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Claim Integers

1a A stockless anchor, comprising:

1b a shank (10) having a head end (12) and a crown end (16); and

1c a fluke arrangement (14) connected to the shank (10) at the crown end (16);

1d characterised in that the fluke arrangement (14) includes:

1e a bill (22) for penetrating the seabed; and

1f a pair of blades (21) disposed symmetrically on either side of a centre line (24)

lying in a plane (x, x', x'', x''') that includes the shank (10);

1g wherein the distance between the outermost edges of the blades (21)

increases from the front to the rear so as to be widest at or close to the rear of the fluke arrangement (14).

2a An anchor as claimed in claim 1,

2b wherein the shank (10) includes an articulated part (18)

2c which is pivotable with respect to the fluke arrangement (14).

3a An anchor as claimed in claim 1 or 2,

3b wherein the bill (22) lies on or close to the centre line (24).

4a An anchor as claimed in claim 3,

4b wherein the fluke arrangement (14') is fixed with respect to the shank (10').

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5a An anchor as claimed in any preceding claim,

5b wherein the blades (21) extend from the centre line (24)

5b and define a central ridge extending to the bill (22).

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CONSTRUCTION

NB. the reference numbers used throughout the claims are not construed as limiting the terms of the claims, but merely as aiding the clarity thereof by enabling one to see examples in the figures. I will for this reason leave out the ref. numbers in my discussion below.

Technically, there are some minor mistakes, for example 14' should also be included for the fluke arrangement in claim 1, i.e., 'fluke arrangement (14; 14)', but that it a minor thing and not worth trying to correct post-grant.

1a

'a stockless anchor' – stockless, means an anchor without a stabilising portion or a 'stock' at the head end of the anchor (or elsewhere on the anchor), because p.3, l.12 refers to 'traditional stockless anchors' as shown in Fig 2 of doc C, and fig 2 of doc C is compared to the anchor having a stock 7 in figure 1 of doc C (see p.11, l.10-11). Any anchor that has a stock is not a stockless anchor.

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The feature of having a self-burying and self-righting capability described at p.4, l.6-7 is not intrinsic to the term 'stockless anchor' because that sentence talks of the provision of 'an anchor of the type known as a 'stockless anchor' and having a self-burying and self-righting capability' – Thereofre the capabilities mentioned are separate from the meaning of the term 'stockless anchor'.

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Any anchor that has a stock is not a stockless anchor.

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'comprising' means including at least the following features and possibly further features, because comprising is used in this way in conventional drafting practice.

1b

'a shank' – includes, but is not limited to the elongate shanks 10, 10' described a p.3, l.28 and p.4, l.35 and shown in the figures. (It helps to orientate the anchor, and provides a link between the end of a cable or mooring chain and the rest of the anchor)

1

'having' means including at least the following features, and possibly further features because it is the normal meaning of the term.

'a head end' – the end which is attachable to a cable (see p.3, l.29), or mooring chain (p.4, l.17)

1

'a crown end' – attached or attachable to the fluke arrangement (see p.3, l.29-30)

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1c

'a fluke arrangement' – arrangement means that this is a collection of one or more flukes, including, but not limited to the exemplary fluke arrangement 14 described.

'connected to the shank' - this wording could mean either directly, or indirectly connected to, either by an actual connecting part, or simply being integral with. It must encompass the embodiments shown, wherein, in figure 4, the fluke arrangement 14' is directly connected to the shank 10', and also that of figures 1 to 3, wherein the fluke arrangement 14 is connected via an articulation, or a hinged part (18), (p.4, l.9). Furthermore, because claim recites the articulated part (18), connected to must include at least that, but must not be limited to it, otherwise claim 2 would cease to provide a limitation. (this is known as the repercussive effect)

'at the crown end' – as distinct from the other end.

1d

'characterised in that' – this is used in EP practice to state that anything before this phrase is known in one document, and anything after this phrase is not known from that document. The description highlights doc C (p.3, l.8), but does not state over which part of doc C this two-part form has been drafted. It cannot be relied on as definitively accurate, but may help to construe the patentee's meaning of some features relative to the prior art referenced in the description.

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'includes' – means that the fluke arrangement has the following features and could also have further features.

1

1e

'a bill' – the bill includes, but is not limited to the pointed bill 22 shown in the figures, and described as a 'point' at p.3, l.36. A point is not necessarily a sharp point. The bill in figure 2 does not appear to have a sharp point and would be included in the claimed wording.

'for' = suitable for (cf. the *Virgin Atlantic* case)

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Therefore 'a bill for penetrating the seabed' means a part of the fluke arrangement is able to be driven into the seabed (for example as described at p.4, l.17-18, which describes a bill with further features, but gives us the meaning of 'penetrate' even so)

1f

'a pair' means more than simply two, the two have to be related in some way so as to function together.

'of blades' – this includes the exemplary blades 21, which form a structure similar to a back-to-back pair of plough-share blades (p.3, l.33-34), are wing shaped and extend in a concave curve (p.3, l.36), but the claimed blades are not limited to

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the exemplary blades shown. Especially given the description at p.4, l.3 to 6 explains that separate plates 19 are bent and welded to form a contiguous structure, but that alternative forms of construction are possible. One example is given where the two blades form a single piece, but seeing as it is explained to be an example, the blades need not be a singular piece. The skilled person would understand all the embodiments described to be within the scope of claim 1, which is the only independent claim.

Therefore the pair of blades are not limited to a single piece blade.

'disposed symmetrically on either side of a centre line lying in a plane that includes the shank' – this does not mean that the blades themselves are symmetrical as singular blades, but that they are symmetrical to one another, being disposed/located such that the centre line is a line of symmetry between them. This is described at p.4, l.11-12, and means that the fluke arrangement 14 as a whole will be symmetrical. This is consistent with the embodiment shown in figure 2 (which shows a plan view).

1

1g

' the distance between the outermost edges of the blades' this will be construed as the outermost edges in the plan view (as shown in figure 2). The blades is interpreted as the pair of blades, for consistency with the earlier reference in the claim.

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'increases from the front to the rear' – the front or the rear do not have antecedent basis in the claim; however, to be consistent with the figures, this will be construed as meaning in the direction of travel of the anchor as it is pulled along the seabed when in use, which is consistent with the effect given in p.4, l.31-32 of this feature.

1

'so as to be widest at or close to the rear of the fluke arrangement':

'at or close to' means either one of at, or close to. At would be construed as directly at, whereas close to, means toward the rear.

The overall phrase means that the area of the blades is greater in the rearmost half of the fluke arrangement (see p.3, l.35). It follows that 'close to' would mean closer than halfway along the blade.

1

The purpose is such that the resistance will increase when the fluke digs further into the seabed due to the increased width (see p.4, l.31-33).

I will therefore construe this wording to mean that the overall area of the blades of the fluke arrangement is larger at the rearmost half of the fluke arrangement.

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2a

'...as claimed in claim 1' – this means including all the features of claim 1, as well as the following features.

2b

'includes' – see above in claim 1

'an articulated part' – includes but is not limited to the exemplary hinged part 18 (see. p.4, l.9-10), which includes a pivot pin 28. The function is that the part of the shank attached to the fluke arrangement can move relative to the part which is not. Thereby the fluke arrangement can pivot relative to the bulk of the shank

1

2c

'which is pivotable with respect to the fluke arrangement'.

'pivotable' means that the articulated part (and thus the fluke arrangement) can pivot.

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3a

'as claimed in claim 1 or 2' – means including all of the features of either: claim 1; or of claim 2 (which includes the features of claim 1) and the following features.

That is, either of:

- 1+2+3
- 1+3

3b

'lies' – means 'is', or 'is provided' – normal meaning (and p.4, l.16)

'on or close to' – the 'or' means either of those locations.

'the centre line' – as described in claim 1.

This is the same as being in (or very close to) the plane of symmetry described at p.4, l.22 to 24 and means that the likelihood of twisting is reduced.

Similarly, the bill is described as being provided on the centre line, such that when drag is applied by the cable the bill is driven into the seabed. (p.4, l.16-18).

This is describing a fluke arrangement with curved blade, which is not claimed; however, the curved shape is described as providing a self-righting action, so the location of the bill is understood to provide the 'being driven into the seabed' function.

Therefore lies on the centre line, means that the bill will be driven in to the seabed when drag is applied, in use.

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4a

'as claimed in claim 3' means including all the features of claim 3 (as discussed above), and the following features.

That is, either of:

- 1+2+3+4
- 1+3+4

Seeing as claim 4 refers to features of the embodiment in figure 4, and is inconsistent with claim 2 (claim 2 requiring a hinged part, and claim 4 requiring the fluke arrangement to be fixed), it appears there is a mistake in the dependency. Instead, claim 4 should be dependent on claim 1 or claim 3 when not dependent on claim 2. (the claim order could be changed to make that simpler)

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4b

It is noted that the reference numerals in claim 4 are those used in figure 4, and so it would be understood to be intended to refer to that arrangement.

'is fixed with respect to the shank' – 'is fixed' could mean either attached (but still able to rotate), or fixed so that it cannot rotate or pivot. Seeing as the wording 'with respect to' rather than just 'to' are used, one might expect the latter. This is consistent with what is shown in figure 4, and described at p.4, l.34-40, as having no hinge, as well as the benefit (in some situations), of being structurally simpler, and stronger.

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Therefore, this is interpreted as the fluke arrangement being fixed and thus not able to move relative to the shank.

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5a

'...as claimed in any preceding claim' means including the features of any of the previous claims, in the combinations set out therein, as well as the following features.

That is, claims:

- 1+5
- 1+2+5
- 1+2+3+5
- 1+3+5
- 1+2+3+4+5 (although note the mistake mentioned in claim 4)
- 1+3+4+5

5b

'the blades' – interpreted as 'the pair of blades' referred to in claim 1.

'extend from the centreline' means that a part of each blade is at the centreline.

'define' – means the same as 'forms' on p.4, l.1.

'central' – i.e., at the centre line – Note that other claims have used 'at or close to' e.g., claim 4, so a location without such tempering would be construed as meaning precisely central (or very very close to that because manufacturing tolerances would apply)

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'ridge extending to the bill' – a similar ridge is described at p.4, l.1-2 as a ridge extending upwardly from the bill. It follows that the ridge extending to the bill extends downwardly to the bill and at least includes the exemplary ridge described.

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INFRINGEMENT

Doc B is a patent that includes description of a product being manufactured and seems to be being sold for vessels in Aberdeen (i.e., in the UK). I will analyse the product as in doc B.

It is noted that actions, rather than products infringe rights; however the term infringe used with respect to a product herein means that the product would infringe if an infringing act of s60 were performed in relation to it.

Claim 1

1a – present ('anchor', p.8, l.19; and has no stock, as shown in the figures)

1

1b – shank – present – 52

- head end – present – the hole at 52a is connectable to a cable
- crown end – present - 52b is connected to the fluke

1

1c – present – fluke 52 is a fluke arrangement and is mounted on the shank (p.8, l.32) at the correct end (see the figures.)

1d – only relative terms for the claim

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1e – present – p.9, l.7-8 & 10, the fluke digs into the holding ground (which is the sea bed, c.f., p.8, l.7) due to its shape, and as shown in figure 1, there is a rounded point at the front of the fluke 53.

1f – present – the fluke is in the form of two curved and tapering plates 56, 57, which, as shown in figure 2 are provided symmetrically either side of a central line in a plane including the shank 52

1g – present (as per the construction above) - as shown in figure 2, the greatest width is more than halfway from the part of the fluke that digs in to the seabed, and the area of the 'rearmost half' of the fluke is larger. The fluke 53 shown in doc B would indeed provide greater resistance as the fluke digs further into the seabed.

Therefore, the anchor of doc B infringes claim 1.

It is noted that even if the anchor of doc B had differed from claim 1 by a different construction, the Actavis questions could be applied to the question of infringement, in particular by a consideration of whether the different parts thereof functioned in the same manner, if such same method of functioning was obvious, and whether the patentee intended strict compliance with the claimed wording anyway to exclude the difference.

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Claim 2

2a – present – see above for claim 1

2b – not present – there is no suggestion in doc B of any articulation or pivoting. Instead, there is an aft limb 52b that extends away from the shank 52a, but is fixed to both parts.

2c – not present – as above for 2b.

Therefore claim 2 is not infringed by the anchor in doc B.

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Claim 3

3a – when dependent on just claim 1 – present (see above)

- when dependent on claim 2 – not present (see above)

3b – present – as shown in figure 2 of doc B, the bill (as above, the front, rounded point of fluke 53) is on the centre line, in line with the shank

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Therefore, claim 3 is infringed by doc B when it is dependent on claim 1, but not infringed when it is dependent on claim 2.

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Claim 4

4a – present when dependent on claim 3 and 1 (but not claim 2) – see above

- not present when dependent on claim 1 and 2 and 3 – see above.

As noted before, the dependency on claim 2 (via dependency on claim 3, that can depend on claim 2) is an error.

4b –present - the fluke 53 is fixed such that is cannot move relative to the shank.

It is noted that the movement described at p.9, l.11-14, where one plate becomes displaced lower than the other is the whole anchor rotating, rather than the fluke moving relative to the shank.

Therefore, claim 4 is infringed when claim 4 does not depend on claim 2 (i.e., when claim 4 depends on claim 3 as dependent on claim 1 alone); however, claim 4 is infringed when it is dependent on claim 2 (i.e., when claim 4 depends on claim 3 as dependent on claim 2).

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Claim 5

5a – see above for analysis

when dependent on:

- 1 - present
- 1+2 – not present
- 1+2+3 – not present
- 1+3 - present
- 1+2+3+4 – not present
- 1+3+4 - present

5b – present – as can be seen in the figures, each of the plates 56 has a part at the centreline (below the shank 52)

5c – not present – the fluke has as curved circular surface as the inner surface (p.9, l.5-7), and therefore has no ridge, as consistent with what is shown in the figures thereof.

Therefore claim 5 is not infringed, regardless of its dependency.

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NOVELTY

Doc C is full prior art (for novelty and inventive step) because it was published on 30 May 2000 and was therefore available to the public at the filing date of the patent A, 1 Jan 2008.

Doc C includes three disclosures that are prior art and may be assessed separately: a 'fisherman's anchor' (fig 1); a stockless (/traditional stockless) anchor (fig 2); and the 'improved anchor' (fig 3 & 4).

The fisherman's anchor and stockless anchor were known even before the filing date of doc C.

Some matter is described as 'known' in doc B (p.8, l.8), but that was 'known' as of 1 Jan 2017, not apparent if it was known before 1 Jan 2008, so will not be assessed here

The Fisherman's anchor

Claim 1

1a – not present – stock 7 means this is not a stockless anchor

1b – present – shank 1, head end 6, crown end 2

1c – present – flukes (palm) 4 make an arrangement with arms 3 that are connected to the crown end 2

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1d – no features to assess

1e – present - bill/point 5

1f – present – the fluke has a loosely triangular shape, as shown in figure 1, where each half of the triangle could be a blade. It is symmetrical about a plane in which the shank 1 sits (NB as the shank 1 is vertical, the plane can include any vertical plane)

1g – present – when this is assessed in relation to the width of the blades as extending from the end which engages the sea-bed, the width is indeed broader as the end away from the end that engages the sea-bed first in a direction of travel.

Therefore claim 1 is novel over the fisherman's anchor, because the fisherman's anchor has a stock.

Claim 2

2a – not present (as above)

2b –not present – no indication of a hinge in the description of the fisherman's anchor (p.11, l.5-13) – there is some sort of component halfway up the shank 1 shown in figure 1, but it is not disclosed what this is, let a long that it is hinged.

Therefore, claim 2 is novel over the fishermans' anchor.

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Claim 3

3a – see above (for both dependencies)

3b –present – as can be seen in the figures, given the centreline is also the line of symmetry of the fluke 4.

Therefore claim 3 is novel over doc C by virtue of its dependency, in either case, but the feature of claim 3 per se is not novel over fisherman's anchor.

Claim 4

4a – not present (for either dependency – which arise by claim 3's multiple dependency) see above

4b – present – the shank 1 is fixed to the arms 3 which are part of the fluke arrangement with flukes 4.

Therefore claim 4 is novel over doc C by virtue of its dependency, in either case, but the feature of claim 4 per se is not novel over fisherman's anchor

Claim 5

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5a – not present (by dependency on at least claim 1, which it is in any case) – see above

5b – Not present – there is no central ridge on the 'blades' of thh fluke (4) – the arms 3 do extend below the fluke (4) as shown in figure 1, but these do not form a blade-defined ridge.

Therefore, claim 5 is novel over the fisherman's anchor

The traditional stockless anchor

claim 1

1a – present – it is called a stockless anchor, p.11, l.14

1b –present – shank 1', head end 6', crown end 2' (p.11, l.15-19)

1c – present – the twin flukes 4' are a fluke arrangement

1d- no features...

1e – present – each of the twin flukes 4' have a pointed end, shown in figure 2 that 'engage the ground' p.11, l.19 – To fall within the wording of the claim, there need only be one bill, but there is nothing to say there can't be more than one.

1f – present – each of the twin flukes 4' are a blade that are arranged symmetrically around the central line, as shown in figure 2.

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1g – Not present – the twin flukes are wider, and have more area toward their front (i.e., the part that engages with the sea-bed first), as shown in figure , so even though the distance does increase from the front to the rear along parts of the flukes 4', this feature is not met overall.

1

Therefore claim 1 is novel over the traditional stockless (TS) anchor

Claim 2

2a – not present – see above

2b – present – p.11, l.18 – states the flukes are 'pivoted at the crown and' – meaning they can move relative to the shank.

1

2c – present – the flukes can pivot (as above)

Therefore claim 2 is novel over TS anchor only by virtue of its dependency on claim 1. The features therein are known.

Claim 3

3a – not present (see above, claim 1, on which this always depends, is not all present)

1

3b – not present – the tips of the flukes 4' are located away from the centreline, such that only one of the flukes may engage the seabed in some circumstances (p.11, l.20-22)

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Therefore claim 3 is novel over the TS anchor (whether it is dependent on claim 1 or claim 2)

Claim 4

4a – not present - see above (regardless of dependency, because it is always dependent on claim 1)

4b – not present – p.11, l.18 – the fluke arrangement is pivoted

Therefore, claim 4 is novel over the TS anchor

Claim 5

5a – not present - see above (regardless of dependency, because it is always dependent on claim 1)

5b – not present – no part of the flukes 4' are at the centre line

5c – not present – there is no ridge extending to or from the pointed parts of either fluke 4'

therefore, claim 5 is novel over the TS anchor.

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the Improved Anchor

Claim 1

1a –present – even though lateral extension 110 is called a stock at p.12, l.22, and functions in a similar way (albeit at a different end of the anchor to the TS anchor), the extension 110 is described as being a separable element p.12, l.21-22, and therefore, there is a disclosure of a stockless anchor when the extension is removed (i.e, separated from the rest of the anchor), and therefore there is a disclosure of a stockless anchor. The lateral extension is part of the stock 103. The stock 103 acts as a pivot for the anchor, and so cannot be removed in its entirety. Given it's function as a pivot, the stock 103 would not meet the requirements of claim 1 as being stockless anchor (as compared to a fisherman's anchor with a stock at the head end).

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1b – present - shank 100 (p.11, l.39) has a head end 112 (p.1,2, l.1) and a crown end (p.11, l.42).

1

1c – present – 101 are flukes, and so are a fluke arrangement, connected to the shank 100 via the crown 102

1d – no features...

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1e – present - the points 105 (p.1,2, l.5, figure 3) act as the claimed bill that engage or enter the ground (p.12, l.19)

1

1f – present - As shown in figure 4, each of the flukes 101 are arranged symmetrically across the line of the shank 100.

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1g – present – as shown in figure 4, and as stated on p.12, l.5, the flukes taper to a point, and are widest at the end by the crown end. See also, p.12, l.10-11 for a description of the outer edge 108 diverging.

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Therefore claim 1 is not novel over the Improved Anchor of doc C, because all the features are disclosed therein.

(It is noted that a court might decide differently on the interpretation of the 'stockless anchor')

Claim 2

2a – present – see above

2b – present – the 'stock' 103 of the anchor acts as a pivot for the 'fluke unit' (p.11, l.40-p.12, l.1)

Therefore claim 2 is not novel over the 'Improved anchor'

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Claim 3

3a – present – see above (for either dependency)

3b – present – when 'close to', because at p.12, l.13-16, it is stated that it is desirable to keep the spacing between the flukes as small as possible, meaning the bills will be close to the centreline.

However, if the claim read 'the bill lies on the centre line, this would not be present in the improved anchor, because there must be a space between the flukes for the shank to sit between (p.12, l.16-17)

Therefore claim 3 at present is not novel over the improved anchor, but there would be an amendment to come down to the 'lies on the centre line' alternative to make it novel.

Claim 4

4a – present – see above

4b – not present – the 'stock' 103 acts as a pivot – p.11, l.41.

Therefore claim 4 is novel over the Improved anchor.

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Claim 5

5a – present (except when dependent on claim 4) – see above.

5b – not present – no part of the flukes 101 are at the centre line (they are spaced therefrom (p.12, l.13-17)

5c – not present – there is no disclosure of a ridge in relation to the Improved Anchor.

Therefore claim 5 is novel over the improved anchor.

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Summary

Novel: Y

not novel: X

Claim	Fishermans'	TS	Improved
1	N	N	X (NB. dependent on 'stockless')
2	N	N (by dep. , but features known)	X
3	N (by dependency) But features known	N	X (but possible amendment to ' <u>on</u> the centre line')
4	N (by dep., but features known)	N	N
5	N	N	N

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INVENTIVE STEP

We will apply Pozzoli to all the claims as of 1 Jan 2008, the priority date (which is, in this case, the filing date) of doc A.

1a who is skilled person?

The skilled person is the designer of anchors, because this is what the invention relates to (p.3, l.4)

1b what is their common general knowledge (CGK)?

The two types of the generic anchor shown in doc C are part of the CGK. That is the fisherman's anchor, and the 'traditional stockless anchor' because: (p.11, l.5) the traditional 'fisherman's' anchor is traditional, meaning from a tradition, which has been around for a long time; and the stockless anchor was 'commonly used' in the 'today' of 2000. the traditional stockless anchors are also referred to in the patent at p.3, l.12.

These two anchors are shown in figures 1 and 2 of doc C respectively.

One could consider p.8, l.8-15 (that greater depth for an anchor is better, and therefore some target-characteristics for anchors) to be part of the CGK; however that was known as of 2017, which is later than the filing date of doc A.

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There is no evidence that it was known at the filing date of the patent, 1 Jan 2008. I will therefore not consider it to be part of the CGK.

The skilled person and their common general knowledge (CGK) is the same for each claim, and so will not be repeated.

Claim 1...

Following the analysis above, claim 1 is known, and therefore not inventive; however, if 'a stockless anchor' were interpreted differently, to not include the anchor of the 'improved anchor' then it would be novel, and the next question to determining would be inventive step. I will look at that accordingly, as if the improved anchor's stock 103, meant it was not a 'stockless' anchor.

2. Inventive concept of claim 1

The inventive concept of claim 1 is to provide a self-burying and self-righting stockless anchor (p.3, l.5-7), which is done with a pair of blades that increase in width from the front to the rear and thereby increase the resistance to turning over when dragged along the seabed (p.4, l.30-33)

3. difference with state of the art?

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The state of the art is the 'improved anchor' of document C. The difference therewith is that the anchor of C is not a stockless anchor. Instead it has a stock 103 that functions as a pivot.

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4. Are those differences obvious?

In order to change the 'improved anchor' from an anchor with a 'stock 103' to one without a stock, the skilled person would have to remove the stock 103 from the anchor.

The stock 103 acts to provide a pivot (p.11, l.41), and indeed if the stock 103 were simply removed, there would be nothing to attach the flukes 101 to the shank 101 and the crown 102. However, if the skilled person were to instead replace the stock 103, with the crown end 2' of the traditional stockless anchor (part of the CGK), with the flukes 4' secured together as a unit 3', he or she would arrive at a stockless anchor. The question is therefore, would the skilled person make such a change? It is not enough to state that the skilled person could combine the state of the art with the CGK, but they would have to actually do so.

To this end, it is noted that the lateral extension 101 connected to the 'stock'103 is separable (p.12, l.22). It may not be too large a jump to decide that the stock 103 could be replaced also.

Page 12, l.3 states that the flukes 101 are integral to the crown 102 and each other, and may be suitably formed as a single steel casting. This would motivate the skilled person towards removing the 'stock 103' and using flukes 101 similar

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to flukes 4' without a stock 103, but connected to one another. It would also avoid the skilled person taking other features of the flukes 4', such as their lack of tapering, which would then result in something outside the scope of claim 1. Instead, the skilled person would arrive at the subject-matter of claim 1.

Therefore, claim 1 is not inventive (even if it were interpreted differently, as explained above).

Claim 2

Similarly to claim 1, claim 2 is not inventive because it is novel; however, if the articulated par required instead an actual substantive part of the shank, rather than simply the ability to pivot the fluke arrangement, it would be novel over the improved anchor, and we could discuss inventive step.

The inventive concept of claim 2 is to allow part of the shank to extend flat along the seabed (p.4, l.20), thereby enhancing the burying action (p.4, l.38-41).

The burying action is a benefit of claim 2, because the indication of a lack of a hinge is noted as being acceptable with a heavier anchor where the weight of the anchor enhances the burying action. It follows that the hinge (which is not

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present on the heavier anchors embodied, but is used on lighter anchors) would meet the same function as the weight, that is of enhancing the burying action.

The difference with the state of the art is that there is no distinct articulated portion of the shank in the 'improved anchor'. Instead, the shank 100 is just a straight portion.

Is that difference obvious?

In our hypothetical situation, the skilled person would not be able to arrive at the claimed invention, because, nowhere in the prior art is disclosed a shank with separate portions, one being articulated, or hinged to the other.

Claim 2 would therefore be inventive if such a construction were taken. (but it is not in our analysis.)

Claim 3

Again, claim 3 is not inventive, because it is not novel over the improved anchor, but if 'on or close to' meant 'on' the centre line, then it would be novel, and inventive step could be discussed.

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The inventive concept of claim 3 is to ensure that the fluke digs naturally into the ground, even if the anchor is not in an 'upright' position (p.4, l.20-23, as well as p.4, l.16-18 – although the latter passage also requires a curved blade shape)

The difference with the state of the art is that the bill lies precisely on the centre line. Instead, in the improved anchor, there is a spacing between two bills, in which the shank 100 can sit when it is folded.

Is that difference obvious?

This feature is provided in the 'fisherman's anchor', which is CGK. However, the skilled person would not combine the features of the large, cumbersome fisherman's anchor with the improved anchor. In particular, it is stated in C, both at p.12, l.27-29 and p.12, l.17-18, that the anchor can be stowed flat when not in use, and at p.4, l.16-17 that the spacing needs to be large enough for the shank to fit between. It would not be sensible for the skilled person to remove such spacing, nor would it be apparent how to go about including the fluke of the fisherman's anchor in a vastly different arrangement of the improved anchor.

Therefore, claim 3 is inventive. (if the alternative interpretation is taken, as above).

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Claim 4

Claim 4 could be inventive by virtue of its dependency on claim 3 as amended, but the features will be considered here in particular

the inventive concept of claim 4 is to be structurally simpler and stronger (p.4, l.39-40).

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The difference with the state of the art, is that the 'improved anchor' is able to pivot.

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Is that obvious?

Those changes are not obvious, because the design of the improved anchor needs to be folded flat for stowing (p.12, l.27-28). If the fluke arrangement were fixed it could not be folded flat, and therefore the skilled person would not (even if there was disclosure in his CGK) arrive at the subject-matter of claim 4.

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(It is noted that the fishermans' anchor provides the knowledge of fixed anchors)

Therefore claim 4 is inventive.

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Claim 5

The inventive concept of claim 5 is not apparent from the patent, so the claim would simply be construed as above.

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The difference with the state of the art, the improved anchor (when dependent on anything other than claim 4) is the presence of a central ridge, and blades that extend from the centreline.

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That would not be obvious to the skilled person, because the improved anchor requires a spacing between the blades into which the shank may sit. (p.12, l.16-17). There is no opportunity for the skilled person to introduce a central ridge, even if the skilled person knew of a central ridge from the CGK (such as possibly the arm of the fisherman's anchor – dismissed earlier in the novelty analysis)

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Therefore claim 5 is inventive.

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SUFFICIENCY

There are no sufficiency issues in the patent

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AMENDMENT

One option for amendment would be to amend claim 3 to come down to 'lies on the centreline' – i.e., to delete the 'close to' option. The analysis for the inventive step of this has been done above (for the hypothetical where 'close to or on' meant 'on'. It is inventive, and it still catches the infringement.

There would also be an option to include claim 4 into claim 1, but claim 3 would also need to be included, given claim 4 is dependent on claim 3, so the above amendment may be preferable. The claim 4 amendment would have the benefit of avoiding the innocent infringer defence for Bettermore, as it is in the claims already published. If claim 4 is included in claim 1, then claim 2 would need to be deleted (because it is inconsistent with claim 4).

A yet further option for an amendment would be to include into claim 1, from page 3, lines 36-37 the feature that "*the blades extend in a concave curve*". The benefit of this being described at p.4, l.18, as improved self-righting.

This is novel and inventive over the prior art – the improved anchor is said to be possibly 'dished slightly' p.12 l.6-7, but that only to provide enhanced holding power, not to perform self-righting, and slightly implies not as large a curve as a convex curve, and seeing as those anchors are folded flat for storage, it cannot be a major curve.

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This also still covers the Bettermore NG, which has a concave upward facing burial surface (p.8, l.32-33), and for similar reasons.

Insubstantial, minor errors, such as referring to the pair of blades, rather than simply the blades in claim 4 should not be amended at this stage. A court can construe their meaning, and the purpose of post-grant amendment is to maintain validity, rather than tidy up minor clarity issues.

That being said, it would be prudent to correct the dependency of claim 4 as explained above, if the issue is not made moot by the amendment to claim 1.

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ADVICE

Infringement summary:

Claims 1, 3 (when dependent on claim 1 alone), 4 (when dependent on claim 1 and 3 alone) are infringed

Claims 2 and 5 (& 3 and 4 when dependent on claim 2) are not infringed.

The act of manufacturing a patented product is an infringing act under s60(1). Additionally, the display may have been an offer for sale, and it would appear Bettermore at least intend to sell the anchors, even if they have not done so yet (though they probably have because they've been manufacturing for a few years).

Validity summary

Claims 1 to 3 are invalid because they are not novel.

Claims 4 and 5 are both novel and inventive.

There is a saving amendment for claim 3 (as above), which would render it novel and inventive (and still infringed).

Therefore, Bettermore NG at present infringe valid claim 4, and the patentee's position could be even further improved by an amendment to claim 3 (see above).

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We should check how long the 'few years' that Bettermore have been manufacturing Bettermore NG – if it is before our filing date, then in fact it could be novelty destroying for our patent, if it is after then it will be infringing. Depending on whether it was before or after publication would affect the damages Bettermore are liable for.

After 6 years, we can no longer claim damages in the UK, so that may be relevant if they manufactured before then.

The patent could be amended by either a UK s27 amendment for just the UK patent, and similar provisions will apply to the other countries, including Norway and France. Alternatively, the central limitation facility at the EPO could be used, which requires narrowing amendments, and would be cheaper for the client than amending everywhere separately.

It would be sensible to make the amendment before approaching Bettermore about a licence, because they would otherwise be able to oppose the amendment.

The patent could also be amended in infringement proceedings, but seeing as the client wants to enter licence agreements, they are unlikely to want to begin proceedings.

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A licence would seem to be a good strategy. The client should be specific about where Bettermore can manufacture, use and sell the product. For example, they could be given a licence to make, use and sell the infringing anchors for oil rigs and drilling vessels in Scotland, but not to make, use or sell anchors for the commercial shipping market.

The client will need to consider the other licences they already have in place with other companies, to ensure they don't breach any terms of those that might prevent licences to others, for example, do any of them have exclusive, or sole licences for particular uses of the patented anchor, or for particular geographical markets.

The client should ensure renewal fees continue to be paid, in all the relevant jurisdictions. They could set up a renewals provider to do so if they haven't already.

Seeing as the product described in doc B infringes doc A, it follows that the claims of doc B will potentially be invalid (although they could include further novel features which might make them valid). In any case, we could file third party observations citing doc A (as well as doc C) as prior art. (although, if we are wanting to get a favourable licence deal, we might not want to be too antagonistic toward Bettermore)

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Furthermore, the client should keep a watch on patent application of doc B to see what comes thereof. There is a possibility that cross-licences or similar may be useful if Bettermore do get a granted patent from it. If they were to get a patent granted that covers the client's products, or even the client's licensees' products, it could have a negative impact on our client's business.

Of course, the ownership of a patent or a patent application does not confer freedom to operate for Bettermore.

It is noted that any protection that doc C will have had has expired (after 20 years), although there could feasibly still be patents that claimed priority thereto going for a few more months. We should check that.

The client's letter noted that Bettermore NG worked on the same principle, which, while in light of the above evidence does not need to be explored in detail, would potentially have given rise to Actavis type infringement if there were differences that functioned in substantially the same manner.

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