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(54) **ANNULAR SEAMLESS ROCK CLIMBING QUICKDRAW**

NAHTLOSE RINGFÖRMIGE FELSKLETTER-EXPRESSSCHLINGE

DÉGAINE D'ESCALADE DE ROCHER ANNULAIRE SANS COUTURE

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Description

Technical Field

5 [0001] The present disclosure relates to the field of rock climbing equipment and technologies, in particular, to a seamless webbing loop of a rock climbing quickdraw.

Technical Background

10 [0002] With social development and popularity of sports, more and more people participate in physical exercise, and more and more sporting equipment emerge accordingly. In the field of rock climbing equipment and technologies, a quickdraw in the prior art generally employs a webbing of high strength, both ends of which are abutted against each other and then sewn together by a sewing machine. Such a webbing loop has a low cost and is easy to produce. However, a seam exists between the abutted and sewn both ends of the webbing, and the sewn portion of the webbing loop is subjected to relatively concentrated stress when the webbing loop is applied by a load and hence may be likely broken, leading to a security risk.

JPS59125989A provides a ring-shaped core material in which all or a major part is composed of warp groups, and sewing the long. It is characterized by wrapping it in a cylindrical bag, then turning it upside down and joining together the ends of the reversed bags.

20 [0003] A rock climbing quickdraw having the features as defined in the preamble of claim 1 is known from US2013/0061429.

[0004] It is the object of the present invention to provide a rock climbing quickdraw which is stronger and safer and can be produced at a reduced cost compared to the solutions provided in the prior art. This object can be solved by a rock climbing quickdraw as provided by claim 1.

25 **Summary**

[0005] A rock climbing quickdraw is disclosed according to independent claim 1. The rock climbing quickdraw is easy to produce, but is strong, safe and practical, and is seamless after the webbing loop is sewn. Further improvements and embodiments are provided in the dependent claims.

[0006] The present disclosure adopts the following technical solution.

[0007] A rock climbing quickdraw, including a winding yarn and a webbing; the winding yarn is an annular yarn formed by a single yarn that winds into circles or formed by a plurality of combined closed annular coils; the webbing has an annular shape, and is provided with an opening on its radially inner face, where the opening is configured to receive the annular yarn, so that the annular yarn can be wrapped by the webbing; the webbing loop of rock climbing quickdraw is sewn with a stitching thread.

[0008] Wherein, the webbing is a polyester webbing with high strength of a single layer structure.

[0009] Wherein, the annular yarn is a wire formed by a tetoron filament or a nylon filament.

[0010] Wherein, a diameter of the wire is greater than or equal to 0.08mm and less than or equal to 5mm.

40 [0011] Wherein, a perimeter of an outer contour of the webbing is slightly greater than that of the annular yarn.

[0012] Wherein, a diameter of a cross section of the webbing is slightly greater than that of the annular yarn.

[0013] Wherein, the stitching thread is a wire made by a tetoron filament or a nylon filament.

[0014] The beneficial effects of the disclosure are as follows. A seamless webbing loop of a rock climbing quickdraw in the disclosure includes a winding yarn and a webbing. The winding yarn is an annular yarn formed by a single yarn that winds into circles or formed by a plurality of combined closed annular coils; the webbing has an annular shape, and is provided with an opening on its radially inner face, where the opening is configured to receive the annular yarn, so that the annular yarn can be wrapped by the webbing; and the webbing loop of rock climbing quickdraw is sewn with a stitching thread. The annular yarn formed by winding overcomes the defect of the seam between the abutted ends of a webbing in the prior art, thus making the webbing loop more strong and safe. The disclosure has simple processes and is strong, safe and durable, and is seamless after the webbing loop is sewn.

Description of Drawings

55 [0015]

Fig. 1 is a schematic diagram showing the structure of a webbing of a seamless webbing loop of a rock climbing quickdraw according to the disclosure;

Fig. 2 is a schematic diagram showing the structure of a winding yarn of the seamless webbing loop of the rock

climbing quickdraw according to the disclosure; and
 Fig. 3 is a schematic diagram showing the structure of the seamless webbing loop of the rock climbing quickdraw according to the disclosure.

5 [0016] A list of the reference numerals:

- | | | |
|----------------------|---|------------------|
| 1: Webbing; | 2: Opening; | 3: Winding Yarn; |
| 4: Stitching thread; | 5: Webbing Loop of rock climbing Quickdraw. | |

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Detailed description of the Preferred Embodiment

15 [0017] The technical solution of the disclosure will be further described by way of embodiments below in conjunction with the accompanying Figs. 1 to 3.

[0018] A seamless webbing loop of a rock climbing quickdraw is disclosed. A webbing loop of rock climbing quickdraw 5 includes a winding yarn 3 and a webbing 1. The winding yarn 3 is an annular yarn formed by a single yarn that winds into circles or formed by a plurality of combined closed annular coils; the winding 1 has an annular shape, and is provided with an opening 2 on its radially inner face, where the opening 2 is configured to receive the annular yarn, so that the annular yarn can be wrapped by the webbing 1; and the webbing loop of rock climbing quickdraw 5 is sewn with a stitching thread 4. By wrapping the winded annular yarn in the annular webbing with the opening, and then sewing up the opening by a sewing machine, the webbing loop is made safe and practical. The annular yarn formed by winding overcomes the defect of the seam between the abutted ends of a webbing in the prior art, thus making the webbing loop more strong and safe. The webbing loop for a rock climbing quickdraw in the present disclosure may be manufactured by a simple process, but is strong, safe and durable, and is seamless after the webbing loop is sewn.

20 [0019] The webbing 1 is a polyester webbing with high strength of a single layer structure. The high-strength polyester webbing has high tensile strength, is strong and wearable, and is suitable for use in outdoor rock climbing.

[0020] The annular yarn is a wire formed by a tetoron filament or a nylon filament, or a wire with other materials.

25 [0021] A diameter of the wire is greater than or equal to 0.08mm and less than or equal to 5mm. A thickness of the wire can be selected based on a load-bearing capability and a thickness of a quickdraw actually used.

[0022] A perimeter of an outer contour of the webbing is slightly greater than that of the annular yarn, so that the webbing wraps the annular yarn completely.

[0023] A diameter of a cross section of the webbing 1 is slightly greater than that of the annular yarn.

30 [0024] The stitching thread 4 is a wire made by a tetoron filament or a nylon filament, or other wires which are strong and durable and adopted for sewing.

35 [0025] The technical principles of the disclosure have been described in conjunction with the embodiments as above. The description is only intended to explain the principles of the disclosure, but not to limit the disclosure. Based on the explanation herein, other embodiments can be conceived by those skilled in the art without inventive working, thus these embodiments should be included within the protection scope of the disclosure as defined by the appended claims.

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Claims

- 45 1. A rock climbing quickdraw (5), comprising a webbing (1), wherein the webbing (1) has an annular shape, and is provided with an opening (2) on its radially inner face; **characterized in that** the rock climbing quickdraw (5) further comprises a winding yarn (3); wherein the winding yarn (3) is an annular yarn formed by a single yarn that winds into circles or is formed by a plurality of combined closed annular coils; wherein the opening (2) is configured to receive the annular yarn, so that the annular yarn can be wrapped by the webbing (1); and the opening (2) of rock climbing quickdraw (5) is sewn up with a stitching thread (4).
- 50 2. The rock climbing quickdraw (5) according to claim 1, wherein, the webbing (1) is a polyester webbing with high strength of a single layer structure.
- 55 3. The rock climbing quickdraw (5) according to claim 1, wherein, the annular yarn is a wire formed by a tetoron filament or a nylon filament.
4. The rock climbing quickdraw (5) according to claim 3, wherein, a diameter of the wire is greater than or equal to

0.08mm and less than or equal to 5mm.

5 5. The rock climbing quickdraw (5) according to claim 1, wherein, a perimeter of an outer contour of the webbing (1) is slightly greater than that of the annular yarn.

6. The rock climbing quickdraw (5) according to claim 1, wherein, a diameter of a cross section of the webbing (1) is slightly greater than that of the annular yarn.

10 7. The rock climbing quickdraw (5) according to claim 1, wherein, the stitching thread (4) is a wire made by a tetoron filament or a nylon filament.

Patentansprüche

15 1. Kletterschnellzug (5), umfassend ein Gurtband (1), wobei das Gurtband (1) eine Ringform aufweist und an seiner radialen Innenseite mit einer Öffnung (2) versehen ist;
dadurch gekennzeichnet, dass der Kletterschnellzug (5) weiterhin ein Wickelgarn (3) umfasst;
wobei das Wickelgarn (3) ein ringförmiges Garn ist, das durch ein einzelnes Garn gebildet wird, das sich zu Kreisen
wickelt, oder durch eine Vielzahl von kombinierten geschlossenen ringförmigen Wicklungen gebildet wird;
20 wobei die Öffnung (2) so konfiguriert ist, dass sie das ringförmige Garn aufnimmt, so dass das ringförmige Garn von dem Gurtband (1) umwickelt werden kann; und die Öffnung (2) des Kletterschnellzugs (5) mit einem Heffaden (4) vernäht wird.

25 2. Kletterschnellzug (5) nach Anspruch 1, wobei das Gurtband (1) ein Polyestergewebe mit hoher Festigkeit eines einschichtigen Aufbaus ist.

3. Kletterschnellzug (5) nach Anspruch 1, wobei das ringförmige Garn ein Draht ist, der durch ein Tetoronfilament oder ein Nylonfilament gebildet ist.

30 4. Kletterschnellzug (5) nach Anspruch 3, wobei ein Drahtdurchmesser größer oder gleich 0,08 mm und kleiner oder gleich 5 mm ist.

35 5. Kletterschnellzug (5) nach Anspruch 1, wobei ein Umfang einer Außenkontur des Gurtbandes (1) geringfügig größer als der des ringförmigen Garns ist.

6. Kletterschnellzug (5) nach Anspruch 1, wobei ein Durchmesser eines Querschnitts des Gurtbandes (1) geringfügig größer als der des ringförmigen Garns ist.

40 7. Kletterschnellzug (5) nach Anspruch 1, wobei der Heffaden (4) ein Draht ist, der aus einem Tetoronfilament oder Nylonfilament hergestellt ist.

Revendications

45 1. Dégaine d'escalade (5), comprenant une sangle (1), dans laquelle la sangle (1) présente une forme annulaire et est pourvue d'un orifice (2) à sa face radialement intérieure; **caractérisée en ce que** la dégainé d'escalade (5) comprend par ailleurs un fil de bobinage (3);
dans laquelle le fil de bobinage (3) est un fil annulaire constitué soit par un seul fil qui s'enroule en cercles soit par
une pluralité de bobines annulaires fermées combinées;
50 dans laquelle l'orifice (2) est conçu pour recevoir le fil annulaire, de sorte que le fil annulaire puisse être enveloppé par la sangle (1); et l'orifice (2) de la dégainé d'escalade (5) est cousue grâce à un fil de couture (4).

55 2. Dégaine d'escalade (5) selon la revendication 1, dans laquelle la sangle (1) est une sangle en polyester à haute résistance d'une structure monocouche.

3. Dégaine d'escalade (5) selon la revendication 1, dans laquelle le fil annulaire est un fil constitué par un filament en Tetoron ou un filament en nylon.

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4. Dégaine d'escalade (5) selon la revendication 3, dans laquelle un diamètre du fil est supérieur ou égal à 0,08 mm et inférieur ou égal à 5 mm.
- 5 5. Dégaine d'escalade (5) selon la revendication 1, dans laquelle un périmètre d'un contour extérieur de la sangle (1) est légèrement supérieur à celui du fil annulaire.
6. Dégaine d'escalade (5) selon la revendication 1, dans laquelle un diamètre d'une section transversale de la sangle (1) est légèrement supérieur à celui du fil annulaire.
- 10 7. Dégaine d'escalade (5) selon la revendication 1, dans laquelle le fil de couture (4) est un fil fabriqué par un filament en Tetoron ou un filament en nylon.

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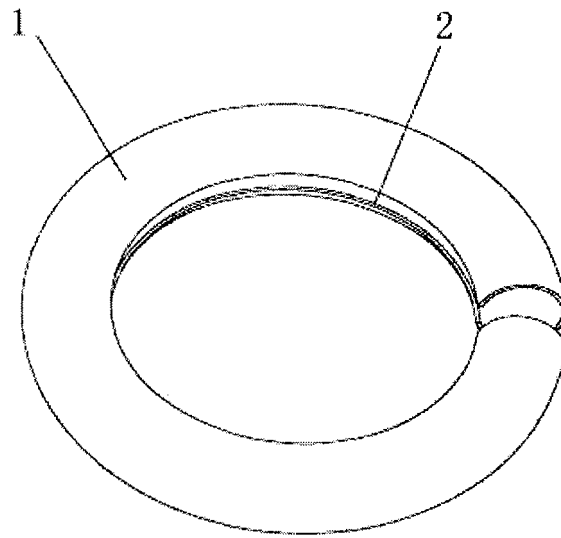


FIG. 1

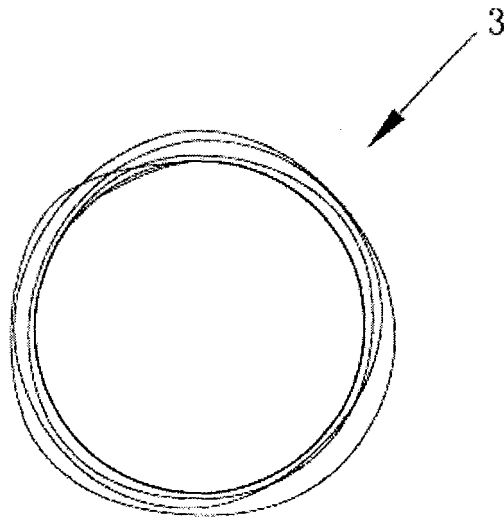


FIG. 2

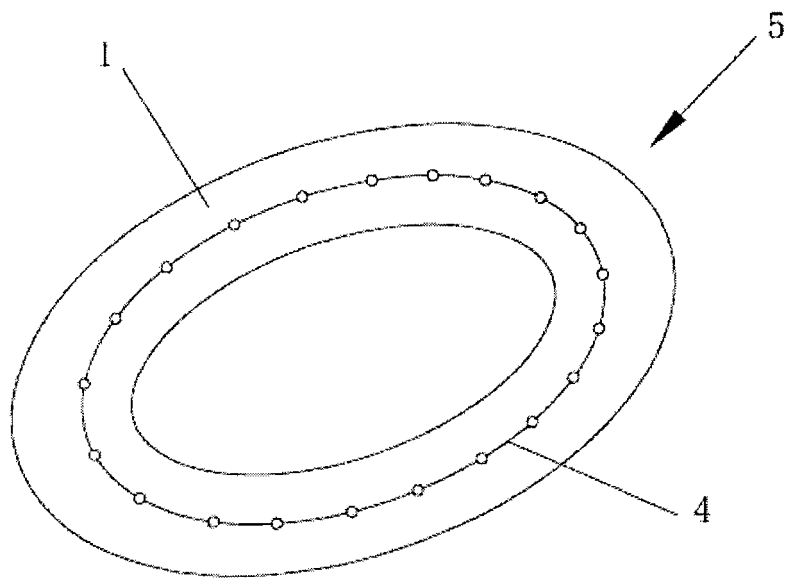


FIG. 3

REFERENCES CITED IN THE DESCRIPTION

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