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Eyelash curling device

(57) An eyelash curling device (2) comprises a frame (20) having two opposite inner sides each formed with a sliding groove (200), which includes a first groove unit (201), a second groove unit (202) and a third groove unit (203) for being assembled with a movable plate. A positive bending angle is included between the first and second groove units, while a negative bending angle is included between the second and third groove units. A fixing hole (204) is formed adjacent to each of the third groove units (203) for being assembled with a curved plate (21). When the frame is abutted against a user's eye portion and the movable plate (22) is shifted upward from the first groove unit (201) to the second groove unit (202), an upper edge of the movable plate (22) will be abutted against a lower edge of the curved plate (21) due to the positive bending angle for positioning the user's eyelash roots between the movable and curved plates.

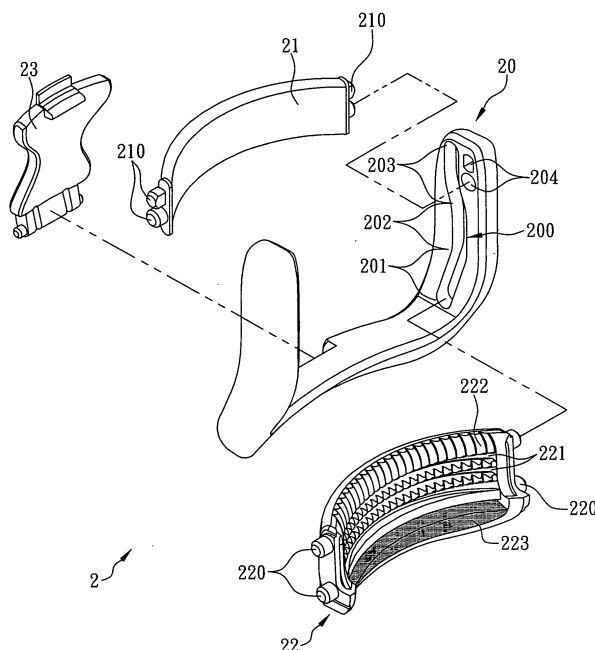


FIG. 1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to an eyelash curling device, more particularly to an eyelash curling device having a structure easy for a user to comb, clip and position each of the eyelashes within the eyelash curling device, and then conveniently and evenly smear a perm agent over the eyelashes, so as to enable the eyelashes to be curled into a tidily curled status and maintained for a long time.

BACKGROUND OF THE INVENTION

[0002] Generally, before talking with each other, people mutually observe the apparel and the appearance of each other to determine the personal style including the characters, the attitude, etc. Thus, the clean and dignified appearance can not only add the self-confidence, but also can earn respect from other people, so as to increase the opportunity of positive interaction and communication. Therefore, the garment and the appearance should be noticed and important to the social etiquette.

[0003] There are thousands of ways for people to spruce themselves. For example, in order to show the great vigor and visual attractiveness, a modern woman usually uses an eyelash clip to curve her eyelashes with the clipping pressure so as to make her eyes more attractive. However, since the curled deformed eyelashes easily droop and restore to the original status under the influence of the resilience of the eyelashes and the gravity force within a short time (such as 2 to 3 hours), it is difficult to maintain the eyelashes in the curled status. As a result, the user not only needs to frequently pay attention to ensure if the eyelashes are curled, but also needs to carry the eyelash clip to strengthen the curled degree of the eyelashes at any time. Furthermore, while an eyelash clip serves to curve eyelashes, it provides no function of ordering originally interlaced eyelashes. Therefore, even though the eyelashes can be curved by using the eyelash clip, the curved yet disordered eyelashes are still far from good-looking. Thus, merely using the eyelash clip is insufficient in beautifying the eyes. As described above, there are still many operational inconveniences and disturbing problems in the traditional eyelash clip.

[0004] To maintain the curled status of the eyelashes for a long time, related manufacturers have developed a kind of mascara to fix the eyelashes in the curled status used with a kind of comb-like eyelash brush. That is, the user can firstly use the eyelash clip to curve the eyelashes, and then use the eyelash brush to smear the mascara over the eyelashes as well as to order the eyelashes. Thus, the decorated eyelashes can not only maintain the curled status, but also remain ordered, so that the user's eyes are provided with improved attractiveness. However, generally, the mascara is easily softened after absorbing environmental moisture, such that the eyelashes

will droop and restore to the original status under the influence of the resilience of the eyelashes and the gravity force. Thus, the user still has to brush the eyelashes with the mascara periodically in a day to strengthen the curled degree of the eyelashes. Moreover, before the user goes to bed every day, the user must use the make-up remover cotton or lotion to remove the mascara. Otherwise, when the user sleeps, the mascara remaining on the eyelashes will easily stain the beddings or the peripheral skin adjacent to the user's eyes, resulting in the problems of the bedding contamination and the skin uncomfortableness. Therefore, as described above, there are still some inconveniences and troubles for the user to use the mascara and the eyelash brush to beautify the eyelashes.

[0005] As a result, it is important to think how to design an eyelash curling device for users to keep their eyelashes curled and ordered day after day without performing troublesome procedures to set and remove make-up, in order to solve the foregoing problems existing in the operation of the conventional the eyelash clip, mascara and eyelash brush, as described above.

BRIEF SUMMARY OF THE INVENTION

[0006] It is therefore tried by the inventor to develop an eyelash curling device for users to easily and conveniently keep their eyelashes curled and ordered status for a long time, so as to provide the users' eye portion with improved attractiveness, while the foregoing problems existing in the conventional operation of the conventional eyelash clip, mascara and eyelash brush will be solved.

[0007] An object of the present invention is to provide an eyelash curling device, which comprises a frame, a movable plate and a curved plate, wherein the frame has two opposite inner sides, each of which is formed with a sliding groove and a fixing hole. Each of the sliding grooves can be assembled with the movable plate, while each of the sliding grooves is provided with a first groove unit, a second groove unit and a third groove unit, all of which are communicated with each other in turn. A positive bending angle (such as 15 to 25 degrees) is included between the first groove unit and the second groove unit, while a negative bending angle (such as 5 to 15 degrees) is included between the second groove unit and the third groove unit. Each of the fixing holes is formed adjacent to the third groove unit for being assembled with the curved plate. The movable plate is formed with at least one opening along a horizontal direction thereof, wherein each said opening has an inner side surface provided with a plurality of protruded ribs along its longitudinal direction. Therefore, the frame can be abutted against an eye portion by a user, and then the movable plate can be shifted. When the movable plate is shifted upward from the position of the first groove unit to the position of the second groove unit, an inner side of an upper edge of the movable plate will be abutted against an outer side of a lower edge of the curved plate due to the positive bending angle included between the first groove unit and

the second groove unit, so that the user's eyelash roots can be positioned between the inner side of the movable plate and the outer side of the curved plate. Then, when the movable plate is shifted upward from the position of the second groove unit to the position of the third groove unit, each of the user's eyelashes can be combed between each of the protruded ribs and the curved plate. Meanwhile, the movable plate can be positioned on the position corresponding to the third groove unit due to the negative bending angle included between the second groove unit and the third groove unit, so that the user's eyelashes can be stably clipped and positioned between the inner side of the movable plate and the outer side of the curved plate. As a result, after the user uses the eyelash curling device to comb, clip and position each of the eyelashes, a perm agent can be conveniently and evenly smeared over the eyelashes from each of the opening formed on the outer side of the movable plate, and then the eyelashes can be curled, so that the tidily curled status of the curled eyelashes can be obtained and maintained for a long time.

[0008] Another object of the present invention is to provide an eyelash curling device, which further comprises an engaging plate, wherein the engaging plate is pivotally connected to an outer side of a lower edge of the frame. When the movable plate is shifted to the position corresponding to the third groove unit, the engaging plate can be rotated to a position corresponding to a lower edge of the movable plate to engage with the movable plate. Thus, the movable plate will be positioned on the position corresponding to the third groove unit, so that it is convenient for the user to store the eyelash curling device or keep clipping and positioning the eyelashes for carrying out the eyelash curling procedures.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0009] The structure and the technical means adopted by the present invention to achieve the above and other objects can be best understood by referring to the following detailed description of the preferred embodiment and the accompanying drawings, wherein

FIG. 1 is an exploded perspective view of an eyelash curling device according to a preferred embodiment of the present invention;

FIG. 2 is an assembled perspective view of the eyelash curling device according to the preferred embodiment of the present invention, with partially cross-sections thereof;

FIG. 3 is an operational view of the eyelash curling device according to the preferred embodiment of the present invention; and

FIG. 4 is another operational view of the eyelash curling device according to the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0010] The present invention is related to an eyelash curling device. Referring now to FIG. 1, according to a preferred embodiment of the present invention, the eyelash curling device 2 comprises a frame 20, a curved plate 21 and a movable plate 22, wherein the frame 20 is U-shaped and has two opposite inner sides, each of which is formed with a sliding groove 200 and a fixing hole 204. Each of the sliding grooves 200 is extended from a lower end of the frame 20 to an upper end thereof, while each of the sliding grooves 200 is provided with a first groove unit 201, a second groove unit 202 and a third groove unit 203, all of which are communicated with each other in turn and have the same length as each other. In the present invention, a positive bending angle is included between the first groove unit 201 and the second groove unit 202, wherein the positive bending angle is ranged between 15 and 25 degrees. Meanwhile, a negative bending angle is included between the second groove unit 202 and the third groove unit 203, wherein the negative bending angle is ranged between 5 and 15 degrees. Furthermore, each of the fixing holes 204 is formed on a position adjacent to the third groove unit 203. Referring now to FIG. 2, the curved plate 21 is curved to match with the profile of a human eye portion, while the curved plate 21 has a lower edge with a curved guiding angle. The curved plate 21 further has two ends, each of which is formed with at least one inserting portion 210, wherein the inserting portions 210 are corresponding to the fixing holes 204, so that the curved plate 21 can be fixed on the frame 20 by the inserting portions 210. In addition, the movable plate 22 is also curved to match with the profile of the eye portion of human body, while the movable plate 22 has two ends, each of which is formed with at least two protrusions 220, wherein each of the protrusions 220 is corresponding to each of the sliding grooves 200, so that the movable plate 22 can slide along the groove units 201, 202 and 203 of the frame 20 by the protrusions 220. Besides, the movable plate 22 is formed with at least one opening 221 along a horizontal direction thereof, wherein the movable plate 22 has an inner side surface provided with a plurality of protruded ribs 222 along its longitudinal direction and corresponding to each of the opening 221. The inner side surface of the movable plate 22 is further provided with a clipping cushion 223 formed on a position adjacent to a lower edge of the movable plate 22, wherein the clipping cushion 223 is made of a soft rubber material.

[0011] Referring still to FIG. 2, in a case that the protrusions 220 are corresponding to the first groove units 201, respectively, a predetermined gap is defined between an upper edge of the movable plate 22 and the lower edge of the curved plate 21, so that eyelashes of the eye portion of a user can pass through the gap. Referring now to FIG. 3, in a case that the protrusions 220 are corresponding to the second groove units 202, respectively, an inner side of the upper edge of the movable

plate 22 is overlapped with and abutted against an outer side of the lower edge of the curved plate 21, so as to position a user's eyelash roots between the inner side of the movable plate 22 and the outer side of the curved plate 21. Referring further to FIGS. 1 and 4, in a case that the protrusions 220 are corresponding to the third groove units 203, respectively, an upper edge of the clipping cushion 223 can be abutted against the lower edge of the curved plate 21, so as to clip and position the user's eyelashes between the protruded ribs 222 on the inner side of the movable plate 22 and the outer side of the curved plate 21.

[0012] Thus, referring back to FIGS. 1 and 2, when the movable plate 22 of the eyelash curling device 2 is placed to a position corresponding the first groove unit 201 by the user and the inner side of the frame 20 is abutted against the user's eye portion, the user's eyelashes can pass through the gap between the upper edge of the movable plate 22 and the lower edge of the curved plate 21. Then, referring now to FIG. 3, the movable plate 22 is shifted upward from the position of the first groove unit 201 to the position of the second groove unit 202 by the user, the inner side of the upper edge of the movable plate 22 will be abutted against the outer side of the lower edge of the curved plate 21 due to the positive bending angle included between the first groove unit 201 and the second groove unit 202, so that the user's eyelash roots can be positioned between the inner side of the movable plate 22 and the outer side of the curved plate 21. Then, referring now to FIGS. 1 and 4, when the movable plate 22 is shifted upward from the position of the second groove unit 202 to the position of the third groove unit 203 by the user, each of the user's eyelashes can be tidily combed between each of the protruded ribs 222 and the curved plate 21. Meanwhile, the movable plate 22 can be positioned on the position corresponding to the third groove unit 203 due to the negative bending angle included between the second groove unit 202 and the third groove unit 203, so that each of the user's eyelashes can be stably clipped and positioned between the protruded ribs 222 on the inner side of the movable plate 22 and the outer side of the curved plate 21. Meanwhile, the upper edge of the soft clipping cushion 223 can be abutted against the curved guiding angle on the lower edge of the curved plate 21. Thus, a portion of the eyelashes adjacent to the user's eyelash roots can be shaped to generate a smooth curve as the curved guiding angle. As a result, after the user uses the eyelash curling device 2 to comb, clip and position each of the eyelashes, a perm agent can be conveniently and evenly smeared over the eyelashes through each of the opening 221 from the outside of the movable plate 22, and then the user's eyelashes can be curled, so that the tidily curled status of the curled eyelashes can be obtained and maintained for a long time. In addition, because the eyelashes are shaped by means of curling method, the curled status of the eyelashes can be maintained for a long time. Therefore, the user needs not carry any eyelash clip to strength-

en the curled degree of the eyelashes at any time. Meanwhile, the user needs not purchase any mascara and eyelash brush, so that time and money for make-up and cleansing can be substantially saved. Besides, it can prevent the remaining mascara from smearing over the eyelids, so that the skin uncomfortableness can be avoided.

[0013] Furthermore, in the embodiment, the size of the frame 20, the curved plate 21 and the movable plate 22, and the curved bending angle of the curved plate 21 and the movable plate 22 matching with the profile of the eye portion of human body are not limited to a single specification. Because each of users has different face shape, profile and eyelash length, each of the users can select the frame 20, the curved plate 21 and the movable plate 22 with a suitable size according to his/her individual face shape, profile and eyelash length, and select the curved plate 21 and the movable plate 22 with a suitable curvature. Then, the frame 20, the curved plate 21 and the movable plate 22 with a suitable specification can be installed to construct the eyelash curling device 2, so that the eyelash curling device 2 can be tightly attached to an eye socket of the user. As a result, the user can use the curved plate 21 and the movable plate 22 to tidily comb, clip and position each of the eyelashes, and all of the users can use the eyelash curling device 2 to carry out the eyelash curling operation and achieve the same effect.

[0014] In the preferred embodiment, referring back to FIGS. 1 and 4, the eyelash curling device 2 further comprises an engaging plate 23, wherein the engaging plate 23 has a lower end pivotally connected to the outer side of the lower edge of the frame 20. In a case that the protrusions 220 are corresponding to the third groove units 203, respectively, the upper edge of the clipping cushion 223 of the movable plate 22 is abutted against the lower edge of the curved plate 21 and the protruded ribs 222 on the inner side surface of the movable plate 22 contacts the outer side of the curved plate 21, an upper end of the engaging plate 23 can be rotated to a position corresponding to the lower edge of the movable plate 22 by the user, so that the upper end of the engaging plate 23 can abut against the lower edge of the movable plate 22. Thus, the engaging plate 23 can engage with the movable plate 22, and the upper edge of the clipping cushion 223 can keep abutting against the lower edge of the curved plate 21. Meanwhile, the protruded ribs 222 on the inner side of the movable plate 22 can keep contacting the outer side of the curved plate 21. In such a way, the user can use the engaging plate 23 to engage and position the movable plate 22 on a position corresponding to the third groove units 203, so as to conveniently store the eyelash curling device 2. Alternatively, the movable plate 22 and the curved plate 21 can keep clipping and positioning the eyelashes, in order to conveniently carry out the eyelash curling procedures. As a result, the convenience of the eyelash curling device 2 can be substantially enhanced.

[0015] As described above, referring back to FIG. 1,

the eyelash curling device 2 of the present invention can be used to help the user to easily and conveniently comb, clip and position the eyelashes, in order to smear a perm agent over the eyelashes. After the eyelashes are curled, the tidily curled status of the curled eyelashes can be maintained for a long time, so that the user's eye portion will become more attractive due to the curled and tidily combed eyelashes. Meanwhile, the inconveniences and troubles existing in the conventional operation of the conventional eyelash clip, mascara and eyelash brush will be solved.

[0016] The present invention has been described with a preferred embodiment thereof and it is understood that many changes and modifications to the described embodiment can be carried out without departing from the scope and the spirit of the invention that is intended to be limited only by the appended claims.

Claims

1. An eyelash curling device, comprising:

a frame being U-shaped and having two opposite inner sides, each of which is formed with a sliding groove and a fixing hole, wherein each of the sliding grooves is extended from a lower end of the frame to an upper end thereof, and provided with a first groove unit, a second groove unit and a third groove unit, all of which are communicated with each other in turn, a positive bending angle is included between the first groove unit and the second groove unit, a negative bending angle is included between the second groove unit and the third groove unit, and each of the fixing holes is formed on a position adjacent to the third groove unit;

a curved plate being curved and having a lower edge with a curved guiding angle, wherein the curved plate further has two ends, each of which is formed with at least one inserting portion, and the inserting portions are corresponding to the fixing holes, so that the curved plate is allowed to be fixed on the frame by the inserting portions; and

a movable plate being curved and having two ends, each of which is formed with at least two protrusions, wherein each of the protrusions is corresponding to each of the sliding grooves, so that the movable plate is allowed to slide along the groove units of the frame by the protrusions, the movable plate is formed with at least one opening along a horizontal direction thereof, and the movable plate has an inner side surface provided with a plurality of protruded ribs along a longitudinal direction thereof and corresponding to each of the opening, while the inner side surface of the movable plate is further provided with

a clipping cushion formed on a position adjacent to a lower edge of the movable plate; whereby when the protrusions are corresponding to the first groove units, respectively, a predetermined gap is defined between an upper edge of the movable plate and the lower edge of the curved plate; when the protrusions are corresponding to the second groove units, respectively, an inner side of the upper edge of the movable plate is overlapped with and abutted against an outer side of the lower edge of the curved plate; and when the protrusions are corresponding to the third groove units, respectively, an upper edge of the clipping cushion is allowed to be abutted against the lower edge of the curved plate, while the protruded ribs on the inner side surface of the movable plate are allowed to contact an outer side of the curved plate.

2. The eyelash curling device according to Claim 1, further comprising an engaging plate, wherein the engaging plate has a lower end pivotally connected to the outer side of the lower edge of the frame, when the protrusions are corresponding to the third groove units, respectively, while the upper edge of the clipping cushion is abutted against the lower edge of the curved plate and the protruded ribs on the inner side surface of the movable plate contact the outer side of the curved plate, an upper end of the engaging plate is allowed to be rotated to a position corresponding to the lower edge of the movable plate, while the upper end of the engaging plate is allowed to abut against the lower edge of the movable plate, so that the engaging plate is allowed to engage with the movable plate, and the upper edge of the clipping cushion is allowed to keep abutting against the lower edge of the curved plate, while the protruded ribs on the inner side of the movable plate are allowed to keep contacting the outer side of the curved plate.
3. The eyelash curling device according to Claim 2, wherein the clipping cushion is made of a rubber material.
4. The eyelash curling device according to Claim 3, wherein the positive bending angle between the first groove unit and the second groove unit is ranged between 15 and 25 degrees.
5. The eyelash curling device according to Claim 3 or 4, wherein the negative bending angle between the second groove unit and the third groove unit is ranged between 5 and 15 degrees.

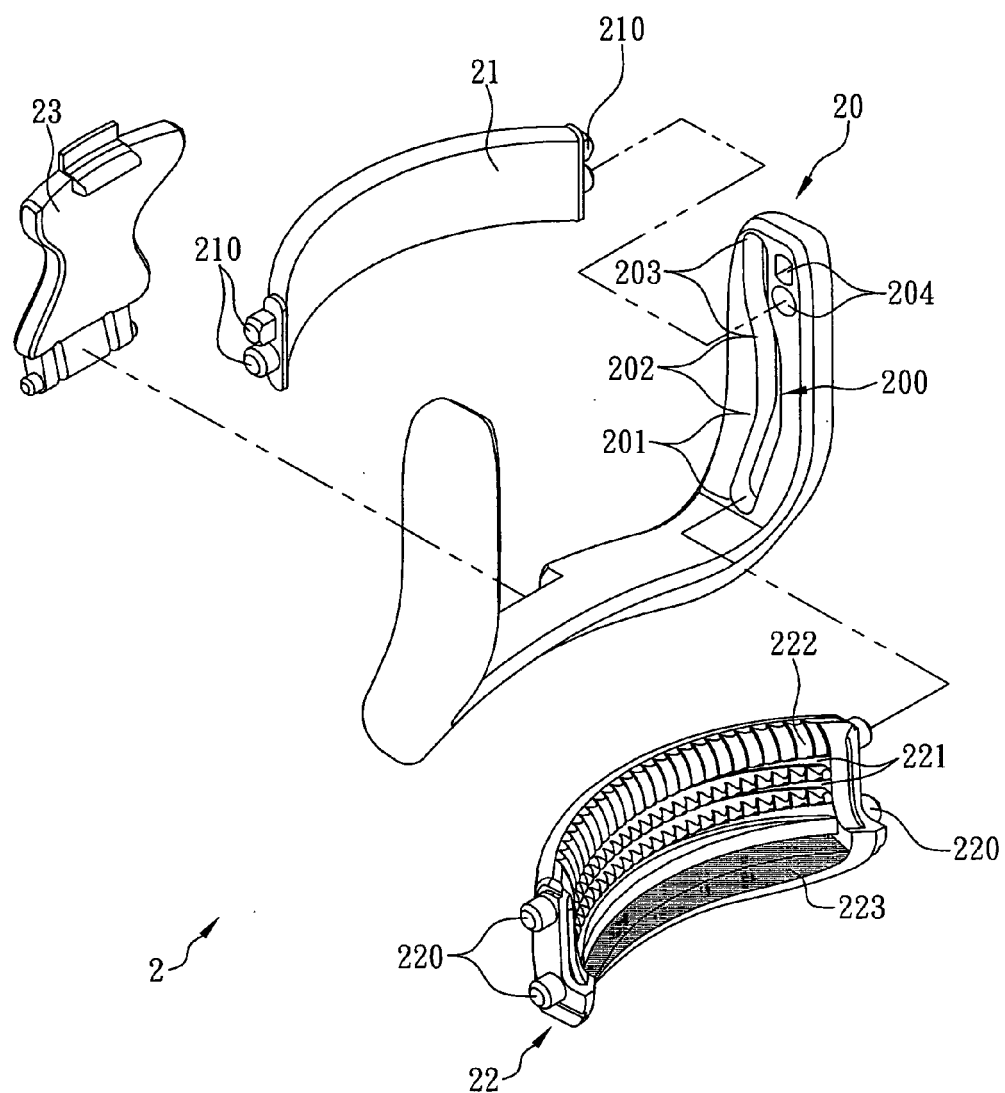


FIG. 1

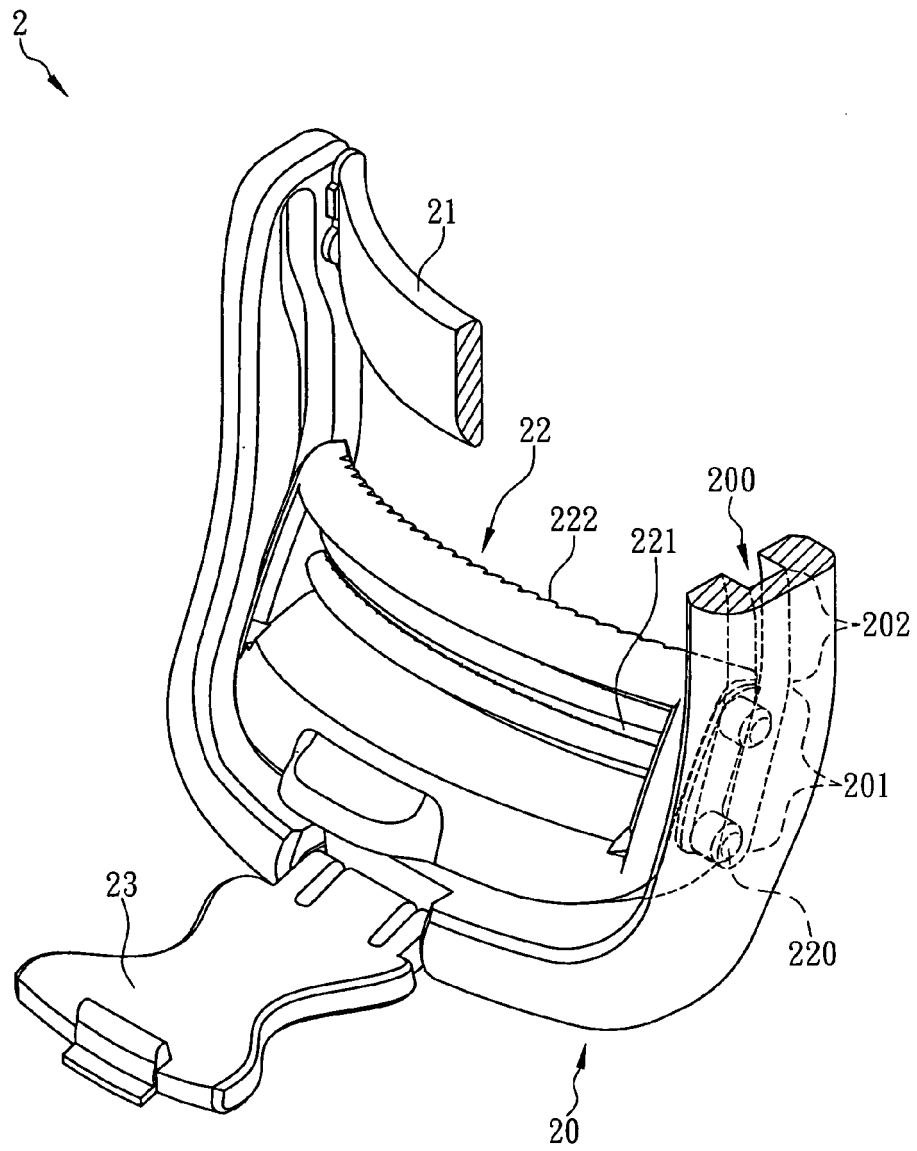


FIG. 2

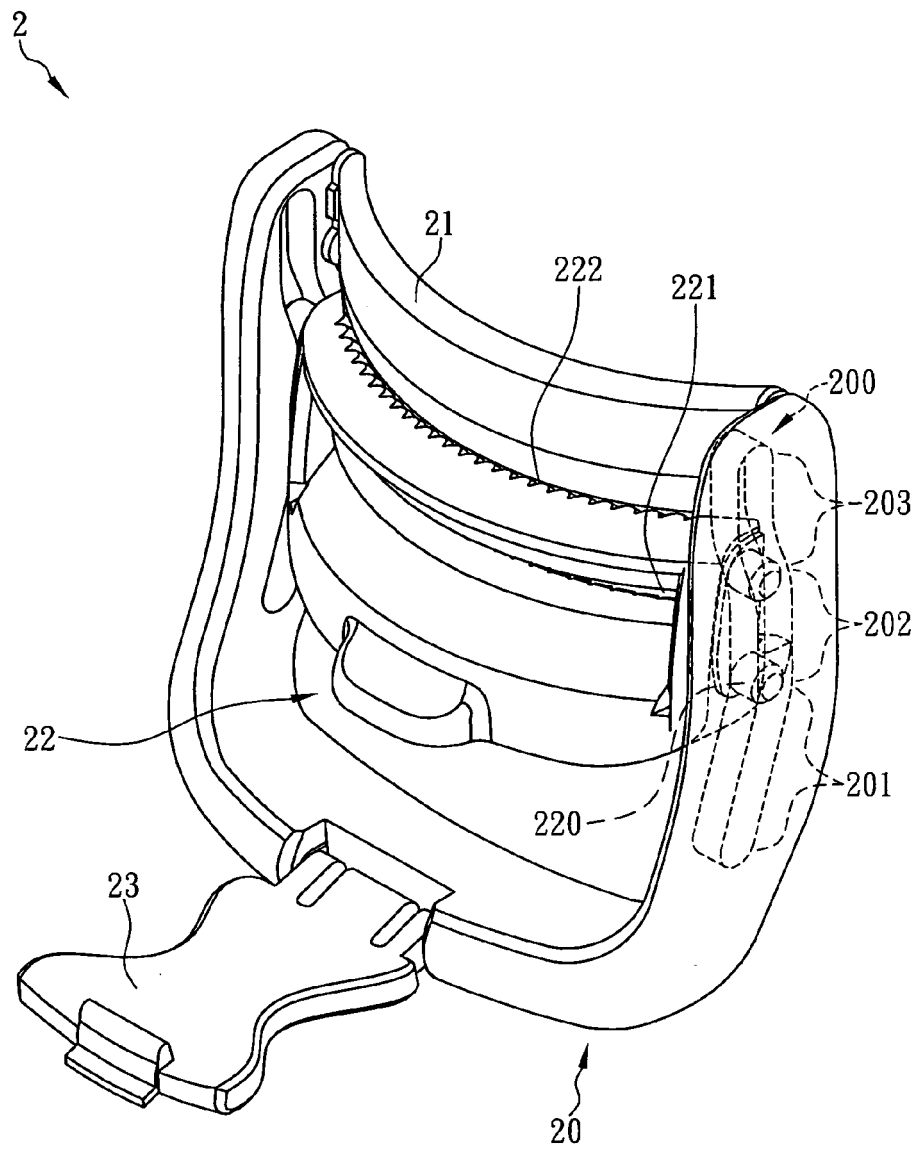


FIG. 3

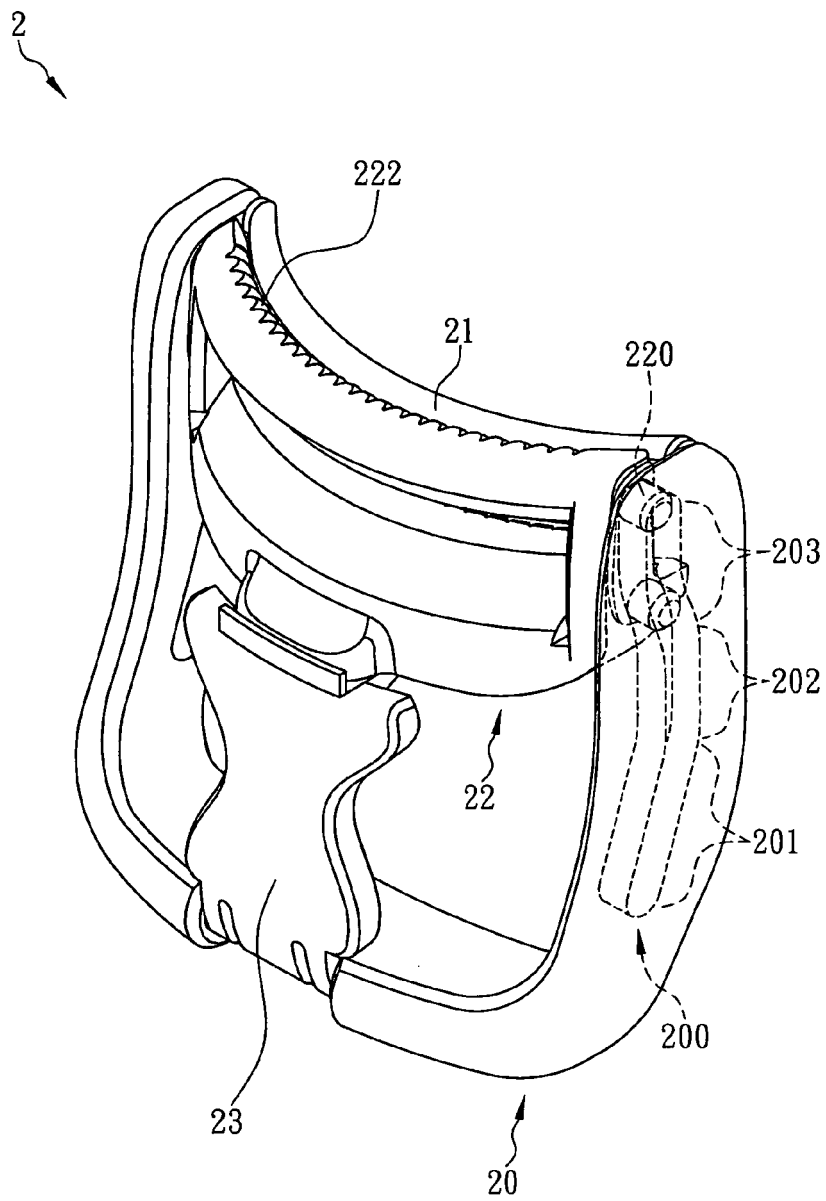


FIG. 4



EUROPEAN SEARCH REPORT

Application Number
EP 09 01 1345

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	JP 2001 299431 A (CUTTING STUDIO KIMURA KK) 30 October 2001 (2001-10-30) * paragraphs [0010] - [0011] * * figures 1-11 *	1-5	INV. A45D2/48
A	----- KR 2009 0006255 A (GAEASOFT CO LTD [KR]) 15 January 2009 (2009-01-15) * paragraphs [0020], [0021], [0024], [0025] * * figures 1-5 *	1-5	
A	----- US 2 044 209 A (GUSTAVE GLATZER) 16 June 1936 (1936-06-16) * page 1, column 2, lines 6-11 * * figures 1,2,4,5,8 *	1	
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A45D
3	Place of search The Hague	Date of completion of the search 14 April 2010	Examiner Witkowska-Piela, A
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 09 01 1345

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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14-04-2010

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