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(54) BELTS AND STRAPS EQUIPPED WITH A DEVICE FOR FASTENING THE EXCESS PART

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CEINTURES ET SANGLES ÉQUIPÉES D'UN DISPOSITIF DE FIXATION DE LA PARTIE EXCÉDENTAIRE

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(73) Proprietor: **MY Toucher S.r.l.**
22100 Como (IT)

(72) Inventor: **DI BARTOLO, Maria Cristina**
22100 Como (IT)

(74) Representative: **Garavelli, Paolo**
A.BRE.MAR. S.R.L.
Consulenza in Proprietà Industriale
Via Servais 27
10146 Torino (IT)

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Description

[0001] The present invention refers to belts, straps or similar items equipped with devices adapted to fasten them around the body of those who wear them, in particular to fasten their free end. The items can be in particular belts for clothing, straps for shoes and leather goods in general, for watches, for costume jewelry or jewelry bracelets, and can be applied in all cases in which it is necessary to fasten the excess part.

[0002] In case of fastening the excess part, the problem is solved, according to the prior art, through the use of a passing-through element, namely an element having a squashed annular shape, which is inserted on the belt or strap and wherein also the free end of the belt or strap is passed. However, this solution has inconveniences, since the passing-through element tends to move. If it moves towards the buckle, in practice it does not perform its function any more, while, if it excessively moves on the opposite side, the free end the belt can be taken off.

[0003] Another prior art solution rather more efficient, provides for the use of a particular type of buckle which passes the free end of the belt below the belt itself. This solution is technically valid, but only when the excess part is particularly short. In fact, on the contrary, this excess part could slide upwards or downwards any anyway freely oscillate outwards. However, also when the excess part is particularly short, and therefore this solution is technically valid, it must be taken into account that a belt is an item of clothing and, as such, subjected to the fancy of fashion creators. In other words, a stylist is sacarcely interested in a technically valid solution, which is not in line with his aesthetic canons. Another problem, paradoxally, is that this type of buckle scarcely damages the belt, in particular damages it much less than a common buckle, with the consequence that the belts last a long time and this is negative for the market.

[0004] US-A-1 503 445 and WO-A1-2005/006907 disclose a belt or a bracelet with a retention device for securing its free end. JPH09117305A discloses a belt according to the preamble of claim 1.

[0005] Object of the present invention is solving the above prior art problems, whit a belt, strap or the like asclaimed in claim 1, wherein the belt, strap or the like are equipped with means adapted to keep their free end adherent to the body of the person which wears them; their feature is that these means comprise retention devices, applied to a hole of the belt, adapted to connect the free end of the belt with a part of the belt itself which adheres to the body of the person who wears it, the retention device being equipped with first means adapted to hook the part of the belt, which adheres to the body of the person who wears it, and with second means adapted to hook the free end of the belt.

[0006] Preferred embodiments and non-trivial variations of the present invention are the subject matter of the dependent claims.

[0007] It is intended that all enclosed claims are an integral part of the present description.

[0008] It will be immediately obvious that numerous variations and modifications (for example related to shape, siyes, arrangements and parts with equivalent functionality) can be made to what is described, without departing from the scope of the invention as appears from the enclosed claims.

[0009] The present invention will be better described by some preferred embodiments thereof, provided as a nonlimiting example, with reference to the enclosed drawings, in which:

- Figure 1 shows a belt without retention means of its free end;
- Figure 2 shows a belt equipped with a first retention device according to the present invention;
- Figures 3 and 4 are respectively a perspective view and an exploded view of the first retention device according to the present invention;
- Figures 5 and 6 show this first retention device in three orthogonal and, respectively, sectional views;
- Figure 7 shows a different way of using the first retention device;
- Figures 8 (a, b) show a belt equipped with a particular type of buckle and with a second retention device of the invention;
- Figure 9 discloses an embodiment which is not covered by the subject-matter of the claims. Figure 9 (a, b, c) show this particular type of buckle in section;
- Figures 10 (a, b, c) show this second retention device in section.

[0010] The described embodiment refers to a belt for clothing and therefore sentences like "adhere to the body of the person who wears it" will be used. In case of other uses (straps for shoes, straps for watches), the above sentence must be intended as "fastening of the free end on the belt itself"

[0011] With reference to Figure 1, (1) designates a belt, equipped with a buckle (2), whose free end (1a) is not kept by any retention means. As clearly appears, this free end (1a) is detached from the part (1b) of the belt which adheres to the body of the person who wears it, the part (1b) being kept taut by the buckle (2).

[0012] Figure 2 shoes the same belt (1), with the same buckle (2), but with the free end (1a) kept in position by a first retention device (3), which is interposed between the free part (1a) and the taut part (1b) of the belt which adheres to the body. The first retention device (3) is applied to the belt (1) next to the last of the holes (1c) and comprises means adapted to hook the taut part (1b) which adheres to the body.

[0013] Figure 3 is a perspective view of the first retention device (3), while Figure 4 is an exploded view of the device (3).

[0014] Figure 5 shows with three orthogonal views the first retention device (3) of the invention. This device (3) comprises first means adapted to hook the taut part (1b)

of the belt (1) and second means adapted to hook the free part (1a) of the belt (1).

[0015] According to the invention these first means, adapted to hook the taut part (1b) of the belt (1), comprise a upper fixed end (4) bent as a hook, and a lower moving end (5), of the device (3), which are fastened to the upper and lower edges of the taut part (1b) of the belt (1). The lower moving end (5) rotates around a pin (6) configuring a lower end of the device (3) bent as a hook, in order to be fastened to the lower edge of the part (1b) of the belt (1).

[0016] According to a preferred embodiment, the second means, adapted to hook the free part (1a) of the belt (1), comprise a screw (7) which is screwed in an element (8) which is preferably inserted in the last one of the holes (1c) of the free part (1a) of the belt (1). According to a preferred embodiment, the element (8) is a blind threaded bush and is equipped with a flange (8a); the cylindrical part (8b) of the bush (8) is inserted in the hole (1c) of the belt (1), which is thereby blocked between the flange (8a) and the screw (7).

[0017] Figure 6, which shows the first retention device (3) in section, points out the first and second means for hooking the first retention device (3) to the belt (1). Moreover, Figures 6 (a, b, c) show in a sequence the opening of the lower part (5) to separate the free part (1a) from the adhering part (1b) of the belt (1).

[0018] The lower moving end (5) comprises a part, wherein a hole is obtained to house the pin (6), shaped in order to have a first and a second mutually perpendicular surfaces (5a) and (5b) at a same distance from the axis of the pin (6). The surfaces (5a) and (5b) are coupled with a part (9a) of an elastic element (9), so that this part (9a) presses on one or the other of the surfaces (5a), (5b), in order to keep the lower moving end (5) in a closed or open position.

[0019] According to a preferred embodiment, the elastic element (9) is a small plate made, for example, of harmonic steel and kept adherent to the body of the first retention device (3) by a pin (10), which is inserted into a suitable hole of the first retention device (3), the small plate (9) being bent as a straight angle for form the part (9a).

[0020] In Figure 6a, the lower moving end (5) of the first retention device (3) is in a closed position, namely in the suitable position to hook the adhering part (1b) of the belt (1). In this position, the bent part (9a) of the elastic element (9) presses on the first surface (5a) of the element (5), keeping it in its closed position. In Figure 6b, the lower moving end (5) is opened to un-constrain the free end (1a) of the belt (1) from the adhering part (1b), this opening being performed by rotating the end (5) as shown by the arrow. Since the two surfaces (5a) and (5b) are perpendicular, the rotation of the end (5) generates a distortion of the elastic element (9) which, with its bent part (9a), will press against the second surface (5b) (Figure 6c), keeping the moving end (5) of the first retention device (3) in its opening position.

[0021] According to a preferred embodiment, the moving end (5) is equipped with a pair of beaks (11) which, delicately pressed against the adhering part (1b) of the belt (1), enable the stability of the fastening performed by the first retention device (3), the pressure being exerted by the elastic element (9) which presses with its bent part (9a) against the first surface (5a) of the moving element (5).

[0022] In the described embodiment, the first retention device (3) is fastened to the belt through a screw (7) which is screwed in a flanged threaded bush (8).

[0023] Alternatively a threaded pin could be used, welded onto the plane part of the first retention device (3), on which the flanged threaded bush (8) is screwed, or a screw can be used which is screwed on a cylindrical, internally threaded, bush, which is an integral part of the first retention device (3).

[0024] In other words, the screw (7) or the bush (8) can be made integral with the body of the retention element (3).

[0025] Figure 7 shows a belt (20) equipped with a buckle (21), of the type which makes the free end (20a) of the belt (20) be placed below the part (20b) which is tensioned by the buckle (21). Also in this case, like the one shown in Figure 2, the free end (20a) is kept in the correct position by the first retention device (3), which is interposed between the free part (20a) and the part (20b) of the belt which is tensioned by the buckle (21). The first retention device (3) is fastened through the screw (7) which is screwed in the element (8) which is inserted in one of the holes (20c) of the taut part (20b) of the belt (20). The only difference consist in that, in this case, the device (3) is applied onto the taut part (20b) and is fastened to the free part (20a), while in the case shown in Figure 2, the device (3) is applied to the free part (1a) of the belt (1) and is fastened to the adhering part (1b) to the body of the person which wears the belt (1).

[0026] Figures 8 (a, b) show a belt (30) equipped with a buckle (31) and with a second retention device (32). Figure 8a shows the belt (30) as appears when worn, but before having stopped the free part (30a) against the taut part (30b), while Figure 8b shows in particular the internal part of the belt (30) in the end to which the buckle (31) is connected through a screw (33).

[0027] Figure 9 discloses an embodiment which is not covered by the subject-matter of the claims. The buckle (31) is shown in Figures 9 (a, b, c) and comprises a lower part (34), bent as a hook, and an upper part (35), rotatable around a pin (36).

[0028] The upper moving end (35) comprises a part, wherein a hole is obtained to house the pin (36), shaped in order to have a first and a second, mutually perpendicular surfaces (35a) and (35b) at a same distance from the axis of the pin (36). The surfaces (35a) and (35b) are coupled with a part (37a) of an elastic element (37), so that the part (37a) presses on one or the other of the surfaces (35a), (35b), in order to keep the upper moving end (35) in its closed or open position.

[0029] In the plane part (38) of the buckle (31), there is

a pin (39), holed and internally threaded, wherein the screw (33) is screwed, with which the buckle (31) is fastened to the belt (30), after having passed the pin (39) of the buckle (31) in a hole (not visible) obtained at an end of the belt (30).

[0030] Figures 9, (a, b, c) show in a sequence the closure of the upper part (35) to block the belt (30), after having adjusted it around the waist, the blocking being enabled by some beaks (40) obtained on the upper moving part (35).

[0031] Figures 10 (a, b, c) show the second retention device (32). Like the first retention device (3), it comprises an upper part (41) bent as a hook and a lower part (42) rotatable around a pin (43) and controlled by elastic means (44). The second retention device (32) is connected to the belt (30) through a screw (45), which is screwed in a blind threaded bush (46), equipped with flange (46a), which is inserted with a cylindrical part (46b) into a hole (30c) made of the free part (30a) of the belt (30). By applying the second retention device (32) to the free part (30a) of the belt (30), the moving element (42) allows correctly adhering the free part (30a) of the belt (30) to the taut part (30b) of the belt (30).

[0032] Obviously, both the first (3) and the second (32) retention devices, in addition to the buckle (31), can indifferently be assembled along both possible directions, according to one's own aesthetic taste. The claims will anyway keep the terminology used in the description.

Claims

1. Belt (1, 20, 30) or strap equipped with means adapted to keep a free end (1a 20a, 30a) of the belt (1, 20, 30) or strap adherent to a body of a person who wears the belt or strap, wherein said means comprise a retention device (3, 32) adapted to hook the free end (1a, 20a, 30a) to a part (1b, 20b, 30b) of the belt (1, 20, 30) which is tensioned by a buckle (2, 21, 31), the retention device (3, 32) comprising:

    • first means adapted to connect the retention device (3, 32) to a first part of the belt (1, 20, 30);
    • second means adapted to hook the retention device (3, 32) to a second part of the belt (1, 20, 30); the second means, adapted tc hook the retention device (3) to the second part of the belt (1, 20), comprise a first upper end (4), bent as a hook, and a second lower moving end (5), rotatable around a pin (6), which are respectively fastened to the upper and lower edges of the second part of the belt (1, 20, 30),

    characterized in that the first upper end (4) is fixed and **in that** the lower moving end (5, 42) comprises a part, wherein a hole is obtained to house the pin (6, 43), shaped in order to have a first and a second, mutually perpendicular surfaces (5a, 42a) and (5b, 42b) at a same distance from the axis of the pin (6, 43), the surfaces (5a, 42a) and (5b, 42b) being coupled with a part (9a, 44a) of an elastic element (9, 44), so that the part (9a, 44a) presses onto one or the other of the surfaces (5a, 42a), (5b, 42b), keeping the lower moving end (5, 42) in its closed or open position.

2. Belt (1, 20, 30) or strap according to claim 1, **characterized in that** the elastic element (9, 44) is a small plate kept adherent to the body of the retention device (3) by a pin (10, 45) which is inserted into a suitable hole of the retention device (3, 32), the small plate (9, 44) being bent as a straight angle to form the part (9a, 44a).

3. Belt (1, 20, 30) or strap according to claim 1, **characterized in that** the elastic element (9, 44, 37) is made of harmonic steel.

Patentansprüche

1. Gürtel (1, 20, 30) oder Riemen, der mit Mitteln ausgestattet ist, um ein freies Ende (1a, 20a, 30a) des Gürtels (1, 20, 30) oder Riemens am Körper einer den Gürtel tragenden Person festzuhalten oder des Riemens, wobei die Mittel eine Haltevorrichtung (3, 32) umfassen, die das freie Ende (1a, 20a, 30a) an einem Teil (1b, 20b, 30b) des Riemens (1, 20, 30) einhaken kann gespannt durch eine Schnalle (2, 21, 31), wobei die Haltevorrichtung (3, 32) umfasst:

    * erste Mittel, die dazu geeignet sind, die Haltevorrichtung (3, 32) mit einem ersten Teil des Gürtels (1, 20, 30) zu verbinden;
    * zweite Mittel, die dazu geeignet sind, die Haltevorrichtung (3, 32) an einem zweiten Teil des Gürtels (1, 20, 30) einzuhaken;

        die zweiten Mittel, die zum Einhaken der Haltevorrichtung (3) am zweiten Teil des Gürtels (1, 20) geeignet sind, umfassen ein erstes oberes Ende (4), das wie ein Haken gefaltet ist, und ein zweites bewegliches unteres Ende (5), Drehen um einen Stift (6), der jeweils an der Ober- und Unterkante des zweiten Teils des Riemens (1, 20, 30) befestigt ist,
        dadurch gekennzeichnet, dass das erste obere Ende (4) fest ist und dass das bewegliche untere Ende (5, 42) einen Teil umfasst, in dem ein geformtes Loch zur Aufnahme des Stifts (6, 43) angebracht ist so dass eine erste und eine zweite Fläche (5a, 42a) und (5b, 42b) zueinander senkrecht im gleichen Abstand von der Achse des Stifts (6, 43) sind, wobei die Flächen (5a, 42a) und (5b,

42b) mit einem Teil (9a, 44a) eines elastischen Elements (9, 44) gekoppelt ist, so dass der Teil (9a, 44a) auf die eine oder andere der Oberflächen (5a, 42a), (5b, 42b) drückt, wobei das bewegliche untere Ende (5, 42) in seiner geschlossenen oder offenen Position gehalten wird.

2. Gürtel (1, 20, 30) oder Gurt nach Anspruch 1, **dadurch gekennzeichnet, dass** das elastische Element (9, 44) eine Platte ist, die durch einen Stift (10, 45) am Körper der Haltevorrichtung (3) festgehalten wird, der in ein passendes Loch der Haltevorrichtung (3, 32) eingesetzt wird, wobei die Platte (9, 44) im rechten Winkel gefaltet wird, um das Teil (9a, 44a) zu bilden.

3. Gürtel (1, 20, 30) oder Riemen nach Anspruch 1, **dadurch gekennzeichnet, dass** das elastische Element (9, 44, 37) aus harmonischem Stahl besteht.

Revendications

1. Ceinture (1, 20, 30) ou sangle équipée de moyens pour maintenir une extrémité libre (1a, 20a, 30a) de la ceinture (1, 20, 30) ou sangle adhérente au corps d'une personne portant la ceinture ou la sangle, dans laquelle lesdits moyens comprennent un dispositif de retenue (3, 32) apte à accrocher l'extrémité libre (1a, 20a, 30a) à une partie (1b, 20b, 30b) de la ceinture (1, 20, 30) qui est tendu par une boucle (2, 21, 31), le dispositif de retenue (3, 32) comprenant:

* des premiers moyens adaptés pour relier le dispositif de retenue (3, 32) à une première partie de la ceinture (1, 20, 30);
* des deuxièmes moyens adaptés pour accrocher le dispositif de retenue (3, 32) à une deuxième partie de la ceinture (1, 20, 30);

les deuxièmes moyens, adaptés pour accrocher le dispositif de retenue (3) à la deuxième partie de la ceinture (1, 20), comprennent une première extrémité supérieure (4), repliée en crochet, et une deuxième extrémité inférieure mobile (5), tournant autour d'un axe (6), fixé respectivement aux bords supérieur et inférieur de la deuxième partie de la ceinture (1, 20, 30), **caractérisé par le fait que** la première extrémité supérieure (4) est fixe et **par le fait que** l'extrémité inférieure mobile (5, 42) comporte une partie dans laquelle est pratiqué un trou pour loger le pion (6, 43), conformé en de manière à avoir une première et une seconde surfaces (5a, 42a) et (5b, 42b) mutuellement perpendiculaires à la même distance de l'axe de la broche (6, 43), les surfaces (5a, 42a) et (5b, 42b) étant couplée à une partie (9a, 44a) d'un élément élastique (9, 44), de sorte que la partie (9a, 44a) appuie sur l'une ou l'autre des surfaces (5a, 42a), (5b, 42b), maintenant l'extrémité inférieure mobile (5, 42) dans sa position fermée ou ouverte.

2. Ceinture (1, 20, 30) ou sangle selon la revendication 1, **caractérisée en ce que** l'élément élastique (9, 44) est une plaque maintenue adhérente au corps du dispositif de retenue (3) par une goupille (10, 45) qui est inséré dans un trou approprié du dispositif de maintien (3, 32), la plaque (9, 44) étant pliée à angle droit pour former la pièce (9a, 44a).

3. Ceinture (1, 20, 30) ou sangle selon la revendication 1, **caractérisée en ce que** l'élément élastique (9, 44, 37) est en acier harmonique.

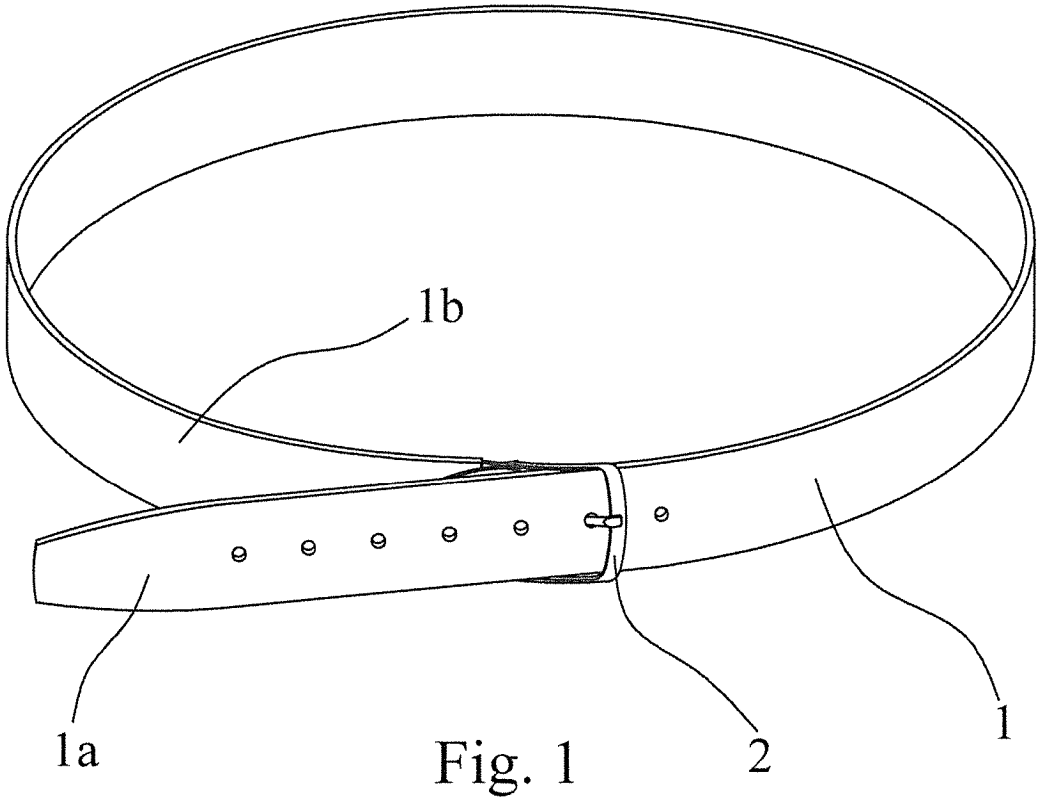

Fig. 1

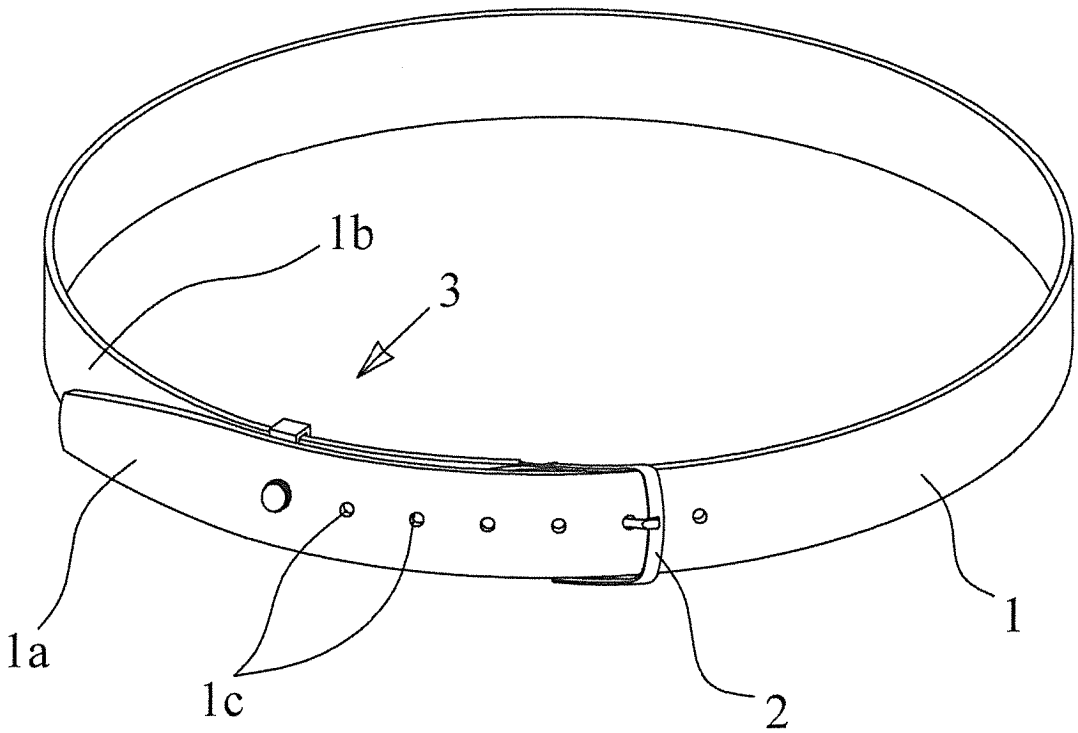

Fig. 2

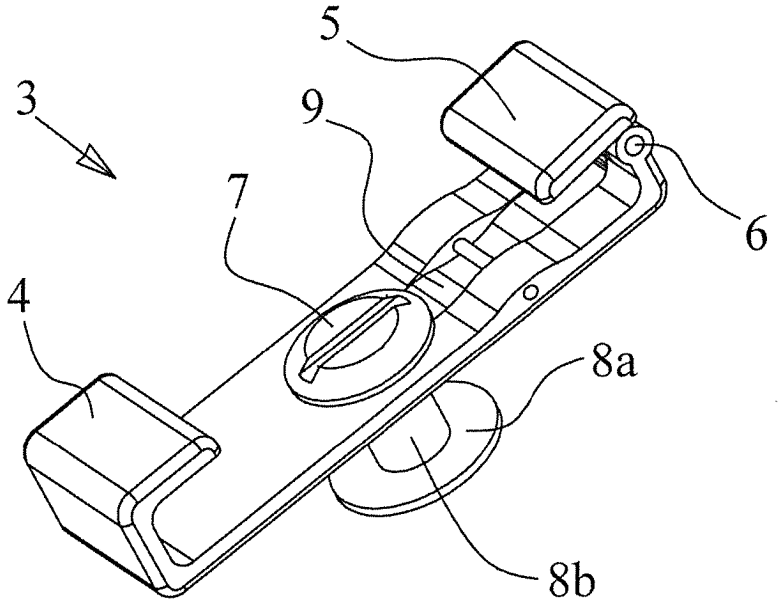

Fig. 3

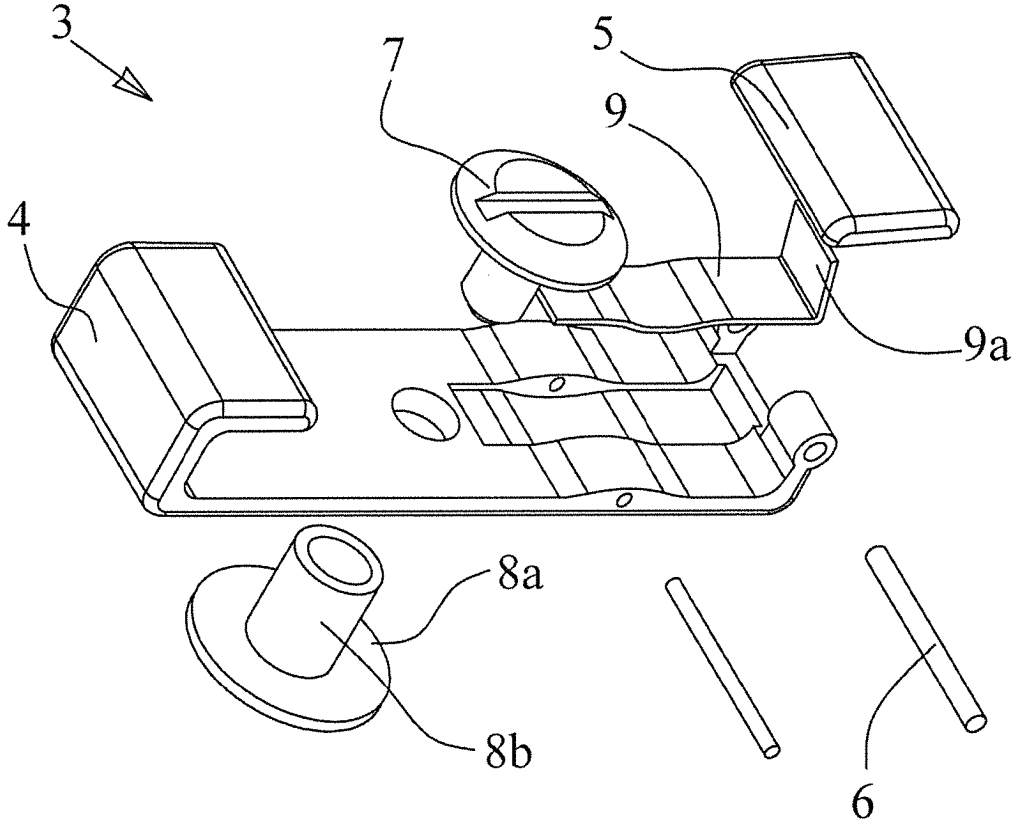

Fig. 4

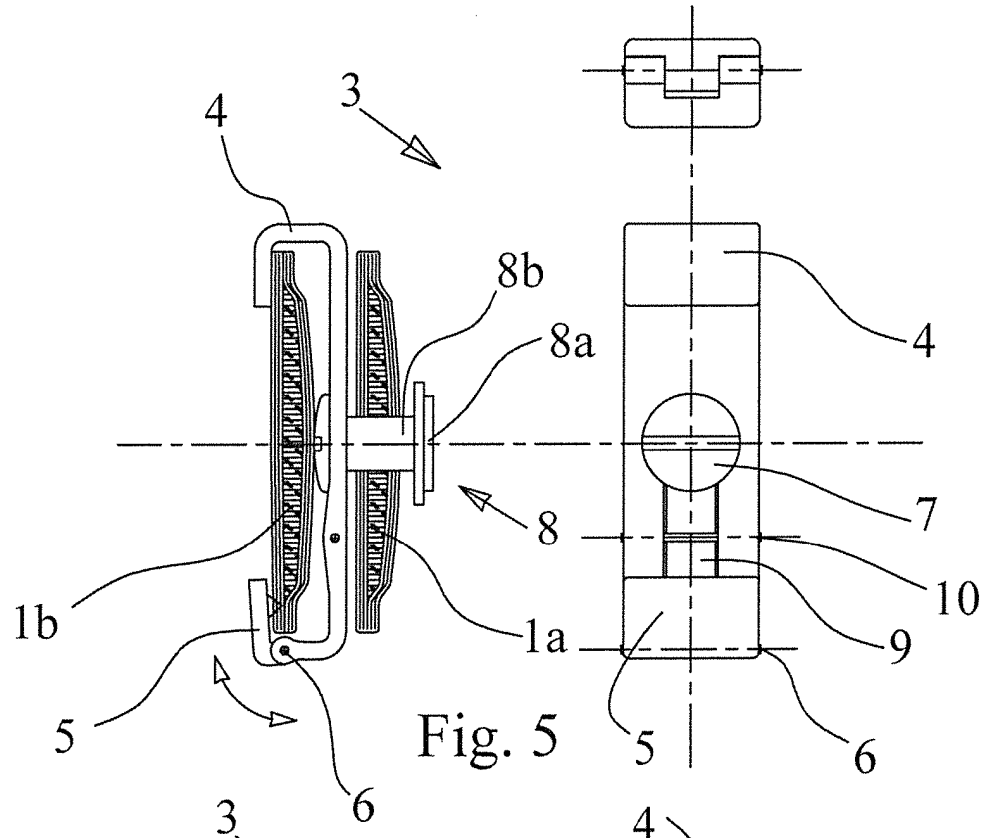
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Fig. 5

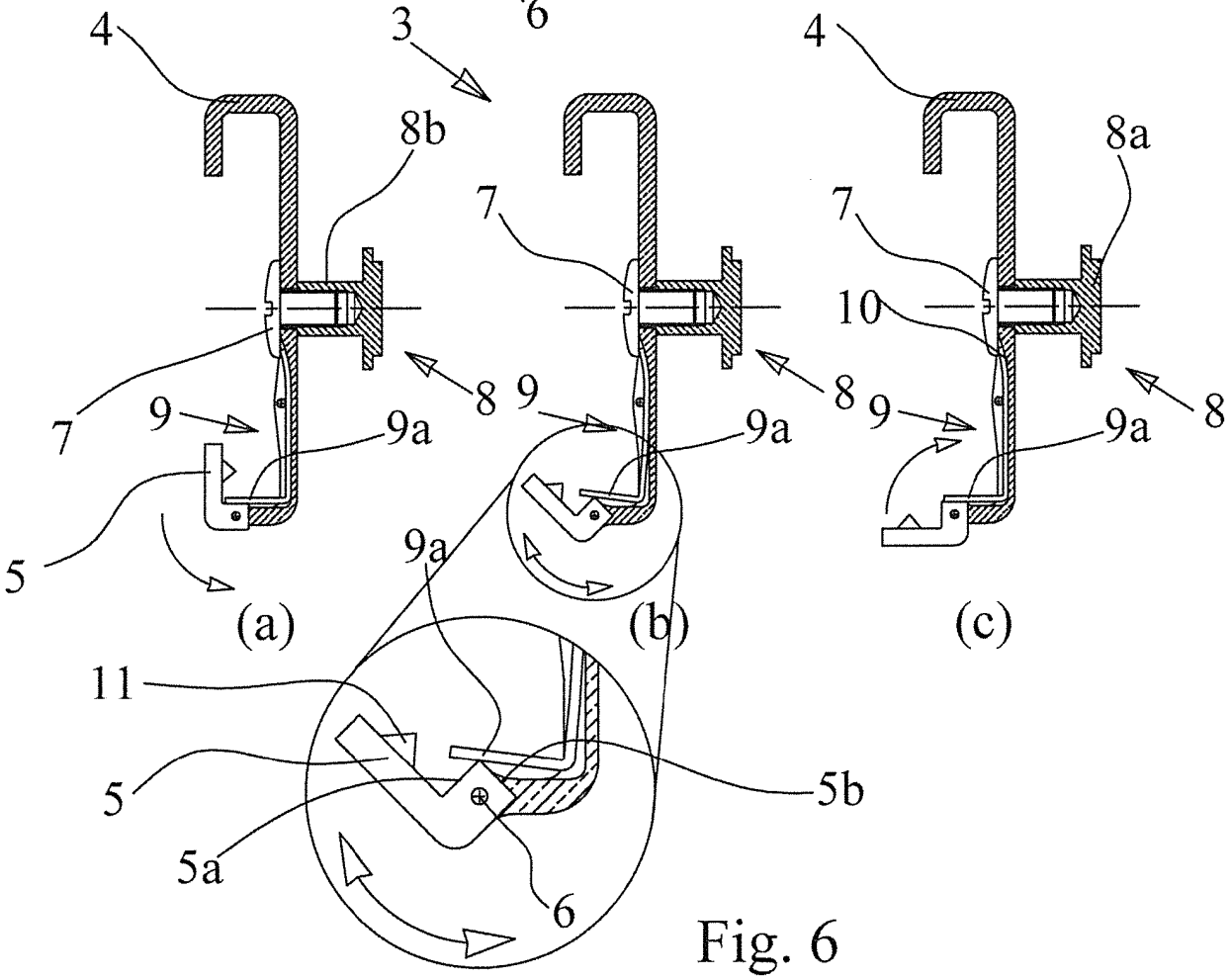
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Fig. 6

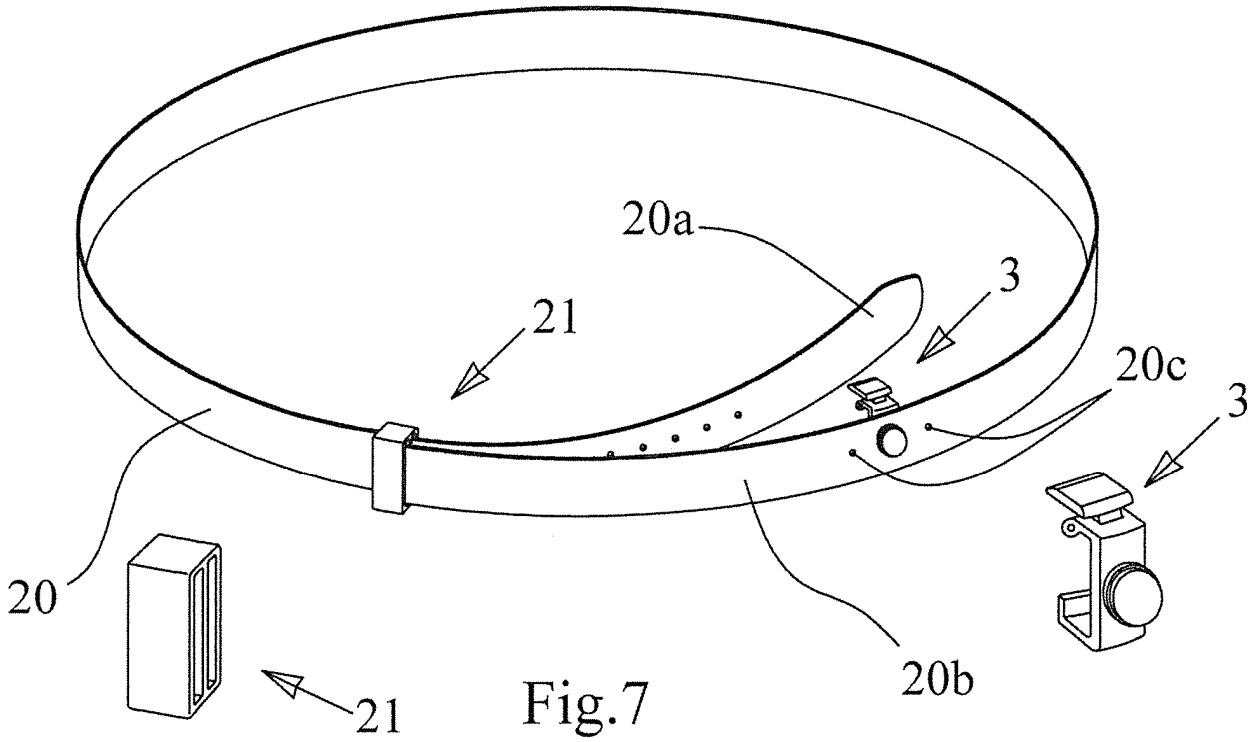

Fig.7

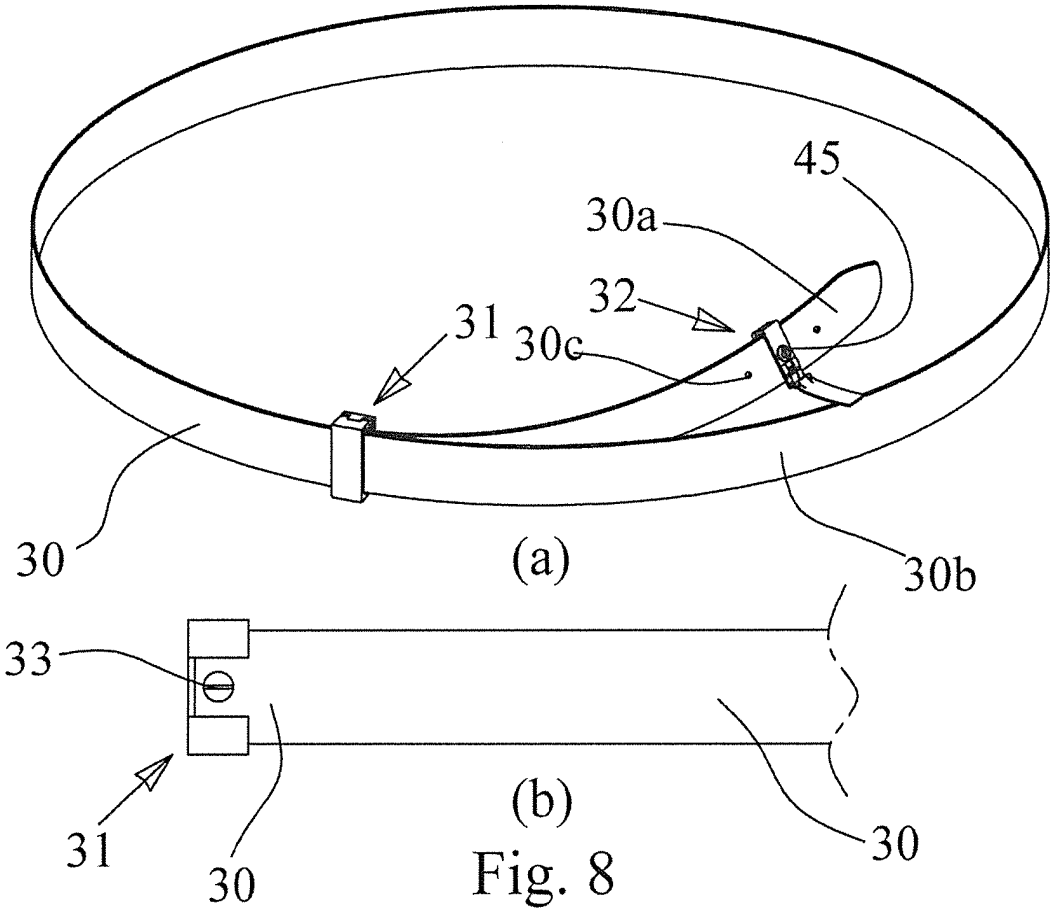

Fig. 8

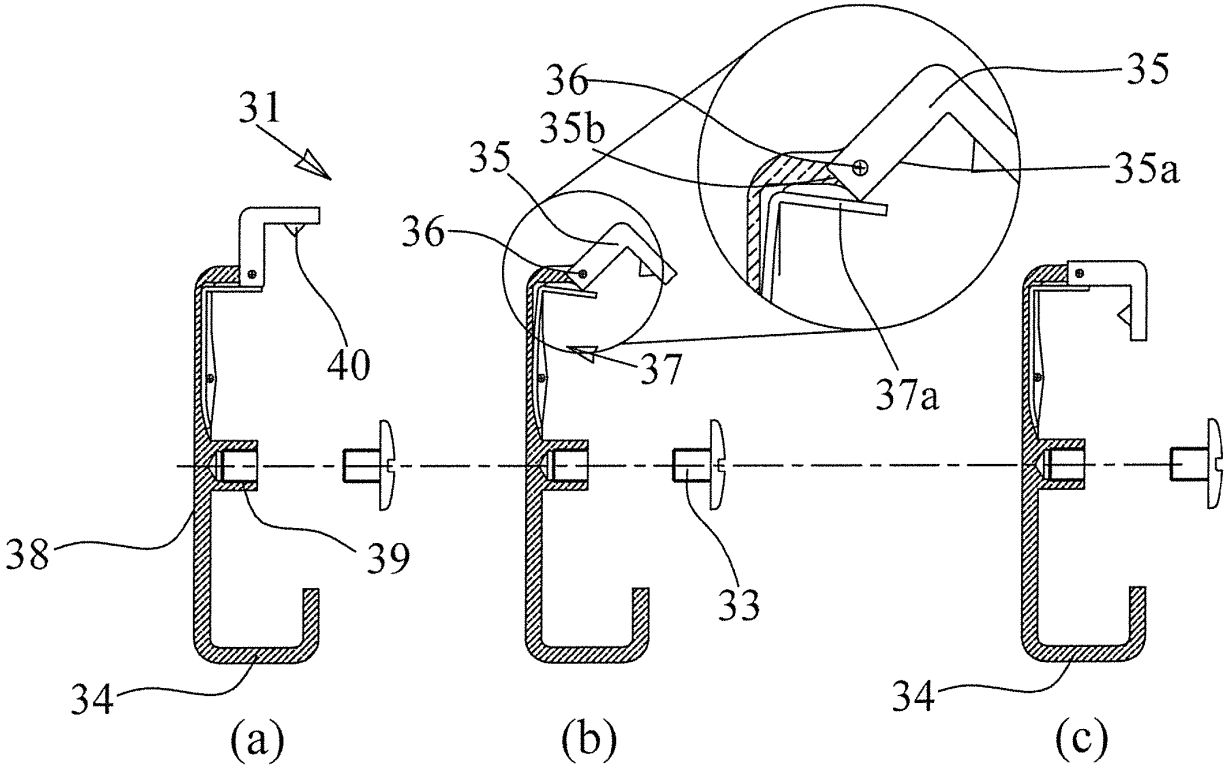
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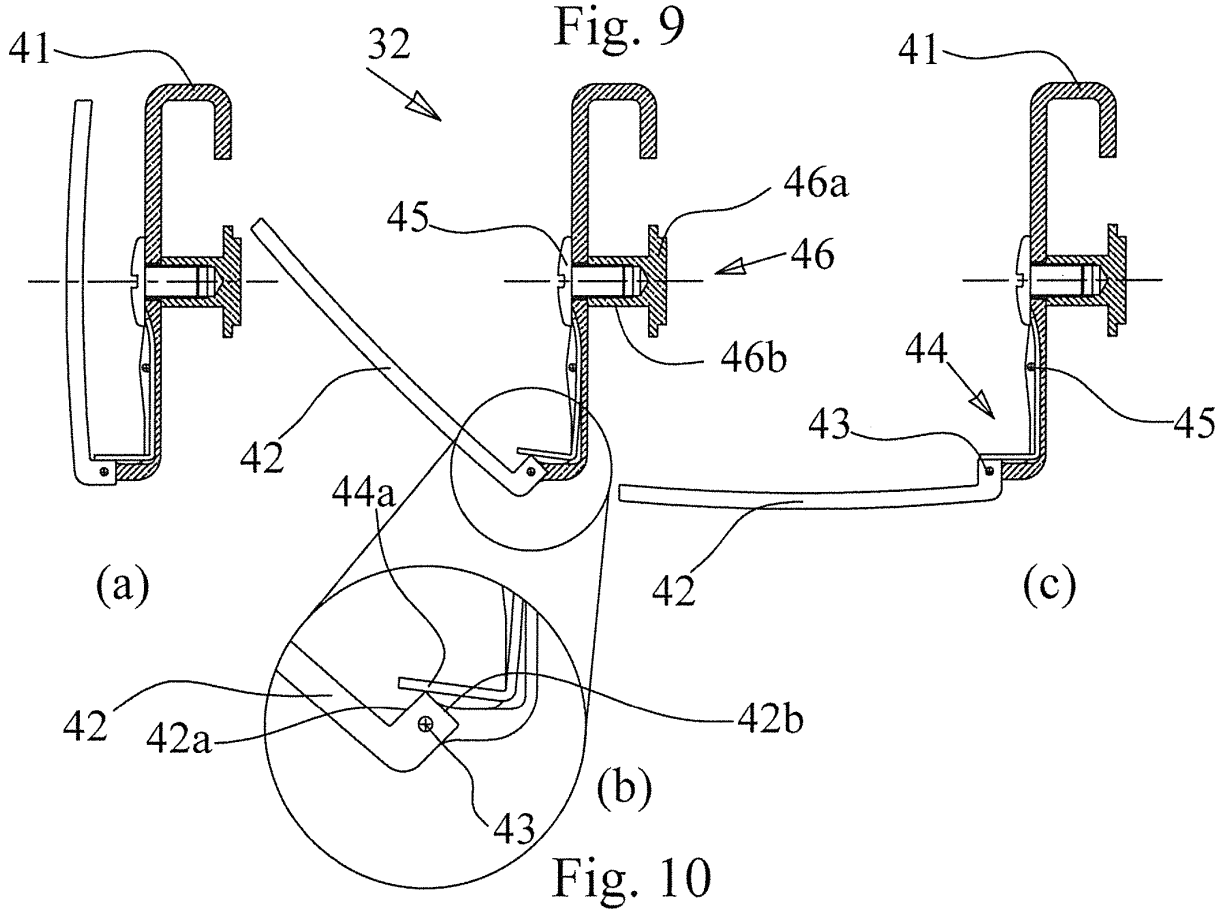
Fig. 9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(a)
(c)
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42a
42b
43
(b)

Fig. 10

REFERENCES CITED IN THE DESCRIPTION

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