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(72) Inventor: **Paglioli, Luca**
Monte Marenzo
23804 Lecco (IT)

(74) Representative: **Marietti, Giuseppe et al**
Marietti, Gislone & Trupiano S.r.l.
Via Larga, 16
20122 Milano (IT)

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(71) Applicant: **ALUDESIGN S.p.A.**
24034 Cisano Bergamasco BG (IT)

(54) **Safety device for routes with fixed ropes or the like**

(57) The invention relates to a tool for the safety of mountaineers or users who are likely to fall while travelling along paths with fixed safety ropes, of the type comprising a connecting element between a rope or the like,

which is suitable to be fastened to the user and a pair of belts or ropes having free ends that can be attached to the fixed rope or the like. In order to avoid crossing the belts, the latter are connected to the connecting element via a pin that can be rotated about an axis.

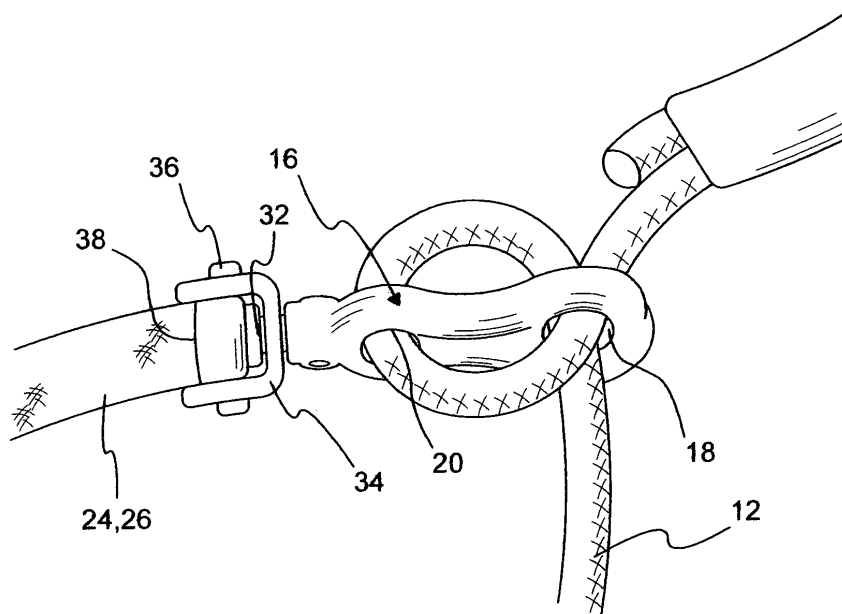


Fig.2

Description

[0001] The present invention relates to a tool for the safety of mountaineers while travelling along routes with fixed ropes, or generally users that are likely to fall while travelling along a path in which a fixed safety rope is provided, such as in the so-called adventure parks.

[0002] This tool, which is known per se, essentially consists of a generally metallic and plate-like connecting element, to which there is coupled a rope suitable to be fastened to the user, as well as a pair of ropes or belts to be attached to the fixed rope by means of karabiners. The connecting element is usually in the form of a so-called screamer, that dissipates the energy of a possible fall by braking the rope fastened to the user, which is caused to follow a tortuous and braked path there-through.

[0003] The connecting element, or screamer, is then linked to the ends of two belts or ropes, the other free ends of which are attachable by means of karabiners to the fixed rope, or the like.

[0004] The mountaineer, or however the user, as he/she proceeds along the fixed rope, detaches the upstream belt karabiner therefrom, in order to attach the same downstream to the other, and so on, in a sequential and progressive manner.

[0005] During this procedure, less experienced climbers tend to cross the two belts relative to each other, thereby reducing more and more the available length and tend to arrange the belts in a non-optimum safety condition.

[0006] The present invention relates to a tool of the type and for the expected uses, in which the above-mentioned drawback does not occur, or however is considerably reduced to the extent that it does not interfere with the safety conditions.

[0007] In order to achieve this, the present invention relates to a tool of the above-mentioned type, such as defined in the annexed claims.

[0008] The invention will be now described with reference to a preferred embodiment thereof, which is illustrated by way of example in the annexed drawings, in which:

- Fig. 1 is a perspective view of the tool according to the invention.
- Fig. 2 is a detailed perspective view of the screamer;
- Fig. 3 is a detailed perspective view of the screamer at 90° relative to Fig. 2.

[0009] Referring first to Fig. 1, the tool 10, as illustrated by way of example, is a tool for the safety of mountaineers on fixed rope routes and essentially consists of a safety rope 12 that can be fastened in 14 to the climber, which rope 12 is passed through a connecting element, which is here in the form of a so-called screamer 16. As may be seen in Figs. 2 and 3 in greater detail, the rope 12 is caused to pass, by following a tortuous path, through

openings 18, 20 and 22 that are provided in the body of the screamer 16, such that it can hardly slide therein, thereby braking the climber in the event of a fall.

[0010] Two belts 24 and 26 are then fixed to the body of the screamer 16, the free ends of said belts being provided with karabiners 28 and 30 for attachment to the fixed rope. As the climber moves forward along the latter, he/she releases the upstream karabiner and re-attaches the same downstream of the karabiner that is remained in position.

[0011] To avoid that the belts 24 and 26 may be crossed, according to the invention, the latter are fastened to the screamer 16, in such a manner that one belt can rotate relative to the other. In greater detail, as may be seen in Fig. 2 and 3, the body of the screamer 16 carries a pin 32 that holds a bracket 34 rotatably mounted relative to the axis thereof. The bracket 34 in turn houses, by means of a pin 36, the ends of the belts 24 and 26 that are fastened to each other in the form of a slot in 38.

[0012] Thereby, if the belts 24 and 26 are crossed by the mountaineer while moving forward, this causes no problems, in that the belts are re-aligned by means of the rotation of the slot 38 and bracket 34 about the pin 32.

Claims

1. A tool for the safety of mountaineers or users who are likely to fall while travelling along a path with fixed safety ropes, comprising a connecting element between a rope or the like, which is suitable to be fastened to the user and a pair of belts or ropes having free ends that can be attached to the fixed rope or the like, **characterized in that** the connection of the belts or ropes to be attached to the fixed rope with the connecting element is of the type freely rotatable about an axis.
2. A tool according to claim 1, **characterized in that** the body of the connecting element has an end to which a pin is coupled, the belts or ropes to be attached to the fixed rope being fastened to said pin in an axially stable and rotationally free manner.
3. A tool according to claim 2, **characterized in that** said pin axially holds a bracket that is free to rotate about the axis of the pin and to which the belts or ropes to be attached to the fixed rope are fastened.
4. A tool according to claim 3, **characterized in that** the wings of said bracket hold a pin on which the ropes or belts to be attached to the fixed rope are slot-like wound.
5. A tool according to one or more of the preceding claims, **characterized in that** said connecting element consists of a screamer, which is capable of braking the sliding of the rope suitable to be fastened to the user.

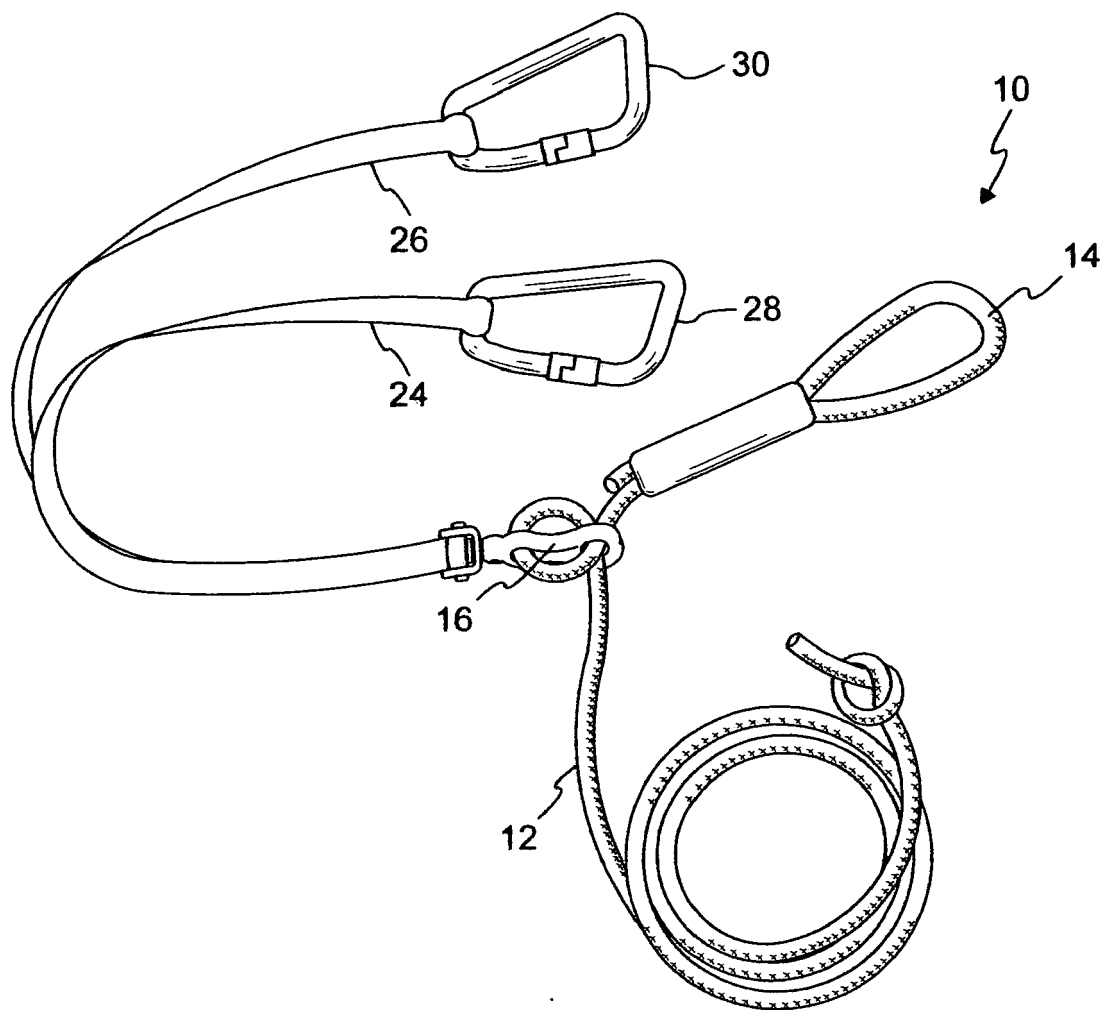


Fig. 1

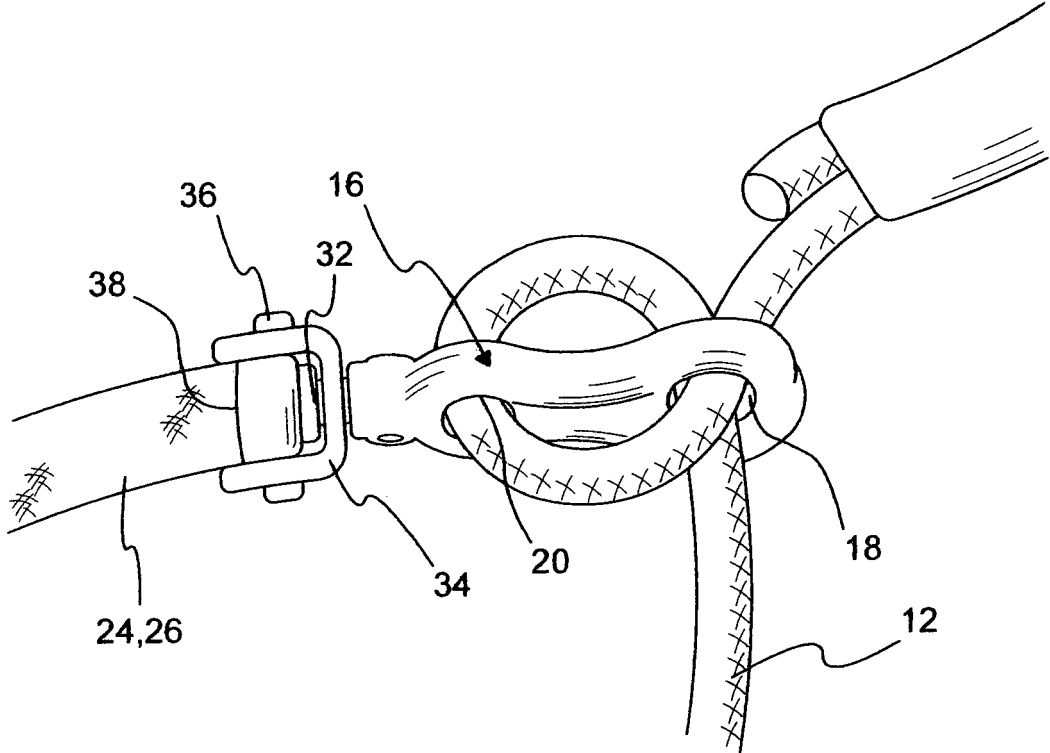


Fig.2

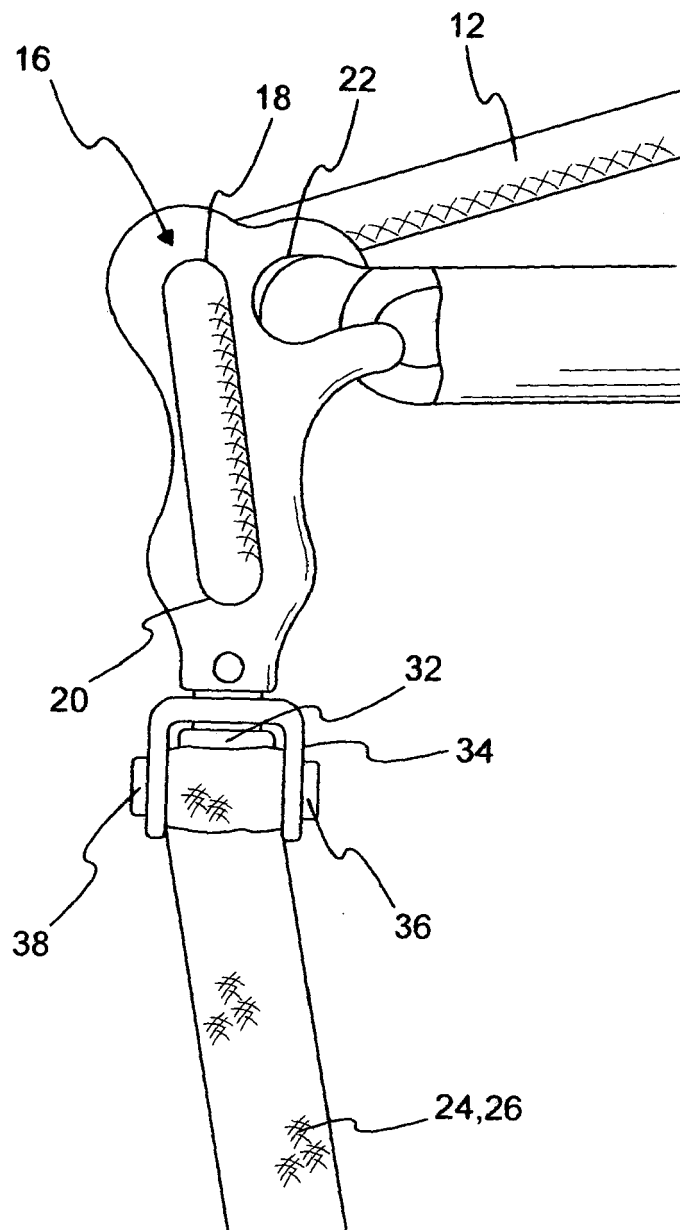


Fig.3



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 06 01 1674

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A63B A62B
Place of search		Date of completion of the search	Examiner
The Hague		18 September 2006	Knoflachner, Nikolaus
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 06 01 1674

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