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(71) Applicant: **Atk Race S.R.L.**
41042 Fiorano Modenese (MO) (IT)

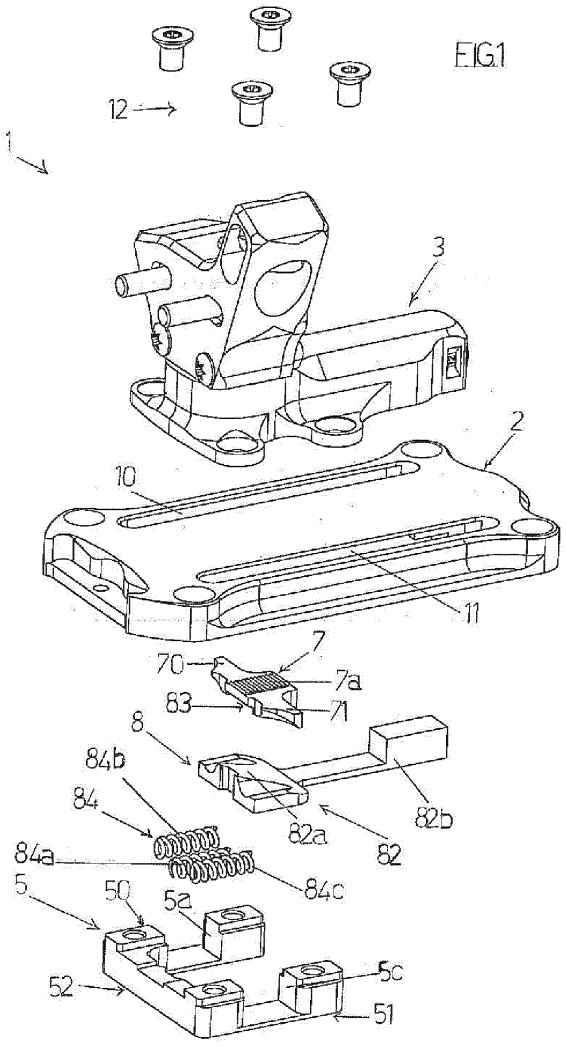
(72) Inventor: **INDULTI, Giovanni**
41042 Fiorano Modenese (MO) (IT)

(74) Representative: **Dall'Olio, Christian et al**
INVENTION S.r.l.
Via delle Armi, 1
40137 Bologna (IT)

(54) BINDING FOR SKI MOUNTAINEERING

(57) A binding (1) for ski mountaineering, comprising a plate (2) fixable to a ski and a hooking device (3) for hooking a ski boot to a ski. The binding comprises: a slide (5) fastenable to the hooking device so as to slide along the plate (2); a first coupling portion (6) fixed to the plate (2); a cursor (7) comprising a second coupling portion (7a) conformed for coupling with the first portion (6); removable locking means (8), for locking the cursor (7) against the plate (2), comprising a wedge element (82) accessible from outside, a fourth coupling portion (83) which is a part of the cursor (7) and which couples with the third portion (82a) and elastic means (84). The cursor (7), the wedge element (82) and the elastic means (84) are reciprocally arranged and dimensioned so that the elastic means (84) can press against the cursor (7) and/or the wedge element (82) so as to lock the cursor (7) to the plate (2) and in such a way that it is possible to move the wedge element (82), by compressing the elastic means (84), determining the decoupling of the cursor (7) from the plate.

FIG.1



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Description

DESCRIPTION OF THE INVENTION

[0001] The present invention relates to the technical sector relating to bindings for ski mountaineering.

[0002] A ski mountaineering binding of known type comprises a plate which comprises a threaded through-hole which is fixable to a ski at a predetermined position. The binding further comprises a hooking device for hooking a ski boot to the plate, and therefore to the ski, which hooking device is slidable on the plate and comprises a nut screw.

[0003] With the aim of enabling the sliding of the hooking device on the plate, the known binding comprises a threaded screw that is couplable with the through-hole of the plate and with the nut screw of the hooking device: a rotation of the screw determines the sliding of the hooking device on the plate and consequently the position of the hooking device relative to the ski is adjusted, when the plate is fixed to the ski.

[0004] Therefore, the known-type ski binding enables skiers having different ski boot sizes to use a same ski. However, the sliding of the hooking device on the plate, and therefore the adjustment of the position of the hooking device with respect to the ski, is neither easy nor rapid as it requires the rotation of the screw by means of the use of appropriate equipment.

[0005] Further, in a case where it is necessary to cause the hooking device to slide on the plate by a considerable length, for example a few centimetres, the operation is not immediate to perform, requiring a few minutes.

[0006] The above problem is particularly relevant in the case of hiring of skis and ski boots, where each skier, on the basis of the measurement of the ski boot, requires having an adjustment made.

[0007] In the light of the above, the aim of the present invention consists in obviating the above-cited drawbacks.

[0008] In particular, an aim of the present invention is to provide a ski binding which enables determining the sliding of the hooking device on the plate without the use of equipment, so that it is possible to adjust the position of the hooking device with respect to the ski, when the plate is fixed to the ski, in a simple and rapid way (so as not to keep the clients waiting), thus adapting a ski to a ski boot of any size.

[0009] The aim is attained by means of a ski binding according to claim 1 and to claim 8.

[0010] The ski bindings of the invention enable a simple, rapid way (and without equipment) to adjust the position of the hooking device with respect to the ski, when the plate is fixed to the ski.

[0011] The bindings of the invention are such that when the second coupling portion of the cursor is decoupled from the first coupling portion, it is possible to freely slide the hooking device on the plate.

[0012] On the other hand, when the second coupling portion of the cursor is coupled to the first coupling portion, the cursor is in a single body with the plate. In this condition the hooking device cannot be made to freely slide on the plate. However, as the elastic means are included, the hooking device continues to have a degree of freedom. In particular, in a case where a force is applied on the hooking device and therefore on the slide which force is directed towards the second wall and which exceeds a predetermined value, a compression of the elastic means is caused, as well as a displacement of the hooking device and the slide towards the cursor (it is again specified that in this configuration the cursor is in a single body with the plate): in this case the sliding of the hooking device on the plate is by a length that depends on the elastic means and the length of the sliding of the cursor between the second wall and the third wall.

[0013] Therefore, in a case in which the second coupling portion of the cursor is coupled to the first coupling portion and an anomalous stress acts on the blocking device (for example as a consequence of a skier jumping), the presence of the elastic means and the possibility for the slide to perform a sliding movement means that the impact can be damped and thus any possible damage can be limited.

[0014] In particular, the ski binding of claim 1 enables adjusting the position of the hooking device with respect to the plate simply by acting manually on the first appendage of the wedge element: by acting on the first appendage, in fact, a skier can decouple/couple the cursor from/to the plate in an immediate and simple way.

[0015] Likewise, the ski binding of claim 8 enables adjusting the position of the hooking device with respect to the plate in a very rapid way: it is sufficient to loosen the first screw.

[0016] Specific embodiments of the invention will be described in the following parts of the present description, according to what is set down in the claims and with the aid of the appended tables of drawings, in which:

- figures 1, 2 and 3 are respectively perspective and exploded views of a first, second and third embodiment of the ski binding of the present invention;
- figures 4 and 5 are respectively a view from above and a lateral view of the binding of figure 2 in the assembled configuration and in which the cursor is coupled to the plate;
- figures 6 and 7 are respectively a section view of figure 4, along section plane VI-VI, and of figure 5 along section plane VII-VII;
- figures 8 and 9 are respectively a view from above and a lateral view of the binding of figure 2 in the assembled configuration and in which the cursor is decoupled from the plate;
- figures 10 and 11 are respectively a section view of

figure 8, along section plane X-X, and of figure 9 along section plane XI-XI;

- figures 12 and 13 illustrate the binding respectively of figures 8 and 9 in which the hooking device has been translated along the plate;

- figures 14 and 15 are respectively a section view of figure 12, along section plane XIV-XIV and of figure 13 along section plane XV-XV;

- figures 16 and 17 illustrate the binding respectively of figures 4 and 5 in which the hooking device has been translated along the plate;

- figures 18 and 19 are respectively a section view of figure 16, along section plane I-I and of figure 17 along section plane II-II;

- figures 20 and 21 illustrate the binding respectively of figures 16 and 17 in a case where a force W has been applied to the hooking device;

- figures 22 and 23 are respectively a section view of figure 20, along section plane III-III and of figure 21 along section plane IV-IV;

- figures 24 and 25 are respectively a view from above and a lateral view of the binding of figure 1 in the assembled configuration and in which the cursor is coupled to the plate;

- figures 26 and 27 are respectively a section view of figure 24, along section plane XX-XX and of figure 25 along section plane XXI-XXI.

[0017] With reference to the appended tables of drawings, reference numeral (1) denotes a ski binding of the present invention.

[0018] With reference to figures 1 and 2, in the following preferred embodiments of the binding (1) of the present invention are described.

[0019] The binding (1) for ski mountaineering of the invention comprises a plate (2) fixable to a ski and a hooking device (3) for hooking a ski boot to the ski.

[0020] The plate (2) is conformed in such a way that when it is fixed to the ski a chamber (4) is identified between the ski and a first wall (2a) of the plate (2) facing the ski.

[0021] The binding (1) further comprises a slide (5) which is positionable in the chamber (4) and which comprises a second wall (5a) and a third wall (5b), facing one another.

[0022] The hooking device (3) is fixable to the slide (5) for sliding along the plate (2).

[0023] The binding (1) further comprises a first coupling portion (6) fixed to the first wall (2a) of the plate (2) and which extends along the first wall (2a) and a cursor (7).

[0024] The cursor (7) comprises a second coupling portion (7a) conformed so as to couple with the first coupling portion (6), which cursor (7) is positionable between the second wall (5a) and the third wall (5b) of the slide (5), in order to be able to slide between the second wall (5a) and the third wall (5b), with the second coupling portion (7a) facing the first coupling portion (6).

[0025] The binding (1) comprises removable locking means (8), for locking the cursor (7) against the plate (2) so that the second coupling portion (7a) couples with the first coupling portion (6).

[0026] The removable locking means (8) are arranged in the chamber (4) and comprise: a wedge element (82) which comprises a third coupling portion (82a) which forms a wedge and a first appendage (82b) which is accessible from outside when the binding (1) is mounted; a fourth coupling portion (83) which is part of the cursor (7) and which is conformed so as to couple with the third coupling portion (82a); elastic means (84).

[0027] The cursor (7), the wedge element (82) and the elastic means (84) are reciprocally arranged and dimensioned so that the elastic means (84) can press against the cursor (7) and/or the wedge element (82), so that the third coupling portion (82a) couples to the fourth coupling portion (83) with a consequent locking of the cursor (7) to the plate (2), and so that it is possible to move the wedge element (82), by compressing the elastic means (84) and acting on the relative first appendage (82b), determining a decoupling of the third coupling portion (82a) from the fourth coupling portion (83) with a consequent decoupling of the second coupling portion (7a) from the first coupling portion (6).

[0028] The elastic means (84) are further dimensioned so as to be compressed in a case in which the cursor (7) is blocked to the plate (2) and a force (W) acts on the hooking device (3), which force (W) is directed towards the second wall (5a) and exceeds a predetermined value.

[0029] By acting manually at the first appendage (82b) it is advantageously possible to decouple/couple the cursor (7) from/to the plate (2) and enable the adjustment of the position of the hooking device (3) on the plate (2).

[0030] Further, the binding (1) of the elastic means (84) enables damping forces, directed towards the second wall (5a), and which exceed a predetermined value, acting on the hooking device (3).

[0031] In a particular embodiment, the elastic means (84) can comprise a first elastic element (84a) (for example a spring) which can be interposed between the slide (5) and the wedge element (8) for pressing the third coupling portion (82a) against the fourth coupling portion (83).

[0032] The first elastic element (84a) advantageously carries out the function of damping and also enables the movement of the wedge element (82) which in turn determines the movement of the cursor (7) (between the coupling position with the plate (2) and the decoupling position from the plate (2)).

[0033] Further, according to a specific embodiment, the elastic means (84) can comprise, as well as the first elastic element (84a), a second elastic element (84b) which can be interposed between the slide (5) and the cursor (7) for pressing the cursor (7) against the second wall (5a). In this embodiment, the first elastic element (84a) can advantageously be designed so as to have a rigidity that is such as to make the manual movement of the wedge element (82) easy (see figures 1 and 2).

[0034] According to what is illustrated in figures 1 and 2, the elastic means (84) can further comprise a second elastic element (84c) which can be interposed between the slide (5) and the cursor (7) for pressing the cursor (7) against the second wall (5a). This embodiment is advantageously more stable.

[0035] According to a further embodiment, not illustrated in the figures, as well as pressing against the wedge element (82) the first elastic element (84a) can be arranged so as to be interposed between the slide (5) and the cursor (7) and dimensioned for pressing the cursor (7) against the second wall (5a).

[0036] The slide (5) preferably comprises: a first part (50) which comprises the second wall (5a) and the third wall (5b); a second part (51) which comprises a fourth wall (5c) and a fifth wall (5d), facing one another; and a third part (52) which connects the first part (50) with the second part (51). Further, the cursor (7) can comprise: a first tab (70) and a second tab (71) which are opposite one another; the cursor (7) and the slide (5) being dimensioned with respect to one another so that the first tab (70) can slide between the second wall (5a) and the third wall (5b) and so that the second tab (71) can slide between the fourth wall (5c) and the fifth wall (5d).

[0037] This conformation of the slide (5) and the cursor (7) advantageously gives greater stability to the binding (1).

[0038] The slide (5) can therefore be C-shaped: the first part (50) and the second part (51) can have a longitudinal extension, be parallel to one another and be parallel to the ski when the binding (1) is mounted on the ski. In this case, the third part (52) can also have a longitudinal extension and be transversal with respect to the ski when the binding (1) is mounted on the ski.

[0039] The second wall (5a) and the third wall (5b) are preferably parallel to one another, and likewise the fourth wall (5c) and the fifth wall (5d) are parallel to one another.

[0040] The second coupling portion (7a) can be arranged between the first tab (70) and the second tab (71).

[0041] With reference to the preferred embodiment illustrated in figure 1 and in figures 24-27, the first appendage (82b) can have a longitudinal extension and be parallel to the ski when the binding (1) is mounted on the ski. In this case, the first appendage (82b) can project from the chamber (4) and be manually reachable (for example using a finger).

[0042] With reference to figures 24-27, the first coupling portion (6) and the second coupling portion (7a) are coupled and therefore the cursor (7) is in a single body with the plate (2). From this configuration, with the aim of decoupling the first coupling portion (6) and the second coupling portion (7a), it is sufficient to push the first appendage (82b) so as to compress the elastic means (84) (in particular, the first elastic element (84a)). Thereafter, by maintaining the elastic means (84) compressed, it is possible to cause the hooking device (3) to slide on the plate (2). By releasing the first appendage (82b) the elastic means (84) are extended and the coupling between the first coupling portion (6) and the second coupling portion (7a) is achieved.

[0043] With reference to the preferred embodiment, the plate (2) can comprise a first slot (10) and/or a second slot (11) (figure 1) and the binding (1) can comprise fastening means (12) for fixing the hooking device (3) to the slide (5), which fastening means (12) are conformed for being insertable through the first slot (10) and/or second slot (11).

[0044] With reference to a further embodiment illustrated in figure 2 and in figures 4-23, the plate (2) can afford a first slot (10) which develops parallel to the ski, when the plate (2) is fixed to the ski, and the first appendage (82b) of the wedge element (82) can be conformed so as to be insertable through the first slot (10).

[0045] This embodiment is advantageously especially comfortable, easy and compact.

[0046] Once more with reference to the further embodiment illustrated in figure 2, the plate (2) can afford a second slot (11) which develops parallel to the ski, when the plate (2) is fixed to the ski, and the wedge element (82) can comprise a second appendage (82c) which is accessible from outside once the binding (1) is mounted so as to cooperate with the first appendage (82b) in order to enable displacing the wedge element (82). The second appendage (82c) is conformed so as to be insertable through the second slot (11). This embodiment is advantageously more stable and easier to use.

[0047] Preferably, the first appendage (82b) can project at the first tab (70). Preferably, the second appendage (82c) can project at the second tab (71).

[0048] Further, the embodiment of figure 2 can comprise fastening means (12) (for example a system of threaded screws and threaded holes) for fixing the hooking device (3) to the slide (5), which fastening means (12) are conformed so as to be insertable through at least the first slot (10).

[0049] The following is a description of functioning of the above-mentioned embodiments of the binding (1), with reference to figures 4-23. With reference to figures 4-7, the first coupling portion (6) and the second coupling portion (7a) are coupled: the cursor (7) is in a single body with the plate (2). In order to proceed with the adjustment of the position of the hooking device (3) on the plate (2) it is necessary to decouple the first coupling portion (6) and the second coupling portion (7a).

[0050] For this purpose, the elastic means (84) are compressed by moving the wedge element (82) at the relative first appendage (82b). In this way the first cou-

pling portion (6) and the second coupling portion (7a) are decoupled (figures 8-11). Thereafter, by maintaining the elastic means (84) compressed, it is possible to proceed to the sliding of the hooking device (3) on the plate (2) (figures 12-15). Once the hooking device (3) has been adequately positioned, the wedge element (82) is released so that the elastic means (84) can extend and the third coupling portion (82a) of the wedge element (82) goes to couple to the fourth coupling portion (83) of the cursor (7): the cursor (7) is newly in a single body with the plate (2) see figures 16-19).

[0051] With reference to figures 20-23, the configuration of the binding (1) is illustrated in a case where the force (W) directed towards the second wall (5a) and which exceeds a predetermined value acts on the hooking device (3) during the use of the binding (1). This force (W) might be consequent upon an impact and/or a jump. In this case, the cursor (7) is coupled to the plate (2) and the force (W), by compressing the elastic means (84), determines a sliding of the hooking device (3) and of the slide (5) towards the cursor (7) (it is fixed), enabling a damping of the effect of the force (W).

[0052] With reference to figure 3, in the following preferred embodiments of the binding (1) are described that are alternative to the ones described in the foregoing but which are also the objects of the present invention.

[0053] With reference to figure 3, the binding (1) for ski mountaineering comprises a plate (2) fixable to a ski and a hooking device (3) for hooking a ski boot to a ski.

[0054] The plate (2) is conformed in such a way that when it is fixed to the ski a chamber (4) is identified between the ski and a first wall (2a) of the plate (2) facing the ski. Further, the plate (2) affords a first slot (10) which develops parallel to the ski, when the plate (2) is fixed to the ski.

[0055] The binding (1) comprises a slide (5) which is positionable in the chamber (4) and which comprises a second wall (5a) and a third wall (5b), facing one another. The hooking device (3) is fixable to the slide (5) for sliding along the plate (2).

[0056] The binding (1) further comprises a first coupling portion (6) fixed to the first wall (2a) of the plate (2) and which extends along the first wall (2a) and a cursor (7). The cursor (7) comprises a second coupling portion (7a) conformed for coupling with the first coupling portion (6). The cursor (7) is further positionable between the second wall (5a) and the third wall (5b) of the slide (5), in order to be able to slide between the second wall (5a) and the third wall (5b), with the second coupling portion (7a) facing the first coupling portion (6).

[0057] The binding (1) comprises removable locking means (8), for locking the cursor (7) against the plate (2) so that the second coupling portion (7a) couples with the first coupling portion (6). The removable locking means (8) comprise a first threaded hole (80) made in the cursor (7) and a first threaded screw (85) which can be inserted through the first slot (10) so as to engage in the first threaded hole (80) and which has a head dimensioned for abutting the plate (2).

[0058] The binding (1) further comprises elastic means (84) which can be interposed between the slide (5) and the cursor (7) for pressing the cursor (7) against the second wall (5a) and which are dimensioned so as to be compressed in a case in which a force (W) acts on the hooking device (3), which force (W) is directed towards the second wall (5a) and exceeds a predetermined value.

[0059] By screwing the first screw (85) in the first hole (80), therefore, the cursor (7) is raised up to when the second coupling portion (7a) couples to the first coupling portion (6). Consequently, by unscrewing the screw (85) the cursor (7) is lowered, the second coupling portion (7a) decouples from the first coupling portion (6) and it is possible to freely slide the hooking device (3) on the plate (2).

[0060] Therefore, with the purpose of decoupling the cursor (7) from the plate (2), it is sufficient only to loosen the first screw (85). The locking means (8) are advantageously simple and, consequently, they are light and require only a small amount of maintenance.

[0061] The elastic means (84) preferably comprise a first elastic element (84a). They can further comprise a second elastic element (84b). The binding (1) is advantageously more stable.

[0062] With further reference to figure 3, the slide (5) comprises: a first part (50) that comprises the second wall (5a) and the third wall (5b); a second part (51) which comprises a fourth wall (5c) and a fifth wall (5d), facing one another; and a third part (52) which connects the first part (50) with the second part (51). The cursor (7) further comprises a first tab (70) and a second tab (71) which are opposite one another. The cursor (7) and the slide (5) can be dimensioned with respect to one another so that the first tab (70) can slide between the second wall (5a) and the third wall (5b) and so that the second tab (71) can slide between the fourth wall (5c) and the fifth wall (5d). In this embodiment, the elastic means (84) can be interposed between the third part (52) of the slide (5) and the cursor (7) so as to press the first tab (70) against the second wall (5a) and so as to press the second tab (71) against the fourth wall (5c). This conformation of the slide (5) and the cursor (7) advantageously gives greater stability to the binding (1).

[0063] The slide (5) can therefore be C-shaped: the first part (50) and the second part (51) can have a longitudinal extension, be parallel to one another and be parallel to the ski when the binding (1) is mounted on the ski. In this case, the third part (52) can also have a longitudinal extension and be transversal with respect to the ski when the binding (1) is mounted on the ski.

[0064] The second wall (5a) and the third wall (5b) are preferably parallel to one another, and likewise the fourth wall (5c) and the fifth wall (5d) are parallel to one another.

[0065] The second coupling portion (7a) can be arranged between the first tab (70) and the second tab (71).

[0066] With further reference to figure 3, the first threaded hole (80) can be made at the first tab (70) of

the cursor (7), and the plate (2) can afford a second slot (11) which develops parallel to the ski, when the plate (2) is fixed to the ski. The removable locking means (8) can further comprise a second threaded hole (81) made at the second tab (71) of the cursor (7), and a second threaded screw (86) which can be inserted through the second slot (11) so as to engage in the second threaded hole (81) and which has a head dimensioned for abutting the plate (2).

[0067] Further, the binding can comprise fastening means (12) (for example a system of threaded screws and threaded holes) for fixing the hooking device (3) to the slide (5), which fastening means (12) are conformed so as to be insertable through the first slot (10).

[0068] According to any of the above-described embodiments, the hooking device (3) can be a toe-piece or a heel-piece. The hooking device (3) is preferably a heel-piece (see the appended figures).

[0069] The plate (2) preferably has a longitudinal extension and is fixable to the ski in such a way that the extension thereof is parallel to the ski.

[0070] Further, the first coupling portion (6) can have a ridged conformation (see the figures). Consequently the second coupling portion (7) can also have a ridged conformation. The ridging advantageously enables a precise positioning (millimetric precision) of the hooking device (3) with respect to the plate (2), and therefore the ski.

[0071] Further, the teeth of the ridging preferably has a triangular section.

Claims

1. A binding (1) for ski mountaineering, comprising a plate (2) fixable to a ski and a hooking device (3) for hooking a ski boot to a ski;
which ski binding (1) is **characterised in that**:

the plate (2) is conformed in such a way that when it is fixed to the ski a chamber (4) is identified between the ski and a first wall (2a) of the plate (2) facing the ski;
it comprises a slide (5) which is positionable in the chamber (4) and which comprises a second wall (5a) and a third wall (5b), facing one another;
the hooking device (3) is fixable to the slide (5) for sliding along the plate (2);
it comprises a first coupling portion (6) fixed to the first wall (2a) of the plate (2) and which extends along the first wall (2a);
it comprises a cursor (7) comprising a second coupling portion (7a) conformed so as to couple with a first coupling portion (6), which cursor (7) is positionable between the second wall (5a) and the third wall (5b) of the slide (5), in order to be able to slide between the second wall (5a) and the third wall (5b), and the second coupling portion (7a) being facing the first coupling portion (6);
it comprises removable locking means (8), for locking the cursor (7) against the plate (2) so that the second coupling portion (7a) couples with the first coupling portion (6);
the removable locking means (8) are arranged in the chamber (4) and comprise: a wedge element (82) which comprises a third coupling portion (82a) which forms a wedge and a first appendage (82b) which is accessible from outside when the binding (1) is mounted; a fourth coupling portion (83) which is part of the cursor (7) and which is conformed so as to couple with the third coupling portion (82a); elastic means (84); the cursor (7), the wedge element (82) and the elastic means (84) are reciprocally arranged and dimensioned so that the elastic means (84) can press against the cursor (7) and/or the wedge element (82), so that the third coupling portion (82a) couples to the fourth coupling portion (83) with a consequent locking of the cursor (7) to the plate (2), and so that it is possible to move the wedge element (82), by compressing the elastic means (84) and acting on the relative first appendage (82b), determining a decoupling of the third coupling portion (82a) from the fourth coupling portion (83) with a consequent decoupling of the second coupling portion (7a) from the first coupling portion (6);
the elastic means (84) are further dimensioned so as to be compressed in a case in which the cursor (7) is blocked to the plate (2) and a force (W) acts on the hooking device (3), which force (W) is directed towards the second wall (5a) and exceeds a predetermined value.

2. The binding (1) of the preceding claim, wherein the elastic means (84) comprise a first elastic element (84a) which can be interposed between the slide (5) and the wedge element (8) for pressing the third coupling portion (82a) against the fourth coupling portion (83).

3. The binding (1) of the preceding claim, wherein the elastic means (84) comprise a second elastic element (84b) which can be interposed between the slide (5) and the cursor (7) for pressing the cursor (7) against the second wall (5a).

4. The binding (1) of claim 2, wherein the first elastic element (84a) is arranged so as to be interposed between the slide (5) and the cursor (7) and dimensioned for pressing the cursor (7) against the second wall (5a).

5. The binding (1) of any one of the preceding claims,

wherein:

the slide (5) comprises: a first part (50) that comprises the second wall (5a) and the third wall (5b); a second part (51) which comprises a fourth wall (5c) and a fifth wall (5d), facing one another; and a third part (52) which connects the first part (50) with the second part (51);
the cursor (7) comprises: a first tab (70) and a second tab (71) which are opposite one another;
the cursor (7) and the slide (5) being dimensioned with respect to one another so that the first tab (70) can slide between the second wall (5a) and the third wall (5b) and so that the second tab (71) can slide between the fourth wall (5c) and the fifth wall (5d).

6. The binding (1) of any one of the preceding claims, wherein the plate (2) affords a first slot (10) which develops parallel to the ski, when the plate (2) is fixed to the ski, and wherein the first appendage (82b) of the wedge element (82) is conformed so as to be insertable through the first slot (10).

7. The binding (1) of the preceding claim, wherein the plate (2) affords a second slot (11) which develops parallel to the ski, when the plate (2) is fixed to the ski, and wherein the wedge element (82) comprises a second appendage (82c) which is accessible from outside once the binding (1) is mounted so as to cooperate with the first appendage (82b) and so as to enable displacing the wedge element (82); the second appendage (82c) being conformed so as to be insertable through the second slot (11).

8. A binding (1) for ski mountaineering, comprising a plate (2) fixable to a ski and a hooking device (3) for hooking a ski boot to a ski;
which ski binding (1) is **characterised in that**:

the plate (2) is conformed in such a way that when it is fixed to the ski a chamber (4) is identified between the ski and a first wall (2a) of the plate (2) facing the ski, which plate (2) affords a first slot (10) which develops parallel to the ski when the plate (2) is fixed to the ski,
it comprises a slide (5) which is positionable in the chamber (4) and which comprises a second wall (5a) and a third wall (5b), facing one another;
the hooking device (3) is fixable to the slide (5) for sliding along the plate (2);
it comprises a first coupling portion (6) fixed to the first wall (2a) of the plate (2) and which extends along the first wall (2a);
it comprises a cursor (7) comprising a second coupling portion (7a) conformed so as to couple with a first coupling portion (6), which cursor (7) is positionable between the second wall (5a) and the third wall (5b) of the slide (5), in order to be able to slide between the second wall (5a) and the third wall (5b), and the second coupling portion (7a) being facing the first coupling portion (6);
it comprises removable locking means (8), for locking the cursor (7) against the plate (2) so that the second coupling portion (7a) couples with the first coupling portion (6);
the removable locking means (8) comprise a first threaded hole (80) made in the cursor (7) and a first threaded screw (85) which can be inserted through the first slot (10) so as to engage in the first threaded hole (80) and which has a head dimensioned for abutting the plate (2);
it comprises elastic means (84) which can be interposed between the slide (5) and the cursor (7) for pressing the cursor (7) against the second wall (5a) and which are dimensioned so as to be compressed in a case in which a force (W) acts on the hooking device (3), which force (W) is directed towards the second wall (5a) and exceeds a predetermined value.

9. The binding (1) of the preceding claim, wherein
the slide (5) comprises: a first part (50) that comprises the second wall (5a) and the third wall (5b); a second part (51) which comprises a fourth wall (5c) and a fifth wall (5d), facing one another; and a third part (52) which connects the first part (50) with the second part (51);
the cursor (7) comprises: a first tab (70) and a second tab (71) which are opposite one another; the cursor (7) and the slide (5) being dimensioned with respect to one another so that the first tab (70) can slide between the second wall (5a) and the third wall (5b) and so that the second tab (71) can slide between the fourth wall (5c) and the fifth wall (5d);
the elastic means (84) can be interposed between the third part (52) of the slide (5) and the cursor (7) so as to press the first tab (70) against the second wall (5a) and so as to press the second tab (71) against the fourth wall (5c).

10. The binding (1) of the preceding claim, wherein the first threaded hole (80) is made at the first tab (70) of the cursor (7), wherein the plate (2) affords a second slot (11) which develops parallel to the ski, when the plate (2) is fixed to the ski, and wherein the removable locking means (8) comprise: a second threaded hole (81) made at the second tab (71) of the cursor (7); and a second threaded screw (86) which can be inserted through the second slot (11) so as to engage in the second threaded hole (81) and which has a head dimensioned for abutting the plate (2).

FIG.1

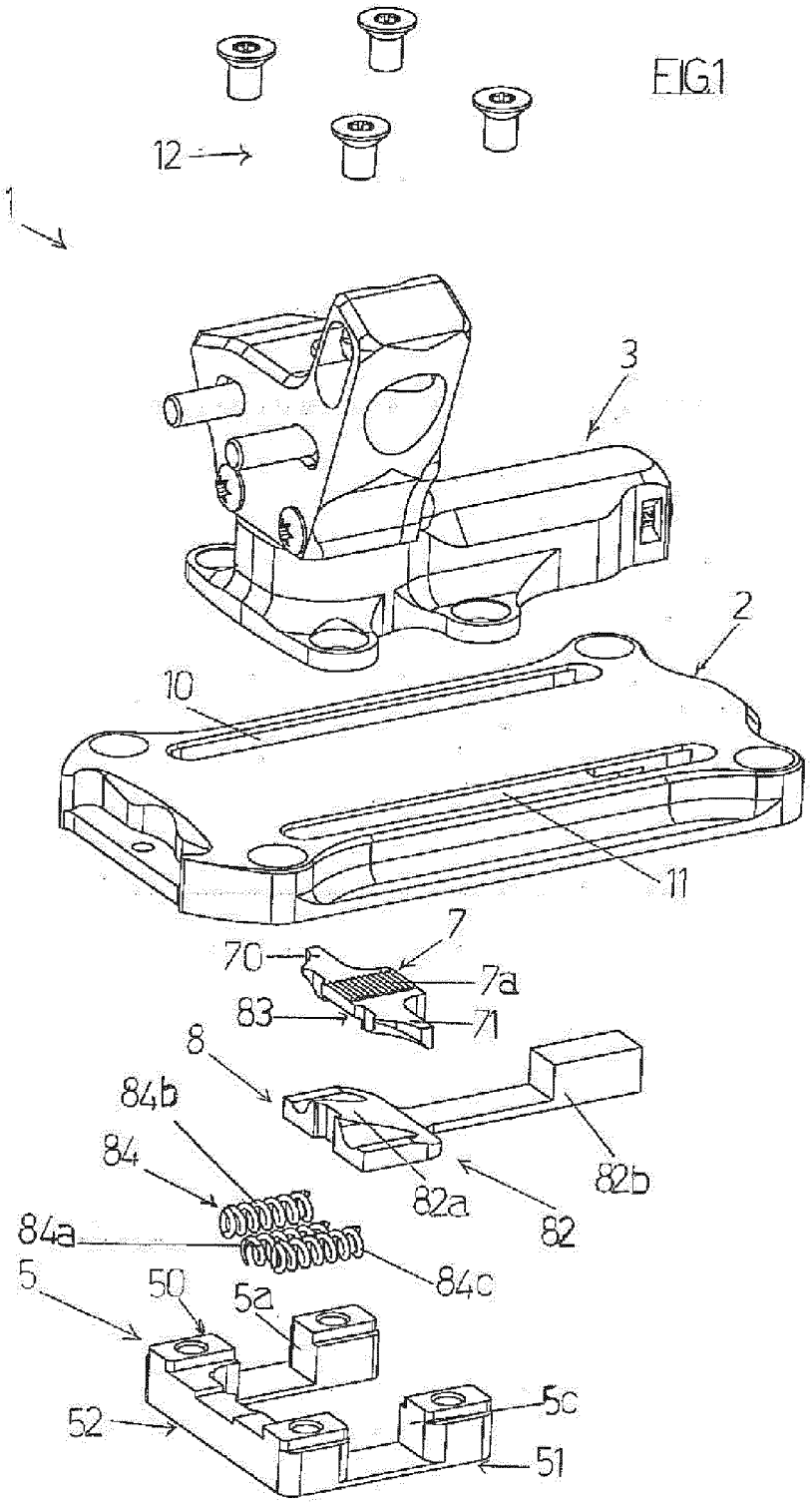


FIG.2

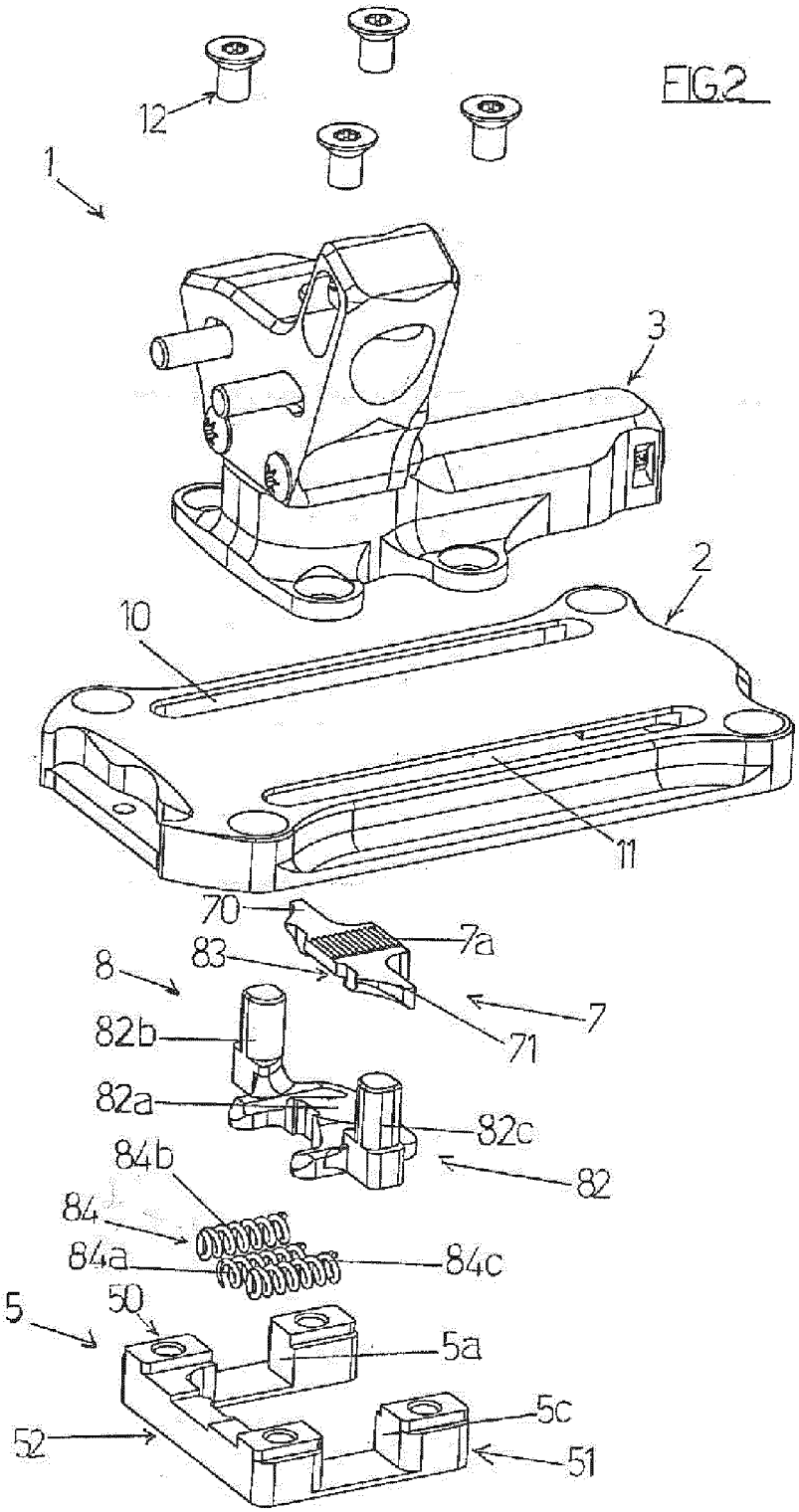
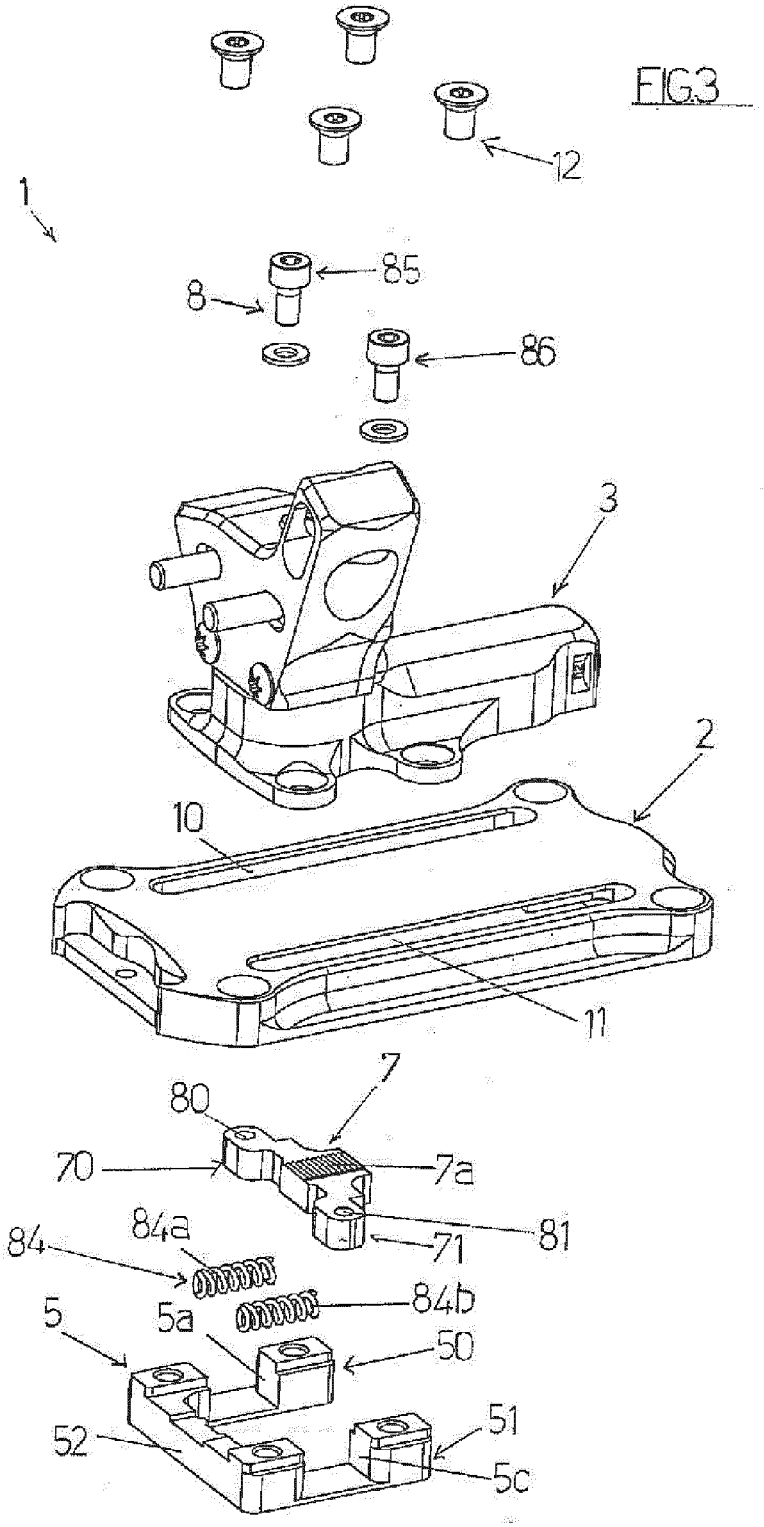

12
1
3
2
10
11
70
7a
83
8
7
71
82b
82a
82c
82
84b
84
84a
84c
5
50
5a
5c
52
51

FIG.3



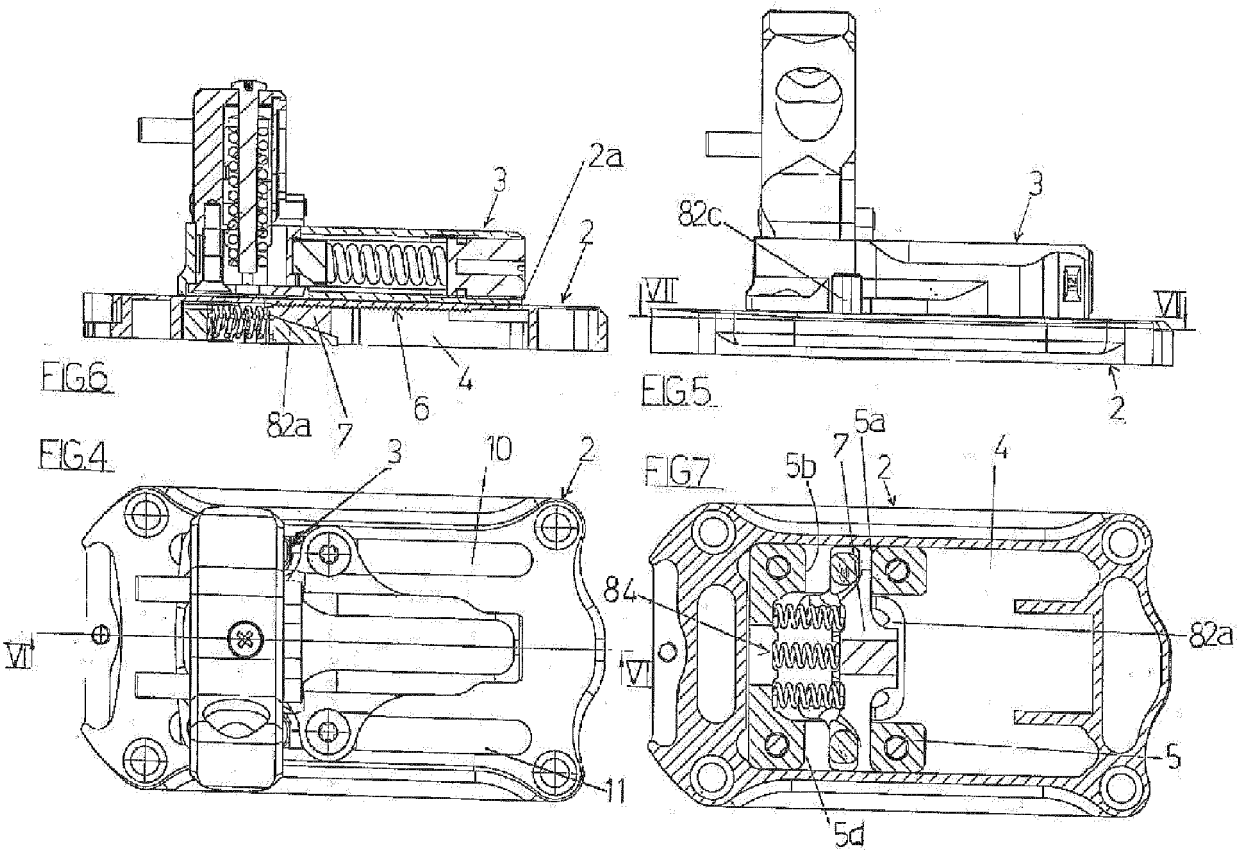


FIG.6
2a
3
2
82a
7
6
4
FIG.5
82c
3
VII
VII
2
FIG.4
3
10
2
VI
VI
11
FIG.7
5a
5b
7
2
4
84
82a
5
5d

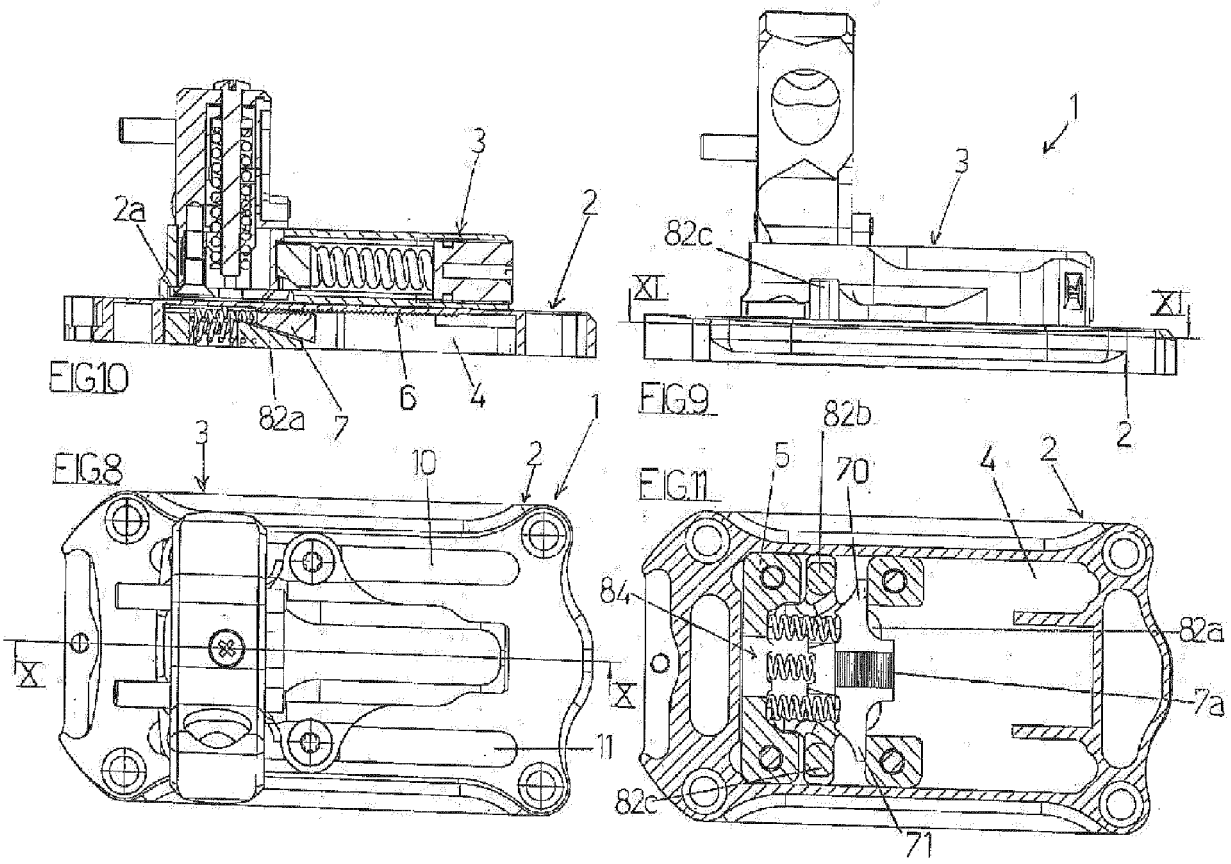


FIG.10
2a
3
2
82a
7
6
4
FIG.9
1
3
82c
XI
XI
2
FIG.8
3
10
2
1
X
X
11
FIG.11
82b
5
70
4
2
84
82a
7a
82c
71

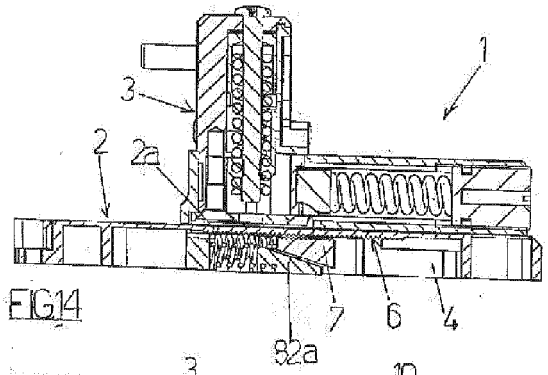


FIG.14

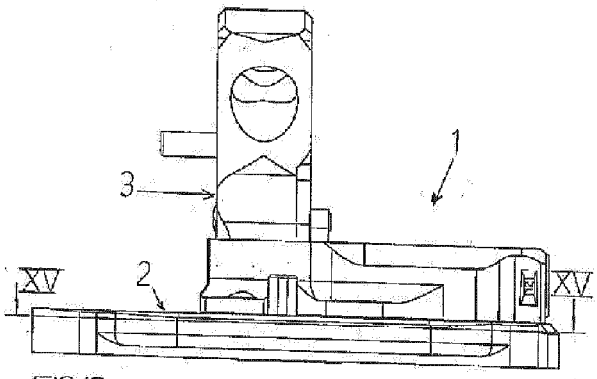


FIG.13

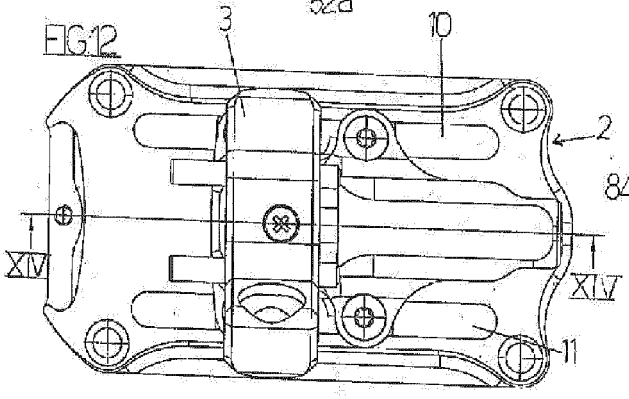


FIG.12

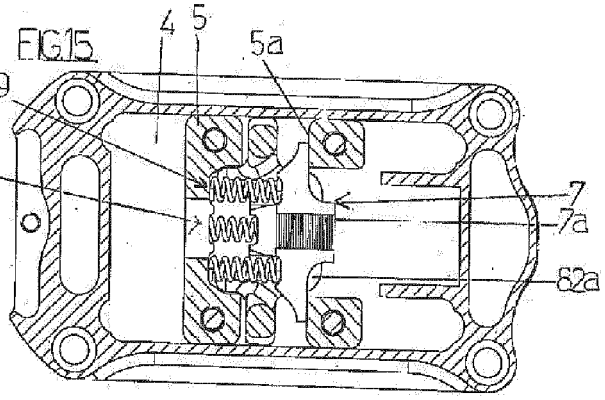


FIG.15

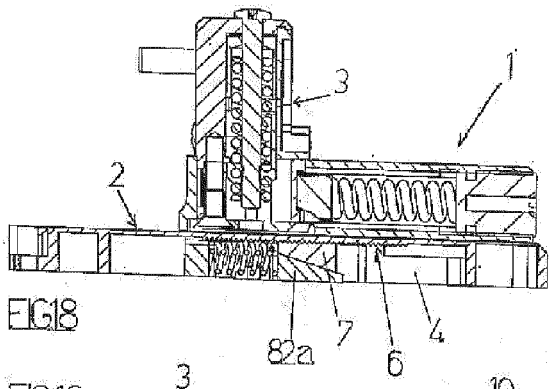


FIG18

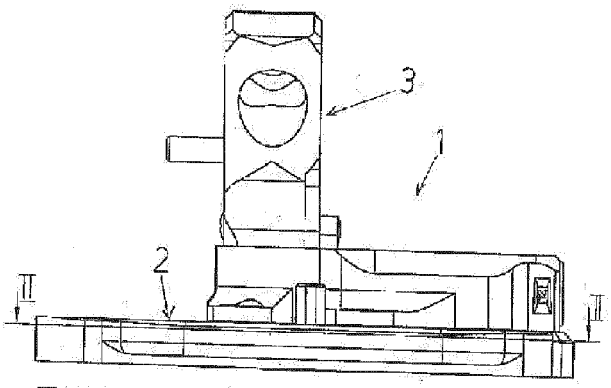


FIG17

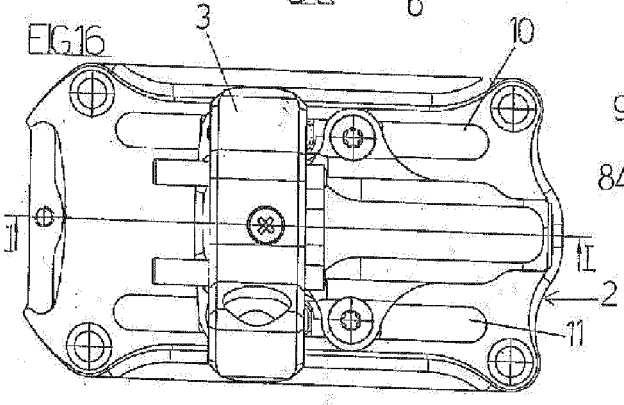


FIG16

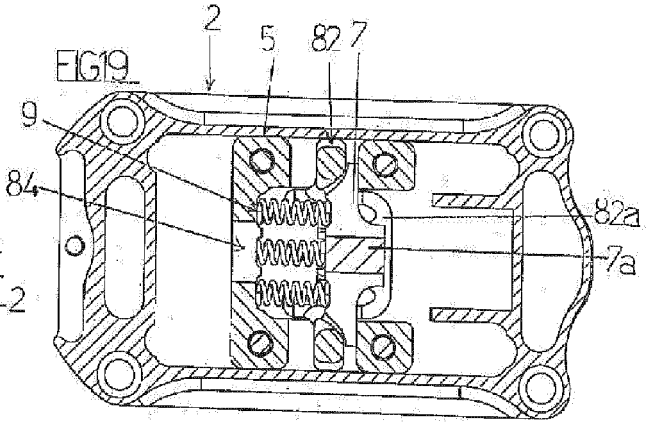


FIG19

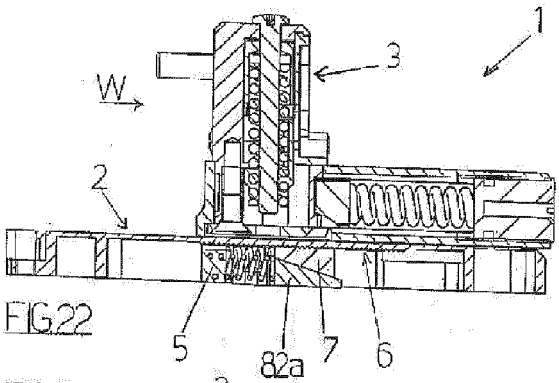


FIG.22

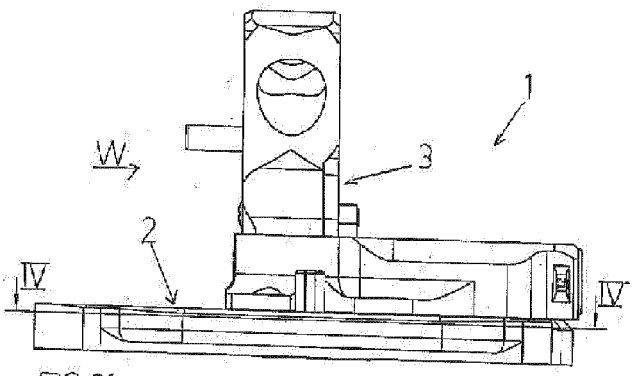


FIG.21

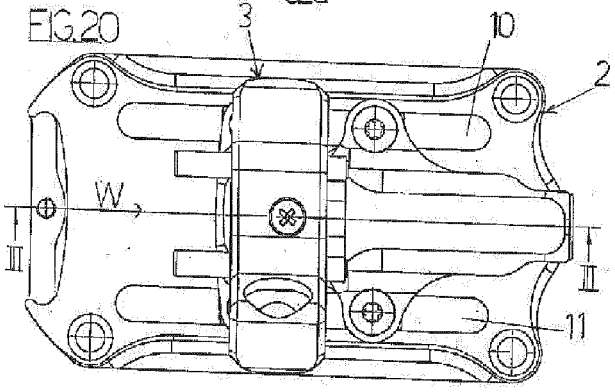


FIG.20

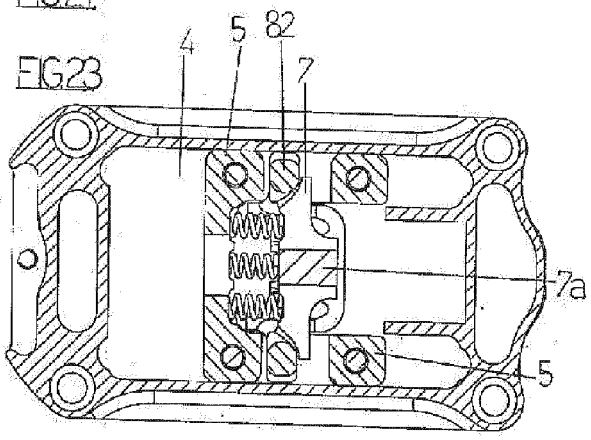


FIG.23

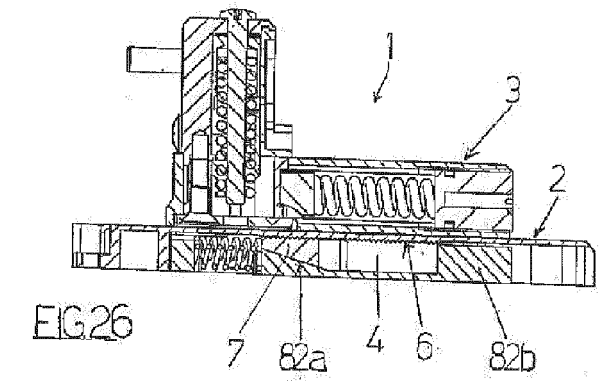


FIG.26

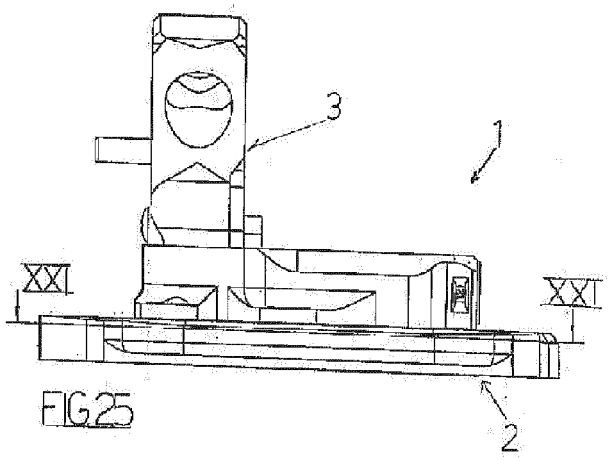


FIG.25

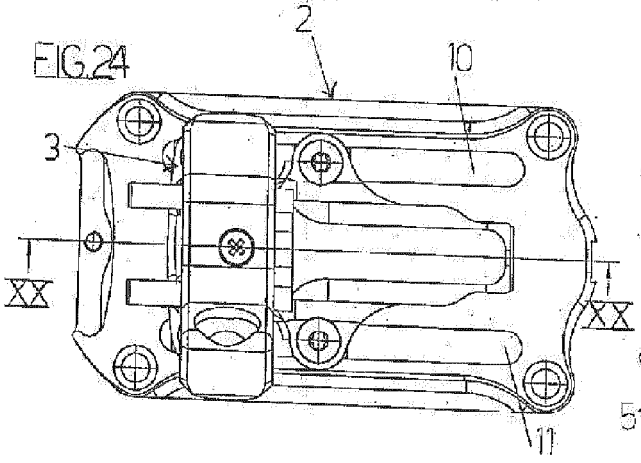


FIG.24

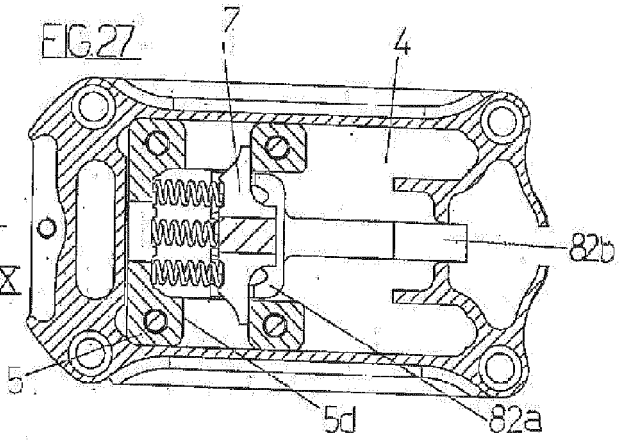


FIG.27

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EUROPEAN SEARCH REPORT

Application Number
EP 17 15 0696

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 10 2014 109601 A1 (G3 GENUINE GUIDE GEAR INC [CA]) 15 January 2015 (2015-01-15) * paragraph [0053]; figure 10 *	1-10	INV. A63C9/00 A63C9/08 A63C9/086
A	FR 2 640 152 A1 (SALOMON SA [FR]) 15 June 1990 (1990-06-15) * page 13, line 1 - page 13, line 26; figures 9,10 *	1-10	
A	DE 200 22 153 U1 (SALOMON SA [FR]) 19 April 2001 (2001-04-19) * page 5, line 24 - page 6, line 25; figure 2 *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC) A63C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	11 May 2017	Murer, Michael

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11-05-2017

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