ARRANGEMENT IN A HOLLOW WALKING OR SKI STICK

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Abstract

The invention relates to an arrangement in a hollow skiing or walking pole, said pole having at least a substantially hollow shaft part (1), a handgrip (2) in the upper part of the shaft part and a tip part (3) in the lower part of the shaft part. Inside the hollow shaft part (1) of the pole is an elastic element (4) adapted to be pulled at least partially out of the shaft part (1) and pushed at least partially back into the shaft part (1).
ARRANGEMENT IN A HOLLOW WALKING OR SKI STICK

[0001] The present invention relates to an arrangement in a hollow skiing or walking pole, as disclosed in the preamble of claims 1 and 2.

[0002] There are prior-art hollow skiing or walking poles which are well suited for skiing or walking purposes but cannot be used for much else. There are also prior-art poles or rods developed for muscular training, having at their ends elastic strips or equivalent which can be fastened by their free ends e.g. with string loops to the feet, allowing the rod to be used for muscular fitness training by lifting the rod. These implements are likewise not suited for any other use except just muscular fitness training. For example, if one wishes to do some muscular fitness training during a skiing or walking tour, this is not possible without separate implements or unless there is along the walking route a muscular fitness training area expressly arranged for this purpose.

[0003] The object of the present invention is to overcome the above-mentioned drawbacks and to achieve an economical, simple and reliable arrangement allowing a hollow skiing or walking pole used as a physical exercise implement or as an aid in physical exercise to be utilized in versatile ways as a physical exercise implement. Hereinafter, a skiing and walking pole is mainly referred to by the shorter designation 'pole'. The arrangement of the invention is based on the idea of providing in the upper part of the hollow shaft portion of the pole an opening through which it is possible to thread into the hollow pole an elastic strip, such as a piece of rubber tube or rubber band, which is substantially always carried along with the pole but which still remains out of the way and can be pulled out of the pole and used to perform different physical fitness exercises e.g. during skiing or walking tour or at some other suitable time. The arrangement of the invention is characterized by what is disclosed in the characterization parts of claims 1 and 2. Other embodiments of the invention are characterized by what is disclosed in the other claims.

[0004] The arrangement of the invention has the advantage of allowing the poles to be used in more versatile ways for physical exercise. An additional advantage is that the elastic strips permitting physical exercise are placed inside the hollow poles, where, when the user is walking with the poles, they are out of the way but still carried along and immediately available for use when the user wishes to perform muscular fitness exercises e.g. during skiing or walking tour. The elastic strips being inserted into the shaft part of the pole through the lower part of the handgrips also provides the advantage that the handgrip braces the shaft part from either side of the opening made for the elastic strip in the shaft. Correspondingly, form-locking of the handgrip provides the advantage of easy detachability when the elastic strip is to be replaced. In addition, placing the opening below the handgrip has the advantage of making it altogether unnecessary to remove the handgrip to allow replacement of the elastic strip. A further advantage is that the opening in the handgrip or in a separate sleeve or an opening provided with an elastic ring makes the edges of the elastic opening of the shaft part thicker and softer, thus improving the durability of the elastic strip in the area of the opening. Placing the opening in the lower part of the handgrip or below it also affords the advantage that the protruding portion of the elastic strip in no way interferes with the actual skiing or walking activity using the poles.

[0005] In the following, the invention will be described in detail by referring to different embodiment examples and the attached drawings, wherein FIG. 1 presents a pole according to the invention in lateral view,

FIG. 2 presents the upper end of the pole of the invention in lateral view,

FIG. 3 presents the upper end of the pole of the invention as seen from the direction of arrow A in FIG. 2,

FIG. 4 presents the upper end of a pole according to a preferred embodiment of the invention in lateral view,

FIG. 5 presents the upper end of a pole according to another preferred embodiment of the invention in lateral view,

FIG. 6 presents the upper end of the pole according to the embodiment in FIG. 5 as seen from the direction of arrow B in FIG. 5,

FIG. 7 presents a lateral view of the lower end of the handgrip of the pole of the invention,

FIG. 8 presents a magnified view of the lower end of the handgrip according to FIG. 7 as seen from the direction of arrow C in FIG. 7, and

FIG. 9 illustrates the arrangement of the invention adapted for use in muscular fitness exercise.

FIGS. 1-3 present a solution according to a preferred embodiment of the invention. The skiing or walking pole consists of at least an elongated, substantially hollow shaft part 1, a handgrip 2 at the first end of the shaft part and a tip part 3 placed at the second end of the shaft part and intended to be thrust against the ground. The handgrip 2 is fitted at least partially over the first end of the shaft part 1 substantially in the same direction with the shaft part 1. The tip part 3 may be a pointed spike, a blunt part having a good frictional grip or some other suitable part which is thrust against the ground. According to the invention, an elongated elastic element 4, which may be e.g. a piece of hollow rubber hose or solid rubber band, is placed inside the shaft part 1.

At the first end, i.e. at the upper end of the shaft part 1 is an opening 5 in the wall of the shaft part, through which opening a separate element, such as an elastic element 4 for use in muscular fitness exercises, can be threaded at least partially into the shaft part 1. FIGS. 1 and 2 represent a situation where the first end of the elastic element 4 has been threaded into the shaft part 1. At the first end of the elastic element 4 is a bulge 9, whose largest cross-section is smaller than the diameter of the opening 5, so that the first end of the elastic element 4 can be threaded through the opening 5 into the shaft part 1 and pulled out of the shaft part. When the elastic element 4 is a piece of hollow rubber hose or equivalent, the bulge is formed by a ball 9a placed inside the elastic element 4.

Correspondingly, the lower part of the handgrip 2 is provided with a substantially circular opening 6 having rounded edges and so designed that the largest cross-sectional area of the bulge 9 at the first end of the elastic element 4 is larger than the diameter of the opening 6, the first end of the elastic element 4 being thus large enough not to pass through the opening 6. The handgrip 2 is so mounted in position that the openings 5 and 6 lie substantially concentrically one over the other. The handgrip 2 placed in position thus prevents the first end of the elastic element 4 from coming out of the shaft part 1.

In the lower part of the handgrip 2 there is additionally a gap 12 starting from the opening 6 and extending from the lower edge of the opening 6 to the lower edge of the
handgrip 2. The gap 12 is so dimensioned in relation to the thickness of the elastic element 4 that, by compressing the elastic element 4, it can be threaded through the gap 12. Thus, the elastic element 4 can be replaced by compressing the elastic element 4 flat between one's fingers and pulling off the handgrip from the first end of the shaft part 1. After this, the damaged elastic element 4 can be removed through the opening 5 in the shaft part 1 and replaced with a new one, whereverupon the handgrip 2 is placed again in position. Provided in the upper part of the opening 6 of the handgrip 2 is an upward beveling 13, which facilitates the handling of the elastic element 4, especially when the elastic element is to be threaded into the shaft part.

[0019] FIG. 4 presents a solution according to a preferred embodiment of the invention. Here, the handgrip 2 is a solid element and the opening 5 in the shaft part 1 is located below the handgrip 2, yet still substantially at the upper end of the shaft part 1. Placed on the shaft part 1 in the area of the opening 5 is a sleeve 7 functioning as a protecting element and provided with an opening 6 corresponding to the above-mentioned opening in the handgrip. When the sleeve 7 is in position, the openings 5 and 6 lie concentrically one over the other. To allow replacement of the elastic element, the sleeve 7 is provided with a gap 12 corresponding to the above-mentioned gap in the handgrip, extending from the edge of the opening 6 to the edge of the sleeve 7. When the elastic element 4 is to be replaced, it is again compressed flat and the sleeve 7 is slid out of position so as to expose the opening 5 in the shaft part.

[0020] FIGS. 5 and 6 present a solution according to a second preferred embodiment of the invention. In this solution, the handgrip 2 is again a solid element and the opening 5 in the shaft part 1 is located below the handgrip 2, yet still substantially at the upper end of the shaft part 1. Placed on the edge of the opening 5 is a substantially soft ring 7a having substantially round outer edges and functioning as a protecting element, the outer edges of the ring being laid on both the inner and outer surfaces of the shaft part 1. The ring 7a has in the mid part of its outer surface a groove extending around the ring, which groove is fitted over the edge of the opening 5 in the shaft part 1, the ring 7a being thus kept firmly in position in the opening 5. The inner diameter of the ring 7a is substantially smaller than the largest cross-section of the bulge 9 at the first end of the elastic element 4. Therefore, when the ring 7a is in position, the bulge of the elastic element 4 cannot come out from inside the shaft part 1 through the ring 7a. The elastic element 4 can be replaced by first removing the ring 7a from its position and then pulling the elastic element out from inside the shaft part 1. When the elastic element 4 is to be inserted into the shaft part 1, the elastic ring 7a is first stretched onto the shaft part, the elastic element 4 is threaded into the shaft part and finally the ring 7a is fastened on the edge of the opening 5.

[0021] FIGS. 7 and 8 illustrate one method of fastening the handgrip 2 in position. The handgrip 2 has at its lower part a flexible strip 14 which remains connected to the handgrip 2 at its upper end but is detached from the handgrip at its sides. At the lower end of the strip 14 is a protrusion 10 extending towards the shaft part 1. Correspondingly, the shaft part 1 has a hole 15 placed at a certain position and so dimensioned that it accommodates the protrusion 10 when the handgrip 2 is in place. Thus, the protrusion 10 fastens the handgrip 2 in place. The handgrip 2 can be removed by turning the lower end of the strip 14 outwards from the outer surface of the shaft part 1 until the protrusion 10 is released from the hole 15. When the handgrip 2 is pressed into position, the protrusion 10 will snap into the hole 15, locking the handgrip in place.

[0022] FIG. 9 illustrates the use of the pole arrangement of the invention for muscular fitness exercise. The elastic element 4 has a loop 8 at its second end, and e.g. a tying band 11 provided with a sticker part is fitted on the pole to keep the loop 8 remaining outside the shaft part 1 tightly against the shaft part when the elastic element 4 is mainly inside the shaft part 1. When the user wishes to do muscular fitness exercise, he/she will place the poles side by side so that the handgrip 2 of one pole is substantially adjacent to the tip part 3 of the other pole. The user then opens the tying bands 11 and pulls the elastic elements 4 out from inside the shaft part 1 of each pole and winds the tying bands 11 around the poles placed side by side to strengthen the stretch bar thus formed. The loops 8 are placed around the feet and the elastic elements 4 are tightened by pulling the poles upwards in a substantially horizontal position. The stretch bar formed from the poles can be further strengthened and the required stretching force can be adjusted by turning the poles about their longitudinal axes so that the elastic elements 4 are simultaneously coiled up around the pole pair by as many revolutions as desirable. After this, muscular fitness training is performed using the pole pair and elastic elements 4 in various known muscular power exercises.

[0023] It is obvious to a person skilled in the art that the invention is not exclusively limited to the example described above, but that it may be varied within the scope of the claims presented below. Thus, for example, the opening in the shaft part need not have a round shape, but it may have some other shape, e.g. that of an elongated groove, in which case the largest cross-section of the bulge at the first end of the elastic element is smaller than the smallest diameter of the opening in the area adjacent to the elastic element, whose diameter is e.g. equal to the width of the opening.

[0024] It is likewise obvious to a skilled person that the wall of the shaft part need not necessarily be provided with an opening for the elastic element at all, but that the elastic element can be inserted into the shaft part from the first end of the shaft part longitudinally through the handgrip.

[0025] It is likewise obvious to a person skilled in the art that the elastic element can also be threaded into the shaft part through an opening located on one side of the handgrip in the upper part of the handgrip.

[0026] It is additionally obvious to a skilled person that, instead of being made of rubber, the elastic element may be made of some other elastic material resistant to stretching.

1. Arrangement in a hollow skiing or walking pole, said pole having at least a substantially hollow shaft part, a handgrip in the upper part of the shaft part and a tip part placed in the lower part of the shaft part and intended to be thrust against the ground, wherein the upper part of the pole is provided with an opening placed at the upper end of the shaft part, in the area of the handgrip or substantially immediately below the handgrip to allow a separate elastic element to be threaded at least partially into the shaft part.

2. Arrangement in a hollow skiing or walking pole, said pole having at least a substantially hollow shaft part, a handgrip in the upper part of the shaft part and a tip part placed in the lower part of the shaft part and intended to be thrust against the ground, wherein the arrangement comprises at least an opening placed in the upper part of the shaft part at the upper end of the shaft part, in the area of the handgrip or
substantially immediately below the handgrip, and an elastic element provided with a loop at its second end, the first end of said element being adapted to be threaded through the opening into the hollow shaft part so that at least the loop remains outside the shaft part, which elastic element has been adapted to be pulled through the opening at least partially out of the shaft part.

3. Arrangement according to claim 1, wherein the opening in the shaft part is located in the area of the handgrip, under the lower part of the handgrip, and that the handgrip is provided with an opening which is suitably smaller than the opening in the shaft part and which is adapted to lie substantially concentrically over the opening of the shaft part when the handgrip is placed in position.

4. Arrangement according to claim 1, wherein the opening in the shaft part is placed below the handgrip, and that the opening is provided with a protecting element softening the edges of the opening.

5. Arrangement according to claim 1, wherein the elastic element is so fitted inside the shaft part that at least the loop at the second end of the elastic element remains outside the shaft part, which loop is adapted to be fastened to a foot or some other securing point.

6. Arrangement according to claim 1, wherein it comprises a bulge located at the first end of the elastic element inside the shaft part, the size of said bulge being so designed that the largest cross-section of the bulge is smaller than the diameter of the opening at the upper end of the shaft part but at the same time larger than the diameter of the opening placed over the opening of the shaft part.

7. Arrangement according to claim 1, wherein the elastic element is a hollow hose-like element and that the bulge inside the shaft part of the elastic element is a ball placed at the end of the elastic element, the size of said ball being so designed that the maximum cross-section of the ball and elastic element together is smaller than the diameter of the opening at the upper end of the shaft part but at the same time larger than the diameter of the opening placed over the opening of the shaft part.

8. Arrangement according to claim 1, wherein a tying band provided with a sticker part is fitted on the pole to keep the loop remaining outside the shaft part tightly against the shaft part when the elastic element is inside the shaft part, which tying band has been adapted to be wound around the poles placed side by side when the poles are to be used for muscular fitness exercise.

9. Arrangement according to claim 1, wherein a gap is provided at the lower edge of the opening in the handgrip, said gap extending from the lower edge of the opening to the lower edge of the handgrip and having a width at least large enough to allow the elastic element to be threaded through the gap.

10. Arrangement according to claim 1, wherein the handgrip has at its lower edge a flexible locking element provided with a protrusion extending towards the shaft part, and that the shaft part is provided with a hole at a position corresponding to the position of the protrusion, the protrusion being adapted to be locked in said hole when the handgrip is pressed into position on the shaft part.

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