



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
25.06.2008 Bulletin 2008/26

(51) Int Cl.:
A45D 24/22 (2006.01)

(21) Application number: **06819973.6**

(86) International application number:
PCT/ES2006/000501

(22) Date of filing: **06.09.2006**

(87) International publication number:
WO 2007/028842 (15.03.2007 Gazette 2007/11)

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

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(30) Priority: **08.09.2005 ES 200501998 U**
01.09.2006 ES 200602270 U

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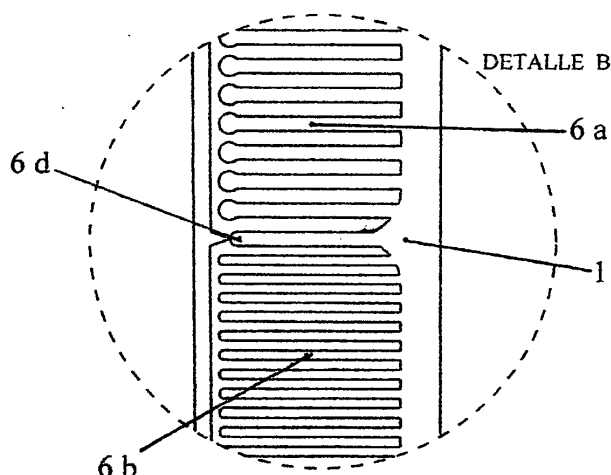
(54) **HYGIENE SEAL FOR DISPOSABLE COMBS**

(57) Hygiene guarantee seal, this invention refers to an anti-use safety device or bar that has been connected to the comb opposite its teeth, preventing its use until it has been removed, at the same time serving as a safety test and guarantee that the comb has not been used before and at the same time the comb has been equipped with another accessory, the multi-function side adapter, which in parallel with the seal, is designed to reduce the lacking in matters of hygiene and suffered by this hair-dressing tool and the purpose of which is to prevent the comb from falling from the hand and possible contact with the floor, the comb in turn consists of two sections of clearly differentiated teeth, fine teeth and thick teeth in which the latter have been modified, with a ball or

sphere at the point, to prevent and improve the contact of the teeth on the hairy skin making this more agreeable than initially for that purpose and to prevent the aggression of the central tooth it has been reduced in height since its purpose is to maintain the balance of the seal joined to it and when the seal is broken and removed from the comb a point or spike may remain that could be aggressive, thus the area of action of this tooth is below the level of the others.

After manufacture the assembly of the comb, seal and multi-function adapter are inserted in a bag to preserve them so that the product reaches its destination, in this case the end consumer, in the best possible conditions of health and hygiene.

FIG -11



Description

PURPOSE OF THE INVENTION

[0001] This invention, as stated in the header to this descriptive report, refers to an anti-use safety device that has been attached to the comb in order to equip this hairdressing tool with new and notable improvements in the area of hygiene and protection compared to the conventional combs that we know up to now.

[0002] This device or seal to guarantee hygiene has been designed and conceived to preserve the teeth of the comb protecting them throughout their length and at the same time providing a test of safety and guarantee that the comb has not been used previously, this idea arising from this purpose, the fundamental objective of which is to prevent the repeated use of the comb on the hair of various individuals, since in this way we collaborate directly in the contagion, transmission and propagation of certain dermatological capillary type illnesses that often incubate around hairy skin.

BACKGROUND TO THE INVENTION

[0003] As is known, a great variety of combs are known with regard to models, sizes and forms, some consisting of thick teeth, others with fine teeth, some with teeth on the side, and some can also be found with a handle for handling them, etc.

[0004] There are also combs protected with covers, others in bags protecting them from exterior contact, some that are sterile according to their wrappings, but in any case none of those that are known have any device to detect whether the comb has been used beforehand or not, it being impossible to guarantee that the use of the comb is the first or only one if so decided, once these have been removed from their wrapping, since there are no definitive tests or at least none that are easily detectable with the means usually available every day in our regular visits to the hairdresser, such as visual or tactile.

[0005] So that this invention, that forms the subject of this report, attempts to reduce the lackings of this tool in hairdressers' in matters of health and hygiene, protecting ourselves as far as possible from contagion by easily transmitted contagious capillary illnesses.

DESCRIPTION OF THE INVENTION

[0006] The protection or sealing device to which we refer consist of a protective bar located in front of the comb's teeth longitudinally throughout its length, it having been fitted to the comb with the fundamental purpose of preventing its use, action and contact of the above-mentioned teeth on any type of hair in normal conditions until it has been removed.

[0007] The system of protection which we have mentioned is not intended be limiting, allowing for the option of recovering the teeth partially or even totally in the form

of a case for the comb in the form of a pouch or cover which can sometimes protect the comb for more than 90 per cent of its figure, in this case the area left uncovered being the back of the comb or area in which it is held, and it is also possible to protect it totally by modifying certain technical aspects of the form of protection with regard to the form of pouch, this being able to be manufactured in parallel with the comb when its composition does not differ from the same raw material from which the comb is made, otherwise it could be manufactured in any other material available for its manufacture, for example, cellulose, silicone, paper, leather, cardboard, etc, in which case the manufacture would have to be separate, in any case the benefits obtained from this latter system of protection is the total covering of the comb with full guarantees of protection, unlike the former in which the protection is partial, but of a simpler and more economical form in order to be a product destined for single use (use and discard), the manufacturing costs must be as low as possible so that the comb may be accessible to any type of public.

[0008] Comb and seal are joined together by connection of points which both share in common, the number of these depending on the dimensions of the comb itself, these having a weak point so that when the seal is removed from the comb, this operation can be carried out very easily.

[0009] For this purpose, the seal has been equipped with a form at one of the ends, specifically that on the side of the thick teeth on the outer part of the comb without a defined form since this is not important, unlike the function for which it is designed to carry out, that of adapting itself to the thumb and forefinger generally, with the greatest comfort possible and to initiate the pressure to be exerted from this point to remove the seal detaching the comb, it then being free and fully operational to carry out its function.

[0010] In turn, and with the same purpose as the above device, and to protect us from contagion by infectious illnesses, another accessory has been built into the comb, this being for prevention unlike the seal, which is for protection.

[0011] Called the multi-purpose side adapter, it is located in the part directly opposite the location occupied by the adaptor for the fingers with which the seal ends at one of its ends.

[0012] The adapter has the form of a hook or broken ring to facilitate it bending if this is necessary to achieve a sufficient interior diameter to facilitate with comfort the insertion in its interior of one of the fingers of the hand using the comb, this accessory serving to give it greater reliability and versatility in its movements, this is being advisable because of the importance of the purpose for which it was designed, that of preventing the comb from slipping from the hand and coming into contact with floor, with the risk of contagion from bacteria, microbes, pests and possible contact with the hair of other individuals that could be lying on the floor, principally when the use of

the comb is within the profession ambit.

[0013] This situation is to be avoided at all cost, bringing into practice the theory of this idea since the studies carried out at this level confirmed that on two out of every 10 occasions that the comb is used to condition, cut or simply care for their hair, etc, the comb unknowingly comes into contact with the floor when accidentally dropped from the hand.

[0014] As with the seal, the adapter is joined to the comb during manufacture, the join between comb and adaptor being a section shared by comb and adapter, unlike the seal which is attached to the comb by points.

[0015] The vulnerability of the above mentioned section is similar to that of the points, allowing for the possibility of their elimination, this operation being carried out with a slight pressure since, as its name indicates, its use is optional due to the awareness of the possible existence of persons who do not adapt to use a comb with these features or who simply do not like the idea, this being optional, this decision being left to the user or professional who is to use the comb, this not being the most advisable way to use it if the adaptor has been removed from the comb, because of the risks described above, if the decision is finely taken to remove it.

[0016] In turn, the comb consist of a main body that gives it rigidity and consistency when it is being used, and also has two sections of clearly differentiated teeth such as the thick teeth and the fine teeth the thick teeth being distinguished by having a greater margin of separation between them, further, one of the teeth is at a lower level in height with respect to the others, this being the thick tooth closest to the centre of the comb, this tooth has been designed to fix the seal in the central part of it using one of the joining points with which it is equipped, the tooth mentioned above has a second function which is to prevent at its lower level in height the rubbing of any splinter or spike that could remain when removing the joining part by its weakest part, which the comb and seal share in common in this area, and which could be considered as an aggressive area, this situation being prevented because that tooth is at a lower level than the line of action and contact of the rest.

[0017] In turn, the thick teeth have the form of a ball or sphere at their points, to prevent the aggression that could be caused by these teeth of the comb in origin, because of the form that these adopt in principle, as though they were sharp points in the shape of a lance, this modification and improvement to the teeth of the single use comb providing a more agreeable and less aggressive contact on the hairy skin mainly when the application of the comb is carried out on persons who have alterations or irregularities to it such as (warts, scabs, pimples, infected follicles, herpes) etc.

[0018] This new configuration in the form of a ball or sphere for the points of the thick teeth of the hygienically sealed single use comb removes the relative aggression giving a more agreeable and slippery while pleasant contact so that during use the teeth of the comb with this

condition provide a massage effect on the hairy skin, helping to stimulate the blood flow in the subcutaneous areas of it, providing greater feed to the follicles and with this the better nutrition of the hair root, this giving a better natural balance and so therefore influencing the delay and prolongation in time of falling hair, these properties allowing the comb to emulate the functions of certain devices designed for the purpose and which are currently used by hair treatment centres for the application and monitoring of certain therapies that are currently often applied to persons and with problems of hair loss or falling hair.

[0019] Having opted for the above decision (the rounding only of the points of the thick teeth) it being understood that in the use and action of the comb by professionals and according to studies carried out, these are inclined towards a greater use of the area of the thick teeth compared to that of the fine teeth, allowing the option of the application of this rounding on the points of the fine teeth if the opposite occurs to that explained above, that is, that the use of the comb for whatever reasons was greater on the area housing the fine teeth, in which case the rounding will be applied to these.

[0020] After the packaging of the assembly of the comb and seal to guarantee hygiene and multi-function side adaptor, after manufacture, these will be preserved by a bag for which a simple manufacture process has been designed that is greatly effective in its function, made of low-density polypropylene, rectangular in shape so that there is sufficient space inside it to house the comb (1) with its two accessories, as described in this report, which it is in turn hermetically sealed by design once it is closed by heat welding, after having inserted the product to be protected into it, while its hermetic condition conserves the state of sterility of the comb from its manufacture by preventing from the outside any contact with the product preserved in it.

[0021] Seen vertically, the top of the bag, outside its useful space for protection or dead space, has been drilled with a die in the form of a European hanger, facilitating its placement if it is decided to place it in a point of sale unit.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022]

Figure 1 shows an overall perspective of the comb with the main seal that forms the subject of the invention and the multi-function side adaptor joined together immediately after they are shaped in manufacture.

Figure 2 is a view of the assembly from the opposite side to that in Figure 1 with the seal in the process of removal, this being partial as can be seen, with the multi-function side adapter still intact.

Figure 3 shows the comb and the seal separately once the process of removing it has ended, with the teeth uncovered and fully operational throughout their extension, this figure shows the most suitable and advisable manner of using the comb when the side adaptor remains intact.

Figure 4 shows the same perspective as in Figures 2 and 3 but with the difference of having lost all protection since the adaptor which remained in Figure 3 no longer adheres, this view of the comb, if compared with that of Figure 1, gives the feeling of nakedness and of vulnerability similar to that of any conventional comb that can currently be found in the market.

Figure 5 shows the seal alone once it has been removed and its life and purpose have ended, leaving it ready to be destroyed or recycled.

Figure 6 shows the multi-function side adaptor alone once it has been decided to use the comb without it, as with the seal and comb because it is made of the same raw material, it is 100 per cent recyclable.

Figure 7 shows the state and form of the closed bag, representing in the imaginary sense of the product which has been inserted into it for the purposes of protecting and preserving it hygienically.

Figure 8 shows the bag opened in the form of a book once it has been torn on one side to show the contents previously inserted into it the contents being as can be seen the assembly that occupies us, comb, seal and adaptor joined together after having been sealed in its interior and hermetically closed to guarantee the good state of hygiene in which they can be maintained until they are removed from inside the bag for use.

Figure 9 gives the same view as that in Figure 1 in order to show from which part of the comb the two sections are extracted and given a better, enlarged view in Figures 10 and 11, identified in this figure as enlargements A and B respectively.

Figure 10 is an enlargement of the detail referred to in Figure 9 as detail A, giving a better view of how the teeth 6 a or thick teeth have a ball or sphere 6 c at the point and at the same time showing an enlargement of the adaptor 2 a.

Figure 11, as in Figure 10, gives another enlarged view of the detail referred to in Figure 9 as detail B, showing an enlargement of the difference between the two sections of teeth 6 a and 6 b of which the comb consists, in which the margins of separation for the teeth 6 a or thick teeth are greater than those

shown for the teeth 6 b or fine teeth, while showing a better view of the detail of the difference in height of the tooth 6 d where the seal 2 has its single support and contact on the teeth 6.

PREFERRED MEANS OF MANUFACTURING THE INVENTION

[0023] Referring to the above-mentioned drawings, it can be seen that the protection or sealing device (2) consists of a bar aligned in front of the teeth (6) of the comb (1) to prevent its correct use or undesired uses until it has been removed, as shown in Figure 2 in which it has been partially removed and Figure 3 in which it has been fully removed. In order to facilitate this task, it has been equipped at one of its ends with a form or figure (2a) to adapt to the fingers comfortably and to start the pressure to be exerted from this point to remove the seal (2), this involves the destruction of the points (4) that both the comb (1) and the seal (2) share in common while they are joined together.

[0024] As described above in the section describing the invention in this report, the comb has been equipped with another accessory which we have called the multi-function side adaptor (3) which in parallel with the seal (2) is designed for the same purpose, to enrich the qualities of hygiene and health that can be attributed to the comb (1).

[0025] This adaptor (3) is located at one of the ends of the comb (1), specifically on its outside and its location is directly opposite to that which is occupied by the figure or form (2 a) as shown in Figures 1 to 3.

[0026] This adaptor (3) is joined to the comb (1) by the section (5) that is easily destroyed due to the weakness built into it during manufacture so that if it is decided to remove it, this task is thus facilitated.

[0027] Equally, and always with a due to the perfection and improvement of the comb, a rounding has been designed and provided at the points of the teeth (6 a) or thick teeth Figure 10 in the form of a ball or sphere (6 c) to obtain new and notable improvements regarding the contact of the teeth of the comb on the hairy skin, it being understood that the presence of teeth that terminate in the point of a lance may injure or damage persons with cutaneous eruptions on the hairy skin or in the case that the skin is irregular, there being also a reduced height of the central tooth (6 d) Figures 9 and 11 to which the seal to is joined in its central area by one of the junction points (4) that the comb (1) and seal (2) share in common and the purpose of which is to safeguard from any spike or aggressive point that may be caused by the breakage of the connecting point (4), these irregularities remaining below the area of action of the teeth.

[0028] After conceiving and manufacturing the assembly of the comb (1), seal (2) and adaptor (3) these are made of the same raw material, it being that described below in his report, only one example of the possibilities of options for manufacture such as manufacture by

moulding from synthetic plastic resins, PS or (polystyrene).

[0029] The materials used in the manufacture and the components used in the manufacture be independent of the purpose of the invention, as also may be the procedures used for obtaining them, as well as the size and form of the seal (2) and the side adapter (3) to which this report mainly refers since these have to fulfil a purpose for which they have been created depending on the form and dimensions of the comb (1) which they must protect.

[0030] The same applies to the pigments, additives, colorants, hardeners and other components in it, as long as they do not affect the fundamental purpose of this invention, and to protect which this request for the protection of an international patent via (PCT) for Europe is made.

Claims

1. COMB AND SEAL TO PROVIDE HYGIENIC GUARANTEES FOR SINGLE USE, consisting of:

a. Part differentiating between the teeth (6) of the comb (1) consisting of two clearly differentiated sections of teeth (6 a) and (6 b) Figures 4 and 11 while the section of teeth (6 b) or fine teeth Figures 4 and 11 the margin of separation is less than that of the thick teeth, in turn the comb (1) has a central tooth (6 d) Figure 11 at a lower level in height with respect to the others, it being this tooth (6 d) which is joined to the seal (2) in its central area Figure 1 by one of the connection points (4) as shown in Figure 3 with which the seal (2) is removed from the comb (1), Figure 2 partially and Figure 3 fully removed.

b. Hygiene guarantee seal (2) Figure 1 consisting of a protective bar or line joined to the comb (1) opposite the teeth (6) Figure 1 and that also consists of connection points (4) Figure 3 which both comb (1) and seal (2) share in common, it being obligatory to destroy them to leave the comb (1) free Figures 3 and 4 for use for which the seal (2) has in one of the ends a form or figure (2 a) Figures 2 and 10 adaptable to the fingers from which to start the pressure to disconnect the seal (2) from the comb (1) by destroying the points (4) Figure 3, the seal has a separation from the teeth (6) of 0.81 mm according to the drawing, with a margin of separation of between 0.2 and 15 mm.

c. Multi-function side adaptor (3) of optional use Figure 1 that consists of an accessory in the form of a hook or broken ring, this break being between 10 and 20 mm and the interior diameter of this adapter (3) being 18 with tolerances for that measurement being ± 15 mm and located opposite to the adapter (2) at the end of the seal

(2) Figures 2 and 10 in one of the ends, that is, on the outside of the comb (1) in the area nearest the fine teeth (6 b) Figures 1, 2, 3 and 9 and the joint shared, by the comb (1) is the easily destroyed section (5) Figure 3.

d. Rounding at the point of the teeth (6) of the comb (1) which consists of the application of a ball or sphere (6 c) Figure 10 measuring between 1 and 3 mm in thickness, eliminating the aggression caused in principle by the comb (1), this new form of the teeth (6 a) at their points (6 c) Figure 10 a more agreeable and less aggressive contact on the hairy skin than initially.

e. Bag for the assembly, comb (1), hygiene guarantee seal (2) and multi-function side adapter (3) Figure 7, rectangular, lengthened, extra flat and of dimensions such that its interior can house the comb (1) with its two accessories (2) and (3) Figure 8.

2. COMB AND HYGIENE GUARANTEE SEAL FOR SINGLE USE, consisting of a part differentiating between the teeth (6) of the comb (1) which consists of two sections of teeth (6 a) and (6 b) Figures 4 and 11 clearly differentiated, the teeth (6 a) or thick teeth have a larger margin of separation between them Figures 4, 10 and 11, while the section of fine teeth (6 b) Figures 4 and 11 have a smaller margin of separation than that of the thick teeth while the comb (1) has a central tooth (6 d) Figure 11 which is at a lower level in height than the others, this tooth (6 d) Figure 11 being that which is joined to the seal (2) in the central area of it Figure 1 by one of the connecting points (4) on it Figure 3 until the seal (2) is removed from the comb (1) Figure 2 partially and Figure 3 totally removed.

3. HYGIENE GUARANTEE SEAL FOR SINGLE USE COMBS hygiene guarantee seal (2) in which there is a protective bar or line that has been joined to the comb (1) opposite the teeth (6) Figure 1 and which also has connection points (4) Figure 3 which both comb (1) and seal (2) share in common, the destruction of these being obligatory to leave the comb (1) free Figures 3 and 4 for use, for which the seal (2) has at one end a form or figure (2 a) Figures 2 and 10 that is adaptable to the fingers from which to start the pressure to detach the seal (2) from the comb (1) by destroying the points (4) Figure 3, the seal has a separation from the teeth (6) of 0.81 mm according to the drawing, this margin of separation ranging from 0.2 to 15 mm.

4. HYGIENE GUARANTEE SEAL FOR SINGLE USE COMBS multi-functional side adapter (3) of optional use Figure 1 consisting of an accessory in the form of a hook or broken ring this interruption being 11.8 mm according to the physical piece, this measure-

ment ranging from 10 to 20 mm, and the inner diameter of which allows the insertion of the fingers, the diameter of this adapter (3) being 18 mm with measurement tolerances of ± 15 mm, and its location is opposite that of the adapter (2 a) at the end of the seal (2) Figures 2 and 10 at one end, that is, on the exterior of the comb (1) in the area nearest the fine teeth (6 b) Figures 1, 2, 3 and 9 and the connection shared by the comb (1) is the section (5) Figure 3 that is easily destroyable.

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FIG.- 1

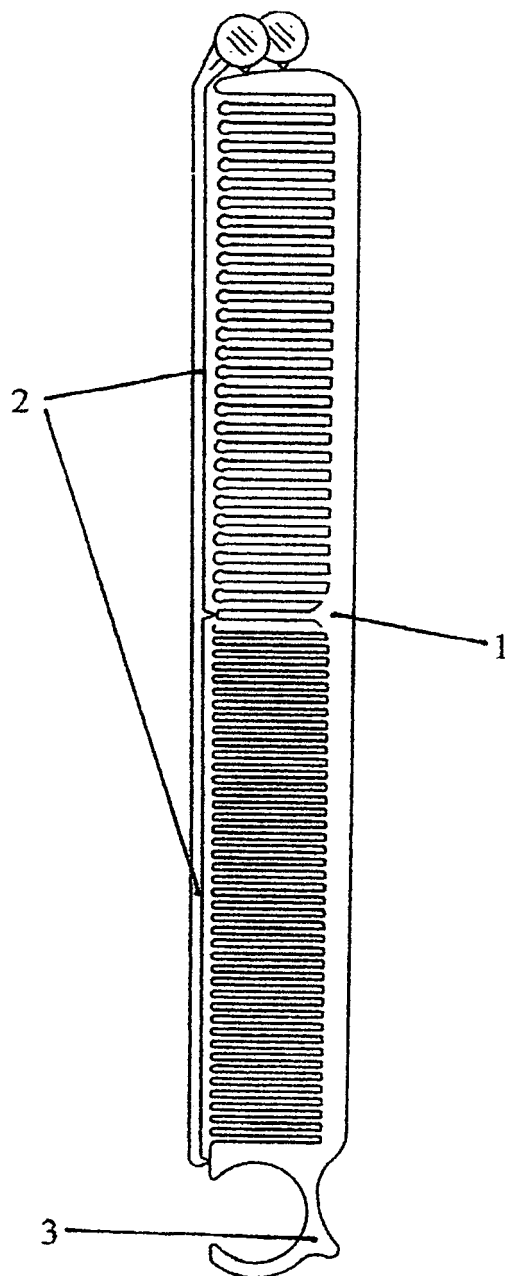


FIG.-2

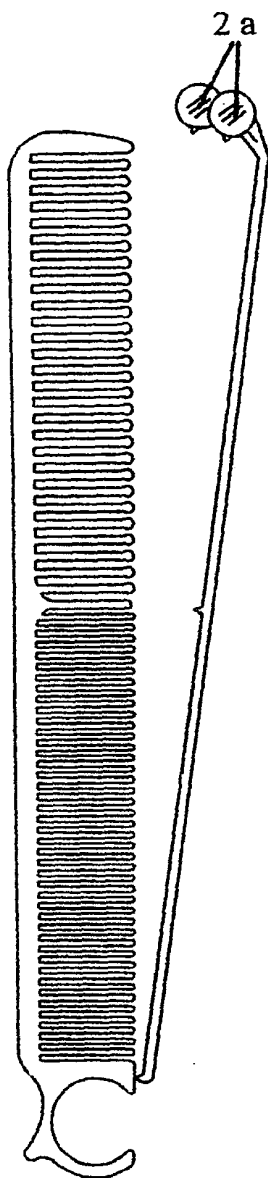


FIG.-3

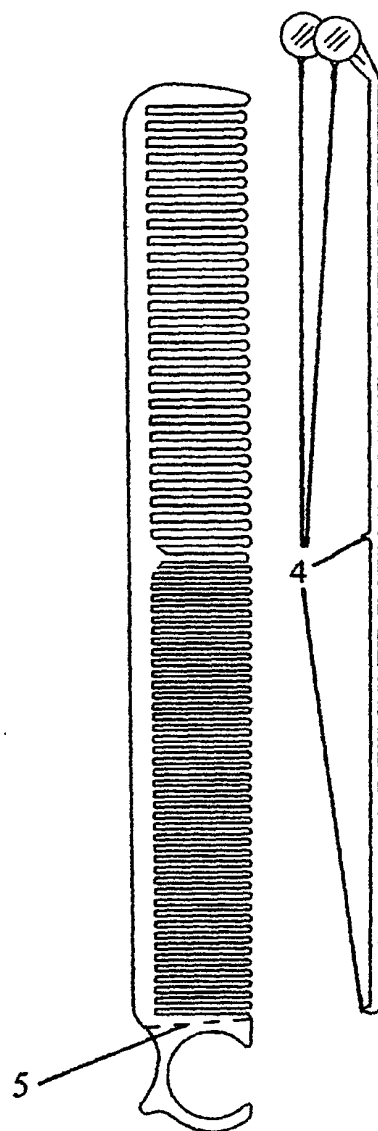


FIG.-4

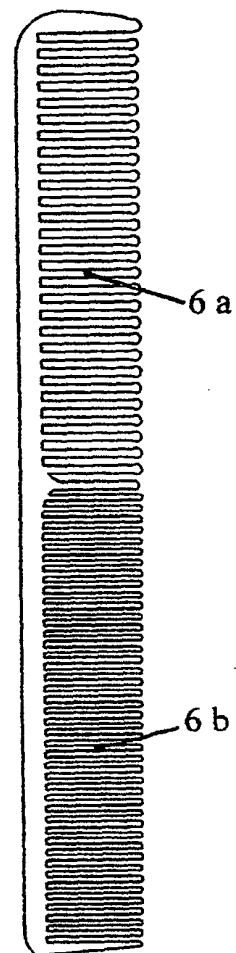


FIG.-5

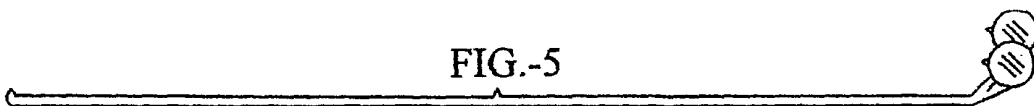


FIG.-6



FIG.- 7

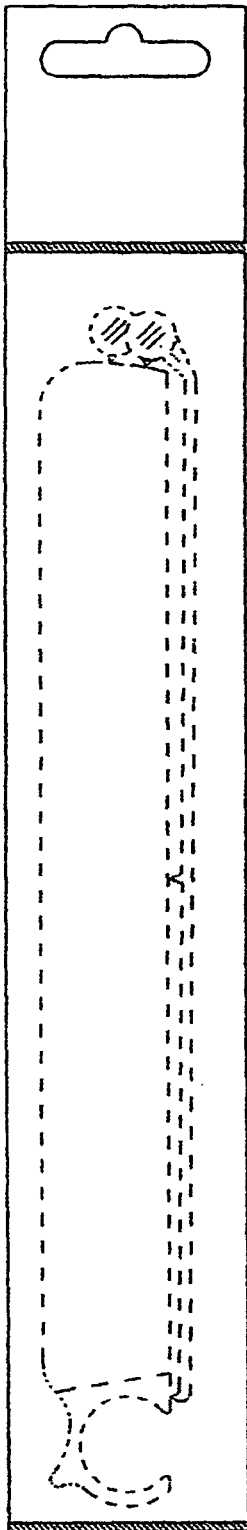


FIG.-8

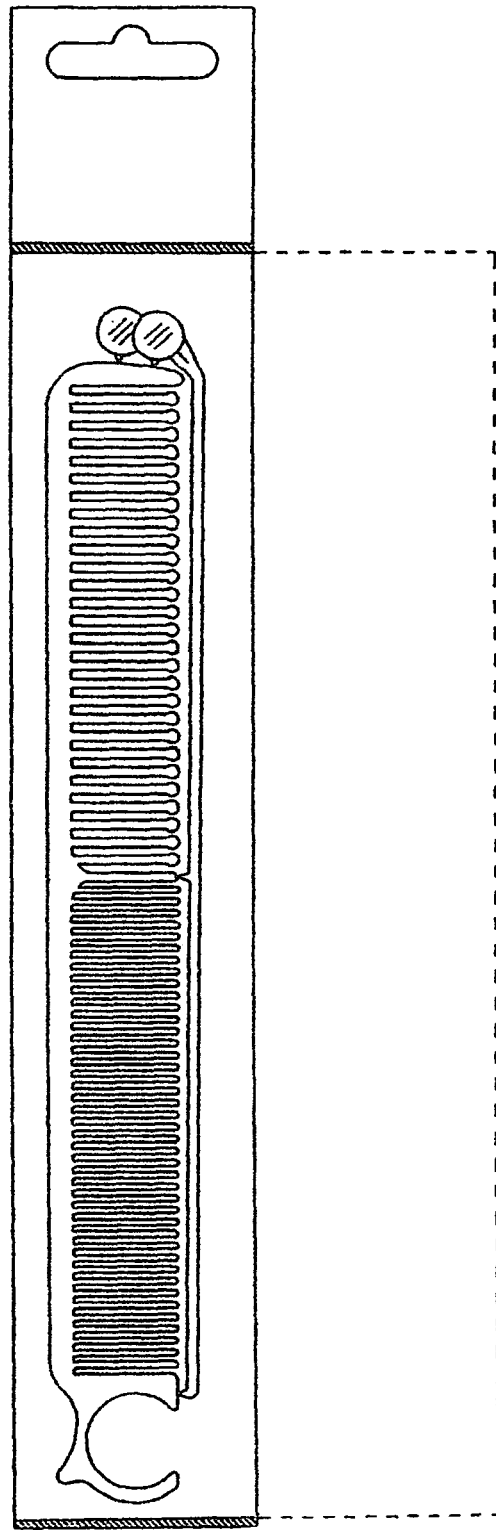


FIG -9

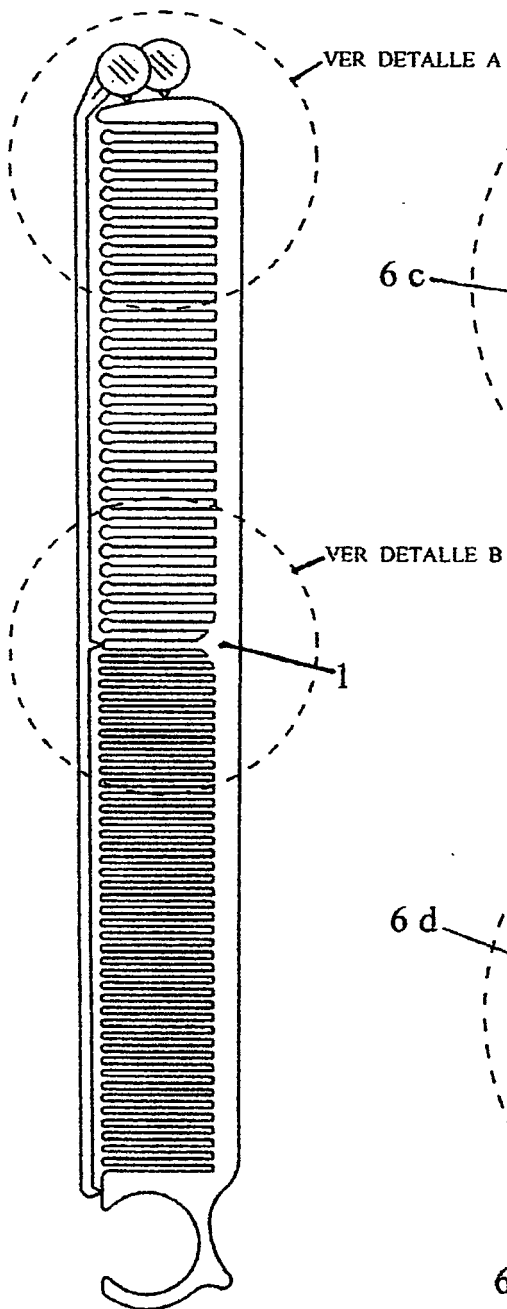


FIG -10

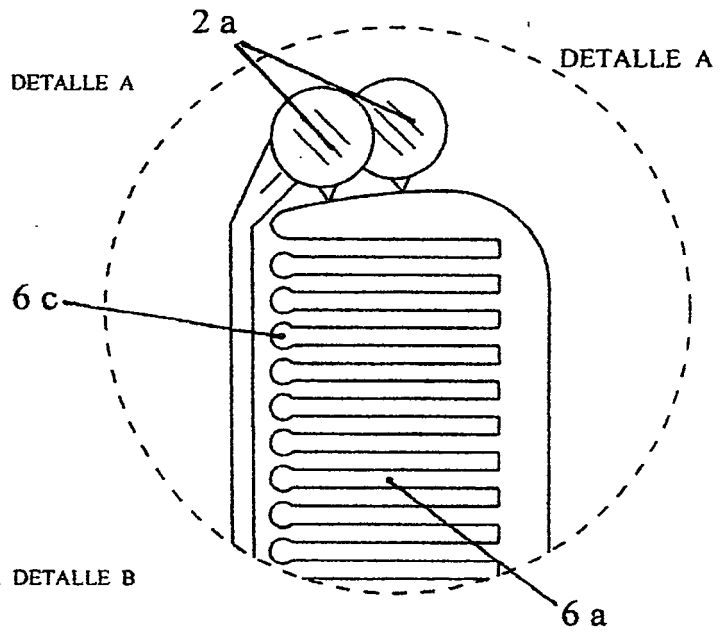


FIG -11

