and cover **51.** Malleable metal wires or strips (not shown) are embedded in the cover **51** and pad **50** extending substantially parallel to the hinge **52** or the outer edge of the pad **50** or cover **51.** The finishing device is closed by means of three spring clips **54.** These spring clips **54** preferably have two positions, an open position which allows the wet strands of hair to be placed in the pad and a closed position where the spring clips **54** hold the cover **51** against the pad **50** with a spring force to hold the strands of hair in the finishing device. There is no connection between the spring clips **54,** thus the finishing device may be rolled or curved to a desired shape for drying in order to set the strands of hair retained therein.

As shown in FIG. **6** the strands of hair **60** are placed on the pad **61** and the cover **62** is closed so that the strands of hair **60** are held within the finishing device. In this particular case, a Velcro detachable contact seal **63** holds the cover **62** to the pad **61.** With the strands of hair **60** firmly held between the pad **61** and the cover **62,** the pad **60** may be bent to any configuration similar to that shown in FIG. **7.** It is only necessary for this bending or deformation to occur in one plane, namely the plane substantially parallel to the strands of hair along which the strips or wires of deformable material extend. Inasmuch as it is required to form a curl or to straighten hair, then this plane extends along the length of the strands of hair. Thus the strands of hair may be formed to an S shape or may be curled. An S shape is the type of curl that cannot be made with a roller. Alternatively, if the hair is originally curly, then the pad may be kept straight and the hair is then set either by means of a setting lotion or by drying after washing so that it retains the straight effect after the pad is removed.

In a hair styling operation, the hair is normally washed or wetted, the hair stylist places strands of hair into the finishing devices **80** as shown in FIG. **8.** The particular strands of hair **81** from the head **82** are shown at the back of the head at the nape of the neck. The strands of hair may be taken from the side of the head or alternatively in the front. The hair is then dried and once it is dry and set, the finishing devices **80** are removed and the strands of hair **81** retain the shape in which they have been held by the finishing devices **80.** The finishing devices **80** may then be straightened for future use. It is found that the finishing devices may be used many times.

These finishing devices may be used on strands of hair at any and all locations on the head to give a smoother more natural effect. The finishing devices do not cause such a tight or regular curl as that caused by

large and small rollers. The size of the finishing devices can vary considerably depending on the length of hair being styled. In some cases the finishing devices need only be 2 to 3 inches long and 1 to 2 inches in width. In other cases, finishing devices with a maximum length up to 15 inches may be required. In the case of a finishing device made from a plastic material, these could be molded to almost any length and cut to the required size.

It will be apparent to those skilled in the art that variations may be made on the design and formation of this particular finishing device with regard to the size, with regard to the materials used, and with regard to the shape of these devices without in any way departing from the spirit or scope of the present invention.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A finishing device for setting strands of hair comprising an essentially flat planar flexible pad, an essentially flat planar flexible cover, means for securing the pad and the cover together into an essentially flat device with the cover overlying the pad such that the strands of hair may be retained therebetween, openings in the pad and the cover adapted to permit air to the strands of hair, and a plurality of malleable members in one plane of the pad and the cover, said mallable members comprising means for deforming the pad and cover, when secured together, in the one plane and for retaining that deformation.

2. The device according to claim **1** wherein the means for securing the pad and the cover together comprises at least one Velcro detachable contact seal formed from two mating strips, one strip located on the pad and the other strip located on the cover.

3. The device according to claim **1** wherein the means for securing the pad and the cover together comprises spring clips adapted to apply a pressure between the pad and the cover when they are together.

4. The device according to claim **1** wherein the means for securing the pad and the cover together comprises at least two snap fasteners each having two mating portions, one portion located on the pad and the other portion located on the cover.

5. The device according to claim **1,** wherein the pad and the cover have a top edge wider than the bottom edge.

6. The device according to claim **1,** wherein the pad and the cover are rectangular in shape.

7. The device according to claim **1,** wherein the pad and the cover are formed from a mesh net woven from plastic monofilaments.

8. The device according to claim **1,** wherein the pad and the cover are formed from a sheet of malleable metal screening material, the pad and the cover forming halves of the sheet with a fold line between the halves, and a protective border surrounding the sheet.

9. A finishing device for setting strands of hair comprising a substantially rectangular flexible essentially flat planar plastic pad, a mating flexible plastic cover similar in size to the pad, both having long edges and short edges, one of the long edges of the pad forming a hinge connection with one of the long edges of the cover, means for securing the pad and cover together such that the strands of hair may be retained therebetween, a plurality of aeration holes in the pad and the cover, and a plurality of malleable members in the pad and the cover extending substantially parallel to the long edges thereof, said malleable members comprising means for deforming the pad and cover when secured together in one plane and for retaining that deformation.

10. The device according to claim **9** wherein the means for securing the pad and the cover together comprises at least one Velcro detachable contact seal formed from two mating strips, one strip located on the long edge of the pad opposite the hinge and the other strip located on the long edge of the cover opposite the hinge.

11. The device according to claim **9** or claim **10** wherein the plastic pad and the cover are made from polyvinyl chloride.

12. The device according to claim **9** or claim **10** wherein the malleable members are formed from metal selected from the group consisting of a strip, a wire or a rod of malleable iron, aluminum, copper or alloys thereof.

13. The device according to claim **9** or claim **10** wherein the plurality of malleable members comprise malleable metal wire embedded in molded ribs extending from the outer surface of the pad and the cover.

14. The device according to claim **9** or claim **10** wherein the plurality of malleable members comprise malleable metal wires embedded in and adhering to the plastic pad and the cover.

15. The device according to claim **9** or claim **10** wherein the plastic pad and cover are molded from polyvinyl chloride together with an additive adapted to impart a fragrance to the device.

16. A finishing device for setting strands of hair comprising a flexible large mesh plastic essentially flat planar net foldable at a fold line into two halves, one half forming a pad and the other half forming a cover, means for securing the pad and the cover together such that strands of hair may be retained therebetween, a plurality of malleable metal wires interwoven in the net, the wires extending substantially parallel to the fold line and a protective border surrounding the net supporting the ends of the wires, said wires in one plane of the pad and cover constituting means for allowing the pad and cover, when secured together, to be deformed in one plane and for retaining that deformation.

17. The device according to claim **16** wherein the means for securing the pad and the cover together comprises at least one Velcro detachable contact seal formed from two mating strips, one strip located on an edge of the pad opposite the fold line and the other strip located on an edge of the cover opposite the fold line.

18. The device according to claim **16** or claim **17** wherein the net is made from a plastic selected from the group consisting of polypropylene, nylon and polyester.

19. The device according to claim **16** or claim **17** wherein the pad and the cover are rectangular in shape and the fold line forms a long edge of the pad and the cover.

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