

(19)



(11)

EP 3 090 643 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
10.07.2019 Bulletin 2019/28

(51) Int Cl.:
A44C 5/18 (2006.01) **G09F 3/03** (2006.01)
B65D 63/14 (2006.01) **G09F 3/00** (2006.01)

(21) Application number: **14876516.7**

(86) International application number:
PCT/ES2014/070949

(22) Date of filing: **22.12.2014**

(87) International publication number:
WO 2015/101688 (09.07.2015 Gazette 2015/27)

(54) ELEMENT FOR ADJUSTING AND LOCKING BRACELETS

ELEMENT ZUM EINSTELLEN UND VERRIEGELN VON ARMBÄNDERN

ÉLÉMENT D'AJUSTEMENT ET DE BLOCAGE DE BRACELETS

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **31.12.2013 ES 201331514**

(43) Date of publication of application:
09.11.2016 Bulletin 2016/45

(73) Proprietor: **Roadknight Fernández, Guillermo
Manuel
08005 Barcelona (ES)**

(72) Inventor: **Roadknight Fernández, Guillermo
Manuel
08005 Barcelona (ES)**

(74) Representative: **Ponti & Partners, S.L.P
C. de Consell de Cent 322
08007 Barcelona (ES)**

(56) References cited:
**EP-A2- 2 239 720 WO-A1-2012/051114
WO-A2-2005/000723 AU-B2- 484 507
DE-U1-202006 008 075 DE-U1-202007 009 790
US-A1- 2011 061 212 US-A1- 2011 225 777
US-A1- 2011 225 777**

EP 3 090 643 B1

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

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.

[0008] Patent DE202007009790U1 and patent US2011/225777A1 disclose an element according to the preamble of claim 1.

Summary of the Invention

[0009] The invention is an adjustment and blocking element for single-use bracelets, according to claim 1, 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.

[0010] 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.

[0011] 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.

[0012] 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.

[0013] 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.

[0014] 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.

[0015] 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

[0016]

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

[0017] 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.

[0018] 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.

[0019] 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.

[0020] 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.

[0021] The teeth that make up said comb (14) can have a conventional triangular shape, as well as other possible shapes (circular, diamond-shaped, etc.)

[0022] 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.

[0023] 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).

[0024] 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 scope of the invention, which is reflected in the attached claims.

Claims

1. BRACELET ADJUSTMENT AND BLOCKING ELEMENT with an inner opening for the ends of a textile strip of a bracelet to pass through and be adjusted, and the element has a catch mechanism inside that prevents readjustment, **characterised in that** the adjustment and blocking element (10) has two independent inner channels (11) along at least part of its inner length, each one of the channels (11) being prepared for one of the ends of the textile strips (12) to be adjusted to pass through, wherein the two independent inner channels (11) are separated by an inner wall (17) and, inside of each of the channels (11), there are provided retaining means (13) in the manner of teeth located on the inner wall (17) of each channel (11).
2. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the first claim, wherein the dividing wall (17) separates the channels (11) along the entire length of the inner opening of the adjustment and blocking element (10).
3. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the first claim, wherein the catch

mechanism (13) is made up of a comb (14) with teeth that is attached to one of the walls of the area formed by each independent channel (11).

4. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the third claim, wherein the teeth (13) have a triangular, circular, or diamond shape.
5. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the first claim, wherein the catch mechanism (13) is made up of a comb (14) without teeth like a paddle, which joins to one of the walls of the area that each independent channel (11) forms.
6. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the first claim, wherein the opening of the independent channels (11) has a curved shape.
7. BRACELET ADJUSTMENT AND BLOCKING ELEMENT according to the first claim, wherein the opening of the independent channels (11) has a curved shape on one longer side, while the other opposite side is straight.

Patentansprüche

1. Element zum Anpassen und Blockieren eines Armbandes mit einer Innenöffnung, durch die die Enden eines Textilbands eines Armbands verlaufen und angepasst werden sollen, wobei das Element im Inneren einen Fangmechanismus besitzt, der ein Nachstellen vermeidet, **dadurch gekennzeichnet, dass** das Element (10) zum Anpassen und Blockieren zwei unabhängige Innenkanäle (11) entlang mindestens eines Teils seiner Innenlänge besitzt, wobei jeder der Kanäle (11) derart angefertigt ist, dass eines der Enden der einzustellenden Textilbänder (12) durch ihn verläuft, wobei die zwei unabhängigen Innenkanäle (11) durch eine Innenwand (17) getrennt sind und in jedem der Kanäle (11) Haltemittel (13) in Form von Zähnen, die sich an der Innenwand (17) jedes Kanals (11) befinden, vorgesehen sind.
2. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 1, wobei die Trennwand (17) die Kanäle (11) entlang der gesamten Länge der Innenöffnung des Elements (10) zum Anpassen und Blockieren trennt.
3. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 1, wobei der Fangmechanismus (13) aus einem Kamm (14) mit Zähnen hergestellt ist, der an einer der Wände des Bereichs, der durch jeden unabhängigen Kanal (11) gebildet wird, befestigt ist.

4. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 3, wobei die Zähne (13) eine Dreiecks-, Kreis- oder Diamantform besitzen.

5. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 1, wobei der Fangmechanismus (13) aus einem Kamm (14) ohne Zähne ähnlich einem Paddel hergestellt ist, der mit einer der Wände des Bereichs, den jeder unabhängige Kanal (11) bildet, verbunden ist.

6. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 1, wobei die Öffnung des unabhängigen Kanals (11) eine gekrümmte Form besitzt.

7. Element zum Anpassen und Blockieren eines Armbandes nach Anspruch 1, wobei die Öffnung des unabhängigen Kanals (11) auf einer längeren Seite eine gekrümmte Form besitzt, während die andere gegenüberliegende Seite gerade ist.

Revendications

1. Élément d'ajustement et de blocage de bracelet avec une ouverture interne pour que les extrémités d'une bande textile d'un bracelet passent à travers cette dernière et soient ajustées, et l'élément a un mécanisme de retenue à l'intérieur qui empêche le réajustement, **caractérisé en ce que** l'élément d'ajustement et de blocage (10) a deux canaux internes (11) indépendants le long d'au moins une partie de sa longueur interne, chacun des canaux (11) étant préparé pour que l'une des extrémités des bandes textiles (12) soit ajustée pour passer à travers, dans lequel les deux canaux internes (11) indépendants sont séparés par une paroi interne (17), et à l'intérieur de chacun des canaux (11), on prévoit des moyens de retenue (13) tels que des dents positionnées sur la paroi interne (17) de chaque canal (11).
2. Élément d'ajustement et de blocage de bracelet selon la revendication 1, dans lequel la paroi de division (17) sépare les canaux (11) le long de toute la longueur de l'ouverture interne de l'élément d'ajustement et de blocage (10).
3. Élément d'ajustement et de blocage de bracelet selon la revendication 1, dans lequel le mécanisme de retenue (13) est composé d'un peigne (14) avec des dents, qui est fixé sur l'une des parois de la zone formée par chaque canal (11) indépendant.
4. Élément d'ajustement et de blocage de bracelet selon la revendication 3, dans lequel les dents (13) ont une forme triangulaire, circulaire ou de diamant.

5. Élément d'ajustement et de blocage de bracelet selon la revendication 1, dans lequel le mécanisme de retenue (13) est composé d'un peigne (14) sans dents en forme de palette, qui s'assemble à l'une des parois de la zone formée par chaque canal (11) indépendant. 5
6. Élément d'ajustement et de blocage de bracelet selon la revendication 1, dans lequel l'ouverture des canaux (11) indépendants a une forme incurvée. 10
7. Élément d'ajustement et de blocage de bracelet selon la revendication 1, dans lequel l'ouverture des canaux (11) indépendants a une forme incurvée sur un côté plus long, alors que l'autre côté opposé est droit. 15

20

25

30

35

40

45

50

55

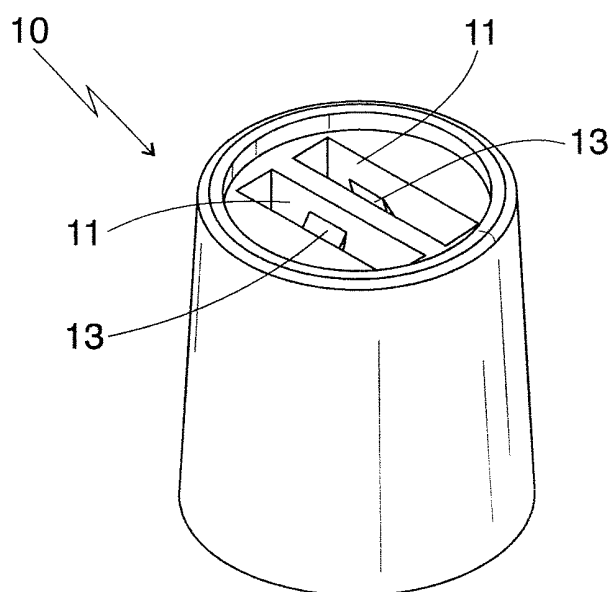


Fig. 1

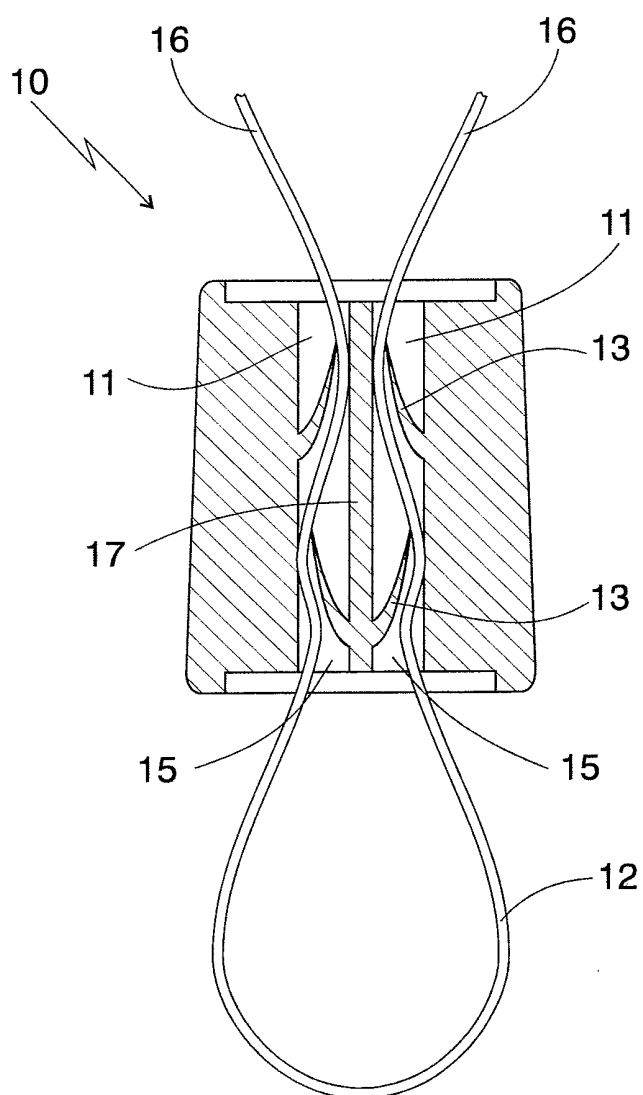


Fig. 2

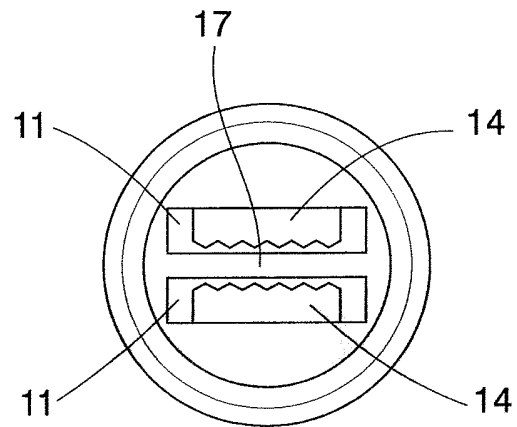


Fig. 3

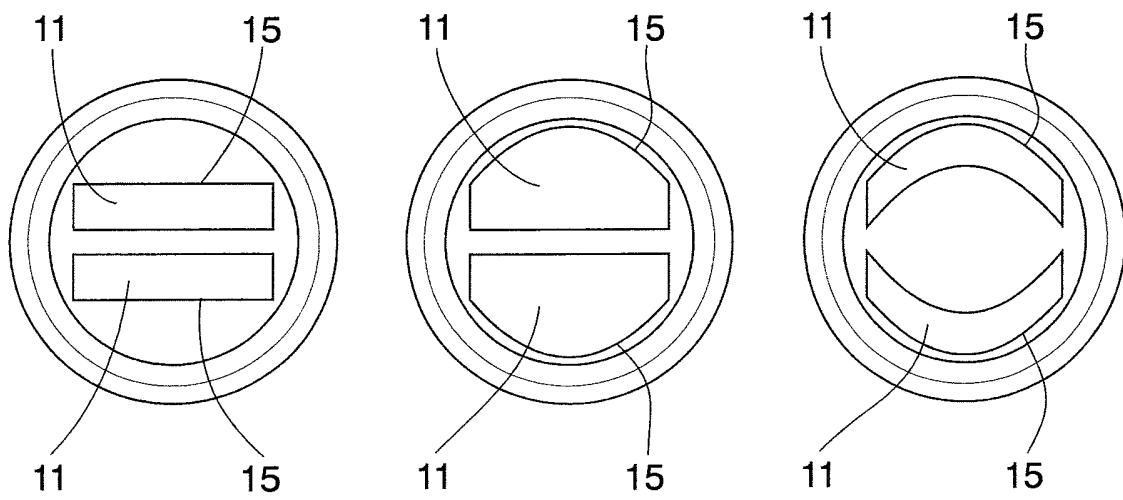


Fig. 4

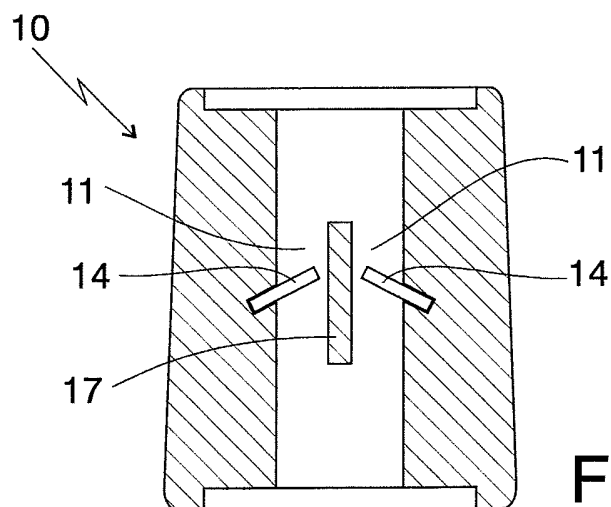


Fig. 5

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- DE 202007009790 U1 [0008]
- US 2011225777 A1 [0008]