



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
**25.06.2008 Bulletin 2008/26**

(51) Int Cl.:  
**A45B 9/02 (2006.01) A63C 11/22 (2006.01)**

(21) Application number: **06397027.1**

(22) Date of filing: **18.12.2006**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL BA HR MK RS**

(72) Inventor: **Bennert, Andreas**  
**00660, Helsinki (FI)**

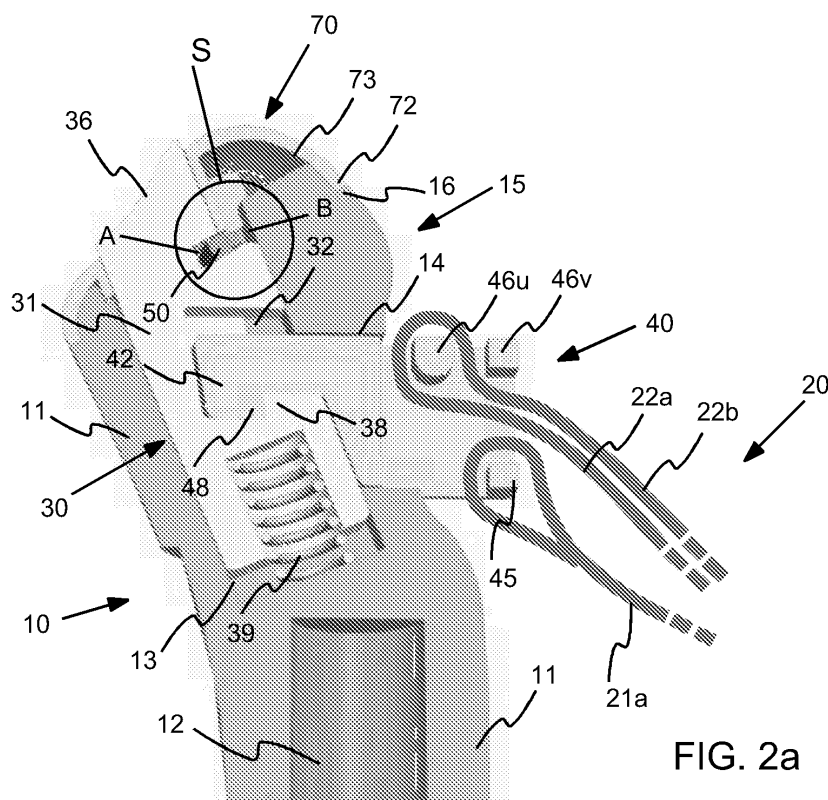
(74) Representative: **Kupiainen, Juhani Kalervo**  
**IPR Partners Oy**  
**Bulevardi 2-4 A**  
**00120 Helsinki (FI)**

(71) Applicant: **ONE WAY SPORT OY**  
**00400 Helsinki (FI)**

(54) **Arrangement relating to a Hand Strap and a Handle of a Sports Pole**

(57) The invention relates to an arrangement for fixing a hand strap (20) in a handle (10) of a sports pole, such as a ski pole, a walking pole or a pole for roller-skating, for example. Especially the invention relates to an arrangement which has a joining element (40) for joining the hand strap into the handle in a releasable manner. The object of the invention is to solve problems relating

to unintentional release of interlocking. The object of the invention is achieved by providing an arrangement in relation to fixing a hand strap to a handle of a sports pole, wherein the arrangement has user controllable means (50) for preventing unintentional release action of the interlocking. Thus a sports pole according to the invention can be used effectively without substantial risks of unintentional release of locking of the hand strap.



**FIG. 2a**

## Description

### Field of Technology

**[0001]** The subject of the present invention relates to an arrangement in connection with a handle and a hand strap of a sports pole. More particularly, the invention relates to an arrangement for fixing a hand strap in a handle of a sports pole, such as a ski pole, a walking pole or a pole for roller-skating, for example. Especially the invention relates to an arrangement which has a joining element for joining the hand strap into the handle in a releasable manner.

### Background of the Invention

**[0002]** Hand straps are often fixed to a handle of a sports pole by means of a joining element. The joining element is generally fixed to two or three fixing straps of the hand strap, and on the other hand, to the handle. The joining element may be fixed to the handle in a way to allow an easy release of the joining element i.e. the hand strap from the handle. The releasing function may be actuated e.g. by pressing a release button at the top of the handle. Releasing the hand strap may be necessary, for example, in order to change the hand strap or in order to use hands instantaneously for drinking, using a mobile phone, etc. Some prior art arrangements with releasable joining elements are disclosed in publications US6264242, WO96/34665 and EP1036579.

**[0003]** However, some drawbacks are involved in prior art arrangements for fixing a hand strap to a handle in an easily releasable manner. Namely, during the intensive activities, some movements of the user's fingers may cause the interlocking to open unintentionally and counterproductively. Additionally, the same unintentional and counterproductive behaviour may occur due to the shocks, which the pole, stick or cane randomly receives during sequential contacts with the ground or the terrain and which are transmitted as vibrations to the area of the handle. The prior art does not provide any teaching how to solve problems of these kind of awkward occurrences, in order to secure effective use of a sports pole.

### Summary of the Invention

**[0004]** The object of the present invention is to create a new arrangement relating to fixing a hand strap with a sports pole in a releasable manner wherein the above-mentioned problems of the prior art are eliminated or reduced. It is therefore an object of the present invention to provide an arrangement in connection with a handle and a hand strap, which is easy secure to use, and allows efficient use of the sports pole.

**[0005]** The object of the invention is achieved by providing an arrangement in relation to fixing a hand strap to a handle of a sports pole, wherein the arrangement has user controllable means for preventing an unintentional release action of the interlocking. Thus a sports pole according to the invention can be used effectively without substantial risks of unintentional release of locking of the hand strap.

tion release action of the interlocking. Thus a sports pole according to the invention can be used effectively without substantial risks of unintentional release of locking of the hand strap.

**[0006]** An arrangement according to the invention, relating to a handle and a hand strap of a sports pole, the handle and the hand strap being intended for releasable interlocking with each other, wherein the arrangement comprises

- a first locking member in connection of the handle,
- a joining element in comprising means for attachment with a hand strap,
- a second locking member in connection with the joining element and cooperating with the first locking member for interlocking between the first and second locking members, and
- an actuating member for releasing the interlocking by a user,

is characterised in that the arrangement comprises user controllable means for preventing the release of mutual interlocking of the first and second locking members with the actuating member.

**[0007]** Some useful embodiments of the invention are disclosed in the dependent claims.

**[0008]** The term "sports pole" means in this patent application e.g. ski poles, walking poles or roller-skating poles. However, the term sports pole is not limited here to only certain use but it includes any poles/shafts used for human activities in leisure time, professional sports, etc.

**[0009]** The term "preventing means" relate in this application to means which in their activated state prevent the release of interlocking. The expression "preventing" the release of interlocking means in this patent application that the release of interlocking cannot be made in the same manner or with similar force applied to e.g. an actuating member as compared to the release procedure when the preventing means are in a non-activated state.

### Brief Description of the Drawings

**[0010]** The arrangement in connection with a handle and a hand strap of the present invention are more closely explained in the following description with reference to the accompanying drawings, illustrating some non-limiting embodiments of the present invention, wherein

Fig. 1 illustrates a side view of a handle including an exemplary arrangement according to the invention,

Fig. 2a illustrates a partial longitudinal section of the arrangement of Fig. 1, showing also an exem-

- playary connection of a hand strap to the joining element,
- Fig. 2b illustrates a partial enlarged section of Fig. 2a, showing the functional area of the intervening member,
- Fig. 3 illustrates a perspective view of the top part of the handle of Figures 1, 2a and 2b from above without the top cover of the handle, and the intervening member in an activated position,
- Fig. 4a illustrates a partial cross section of the handle of Figures 1-3 taken along the line P-P of Fig. 1 presenting the first embodiment of the arrangement in non-activated position,
- Fig. 4b illustrates a partial cross section of the handle of Figures 1-3 taken along the line P-P of Fig. 1 and presenting the first embodiment of the arrangement in activated position,
- Fig. 5 illustrates an exemplary second embodiment of the arrangement according to the present invention in partial perspective view seen from above.
- Fig. 6a illustrates a side view of a handle including a third exemplary arrangement according to the invention,
- Fig. 6b illustrates a perspective view of a joining element of the arrangement shown in Figure 6a,
- Fig. 6c illustrates an internal side view of the arrangement of Fig. 1, wherein the handle frame is shown transparent,
- Fig. 6d illustrates a top view of the arrangement of Fig. 1, wherein the handle frame and the top cover are shown transparent,

#### Detailed Description

**[0011]** The arrangement according to a first exemplary embodiment of the present invention is shown in detail in Figures 1, 2a, 2b, 3, 4a and 4b. As shown in Figure 2a, a handle 10 is provided with a longitudinal cavity 12 for installation of a pole or alike (not shown) in connection with the handle 10. Generally the handle 10 is manufactured out of injection mouldable plastic material with surface layer that provides good gripping properties when the handle 10 is grasped with the palm and fingers of the hand. Further, a hand strap 20 is provided, which is tightened around the user's wrist, being well known for an artisan in the field. The handle 10 and the hand strap 20 are intended for releasable interlocking with each other during the activities. For releasable interlocking purposes

the arrangement comprises a first locking member 30 in connection with the handle 10 and joining means 40 in connection with the hand strap.

**[0012]** The handle frame 11 has a recess 14 (Fig. 2a) or alike, preferably substantially in lateral direction with regard to the longitudinal direction of the frame 11. The recess 14 is intended to receive a locking member 42 in connection with the joining element 40 during the interlocking. The first locking member is included in a functional element 31 in connection with the frame 11, substantially inside the frame 11 of the handle 10. The functional element 31 is arranged movable with respect to the frame 11 for interlocking and releasing purposes. The functional element 31 has an overall elongate shape and the functional element 31 is inserted into a substantially longitudinal cavity 13 within the frame 11. The first locking member 32 of the functional element 31 is communicating with the said recess 14. The functional element 31 has an actuating member 36 to move the functional element 31 and the first locking member 32 substantially in the longitudinal direction of the cavity 13. The actuating member 36 protrudes somewhat out of the top of the handle 10 in a manner that the functional element 31 is manually operable by the user. Further a longitudinal tension member, preferably a helical spring 39, is provided, to accomplish spring elastic force between the functional element 31 and the frame 11 of the handle 10. The spring force is resilient against manual pressure directed in the longitudinal direction of the functional element 31 onto the actuating member 36 (downwards in Figure 2a).

**[0013]** The joining element 40 comprises a second locking member 42 co-operating with the first locking member 32 in connection with the functional element 31 for interlocking purposes. The second locking member 32 is brought via the recess 14 inside the handle 10 for interlocking, and released from interlocking by moving the actuating member 36 against the direction of the resilient tension of the same. The construction of the locking members 32, 42 can be, as shown in Fig. 2a, two compatible indentation elements 38 and 48 activated in lateral direction of the handle 10 when brought together to the interlocking position by pressing the second locking member 42 through the recess 14, whereby the spring force acting on the functional element 31 yields, preferably manually aided by pressing the actuating member 36, and the interlocking is accomplished. When a pushing force is applied by the user to the actuating member 36 and the functional element 31 moves towards the bottom of the cavity 13, the indentations 38 and 48 are loosened, thereby providing free entrance for the second locking member 42 from the interlocked position inside the handle 10.

**[0014]** The joining element 40 also comprises means for fixing a hand strap 20 to the joining element. Figure 2a shows a hand strap, which has a first fixing strap 21 a from the palm side of the hand strap, and a second fixing strap 22a, 22b from the hand strap at back side of a hand. The first fixing strap has at its end a loop around

a first fixing pin of the joining element. The second fixing strap is led around another pin 46u of the joining element, and led between two adjacent pins 46u and 46v out from the joining element. When the part 22a of the second fixing strap is attached to the wrist part of the hand strap, it is now possible to adjust the distance between the joining part and the wrist strap longer or shorter by pulling part 22a or part 22b respectively. The joining element thus serves as a buckle which allows adjustment of the strap and keeps the strap tightly attached in use. However, there are several other alternatives known in the art for attaching fixing straps to a joining element.

**[0015]** With reference to the foregoing it should be noted that the above description of the Figures is part of the prior art in the field and given in an explanatory manner to carry out the entity of the present invention. An artisan in the field should be in a position to recognise various alternative embodiments to carry out the functional details described above together with the essential features of the present invention explained in more detail below.

**[0016]** According to the present invention the arrangement comprises preventing means that can be activated after or during the interlocking of the locking members to prevent unintentional release of the interlocking. As shown in the exemplary Figures, various embodiments to carry out this basic concept are possible.

**[0017]** As to the first two embodiments of the invention, the preventing means comprise at least one receiving member 34 (Figures 1-4) and 534 (Fig. 5), and at least one intervening member 50 (Figures 1-4) and 550 (Fig. 5), one of them being arranged in connection of the frame 11 of the handle 10, and the other in connection with the functional element 31. In the non-activated position the intervening member 50 and 550 allows the movement of the functional element 31 with respect to the frame 11 of the handle 10, thereby allowing the releasing the interlocking. In the activated position the intervening member 50 and 550 is co-operating with the receiving member 34 and 534 to prevent the unintentional movement of the functional element 31 to the releasing position. Generally, the present invention can be embodied by at least two aligned and communicating recesses or indentations (A and B in Figures 2a and 2b). The recesses are equipped with the said intervening member 50 and 550, having a standby (see Fig. 4a) position. The intervening member is movable to an intervening position by the pertinent measures of the user to activate the arrangement, i.e. to cross the alignment area between the recesses or indentations A and B. In the activated position the undesirable movement of the functional element 31 is blocked, i.e. the movement of the said frame 11 of the handle 10 and the functional element 31 with regard to each other.

**[0018]** Figures 1, 2a, 2b, 3, 4a and 4b show as an overall view an embodiment with parallel transfer of the intervening member. Fig. 5 shows another embodiment with a turning mechanism, wherein the axis of rotation being substantially aligned with the longitudinal axis of the top part of the handle. With reference to those exemplary

Figures it can be noted that the direction of the actuating of the means 34, 50 and 534, 550 to prevent the functional element 31 to move to the releasing position is substantially perpendicular with respect to the longitudinal direction of the handle 10. Further, with reference to those Figures it can be noted that means 34, 50 and 534, 550 (activated during the interlocking of the first and second locking members 32, 42) to prevent the functional element 31 to move to the releasing position, are provided between the frame 11 of the handle 10 and the said functional element 31 in connection top end of the handle 10. To activate the means 34, 50 and 534, 550 the handle 10 is provided with manually operable switching member 55a, 55b and 555 of the intervening member 50 and 550.

**[0019]** With reference to Figure 2a and Figure 2b, the handle 10 comprises a base frame part 11 and a top cover 70 which are attached to each other by suitable adhering method, such as snap-in locking, adhesive or alike in a non-movable manner to form a rigid composition. The top cover 70, having overall form of a thin walled dome, comprises a sleeve part 78 having a trough hole 71 for receiving the actuating member 36, the top surface (manually operable) of which passes the outer surface at the end of the top cover 70. The top cover 70 at the end of the handle and the top surface of the actuating member 36 are designed to have substantially concave curved form. As seen in Figures 3 and 5, the actuating member 36 as a part of the functional element 31 has, at the area of the top cover 70, an overall cylindrical shape with circular cross section, whereas the functional element 31 otherwise has at the area surrounded by the base frame part 11 conical, preferably rectangular cross section, later below referred as the base section 35 of the functional element 31. As shown in figures the cross sectional diameter of the actuating member 36 i.e. the area of cross section of the actuating member 36 is smaller than the length of either of the sides of the rectangular part of the functional element 31 i.e. the area of cross section of the base section 35. Thereby such construction provides together with the construction of the top area 15 of the base frame part 11 a basic space for the arrangement of the present invention at the side of the actuating member 36.

**[0020]** As to the top area 15 of the base frame part 11 (see also Fig. 3), a ring shaped contact surface 16 has been arranged at the outer edge of the top area 15 to receive the similarly ring shaped lateral end 72 of the top cover 70, the radial width of the contact surface 16 corresponding substantially the thickness of wall of the top cover 70 at the lateral end 72. Further, the top area 15 of the base frame part 11 comprises two oppositely situated projections 17 and 18, inside the area limited by the ring shaped contact surface 16, the outer surfaces of which are in a supportable contact with the inner surface 73 of the top cover 70. Further the first projection 17 has a groove 17g for receiving the head part of the sleeve 78 outside the periphery of the actuating member 36. As to the second projection 18 the part of the wall

surface 19 facing towards the actuating member 36 and substantially crossing the top area 15, is situated apart from the actuating member 36 to accomplish basic space for the arrangement of the present invention. With reference to Figures 2a and 2b a longitudinal flange 74 component or a like, facing towards the wall surface 19, is arranged to protrude from the outer wall of the sleeve 78 / top cover 70 to limit the space of the intervening member in vertical direction.

**[0021]** As to the Figures 2a and 2b presenting a parallel transfer embodiment of the present invention, a lateral groove 34 has been arranged at the junction between the actuating member 36 and the base section 35 in the wall of the said actuating member 36. The first side surface 34m of the groove 34 aligns with the lateral end of the base section 35. Thus a part of the lateral end of the base section 35 and the first side surface 34m of the groove 34 form together a lateral lower lip which aligns with a part of the ring shaped contact surface 16 in a manner described below. Accordingly, the end surface 75 of the sleeve 78 coincides with the second side surface 34n of the groove 34. The groove 34 inside the actuating member together with the end surface 75 of the sleeve 78 thus together form the receiving member 34 according to the first embodiment of Figures 2a and 2b. Accordingly, with reference to Figures 5 this embodiment is equipped with a receiving member having a similar construction.

**[0022]** In the first embodiment of the present invention of Figures 1, 2a, 2b, 3, 4a and 4b, a laterally transferable bar 51 of the intervening member 50 is arranged in stand-by position at the site of entrance into the receiving member 34 (Fig. 4a). The bar 51 is constructed in a manner that it can slide at least partly inside the receiving member 34 without essential slack, as seen in fig. 4b. The both end sections of the bar 51 are equipped with manually operable switching member 55a, 55b which project outwards from the outer wall of the handle 10 onto the opposite sides of the top part of the handle 10. The switching members 55a, 55b are both located at the end sections of the bar 51 so that their longitudinal direction is substantially perpendicular with respect to the longitudinal direction of the bar 51. With reference to Figures 4a and 4b, the inner walls 101 a, 101 b of the borders 102a, 102b in both of the switching members 55a, 55b are aligned and in contact with the outer wall of the handle 10 i.e. the top cover 70.

**[0023]** The ring shaped lateral end 72 of the top cover 70 comprises a slot arrangement 77a, 77b, having a quadrangular shape, on both sides of the handle 1, allowing the contact between the bar 51, acting as the intervening member, and the switching members 55a, 55b at the ends of the same. The surface of the ring shaped contact surface 16 forms one side of the slot arrangement 77a, 77b at the area of the base frame 11. The length of the slot arrangement 77a, 77b is selected in a manner that the bar 51 can be brought, by using manually either or both of the switching members 55a, 55b, at least partly inside the groove 34 and simultaneously at the site of the

end surface 75 of the sleeve 78. In this position the bar 51 prevents the movements of the frame 11 and the functional element 31 with respect to each other substantially in the longitudinal direction of the handle 10. The outer surfaces 56a, 56b of the switching members 55a, 55b to which the user directs the switching or releasing forces are roughened or grooved in order to secure the traction.

**[0024]** The bar 51 further comprises two knobs 57a, 57b inside the top cover 70 of the handle 10, being designed to steer the movements of the arrangement together with the inner surface of the top cover 70. The knobs can also be used to secure the boundary positions of the intervening member 50. In this case, notches can be provided at the corresponding locations at the inner wall of the top cover. or the handle frame. The intervening member may thus snap into either of the boundary positions, suitably with a small sound effect.

**[0025]** Fig. 5 illustrates a second, similar kind of embodiment as explained above with reference to Figures 1-3, 4a and 4b as to the basic concept is concerned, however, with the difference that the intervening member has just one switching member 555. The intervening member 550 comprises a bar shaped element 551 connected to a pivot pin 558 mechanism, the axis of rotation being substantially aligned with the longitudinal axis of the top part of the handle 10. The pivot pin 558 can be preferably affixed to the frame 11 of the handle 10. The switching member 555 is connected to the bar shaped element 551 in a functional manner described in connection with the previous embodiment to move in a slot of the top cover (not shown), similar to the slot 77a shown in Figures 4a and 4b.

**[0026]** The embodiments described above are only a few examples on how the invention can be implemented with a functional element movable in longitudinal direction. A person skilled in the art may design many other kinds of implementations. For example, according to one further embodiment (not shown in Figures), the receiving member can be formed as a blind hole instead of a recess. In such an embodiment the intervening member may comprise a tap, which can be inserted into the blind hole for preventing the unintended releasing of the interlocked first and second locking members. The tap is moved in the longitudinal direction by using e.g. a pivoting actuating mechanism, the axis of pivoting movement being perpendicular with respect to the longitudinal direction of the handle. An arm may be pivoted with connection of the tap, and the opposite end of the arm may project in connection the switching member on the outer surface of the top cover. A slot may be arranged at the front wall of the top cover to allow vertical or horizontal movements of the arm. The arm can also be provided with a steering flange in connection with a groove at the inner wall of the top cover.

**[0027]** Further, one more example to carry out of the present invention (not shown in Figures) is related to prior art solutions wherein the top of the handle has an open gap in which the actuating member is functioning in a

pivoting manner. One approach to apply the present invention is to attach a hinged plug or alike in connection with the edge of the said gap so that the plug can be inserted into the gap to prevent unintentional movements of the actuating member during the interlocked state. The plug can be taken off from the gap when releasing the interlocking.

**[0028]** Figures 6a-6d illustrate a further exemplary embodiment of the invention. Figure 6a shows the side view of the handle and Figure 6b shows a perspective view of the joining element. In this embodiment the joining element 640 is locked to the handle at two circular holes 613 located at both sides of the handle frame 611. The hole thus serves as a first locking member for the interlocking between the handle and the joining element. The joining element has two flanges 644a and 644b and two circular shoulders 636a, 636b at the ends of the flanges. The circular shoulders 636a, 636b match with the circular holes 613 and thus snap into the holes when the joining element is pushed into the recess 614 of the handle frame 611. The flanges of the joining element are made of material, such as plastic, which is slightly resilient. The flanges thus bend towards each other when the joining element is inserted into the recess 614. The tension of the flanges then turns the shoulders 636a and 636b into the holes 613a and 613b when the joining element is pushed at the end of the recess 614. The shoulders 636a and 636b thus serve as second locking members for the interlocking.

**[0029]** In the embodiment of Figures 6a-6d the interlocking can be released by pressing the shoulders 636a, 636b of the joining element towards each other, which causes the shoulders to move out of the holes 613a, 613b. The shoulders 636a and 636b thus also serve as the actuating members for releasing the interlocking, and the flanges of the joining element serve as the tension member. Thus, as shown by the embodiment of Figures 6a-6d, the actuating member and the tension member are not necessarily located in connection with the handle frame but they may also be located in connection with the joining element. Figure 6b also shows means 647 and 648 for attaching fixing straps of a hand strap to the joining element.

**[0030]** Figures 6c and 6d show the function of the preventing means of this embodiment. Figure 6c shows a partial side view and Figure 6d shows a partial top view of the preventing means such that the handle frame 611 is shown transparent except for the edges. The preventing means comprise an intervening member 650 intervening member has a bar 651 and a switching member 655. The intervening member also has grooves 659a and 659b at its sides for keeping the intervening member connected to a longitudinal slot at the back side of the handle frame. The intervening member can be moved at the longitudinal direction at the longitudinal slot of the frame. In the upper position the bar 651 is above the flanges 644a, 644b of the joining element. When the intervening member is in this upper position it is possible to release the

interlocking by pressing the actuating members 636a, 636b towards each other. When the intervening member is turned at its lower position, the bar 651 is between the flanges/actuating members of the joining element. The bar 651 has such a width that it fills most of the distance between the flanges. At this position, the bar 651 of the intervening member thus prevents moving the flanges much towards each other by pressing the actuating members. Therefore, in this lower position of the intervening member the interlocking is secured and cannot be unintentionally released. The space 634 between the flanges thus serves as the receiving means which receives the bar of the intervening member to prevent the release of the interlocking.

**[0031]** Accordingly, the prior art also discloses arrangements wherein the movement of the actuating member is other than longitudinal direction of the handle. In such arrangements it may be suitable to use an intervening member which has some other than lateral direction of movement, such as longitudinal direction.

**[0032]** Above, some implementations of the invention have been described. The principle according to the invention can naturally be modified within the frame of the scope defined by the claims, e.g. by modification of the details of the implementation and ranges of use.

**[0033]** For example, the embodiments described above included arrangements where the joining element is mostly located within the handle. Although this is a preferable arrangement, it is also possible to locate e.g. the sides of the joining element outside the handle. In such an arrangement, the locking arrangement could be based on movable hinge pins which transmit holes at the flanges of the joining element.

**[0034]** One should also note that there may be one or several fixing straps, which is/are fixed to the joining element. The fixing strap may be directly led from the wrist part of the hand strap, or the fixing strap may be a separate strap which is connected to a wrist strap part being led between the thumb and the forefinger of a user's hand. The fixing strap can be an integral part of the hand strap, and the hand strap including the fixing strap(s) can be made of a single fabric.

**[0035]** The advantageous applications of the present invention include walking poles, ski poles and roller-skating poles, but the hand strap fixing assemblies according to the scope of the invention include applications for any poles used for human activities.

## Claims

1. An arrangement relating to a handle (10) and a hand strap (20) of a sports pole, the handle and the hand strap being intended for releasable interlocking with each other, wherein the arrangement comprises:

- a first locking member (32, 632) in connection of the handle,

- a joining element in comprising means for attachment with a hand strap,
- a second locking member (42, 636a, 636b) in connection with the joining element and co-operating with the first locking member (32, 632) for interlocking between the first and second locking members, and
- an actuating member (36, 636a, 636b) for releasing the interlocking by a user,

**characterised in that** the arrangement comprises user controllable means (34, 50; 534, 550, 634, 650) for preventing the release of mutual interlocking of the first and second locking members (32, 42, 636a, 636b) with the actuating member.

2. An arrangement according to claim 1, **characterised in that** the preventing means comprise a receiving member and an intervening member, which are in cooperating relation when the preventing means are activated.
3. An arrangement according to claim 2, **characterised in that** the preventing means are arranged to prevent the movement of the actuating member to the releasing position when the preventing means are activated.
4. An arrangement according to claim 2 or 3, **characterised in that** the receiving member (34, 534, 634) is formed as an at least one recess, indentation, hole or spacing having a receiving opening at least towards the line of movement of the corresponding intervening member (50, 550, 650).
5. An arrangement according to any of claims 2-4, **characterised in that** the intervening member (50, 650) comprises at least one switching member (55a, 55b, 555, 655) for the activation of the preventing means (34, 50; 534, 550) by the user.
6. An arrangement according to any of claims 2-5, **characterised in that** said handle comprises a slot at the outer surface of the handle, through which slot the intervening member protrudes.
7. An arrangement according to any of claims 2-6, **characterised in that** said intervening member comprises a bar (51, 551, 651) or a tap co-operating with said receiving means.
8. An arrangement according to any of claims 2-7, **characterised in that** the intervening member (50, 550, 650) further comprises means (57a, 57b, 557, 659a, 659b) for guiding the movements of the bar.
9. An arrangement according to any of claims 2-8, **characterised in that** the intervening member (50,

550) further comprises means (57a, 57b, 557) for keeping the intervening member in the selected position.

- 5 10. An arrangement according to any of the previous claims, **characterised in that** it comprises a tension member for providing a counterforce for the actuating member.
- 10 11. An arrangement according to any of the previous claims, **characterised in that** the frame of the handle comprises a recess (14) for receiving the joining element.
- 15 12. An arrangement according to claims 10 and 11, **characterised in that** the second locking member (42) is arranged to co-operate with the first locking member (32) for interlocking purposes in the lateral direction when brought via the recess (14) of the handle frame (11) inside the handle (10), and arranged to be released from interlocking by moving the actuating member (36) against the direction of tension force of the tension member.
- 20 13. An arrangement according to any of claims 2-12, **characterised in that** the actuating member, the first locking means and the receiving means are comprised within a movable functional element.
- 25 14. An arrangement according to claim 13, **characterised in that** the functional element (31) is substantially inside the frame (11) of the handle (10).
- 30 15. An arrangement according to claim 10 and 13, **characterised in that** the tension member (39) is arranged to act between the frame (11) of the handle (10) and the functional element (31).
- 35 16. An arrangement according to any of claims 13-15, **characterised in that** the intervening member (50, 550) is provided between the functional element (31) and the frame (11) of the handle (10).
- 40 17. An arrangement according to any of claims 13-16, **characterised in that** in the non-activated position the intervening member (50, 550) allows the movement of the functional element (31) with respect to the frame (11) of the handle (10) and in the activated position the intervening member (50, 550) is co-operating with the receiving member (34, 534) to prevent the movement of the functional element (31) to the releasing position.
- 45 18. An arrangement according to any of claims 2-17, **characterised in that** the intervening means (34, 50; 534, 550) are arranged to function in a substantially perpendicular direction with respect to the longitudinal direction of the handle (10).
- 50

19. An arrangement according to any of claims 2-18, **characterised in that** the handle has a top cover (70) comprising a sleeve (78) through which the actuating member (36) is led to reach the inside of the handle frame (11), wherein the sleeve (78) forms a part of the receiving member (34, 534). 5
20. An arrangement according to any of claims 2-19, **characterised in that** the intervening member defines for the actuating member a boundary location, wherein the actuating member is located when not being actuated. 10
21. An arrangement according to any of claims 2-12, **characterised in that** in its activated position the intervening member (650) is arranged to prevent movement of the actuating member (636a, 636b) and the second locking member (636a, 636b) and thus to prevent the release of the interlocking. 15  
20
22. An arrangement according to any of claims 2-12 or 21, **characterised in that** the intervening member (650) is arranged to be movable in a substantially longitudinal direction of the handle (610) between activated and non-activated positions. 25
23. An arrangement according to any of claims 1-12 or 21-22, **characterised in that** the first locking member is comprised of at least one hole at the frame (611) of the handle (610). 30
24. An arrangement according to any of claims 1-12 or 21-23, **characterised in that** the second locking member is comprised of at least one shoulder (636a, 636b) at the joining element (640). 35
25. An arrangement according to any of claims 1-12 or 21-24, **characterised in that** the second locking member (636a, 636b) also serves as the actuating member. 40
26. An arrangement according to any of claims 1-12 or 21-25, **characterised in that** the tension member (644a, 644b) is provided within the joining element (640). 45

50

55



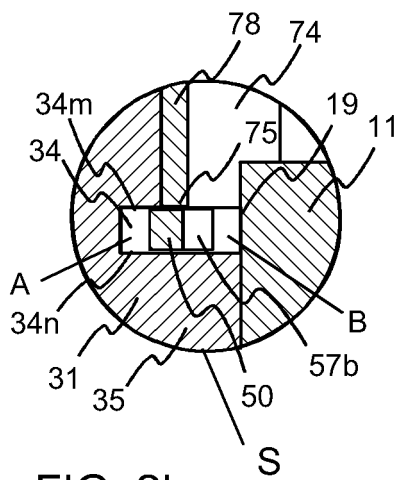


FIG. 2b

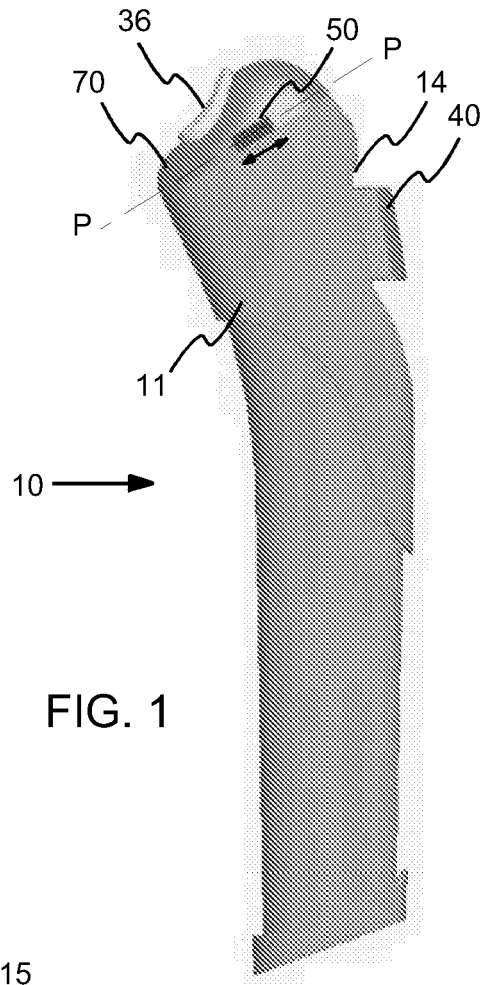


FIG. 1

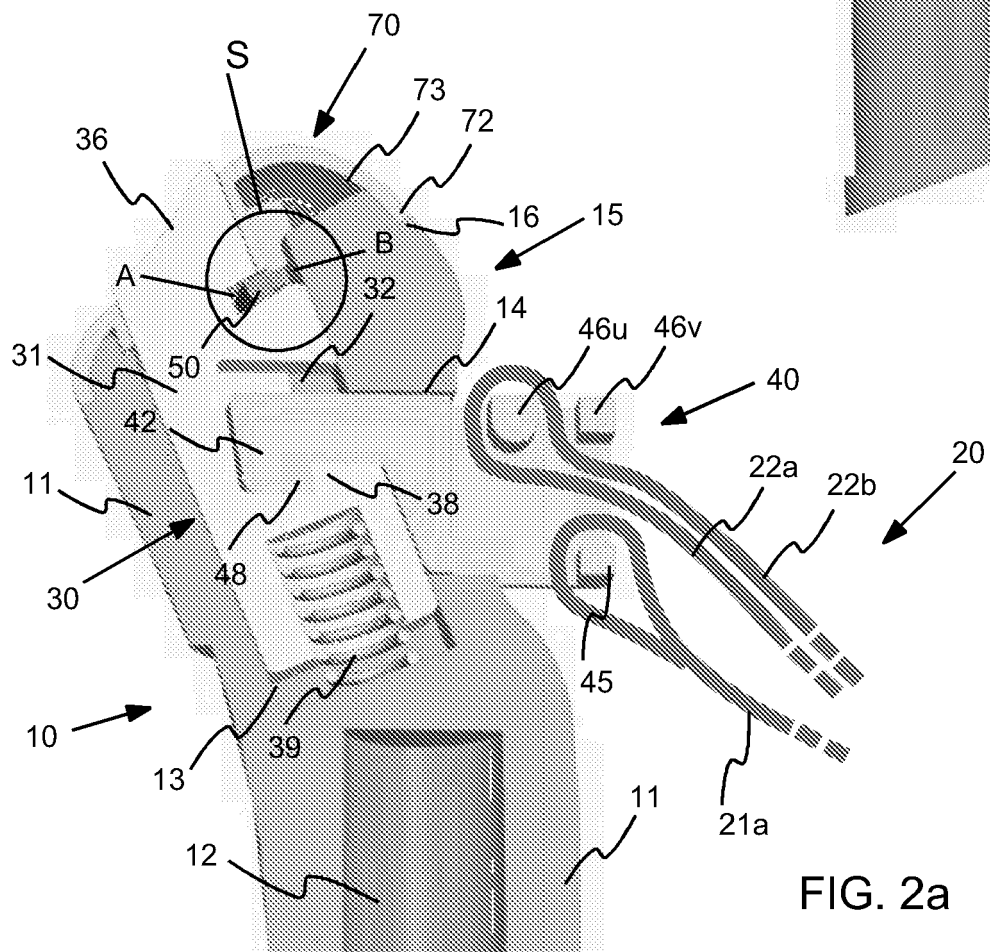


FIG. 2a

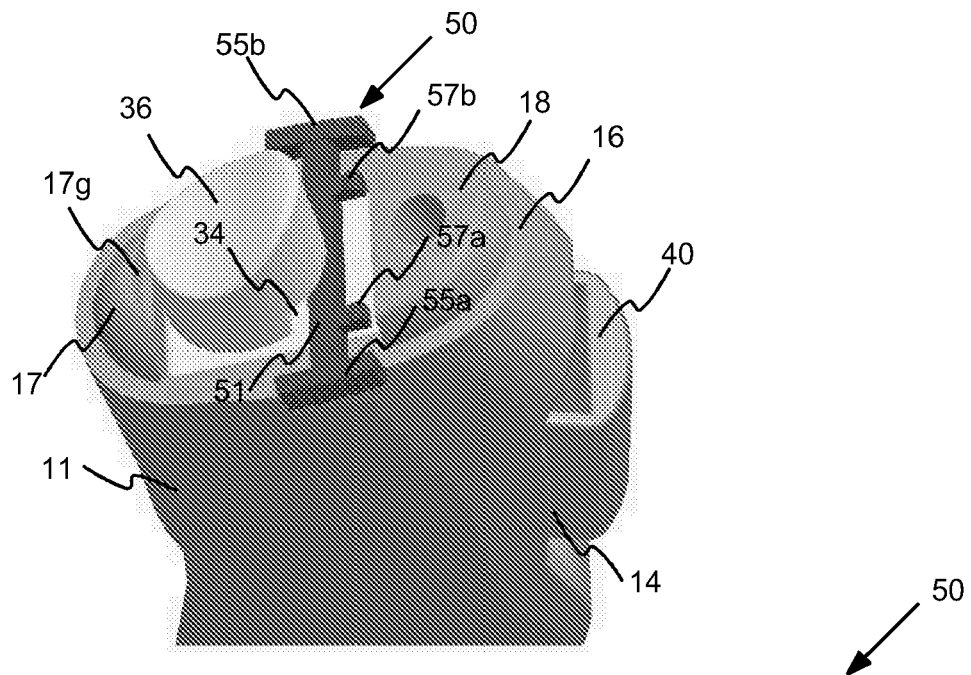


FIG. 3

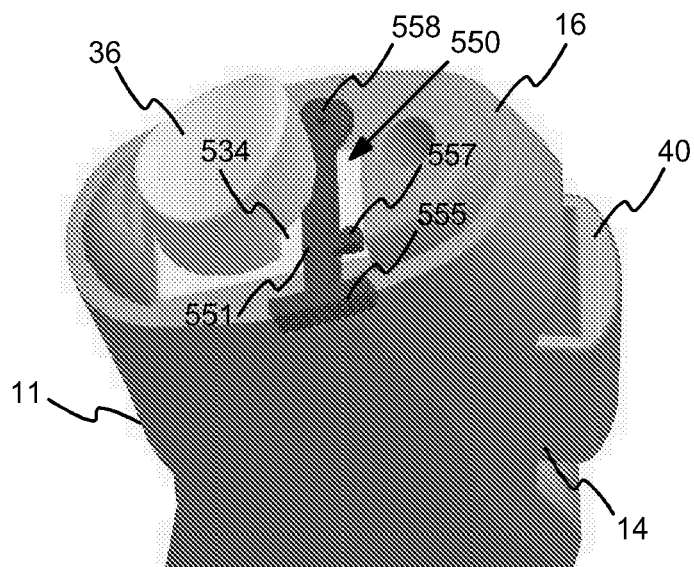
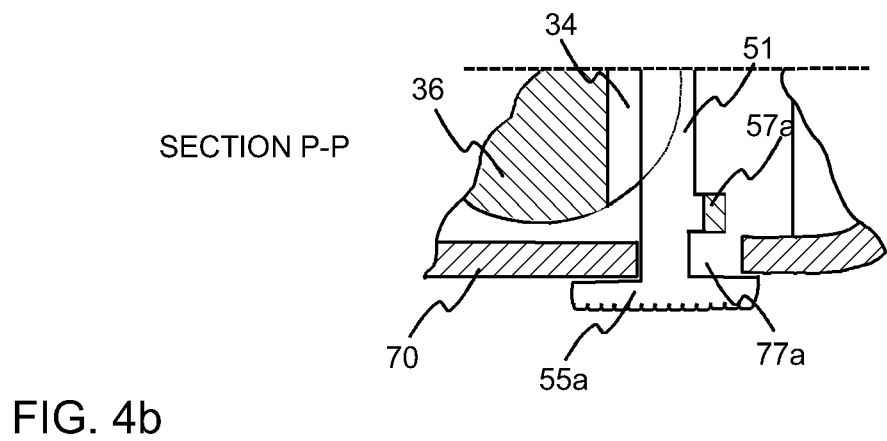
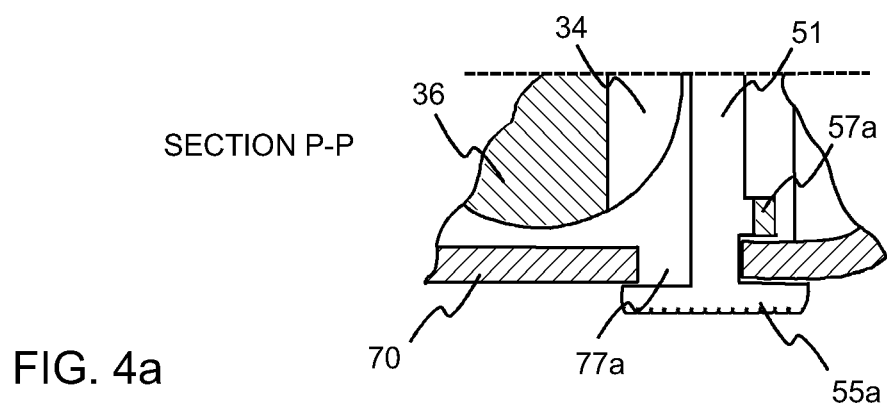
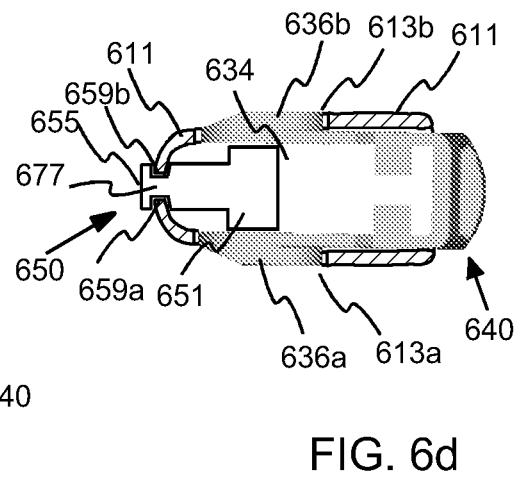
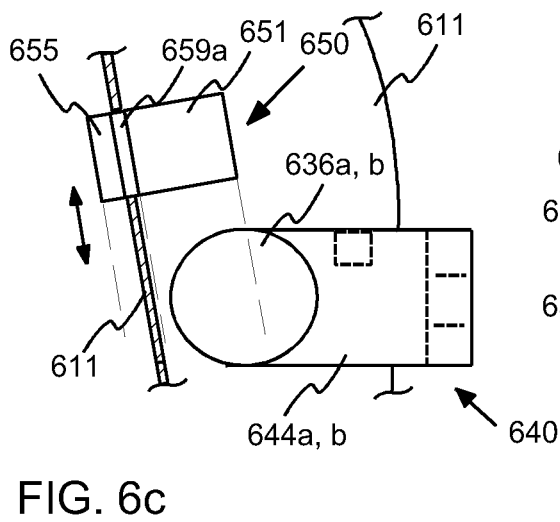
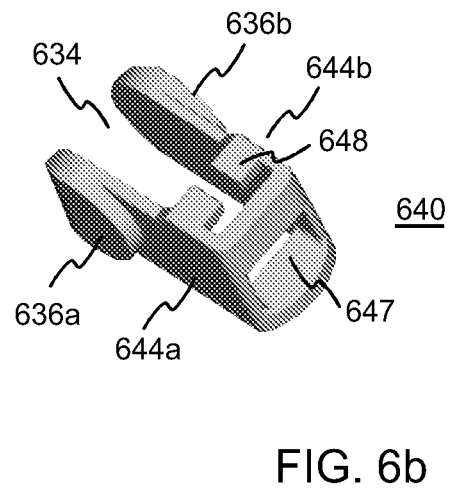
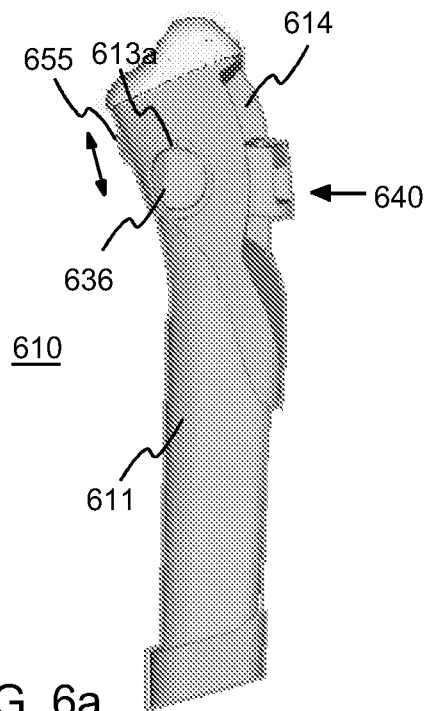


FIG. 5







European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 06 39 7027

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 298 20 451 U1 (LENHART KLAUS [DE]) 6 April 2000 (2000-04-06)  * the whole document *	1,2, 4-16,18, 20,22-26	INV. A45B9/02 A63C11/22
D,A	US 6 264 242 B1 (LENHART KLAUS [DE]) 24 July 2001 (2001-07-24) * the whole document *	1	
D,A	EP 1 036 579 A2 (LENHART KLAUS [DE]) 20 September 2000 (2000-09-20) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A45B A63C
The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>14 May 2007</b>	Examiner <b>Nicolás, Carlos</b>
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone  Y : particularly relevant if combined with another document of the same category  A : technological background  O : non-written disclosure  P : intermediate document</p> <p>T : theory or principle underlying the invention  E : earlier patent document, but published on, or after the filing date  D : document cited in the application  L : document cited for other reasons  .....  &amp; : member of the same patent family, corresponding document</p>			

1

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 39 7027

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-05-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 29820451	U1	06-04-2000	NONE
-----			
US 6264242	B1	24-07-2001	AT 209945 T 15-12-2001
		CA 2264888 A1	19-03-1998
		DE 19636852 C1	12-02-1998
		WO 9810844 A1	19-03-1998
		EP 0925099 A1	30-06-1999
		JP 2001502931 T	06-03-2001
-----			
EP 1036579	A2	20-09-2000	AT 281217 T 15-11-2004
		DE 29904591 U1	24-08-2000
		US 6325418 B1	04-12-2001
-----			

**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**

- US 6264242 B [0002]
- WO 9634665 A [0002]
- EP 1036579 A [0002]