

Examiner's
use only

CLAIMS

1. A climbing chock for positioning in a crack in a rock formation, comprising a generally wedge-shaped body including four side faces (2, 3; 6, 7), two opposite side faces (6, 7) of which are respectively of concave and convex configuration, *and two end faces (4, 5), wherein the chock further comprises a longitudinal passageway means (10) extending the loop between the end faces but within the sidefaces to receive and protect a line within the body*
2. A climbing chock as in *any of the preceding claims wherein claim 1, further comprising two end faces (4, 5) to the chock, the first end face (lower in use) being is smaller than the second end face, both end faces being plane and parallel and of rectangular shape, thereby providing the chock with wider and narrower sides.; the said first face including longitudinal passages (10) through which the line enters and emerges from the chock.*
3. A climbing chock as in ~~claim 1~~, *any one of the preceding claims* wherein the other two opposite side faces (2a, 3a) of the chock are also respectively concave and convex.
4. ~~A climbing chock comprising a generally wedge-shaped body, two opposite side faces (6, 7) of which are respectively of concave and convex configuration to provide secure three-point engagement across a crack in rock being climbed under a wide range of conditions of the crack, and~~ *A climbing chock as in anyone of the preceding claims, wherein the other two opposite side faces (2, 3) of which are plane and tapered, the chock having plane and parallel end faces (4, 5) of rectangular shape, whereby the chock is provided with wider and narrower sides.*

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9 5. A climbing chock as in ~~claim 4~~, *any one of the preceding claims* wherein the chock is provided with an aperture (8) extending across the ~~plane tapered~~ *side* faces.

✓

~~6. A climbing chock as in claim 4, wherein the chock is secured to a line for securing to a climbing rope.~~

10 7. The climbing chock of claim 1 ~~or 4~~, wherein the radii of curvature of the opposite concave and convex side faces (6, 7) are substantially the same in magnitude.

11 8. The climbing chock of claim 1 ~~or 4~~, wherein the curves of the opposite concave and convex side faces extend in substantially the same direction.

12. *Climbing chock of any of preceding claims wherein line forms a loop between the internal passage way means attachable to a climber's rope.*

✓

New claim 2

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2. The climbing chock of claim 1, wherein the longitudinal passageway means comprises two longitudinal channels separated by a solid part of the body.

✓

New claim 3

3. The climbing chock of claim 2, wherein the two longitudinal channels are amalgamated over most of their height to a single passageway.

✓

New claim 4

4. The climbing chock of claim 2 or claim 3 wherein the surface of the end face between the ✓ channels is rounded.

New claim 5

5. The climbing chock of any one of the preceding claims wherein the concave and convex configuration provides and convex configuration provides a three-point engagement on the rock. ✓

Claims

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MARKS AWARDED 32/36Letter to the UKIPO – DRAFT

- Dear Sir or Madam

I am responding to the examination report under section 18(3) by the due date of 15 November 2019.

I enclose an amended set of claims to replace those claims currently on file. ✓

Amended claims

- Claim 1 has been amended to recite that the climbing chock comprises two end faces (4, 5) and wherein the chock further comprises a longitudinal passageway ✓ means extending between the end faces but within the side faces to receive and protect a line within the body

Basis for amended claim 1 – page 5, lines 8–10. This passage clearly teaches that the chock has a longitudinal passageway means which extends the length between the end faces and but within the side faces to protect the rope between the faces. ✓ Therefore, no new information has been presented. Don't need to limit to two channels because embodiment taught where the rope can be in a single passageway means. Therefore it is clear two passageways is only a preferred embodiment. ✓

- we have inserted new claims 2 - 4 which further define the longitudinal passageway means.
- Basis :
 - Claim 2 = page 6, line 31 to page 2.
 - Claim 3 = page 6, lines 27–30.
 - Claim 4 = page 6, lines 24 -27.

- we have inserted new claim 4 which defines that the chock provides a three-point engagement on the rock. Basis = page 7, lines 31– 33. ✓

- we have deleted duplicated subject matter and renumbered previous claims 2 and 3 as claims 6 and 7. We have also added multiple dependencies.

Basis = page 5, lines 3- 7 and page 8, lines 8 - 10.

- Previous claim 4 has been reformulated into a dependent claim and the duplicated subject matter has been deleted.

Basis = page 5, lines 6 - 7.

- Previous claim 5 has been numbered into claim 9. Moreover “plane tapered” faces has been deleted. It is clear ✓ aperture could also be present even if the faces were not tapered.

Basis = page 7, lnes 8–12.

- Previous claim 6 has been deleted
- Previous Claims 7 and 8 have been renumbered as claims 10 + 11 and made multiply dependent on the previous claims.

Basis = page 6, lnes 16–20

- New claim 12 - Basis = page 7, lnes 2–4. ✓

- Novelty

The amended claims are novel over D1.

D1 discloses an anchoring device (14) with side faces (22, 24) and end faces (23). The side faces are convex and concave respectively. However, D1 discloses holes (26b and 26c) in the side faces of the device. D1 does not disclose a longitudinal passageway means which extends between the end faces (23 of D1). but within the side faces. Instead, D1 shows an opposite ✓ arrangement with a hole and not a longitudinal channel to receive and protect a line. in the side face and not the end face of the chock . Therefore, claim 1 is novel over D1.

The remaining claims are dependent on claim 1 and therefore are also novel over D1 for the same reason.

For the avoidance of any doubt, the claims are also novel over D2. As the examiner has confirmed in section 3 of the examination report, the device of D2 only ✓ has convex side faces.

Therefore, D2 does not disclose opposite side faces which are respectively concave and convex. Therefore, claim 1 is novel over D2 and the remaining claims which are dependent on claim 1 are also novel for the same reason. ✓

∴ claims are novel .

Inventive Step

Using Pozzoli

The person skilled in the art is a designer or manufacturer of climbing chocks. ✓

The common general knowledge of the skilled person is a wedge shape climbing chock which are provided in a variety of sizes to fit a ✓ required rock crack. There is a taper angle which fits into the taper of a crack. to form a point of contact between the chock and the crack wall (see page 4, lnes 7- 19 of our patent).

Claim 1 has been amended to recite that the chock comprises a longitudinal passageway means extending between the side faces but within the side faces.

- The inventive concept of claim 1 is a chock with opposite side faces of which are respectively of concave and convex configuration, where the concave face allows the chock to curve round small irregularities to provide a two-point contact and the convex face ensures a third point of contact irrespective of the angle of taper of the crack.

In addition, the chock has a longitudinal passageway means between its end faces but within the side faces to receive a line of rope, whereby, due to the longitudinal arrangement of the passageway the line of rope is entirely within the body of the chock and therefore protected from the rock face.

- Starting from D1 because it comprises a climbing device with three point contact and holes to receive the rope, the .present invention differs because it comprises a longitudinal passageway means to protect the

entire width of rope from the .rock. The longitudinal channel of the invention extends the length between the end faces is within the side faces. This differs from the arrangement of the hole in Doc C (D1) where the holes are formed in the side member + not the end members. Moreover, as shown in Figure 1 of Doc C, the holes do not provide a longitudinal passageway extending between the end faces to protect the length the line within the body. It is seen from D1 Figure 1 that the holes in the arms (side faces) allow the rope to dangle freely to be damaged by the rock.

For this reason, the invention is inventive over D1 alone because the skilled person would not be motivated to adapt the device of D1 when reading D1 alone. ✓

Starting from D2, the differences are that the wedge of D2 does not comprise convex and concave opposing features. The claimed invention is not obvious when D1 and D2 are combined because the ✓ skilled person although could, would not combine these documents.

This is because the device of D2 is a wedge shape chock but the device of D1 is a trefoil shape. The skilled person would not think to put the longitudinal passageway of D2 between the end faces of the trefoil shape of D1 because it would require multiple modifications to the device of D1 including an integral strut, support member such as a metal tube and a lateral enlargement.

These are too many modifications that the skilled person would need to make.

Moreover, the device of D2 actually reaches away from using concave shape which is in the shape of D1 because it says on page 17, lines 17–20 that the convex shape is ideal. Therefore there is no motivation for the longitudinal passage of the convex shape of D2 to be combined with the convex/concave shape of D1.

In addition, D1 is dated 1985 and D2 is dated 1998. These are both very old documents which have been around for a long time. Therefore, this is a further indication that these documents would not be combined because these reaches are incompatible due to the shape of each chock in D1 and D2. The present invention is the first to provide a longitudinal passageway means within a chock with concave/convex side portions to protect the length of the rope from the rock face and provide a three point contact.

D2 makes no mention of three point contact and therefore this is a further reason why the invention is not obvious over D1 in combination with D2.

Conciseness, clarity and support

- Claim 1 has been amended to recite that the rope is received in the longitudinal passageway means. Therefore, the examiner's objection has been addressed.
- The line feature has been deleted from Claim 2 because it is now recited in Claim 1. Therefore, the examiner's objection has been addressed.
- Claim 4 has been converted into a dependent claim + the redundant (duplicated) features have been removed. Therefore, the examiner's objection has been addressed.

The claims are now clear.

We request accelerated prosecution of this patent application because the applicant is aware of infringers.

Yours sincerely,

X .

✓

Letter

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MARKS AWARDED 26/35

Client letter

Dear Leo Capitan

I enclose a draft response.

Please review the amendments to the claims and the arguments present in the response and confirm that it is suitable for filing by the deadline of 15 November 2019. ✓

- A two month extension of term is available as of right if necessary which will extend the deadline to 15 January 2019. ✓
- We needed to amend the claims to overcome the examiner's objection. ✓ This is because D1 does disclose the arrangement of the chock recited in claim 1 as the examiner has identified. D1 does say on

page 13, line 10 that the device of D1 does provide three points of contact (one by each of the arms) and therefore we couldn't argue on novelty on this point alone. ✓

- In addition, the examiner considered that the invention ✓ lacked inventive step over D1 in combination with D2. I can appreciate that these devices are incompatible but we need to amend the claims for novelty anyway and so introducing a novel feature will give us more strength in our inventive step arguments. ✓
- You wanted to keep claims broad so infringers couldn't design around → ∴ I have amended claim 1 to recite the longitudinal passageway means ✓ to protect the rope. I think it is worth testing the examiner on this amendment and our inventive step arguments that D1 and D2 wouldn't be combined. ✓
- However, there is a risk that the examiner would still consider that our device lacks inventive step. ∴ I have added dependent claims 2–4 to further define the longitudinal passageway means as two longitudinal ✓ passageway means separated by a solid part of the body. This would definitely be inventive ✓ over D2 because in D2 the passageways are separated by the traverse bore so this is a fall back position. I recommend Test examiner at this stage but let me know if you want to put claim 2 into claim 1 now to avoid further prosecution costs.
- You said delete claim 4 so I deleted duplicated subject matter + kept any new subject matter as a dependent claim
- Requested accelerated prosecution because you said there could be infringers designing around .
- Other amendments we could have made include further defining the arrangement of the faces but ✓ I think this would be easy to design around and also you indicated that the protection of the rope was an important feature.
e.g. angle of the convex/ ✓ concave curves disclosed on page 6, lines 16–20.

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MARKS AWARDED 15/29