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(54) **ELEMENT FOR ADJUSTING AND LOCKING BRACELETS**

(57) The present invention refers to a bracelet adjustment and blocking element for bracelets usually comprised of a strip of textile material, and which are individual and non-transferable, used, for example, for identification or as an entry pass. The present element is made up of a piece that is usually cylindrical, although it may have various shapes, as this doesn't affect the features of the invention. It is through this element that the ends of the strip that makes up the bracelet are entered, so that the diameter of the strip is adjusted in the area where the user places it; afterwards it can't be readjusted without the strip or the adjustment element being broken, limiting it to a single user, and making it non-transferable.

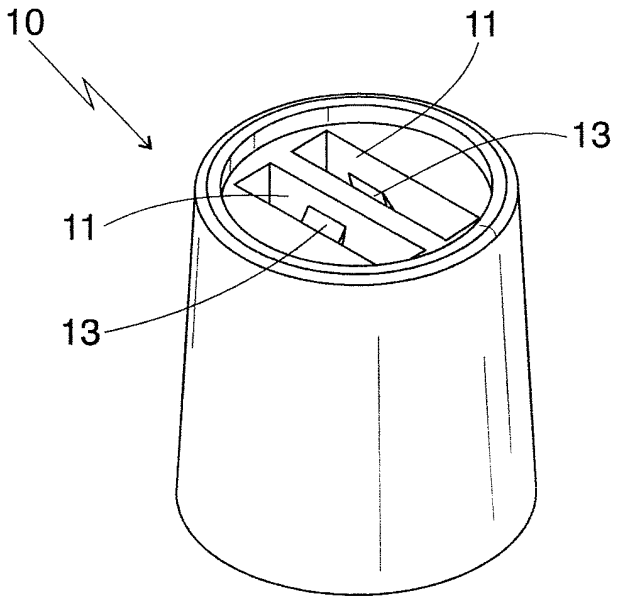

Fig. 1

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Description

Object of the Invention

[0001] More specifically, the present invention refers to a bracelet adjustment and blocking element for bracelets usually comprising a strip of textile material, and which are individual and non-transferable, used, for example, for identification or as an entry pass.

State of the art

[0002] A variety of elements that are used to adjust and lock bracelets used for identification or as entry passes are known, and therefore form a part of state of the art. Said adjustment and blocking elements must prevent users to whom they are delivered and adjusted from being able to readjust them, take them off, and use them again.

[0003] These known systems are based on adjustment elements that are made up of a channel through which both ends of the textile strip pass, and which, when these ends are pulled through the adjustment and blocking element, fix the diameter of the bracelet to the area of the body where they are placed, keeping it from leaving this area.

[0004] The usual adjustment and blocking elements have a single channel through which the ends of the strip pass, and inside there are catch elements like teeth placed in the direction of the adjustment of the strip, so that when someone tries to change the adjustment, the teeth stick into the strip and it can't be readjusted or taken off without breaking.

[0005] This system has the disadvantage that when the ends of the strip are turned along with the turning of the adjustment and blocking element, after the strip is adjusted, the holding effect of the teeth of the element is eliminated, so the bracelet can be readjusted and removed from its position.

[0006] To solve this problem, other elements have added side entrances to this single channel, so that the strip is independent at the end that enters the channel, and the effect created by the turn doesn't have any effect. This has been seen to be stopped with the breaking of the wall that forms one of the openings made in the channel for one of the ends of the strip to pass through, leaving it as if it had the shape of the previous case.

[0007] In order to avoid rotation, elements have been placed outside the channel that cover it and rotate freely inside it, to avoid the aforementioned turning effect, also unsuccessfully when the outer piece is pressed and the previous single channel can be turned.

Summary of the Invention

[0008] The invention is an adjustment and blocking element for single-use bracelets, so that they are personal and non-transferable, and so that when someone readjusts them, the bracelet or the adjustment element should break, such as in the case of identification bands or entry passes. This adjustment and blocking element must prevent the effect of rotation for readjusting them, and provide safety features without having to add extra manufacturing costs.

[0009] The present element is made up of a piece that is usually cylindrical, although it may have a variety of shapes, since this doesn't affect the features of the invention; the ends of the strip that will form the bracelet are placed in it, so that the diameter of the strip is adjusted in the place where the user places it. It can't be readjusted once it is placed there without breaking either the strip or the adjustment element, limiting the bracelet to a single user and making it non-transferable.

[0010] In order to achieve this, two independent inner channels are placed advantageously in said adjustment and blocking element, at least in one interior section of the adjustment and blocking element, and preferably along its entire length. There is one channel for each one of the ends of the strip to be adjusted, so that along the entire element there can be no contact between the two ends of the strip.

[0011] In each one of said independent channels there is a catch mechanism that acts to prevent movement when one tries to move the strip in the direction opposite to that of adjustment, that is to say, in the direction that would give the bracelet greater diameter.

[0012] As it has two entirely independent channels for each of the ends of the strip that makes up the bracelet, the manners in which until now it was possible to enlarge the diameter of the bracelet and be able to take it off without cutting or destroying the adjustment and blocking element are removed, since it isn't possible to rotate the set of the ends of the strips with respect to the adjustment and blocking element.

[0013] In this manner, a safe system for preventing fraud has been achieved, with an easily manufactured adjustment and blocking element system itself, without having additional means of pressure or elements that make the product more expensive.

[0014] Other details and features will be shown in the course of the following description, referring to the accompanying drawings, to illustrate a practical form of the invention, without limiting it.

Description of the figures

[0015]

Figure 1 is a side view of the adjustment and blocking element, showing the openings that the ends of the strip come out of.

Figure 2 is a cross section of the adjustment and blocking element with a conventional catch system with teeth, with the strip of the bracelet passed through it.

Figure 3 is a view from above of the catch system

as a toothed comb.

Figure 4 is a view of some of the various possible shapes of the independent channels of the strips.

Figure 5 is a cross section of the adjustment and blocking element with a conventional catch system with teeth, with a dividing wall that doesn't go all along the length of the adjustment element, and with the catch system as a comb.

Description of one of the forms of the Invention

[0016] In this preferred form of the invention, as can be seen in figures 1 to 4, the element (10) is comprised of a cylindrical body that has two channels (11) as a lengthwise opening that crosses the entire length of said cylinder. In alternative forms, this body may have an outer shape of another kind, whether square, prismatic, spherical, oval, conical, etc. With respect to the materials of said element, any type of material with sufficient structural strength to achieve the purpose of the invention can be used, with the preferred form being a plastic material that reduced manufacturing costs.

[0017] The channels (11) don't connect along the whole length, leaving the strips (12) independent, having a separating inner wall (17) along the entire length of the element (10). In alternative forms there is a dividing wall that doesn't divide the entire length, but rather a part of the interior; it also avoids the turning effect because the catch is in this area, preventing access to cutting and eliminating this separation in order to be able to carry out the aforementioned turning effect.

[0018] In the inside of each one of the channels (11) there is a catch mechanism with teeth (13) usually located at different heights and positions on the inner wall of each channel (11), aimed so that they stick into the strip (12) when they are moved in the direction opposite to that of the teeth (13), that is to say, in the direction that makes the diameter of the bracelet larger.

[0019] The catching mechanisms are made up of comb (14) with teeth, which can be made of a variety of materials (metal, plastic, polyamides, etc.) which ensure the strength for holding the strip. Said comb (14) is usually anchored in the outer wall of each channel (11) allowing passage between said comb (14) with teeth and the dividing wall (17). When the user wants to readjust the strip (12), and tries to move it in the direction opposite to the direction of the teeth of the comb (14), the teeth stick into the strip (12), tilting towards the central wall (17) and pressing against it. This allows cheaper manufacturing of the element (10) due to the lesser complication of the piece and its mould, as well as improving security, as the comb (14) is thicker than the individual teeth (13) and it is anchored to the inner wall of the element (10) with a greater surface area of connection to the wall of the channel, so it is very difficult to be able to cut it and manipulate it so that it loses its effect.

[0020] The teeth that make up said comb (14) can have a conventional triangular shape, as well as other possible shapes (circular, diamond-shaped, etc.)

[0021] In another form, the comb (14) that acts as a catch mechanism is made up of a paddle without teeth, which, like the comb with teeth (14), sticks to the strip (12) when one tries to move the strip (12) in the direction opposite to that of the paddle that makes up the comb (14), tilting against the central wall (17) and pressing against it.

[0022] The opening (15) of each one of the channels (11) of the adjustment and blocking element (10), may have a variety of shapes to facilitate the entrance of the ends (16) of the strip (12). These openings, which usually have a rectangular section, may alternately have a curved shape to improve the entering of the ends (16) of the strip (12), which tends to curve to enter in. It may also have the usual rectangular section, but with one of its longer sides curved, while the opposite side remains straight, creating a sort of semi-circumference that increases the passage section and adds a curved section that makes it easier to enter the end (16) of the strip (12).

[0023] Having sufficiently described the present invention in relation to the attached drawings, it must be understood that any modifications deemed suitable may be made as long as they do not alter the essence of the invention, which is reflected in the attached claims.

Claims

1. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** of the kind that use an element with an inner opening for the ends of a strip that forms the bracelet to pass through and be adjusted. The strip is usually textile, and the element has a catch mechanism inside that prevents readjustment, **characterised in that** the adjustment and blocking element has two independent inner channels along at least part of its inner length, each one of the channels being prepared for one of the ends of the strips to be adjusted to pass through.

2. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the first claim, **characterised in that** the dividing wall separates the channels along the entire length of the inner opening of the adjustment and blocking element.

3. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the first claim, **characterised in that** the catch mechanism is made up of a comb with teeth that is attached to one of the walls of the area formed by each independent channel.

4. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the third claim, **characterised in that** the teeth have a triangular, circular, or diamond shape.

5. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the first claim, **characterised in that** the catch mechanism is made up of a comb without teeth like a paddle, which joins to one of the walls of the area that each independent channel forms.

6. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the first claim, **characterised in that** the opening of the independent channels has a curved shape.

7. **"BRACELET ADJUSTMENT AND BLOCKING ELEMENT"** according to the first claim, **characterised in that** the opening of the independent channels has a curved shape on one longer side, while the other opposite side is straight.

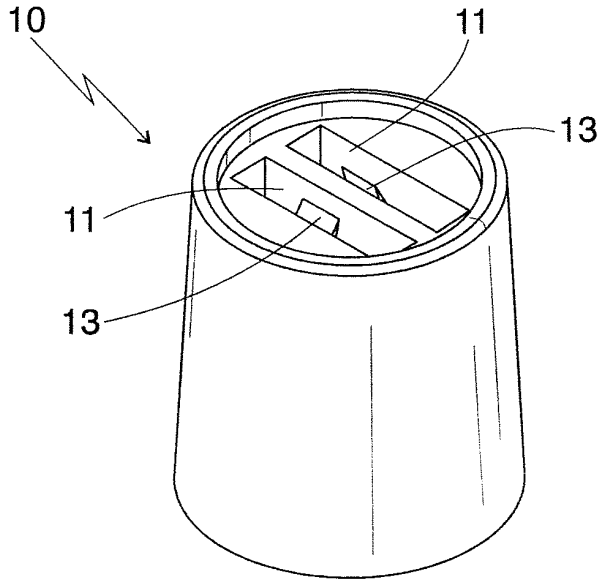

Fig. 1

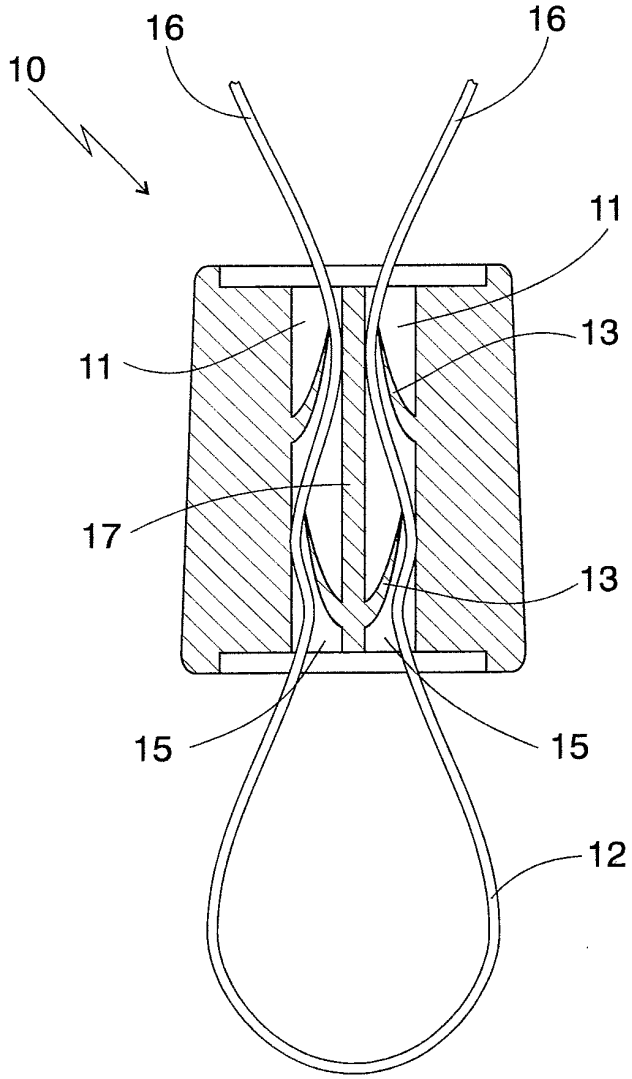

Fig. 2

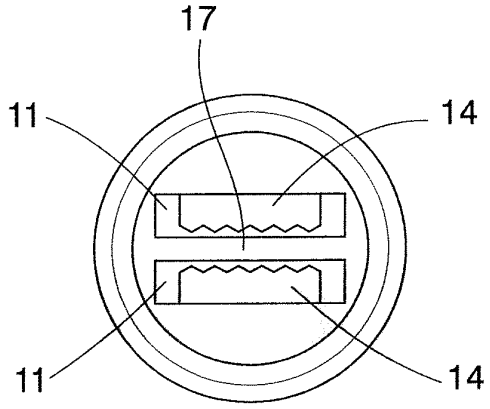

Fig. 3

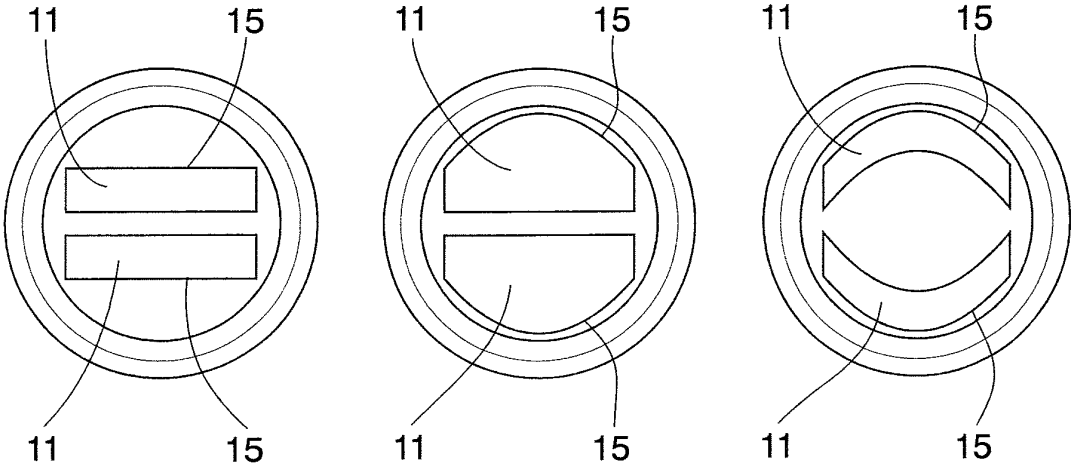

Fig. 4

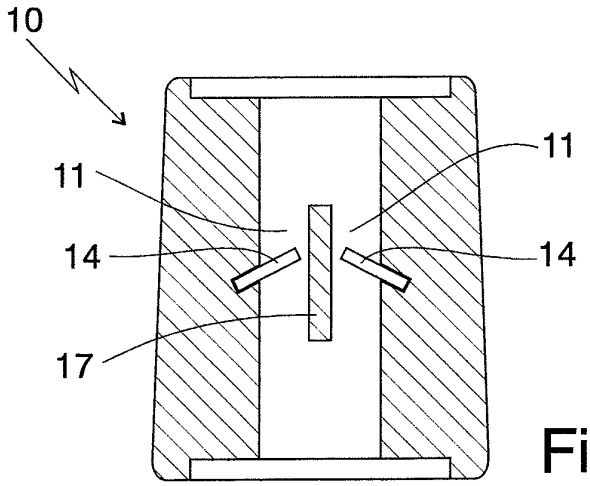

Fig. 5

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2014/070949

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A44C, G09F, B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC, INVENES, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011225777 A1 (ARJOMAND ATAULLAH) 22/09/2011, paragraphs [0007]- [0008]; paragraph [0026]; paragraph [0029]; paragraph [0034]; figures 2, 3, 5, 8-9.	1-7
X	AU 484507B B2 (W.A DEUTSHER PROPRIETARY LIMITED, S.A) 15/07/1976, pages 5 - 6; figures 5 - 9.	1-4
X	WO 2005000723 A2 (WHIPPLE STEVEN) 06/01/2005, paragraph [0002]; paragraphs [0021] - [0022]; figures 1 - 6.	1-2, 7
X	WO 2012051114 A1 (IDEAL IND ET AL.) 19/04/2012, paragraphs [0064] - [0071]; paragraphs [0076] - [0078]; figure 1a, figure 1b, figures 14 - 15.	1-2

☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
31/03/2015	**(06/04/2015)**
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04	Authorized officer I. Coronado Poggio Telephone No. 91 3496860

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2014/070949

C (continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of documents, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 2239720 A2 (KLINGENBERG UWE) 13/10/2010, abstract; figure 5.	1-7
A	US 2011061212 A1 (PIERMAYR MICHAEL ET AL.) 17/03/2011, the whole document.	1

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/ES2014/070949

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
US2011225777 A1	22.09.2011	US2013291343 A1	07.11.2013
		US8978211 B2	17.03.2015
		US8978210 B2	17.03.2015
EP2239720 A2	13.10.2010	DE102010012217 A1	22.09.2011
			25.11.2010
		DE102009016508 A1	04.07.2013
			07.10.2010
		DE102009016508 B4	13.11.2012
US2011061212 A1	17.03.2011	DE202010004150U U1	07.07.2010
			30.04.2010
AU484507B B2	15.07.1976	US8307517 B2	15.07.1976
		CN201518804U U	
WO2005000723 A2	06.01.2005	HK1134625 A2	25.08.2005
WO2012051114 A1	19.04.2012	AU7730675 A	29.07.2013
			15.08.2013
		US2005183245 A1	26.06.2013
			19.04.2012
		MX2013003943 A	21.08.2013
		US2013205545 A1	12.04.2012
		CN103180636 A	
		CA2813143 A1	
		EP2627926 A1	
		US2012084948 A1	

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INTERNATIONAL SEARCH REPORT

International application No.

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CLASSIFICATION OF SUBJECT MATTER

A44C5/18 (2006.01)
G09F3/03 (2006.01)
B65D63/14 (2006.01)