

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, *a first end face and a second end face, and a longitudinal passageway means between the first end face and the second end face, the longitudinal passageway means extending in a direction of, and within, the four side faces such that, in use, a line passes through the body and is protected by the four side faces.*✓
2. A climbing chock as in claim 1, ~~further comprising two end faces (4, 5) to the chock, the first end face being (lower in use) being and 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, 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,~~ *as in claim 1 or 2, wherein the* two opposite side faces (6, 7) ~~of which~~ *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 *in use*, and 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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5. A climbing chock as in claim 4, wherein the chock is provided with an aperture (8) extending across the plane tapered faces.
6. A climbing chock as in claim 4, wherein the chock is secured to a line for securing to a climbing rope.
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.
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.

Claims

9. A climbing chock as in any preceding claim, wherein the curves of the opposite concave and convex side faces are substantially constant over a height of the chock. 1
10. A climbing chock as in claim 9, wherein the curves of the opposite concave and convex side faces extend over most of the height of the chock.
11. A climbing chock as in any preceding claim, wherein the longitudinal passageway means comprises two channels extending between the first end ✓ face and the second end face. 1
12. A climbing chock according to claim 11 wherein a surface of the first end face, on which a line rests in use, is rounded between openings of the two channels. 1
13. A climbing chock according to claim 11 or 12 wherein the two channels are amalgamated over most of a height of the chock to a single hollow space. 1

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MARKS AWARDED 29/36

UKIPO Letter

Dear Sirs,

I write in response to an examination report dated 15/7/2019.

I am filing an amended set of claims to replace on claims currently on file.

Claim Amendments

Claim 1 has been amended to define a first end face and a second end face, and a longitudinal passageway means between the first end face and the second end face, the longitudinal passageway means extending in a direction of, and within, the four side faces such that, in use, a line passes through the body and is protected by the four side faces.

Basis for this amendment can be found on P5 L 8-10 and P5 L15-18. ✓

It is noted that the term "enclosed" [P5 L17] has been omitted from claim 1 in this amendment. Whilst the protection of the line is described with reference to the line being enclosed, this is not essential. The side faces protect the line even when the line is not enclosed by them. This is clear from, for example, Figure 6, where it can be seen that the ✓ line is not enclosed but is protected by the side faces.

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Claim 2 has been amended to remove redundant features in view of amended claim 1. ✓

Basis for this amendment can be found in prior claim 2.

Claim 4 has been amended to depend on claim 1 or 2, and to delete features defined in claim 2. ✓

Basis for this amendment can be found in prior claim 4, and P5L7.

New claim 9 has been added. Basis can be found on P 6 L 18-20. ✓

New claim 10 finds basis on P 6 L18-20 also.

Whilst described together on P6, the features of new claims 9 and 10 are not inextricably linked. The curves being constant and the height over which they extend are not ✓ structurally related; it is possible to alter one without the other. The PSA would understand this. Thus, no matter has been added in separating these features.

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New claim 11 finds basis on P6 L21-24.

New claim 12 finds basis on P6 L24-27.

New claim 13 finds basis on P6 L22-30. ✓

Novelty over D1

Amended claim 1 defines a first end face and a second end face, and a longitudinal passageway means between the first end face and the second end face, the longitudinal passageway means extending in a direction of, and within, the four side faces such that, in use, a line passes through the body and is protected by the four side faces.

Thus, the passageway means is between two end faces and extends within the four side faces such that a line passed through the body is protected by the four side ✓ faces. The four side faces include two opposite side faces of which are respectively a concave and convex configuration.

In contrast, in D1, holes 26b, 26c are formed in side faces which have a concave configuration. See P14 L14-17 ✓ and Fig 3.

Novelty over D2

D1 defines two opposite side faces of which are respectively concave and convex.

In contrast, in D2, all opposed faces are outwardly convex. See P17 L14 – 17.

Thus, amended claim 1 is novel over D1 and D2.

At least by virtue of dependency on claim 1, all of the remaining claims are also novel over D1 and D2.

Inventive step (IS)

I will assess the IS of claim 1 using the Windsurfer approach as modified by Pozzoli.

PSA

The PSA is a designer of climbing chocks. ✓

CGK

The CGK of the PSA includes the information on P4 L7-22. The simple wedge shape has been long known. ✓

✓

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The CGK would not include either of D1 or D2 because patent documents rarely form part of the CGK. There is no reason that the PSA would be aware of these documents.

IC

The inventive concept (IC) of claim 1 is the provision of a chock having a passageway means between a first end face and a second end face and extending within four side faces, two opposite side faces being concave and convex respectively. This chock protects a line passed through the body in use and the concave and convex side faces provide a secure three point engagement in use in a wide variety of cracks. See P4 L29 to P5 L2. ✓

D1 alone

The differences between D1 and amended claim 1 include the passageway means between two end faces.

D1 teaches away from such ✓ a configuration; D1 teaches providing holes 26b , 26c at the bases of upper arms 22b, 22c.

This is advantageous in D1 because the intersection between arms 22b and 22c are exposed, as explained on P14 L14-17.

This allows, as explained on P14 L18-19, a user to insert a sling through holes 26b 26c. ✓

There is no motivation to suggest altering location of holes 26b 26c.

Further, moving the holes into end walls 24 would be disadvantageous; one end wall is, in use, wedged deep into the crack (see fig 1) so is inaccessible.

D2

Difference includes opposite side faces being respectively convex and concave.

D2 teaches away from this configuration. See P17 L17-19.

“The convex shape is ideal”.

Further, this document explicitly discusses one or two pairs of faces being flat and parallel but there's no suggestion of a convex face any where.

The PSA would have no reason to try to modify D2 to include opposite concave and convex faces, as claimed.

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Further still, it would appear that a convex side could potentially reduce a gap between the side and support 24. This could be disadvantageous if the rope were to rub on the support.

D1 and D2

D1 & D2 cannot be combined as neither are part of CGK.

Should the Examiner disagree, it is submitted that combining D1 and D2 still does not lead to claim 1.

It is not clear which features of D2 should be applied to D1, or vice versa. Neither document strongly suggests a feature which is easily applicable to the other which results in claim 1.

D1 and D2 are structurally very different, and it is not clear why the PSA would attempt to combine them. These docs have different aims. D2 aims to protect a rope P16 L 16-18' whilst D1 aims to provide an easily placeable and retrievable device P 13 L5-7

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Thus, claim 1 involves an IS in view of D1 and D2 and CGK in any combination.

At least by virtue of dependency, all unclear word claims also involve an inventive step.

Conciseness, Clarity & support

Antecedence for line is now in claim 1 and is correct.

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Claim 4 now depends on claim 1.

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The line is now defined in claim 1.

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Thus, points 6, 7, and 8 of the report have been addressed.

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MARKS AWARDED 23/35

Memo

I attach a draft response

The current deadline to respond is 15/11/2019 but this can be extended by up to two months retrospectively (as of right) to 15/1/2020

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I believe that claim 1 lacked novelty over D1 as the Examiner suggested.

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Claim 1 was already novel over D2.

It was therefore necessary to amend claim 1 in view of D1.

I have amended claim 1 to define a first end face and a second end face, and a longitudinal passageway means between the first end face and the second end face, the longitudinal passageway means extending in a direction of, and within, the four side faces such that, in use, a line passes through the body and is protected by the four side faces.

This is because these:

- (1) features address the Examiner's objection wrt the line not being present in the claim [without limiting the claim to including a line!] ✓
- (2) features achieve advantage presented in your comments (protecting rope). ✓
- (3) Appear novel and arguably inventive.

Thus, amended claim 1 appears broad but obtainable. However, you will see I have not included the feature of achieving three-point contact ✓ in claim 1. This is because P13 L 10 discloses 3 point contact of the device. Further, your comment re: the rope being rubbed against the rock could easily be avoided by feeding the rope between the gaps between the arms, or just providing a slot in the centre of each arm for the rope ✓ to pass through. It also seems possibly achieved by D2 – see Fig 1 for example, which would also seem to achieve at least 3 points of contact in a variety of cracks. Do you agree? This being said, in my opinion, the three point contact of D1 is seemingly contradictory ✓ to P14 L 13 which states arm 22a preferably points down, and the modification (slots) above may not be considered obvious. Thus I would consider this feature to be a strong candidate for a fall back position.

Alternatively, it may improve chances of obtaining allowance to include this feature ✓ [worded as in lines 2-6 of claim 4: "two...crack"] in claim 1 in this response. This is a key benefit to the invention and is not particularly limiting in my opinion. Please let me have your thoughts. Would this limitation exclude other embodiments you wish to cover? For example, devices which protect the rope as your device does and has opposite convex and concave sides but does not offer three-point engagement?

Could competitors make such a device?

Claim 1 as proposed covers all of your alternative embodiments described. ✓

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3/4

You will see that I have omitted “enclosed” as this seems overly limiting and arguably wouldn’t cover embodiment of Fig 6, for example.

I do not think a divisional is required at ✓ this stage, though you could consider one in the future to maintain uncertainty for competitors you mentioned.

Please let me know if you disagree with my analysis of D1 or D2 above, particularly with respect to modifications I’ve suggested may be obvious.

Also confirm that, in your opinion, neither D1 or D2 are CGK.

D1 and D2 are US patents so do not affect FTO in Europe or the UK.

Also both will have expired now.

Let me know of your wish to accelerate prosecution, eg because of suspected infringement.

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MARKS AWARDED 14/29

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