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(54) **A packaging case set**

(57) A packaging case set comprising a first modular packaging case (1) and a second modular packaging case (1'), each of the first and the second modular packaging case having a first (10) and a second (11) enclosure capable of forming a sealed volume for packing an article, a bonding unit (12) including a first (121) and a second (122) fastener which allow the first and second

enclosure to be fastened together, wherein the first enclosure of the first modular packaging case is interchangeable with the first enclosure of the second modular packaging case whereby to provide a third modular packaging case. The packaging case set provides a versatile means for packing small personal items or a complete set of swimming articles such as swimming goggles, ear plugs, nose pieces and the like.

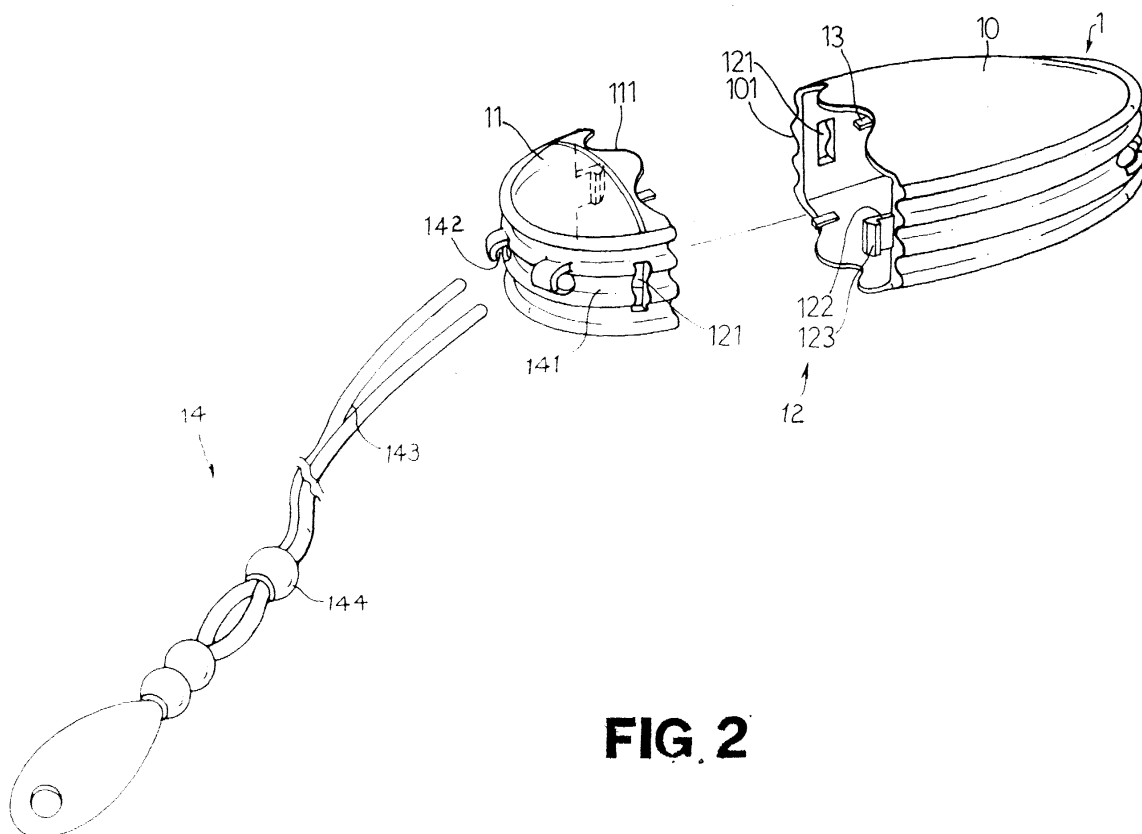


FIG. 2

Description**FIELD OF THE INVENTION:**

5 **[0001]** The presented innovation is designed to provide a kind of packaging case set, and more particularly a case shell, which while being opened is able to be assembled with another opened case shell into two new style case shells. The packaging case set is thus able to form respective structures for the packing of swimming goggles, swimming goods, or small personal items.

BACKGROUND OF THE INVENTION:

10 **[0002]** Figure 1 gives reference to a packaging case related to the present invention, which is especially for the packing of swimming goggles as well. Moreover, the structure for such a kind of swimming goggles packaging case is not only very convenient, but is also able to securely protect the glasses. There are a variety of designs for known swimming goggles containers, but in fact most of them either lack innovative and functional designs, or maybe just concentrate on changes in visible appearance only, with very few of them having an improvement in functions. It is a common experience for most of us that there are no united and proper packaging cases to help us for the collection and packing of small personal items, such as earplugs, nosepieces, small ornaments etc., when we go swimming. As a result, swimming was becoming more and more inconvenient, sometimes even resulting in the unlucky loss of items, thus presenting the need for people who enjoy swimming to solve such a problem.

20 **[0003]** In addition, the design of swimming goggles eyeglasses have dramatically changed, from only having zero diopter eyeglasses, to the provision of services for both shortsighted and far sighted people; and, going further, they can even render special service for particular people in the supply of different diopters on both eyes. There is a tendency to be concerned with the service rendered to customers instead of technology. Under such circumstances, even the sales status for swimming goggles has also changed, from only purchasing mono eyeglasses instead of two eyeglasses at the same time. Therefore there's a rapid need for the improvement of both the style and the functions of the swimming goggles accordingly.

25 **[0004]** Thus, the purpose of the present invention is to provide a kind of packaging case set, in which each packaging case is used for the packing of mono frame swimming goggles. Meanwhile, it also allows each packaging case, while opened, to be reassembled with other opened packaging cases, for the forming of two new style case shells. One of the case shells is for collecting/packing, while the other case shell is for collecting/packing with earplugs, nosepieces, or small ornaments, offering a new style with multi-functions.

30 **[0005]** Another purpose of the present invention is to provide a brand new style in sales by offering the packaging case for mono frame swim glasses, hence allowing customers to select the options in accordance to their actual needs.

CHARACTERISTICS OF THE INVENTION:

35 **[0006]** The major characteristics of the packaging case of the present invention include: each packaging case comprising of 2 pieces of packaging case with the same style case shell, in which each of the packaging cases consists of a first and second enclosure, bonding unit etc, wherein the first and second enclosure align each other and are then assembled into a sealing space. Moreover, each enclosure is equipped with a bonding unit, in which the said bonding unit contains the first and second fasteners, which become further stuck to each other accordingly. Owing to the above structure, and also by means of the function of becoming stuck in-between the first and second fasteners on the first enclosure, it is hence able to be reassembled into two different-styled packaging cases at the time of opening the packaging case.

40 **[0007]** In compliance with the major characteristics, in which the first fastener is a fastening slot and the second fastener is a coupling post, there is also a Flange equipped with the coupling post for the purpose of becoming stuck with the fastening slot.

45 **[0008]** The other characteristic of the packaging case of the present invention is that the join face formed by alignment between the first and second enclosure is the same in conformational structure. Additionally, in light of the above description, the join face between the first and second enclosure is actually a wave shape.

50 **[0009]** Another characteristic of the packaging case of the present invention is the installation of a locator. Located at a position nearby the join face, on the first and second enclosure, it not only provides a special function in the mutual alignment but also prevents the revolving of the join face across the curved surface after the alignment of the first and second enclosure.

55 **[0010]** Furthermore, one additional characteristic of the packaging case of the present invention is a tie-unit installed. This is not only able to tighten the combined piece caused by the first and second enclosures, but also offers a special function for hand carrying purposes.

[0011] The preferred embodiment of the present invention, its configuration, structure, and operation, is best further described in the following detailed description, taken in conjunction with reference to the accompanying drawings:

BRIEF DESCRIPTION OF THE DRAWINGS:

[0012]

Figure 1 is a perspective view of the known packaging case for swimming goggles;

Figure 2 is an exploded perspective view for the single packaging case of the packaging case set in accordance to the present invention;

Figure 3 is a schematic view of the single packaging case for the packaging of swimming goggles with a mono frame, as shown in Figure 2, according to the preferred embodiment of the present invention;

Figure 4 and 5 are schematic views of the new style-packaging case reassembled from two opened packaging cases of the present invention.

BRIEF DESCRIPTION OF NUMBERS:

[0013]

Packaging CASE set	1, 1', 1"	The first enclosure	10
The second enclosure	11	Bonding unit	12
Locator	13	Tie-unit	14
Join face	101, 111	Fastening slot	121
Coupling post	122	Flange	123
Annular slot	141	Perforation	142
Tie-band	143	Pressed sleeve	144

DETAILED DESCRIPTION:

[0014] With reference to Figure 2, this figure is an exploded perspective view for the single packaging case of the packaging case set's present invention. Due to each packaging case, of the packaging case set's present invention, being the same shape and structure, therefore it is acceptable to illustrate only one of the packaging cases. As shown in Figure 2, packaging case 1 comprises of structures such as: the first enclosure 10, second enclosure 11, bonding unit 12, locator 13, tie-unit 14 etc. Herein, the shape of the first enclosure 10 and the second enclosure 11 are similar to a stereo-hollow semi-oval, the said first enclosure 10 is longer than the said second enclosure 11, and the join face 101, 111, in-between the enclosures, is in the shape of a wave, resulting in the effect of contraposition. Moreover, inside the join face 101, 111 is installed with a locator 13 which is located in juxtaposition to the ribbing, extending from the first enclosure 10 and the second enclosure 11. In addition, the other end of the ribbing partly extends out of the join face 101, 111, in-between the first enclosure 10 and the second enclosure 11. By the time the first enclosure 10 and the second enclosure 11 bond together, it will possess the function of guiding and preventing the action of revolving.

[0015] The said bonding unit 12 consists of the first and second fastener, which allow mutual fastening. Therein, the first fastener is a fastening slot 121 and the second fastener is a coupling post 122, which are all equipped on the first and second enclosure 10, 11 and thereby the said coupling post 122 has a Flange 123 for sticking with the said fastening slot 121. Owing to the shape and structure of the present invention's single packaging case being the same, therefore after opening the packaging case, the reassembled enclosures will all stick together to form one piece, by means of the fastening slot 121 and coupling post 122. In other words, the present inventions have a common design in the mutual fastening of different packaging cases without the limitation of orientation.

[0016] Also, the said tie-unit 14 comprises of an annular slot 141, perforation 142, tie-band 143, and pressed sleeve 144, etc. The said annular slot 141 is positioned on the exterior of the first enclosure 10 and the second enclosure 11. The said perforation 142 is positioned at the bottom of the long axle of the said first enclosure 10 and the second enclosure 11, extending from the inside of the first enclosure 10 (or the second enclosure 11) and having the said perforation 142. There is a tie-band 143 stretching outward and then winding into the said annular slot 141, and once again is tied down at the proper position by the pressed sleeve 144 as a result. With reference to the figure 3, upon assembly, the said tie-band 143 will stretch out from the inside of the said enclosure through its perforation, and have a reef knot at the end that is inside the said enclosure. The tie-ban 143 will wind both the first and second enclosure around the annular slot 141, and then be pressed down by the pressed sleeve 144 on the tie-band 143 as a result. In this way the enclosures will be secured properly, while the extra length of the tie-band also acts as a hand-carrying

band. Contrarily, if performing the procedure in reverse then it is possible for you to open it accordingly.

[0017] With reference to the Figure 4 and 5, these are schematic views of the new style-packaging case, which are reassembled from two opened packaging cases of the present invention. Shown in Figure 4 is a packaging case 1' reassembled from two first enclosures 10 for the collecting and packing of complete sets of swimming goggles; while Figure 5 shows a packaging case 1" reassembled from two second enclosures 11, for the collecting and packing of small personal items such as earplugs, nosepieces, coins, keys, etc. Of course, it is also appropriate for the collecting and packing of small sets of cleaning goods.

[0018] In view of the specific embodiment described herein, while the present invention has been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications, such as equipping with an un-wave shaped join face for the packaging case, the use of other geometric figures for the conformation of enclosures, or even using the product for collecting and packing items other than swimming goggles, of the present invention, can be made without departing from the spirit and scope of the invention. Coverage of all such changes and modifications within the scope of the present invention are therefore intended in the appended claims.

Claims

1. A packaging case set comprising:

a first modular packing case and a second modular packaging case, each of the first and the second modular packaging case suitable for packaging one or more articles for swimming and having:

a first and a second enclosure capable of forming a sealed volume for packing the or each article,
a bonding unit including a first and a second fastener which allow the first and second enclosure to be fastened together,

wherein the first enclosure of the first modular packaging case is interchangeable with the first enclosure of the second modular packaging case whereby to provide a third modular packaging case.

2. A packaging case set as claimed in claim 1, wherein the first fastener is a fastening slot and the second fastener is a coupling post with an integral flange insertable into the fastening slot.

3. A packaging case set as claimed in claim 1 or 2, wherein the adjoining edges of the first enclosure and the second enclosure have substantially the same configuration.

4. A packaging case set as claimed in claim 3, wherein the adjoining edges have a wave-like configuration.

5. A packaging case set as claimed in any preceding claim further comprising a locator adjacent to the adjoining edges of the first enclosure and the second enclosure which assists in mutual alignment of the first and second enclosure and prevents lateral movement across the adjoining edges after alignment.

6. A packaging case set as claimed in claim 5, wherein the locator is positioned adjacent to and on the inside of the adjoining edges of the first and second enclosure and in juxtaposition to ribbing on the outer face of the first and second enclosure, whereby the ribbing extends partially out of the adjoining edge of the first and second enclosure.

7. A packaging case set as claimed in any preceding claim further comprising a tie unit capable of securing the first and second enclosure together and allowing the packaging case to be portable by hand.

8. A packaging case set as claimed in claim 7, wherein said tie unit comprises:

an annular groove positioned on the outer face of the first enclosure; and
a perforation in the outer face of the first enclosure positioned substantially at the apex of the longitudinal axis of the first enclosure,

wherein in use the tie band extends outwardly from the inside of the first enclosure through said perforation along the annular groove and is tied by pressed sleeve means.

9. A packaging case set as claimed in any preceding claim wherein the volume of the first enclosure is greater than the volume of the second enclosure.

10. A packaging case as defined in any of claims 1 to 9.

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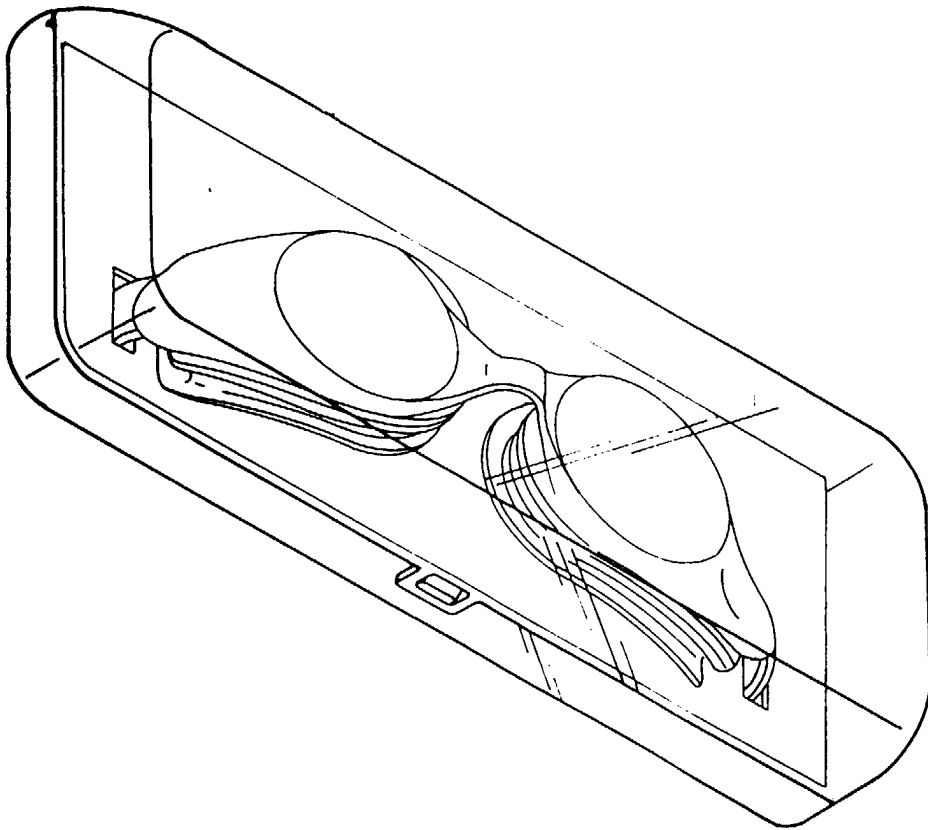


FIG. 1 (Prior Art)

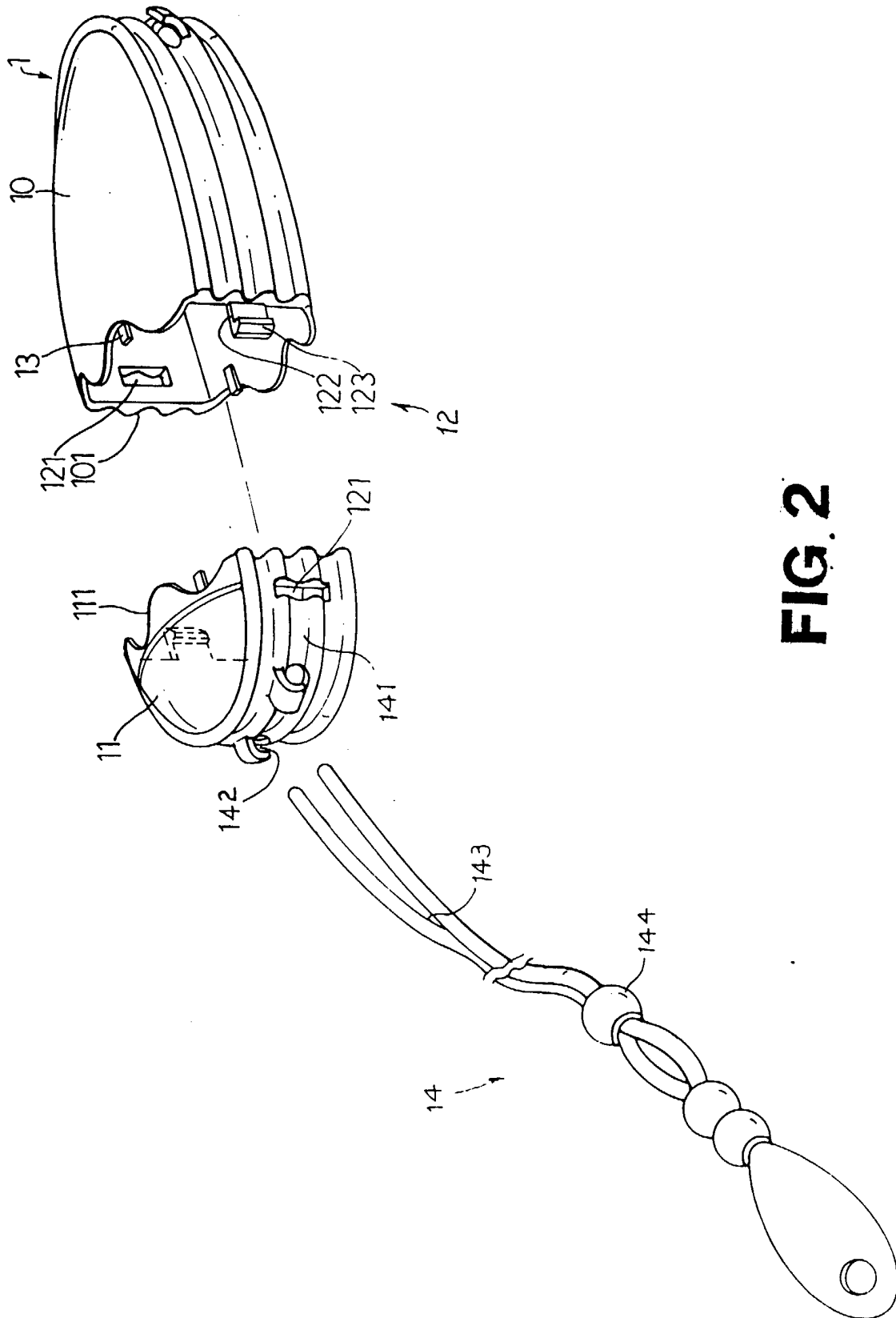


FIG. 2

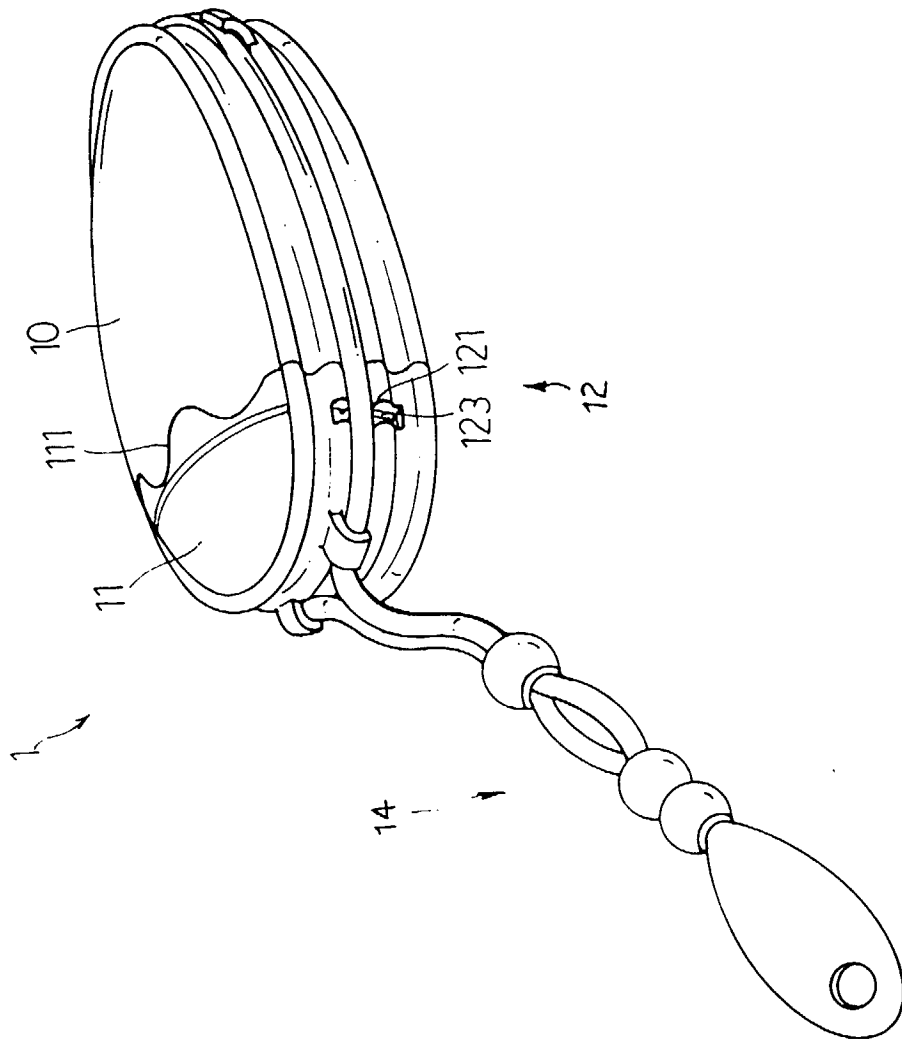


FIG. 3

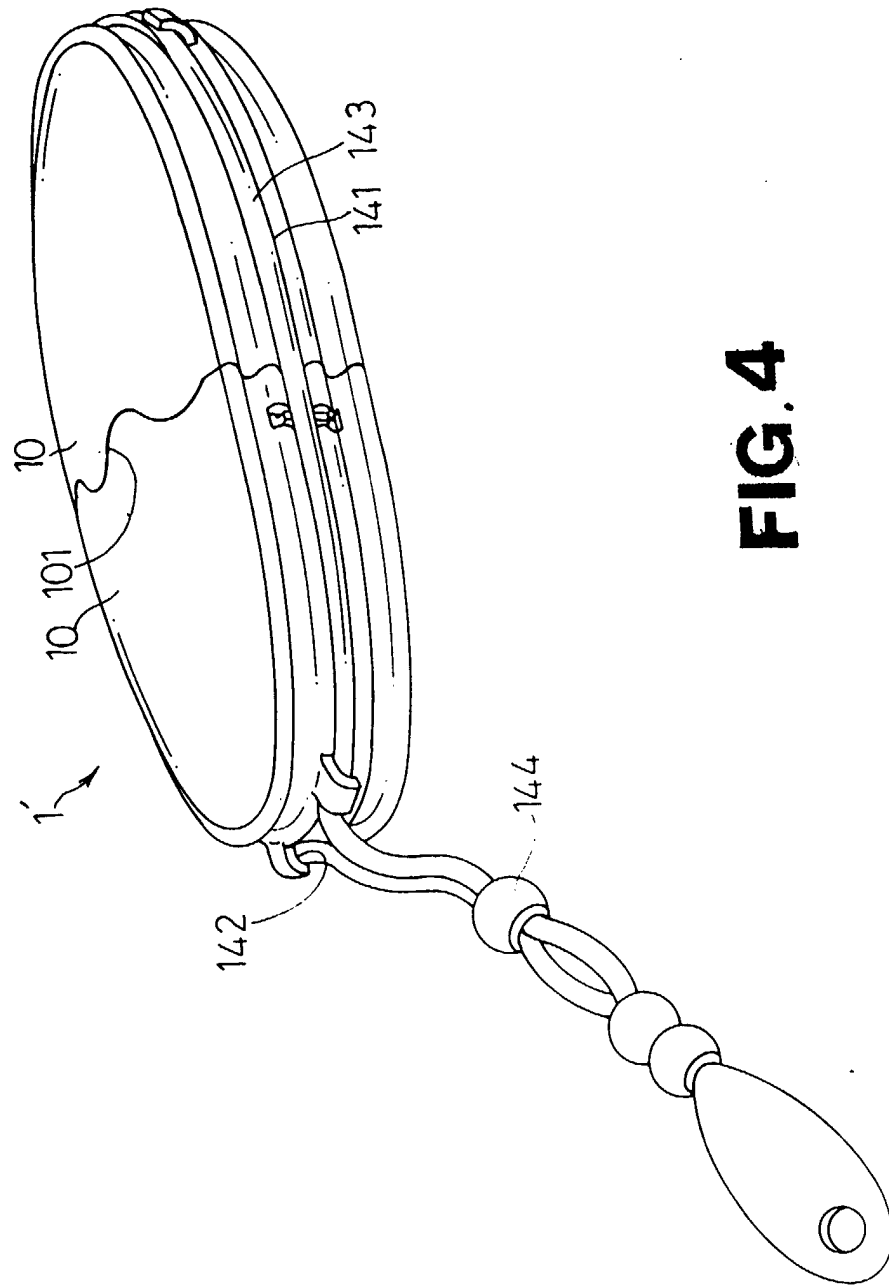


FIG. 4

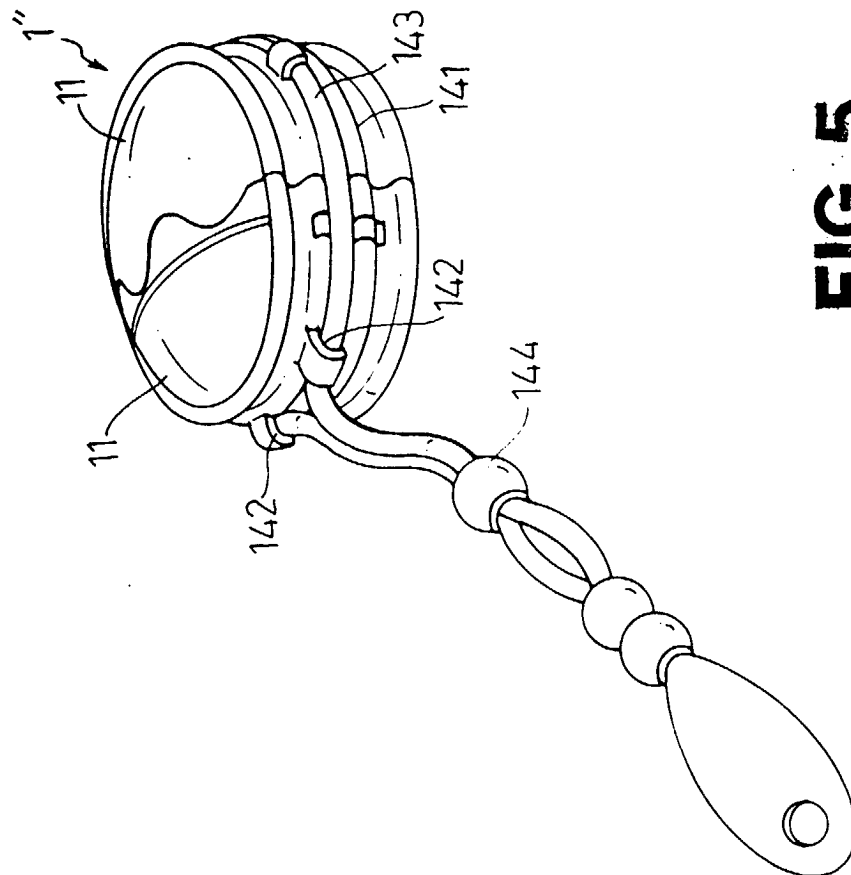


FIG. 5



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 99 31 0316

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7) A45C B65D
Place of search THE HAGUE		Date of completion of the search 26 May 2000	Examiner Sigwalt, C
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 99 31 0316

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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