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**D E C I S I O N**  
**of 14 October 2003**

**Case Number:** T 0012/02 - 3.2.1

**Application Number:** 96107172.7

**Publication Number:** 0759408

**IPC:** B66D 1/74

**Language of the proceedings:** EN

**Title of invention:**  
Winch with two speed ratio drum

**Patentee:**  
HARKEN INC.

**Opponent:**  
Lewmar Limited

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 54, 56, 114(2), 100(c)

**Keyword:**  
"Added subject-matter (no)"  
"Late submitted documents (not admitted)"  
"Novelty (yes)"  
"Inventive step (yes)"

**Decisions cited:**  
-

**Catchword:**  
-



Case Number: T 0012/02 - 3.2.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.1  
of 14 October 2003

**Appellant:** Lewmar Limited  
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**Representative:** Naylor, Matthew John  
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**Respondent:** HARKEN INC.  
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**Representative:** Flosdorff, Jürgen, Dr.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 21 November 2001  
rejecting the opposition filed against European  
patent No. 0759408 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** S. Crane  
**Members:** Y. A. F. Lemblé  
H. Preglau

## Summary of Facts and Submissions

I. The appeal is directed against the decision of the Opposition Division to reject the opposition against European patent No. 0 759 408. The patent has been opposed on the grounds that the subject-matter of the patent extends beyond the content of the application as filed (Article 100(c) EPC) and on the grounds of lack of novelty and lack of inventive step (Article 100(a) EPC).

II. The Opposition Division held that the grounds for opposition mentioned in Articles 100(a) and (c) EPC did not prejudice the maintenance of the patent unamended, having regard to the following documents:

D1: DE-C-719 030

D2: Lewmar Service Manual Volume III (1983)

D3: Lewmar Marine Limited, Winches and Marine Hardware Catalogue 1978/79

D4: US-A-2 538 061

III. Within the one month time limit fixed by the Board before oral proceedings, the Appellant filed the following additional documents:

D5a to D5d: evidence of public availability in 1991 of a 1000 power sheave racing winch

D6: extracts from a Harken catalogue dated 1989

D7a and D7b:extracts from an undated Barbarossa catalogue and a related price list dated 1974

and submitted further arguments in support of the previously raised grounds of lack of novelty and lack of inventive step.

IV. During the oral proceedings held on 14 October 2003 the Appellant requested that the decision to reject the opposition be set aside and the patent revoked in its entirety. The Respondent (Patent Proprietor) requested that the appeal be dismissed and the maintenance of the patent as granted.

V. Independent Claim 1 as granted reads:

"A sailboat winch for hauling in a line, in which a drum is rotatably mounted on a support and means are provided for rotating the drum, characterized in that said drum (12, 30) comprises an upper cylindrical portion (16) and a lower cylindrical portion (22), said lower cylindrical portion having a diameter greater than the upper cylindrical portion, said upper and lower cylindrical portions having a width sufficient to enable more than one turn of line to be wrapped thereon, and a continuous lip (24, 40) projecting outwardly between said upper and lower cylindrical portions to allow alternate and independent use of said portions for hauling in a line at different speed ratios."

Dependent claims 2 to 7 define features additional to the subject-matter of claim 1.

VI. The Appellant's submission made in writing and at the oral proceedings, insofar as they are relevant to the present decision, can be summarised as follows:

Granted claim 1 contained subject-matter which extended beyond the content of the application as originally filed and therefore violated Article 100(c) EPC.

More particularly, granted claim 1 did not require anymore for the lip to fulfil the essential function of preventing slippage from one portion of the drum to the other. The deletion of that essential feature from the originally filed independent claims 1 and 3 amounted to an unwarranted extension of subject-matter beyond the content of the original disclosure.

Moreover, there was no basis in the originally filed documents for the last lines of granted claim 1 "to allow alternate and independent use of said portions for hauling in a line at different speed ratios". The "independent use" of the two portions of the drum defined by claim 1 as granted included the possibility of leading the line over the lip. Such an alternative way of using the winch represented an "independent use" which was not part of the original disclosure. The sole "independent use" disclosed by the application as filed postulated that slippage of the line from one portion of the drum to the other be prevented, a requirement which, as mentioned above, was not present any more in granted claim 1.

Finally, the feature of granted claim 1 "said upper and lower cylindrical portions having a width sufficient to enable more than one turn of line to be wrapped thereon" was not disclosed as such in the application as filed. According to the original disclosure, one turn of line around the drum was already sufficient to obtain the required grip. Apart from the fact that the diameter of the line was not defined in the claim, there was no clear basis for "more than one turn" in the original disclosure.

Granted claim 1 was not novel nor did it involve an inventive step over the prior art.

The late-filed documents were highly relevant and should therefore be taken into consideration by the Board under Article 114(1) EPC. When examining novelty the following preliminary remarks were to be taken into consideration.

The expression "a sailboat winch for hauling in a line" was construed as meaning merely a winch suitable to be used on or with a sailboat and suitable for hauling in a line.

Since the diameter of the line was not specified in the claim, the expression "more than one turn ", when referring to the width of the cylindrical portion, was not a clear limitation and with a very thin line the width of the cylindrical portion would be very short, at the limit infinitesimal. The term "cylindrical" was moreover not to be taken literally and meant "substantially cylindrical" (see column 3, lines 8 to 9 of the patent).

Following these considerations, the capstan of D1 must be considered as a sailboat winch for hauling a line whereby the two drum portions of the capstan had each a shape which defined at least locally a cylindrical portion. Between these portions, D1 showed a projection which was a lip preventing the line from slipping from one portion to another.

In the same way, the sailboat winch of page 22 of D2 or of pages 12 to 3 of D3 comprised an upper main drum having a smaller diameter and an axially shorter lower drum having a larger diameter. The drums had a width sufficient to enable more than one turn of a line to be wrapped thereon. The two drums were separated by a continuous lip for preventing the line from slipping from one portion to another. Thus, these winches were able to allow alternate and independent use of the portions for hauling in a line at different speed ratios.

Should the board be able to recognize a distinguishing feature over the winch of D1 in the fact that the drum was not cylindrical or over the winch of D2 or D3 in the fact that the lip was not continuous, the winch of claim 1 would nevertheless be obvious to a person skilled in the art for the following reasons:

Starting from the winch of D1, it would be obvious to give a cylindrical shape to the drum as an alternative to the concave one, given that a cylindrical shape was well known from conventional sailboat winches (see page 6 of D2).

Starting from the halyard winch of D2 or D3, it would be a simple matter for a skilled person who wanted to provide for an alternate and independent use of the winch, to eliminate the recesses and give a continuous shape to the lip, a measure which was known per se from D1.

VII. The submissions of the Respondent may be summarized as follows:

The late filed evidence cited by the Appellant could have been filed long before, presumably already during the opposition proceedings, and was not relevant to the invention. None of these documents should therefore be admitted into the appeal proceedings.

The capstan of D1 was not a sailboat winch within the meaning of the invention. Moreover, the two drum portions of the capstan had a concave shape and did not define cylindrical portions having a definite diameter.

The halyard winches of pages 20 to 22 of D2 and of pages 12 to 13 of D3 were not adapted for hauling in a line at two different speed ratios. Starting from these known halyard winches, there was nothing leading a skilled person to the claimed two speed winch.

## **Reasons for the Decision**

1. *Extension of subject-matter*

1.1 The objection that the deletion of the essential function of preventing the slippage of the line from



one portion of the drum to the other contravened 100(c) EPC, is, in the view of the Board, not founded.

The decision upon this objection cannot be made on an abstract basis without consideration of the technical context of the invention as filed. Granted claim 1 only reformulates the feature which is alleged to be deleted from claim 1 as filed when it requires "a continuous lip projecting outwardly between said upper and lower cylindrical portions to allow alternate and independent use". This wording stems from column 3, lines 18 to 20 of the A1 publication which specifies that the continuous lip projects in a direction oriented radially outwardly of the drum. Since, for instance, a lip which extends in a direction parallel to the axis of rotation of the drum cannot be considered as projecting outwardly, it implies that the lip must have a certain radial extent.

Considering column 4, lines 3 to 4 and column 3, lines 45 to 55 of the A1 publication where it is specified that it is the lip which prevents the line from slipping and that it is only the radial extent of the continuous lip which prevents slippage, the Board considers that the above reformulation remains within the framework of the original disclosure and does not introduce subject-matter which extends beyond the content of the application as filed.

- 1.2 In the same way, there is no doubt to the Board that the feature of granted claim 1 "said upper and lower cylindrical portions having a width sufficient to enable more than one turn of line to be wrapped thereon" was originally disclosed (see Figure 1 in

combination with column 2, lines 21 to 24 and column 3, lines 37 to 38 of A1 publication).

- 1.3 Finally, the objections and arguments of the Appellant relative to the "independent use" also appear to have been made on a purely semantic basis without consideration of the technical context of the invention as originally filed. There is a clear basis to be found for the wording of granted claim 1: "to allow alternate and independent use of said portions for hauling in a line at different speed ratios" in the original disclosure. Column 3, line 56 to column 4, line 4 of the A1 publication reads: "It will be understood that the two diameter drums of the present invention offers two separate but alternate selections of speed by winding a line on one or the other drum diameters. It is not contemplated that both modes could be used simultaneously or that one line would be wrapped around both drum diameters at the same time". The original disclosure further describes the way the winch of the invention independently hauls in a jib sheet on the upper drum portion in a first mode, or a spinnaker sheet on the lower drum portion in a second mode: see column 3, lines 4 to 13 for the first mode and column 3, lines 34 to 42 for the second mode.

The wording "independent use" in granted claim 1 may include the possibility for the line to be led over the lip from one portion of the drum to the other, this possibility is, however, not something which was precluded by the original disclosure. Thus, it cannot be seen in which way the introduction of this wording represents added subject-matter giving any unwarranted advantage to the Patent Proprietor. It can be conceded

to the Opponent that there is no literal support for the word "independent" in the originally filed documents, there is, however, no doubt on a reading of the originally filed description that the claimed winch with its continuous lip allows alternate and independent use of the cylindrical portions for hauling in a line at different speed ratios.

2. *Construing claim 1*

The claim is directed to a "sailboat winch". This is a readily understood term of the art which refers to a winch which will be used on the deck of a sailboat for working with the various types of line typically found there. An essentially identical term is found for example in D2, a service manual published by the Appellant: "the world's leading manufacturer of yacht winches". The Board can thus not agree with the contention of the Appellant that a "sailboat winch" is any winch which could in some way be used "with" a sailboat, e.g. for towing it into a dock or lifting it out of the water.

The expression "said upper and lower cylindrical portions having a width sufficient to enable more than one turn of line to be wrapped thereon" must be understood in the context of sailboat deck winch used for hauling in and easing out sheets or lines attached to sails (see introductory part of the claim and column 1, lines 34 to 40). The cylindrical portion of the winch must have a width which is sufficient for wrapping the line a number of times around the drum in order to create the necessary friction and avoid slipping. It will be appreciated that the line must be

carefully laid around the drum in spiral turns to prevent overlapping of different coils and avoid what is known as "a riding turn". This is particularly desirable on racing yachts where the line must be hauled in and eased out very quickly.

In this context, the expression "to allow alternate and independent use of said portions for hauling in a line at different speed ratios" is determinative. It means that both cylindrical portions must be adapted for offering two separate but alternate selections of speed by winding a line on one or the other drum diameters.

3. *Late-filed documents*

- 3.1 The additional documents D5a-D5d, D6 and D7a-D7b were filed within the one month time limit fixed by the Board for making written submissions in preparation of the oral proceedings but after expiry of the 9 month period for filing an opposition (Article 99 EPC). According to established case law of the Boards of Appeal the requirement for the admissibility of late-filed facts, evidence and related arguments before the Boards of Appeal is a more restrictive and stringent one than before the Opposition Division (see T 1002/92, point 3.4; OJ EPO 1995, 605). Accordingly, new facts, evidence and related arguments which go beyond the "indication of the facts, evidence and arguments" presented in the notice of opposition in support of the grounds of opposition on which the opposition is based, should only very exceptionally be admitted into the proceedings, if such new material is prima facie highly relevant in the sense that it is highly likely to prejudice maintenance of the European patent in suit.

- 3.2 In the present case, leaving aside the question of its availability to the public, the allegedly prior used winch of D5a-D5d does not comprise a drum having two portions but an upper drum and a lower sheave which can rotate independently of each other.
- 3.3 The winches B1090TCRA/SS and B1090STRA/SS shown in the catalogue D6 comprise each a simple drum rotatably mounted on a support having a lower part of greater diameter, the latter appearing to be fixed.
- 3.4 It is not clearly recognizable how the halyard winch of the Barbarossa catalogue D7a is built. It would appear that this winch is similar to the halyard winches already shown in D2 or D3. No evidence has been presented proving that the separate price list D7b (dated 1974) refers to the winches shown in the catalogue D7a (undated).
- 3.5 Therefore, the Board, exercising its discretion, decides not to admit these documents into the appeal proceedings.

#### 4. *Novelty*

- 4.1 D1, a patent of 1937, describes a capstan for towing watercraft and comprising a slipping clutch to limit the driving torque of a rotating drum to a maximum value. The purpose of this is to reduce the maximum speed at which the craft can be moved so as to avoid damage, e.g. to lock gates or the like. The larger the tonnage of the craft, the slower the maximum speed should be. To facilitate setting by the operator the

control wheel for the slipping clutch is calibrated with corresponding tonnages. The example given is 600 t (page 2, line 96). It is thus wholly apparent that, in use, the capstan will be firmly affixed to the ground and is not a "sailboat winch" within the meaning of claim 1, as explained above, even though, as argued by the Appellant, it could no doubt be used "with", i.e. to tow a sailboat.

Thus, the subject-matter of claim 1 is novel with respect to D1 for this reason alone.

Furthermore, the drum of the capstan does not conform with the requirements of the claim. It comprises two drum portions having each a concave shape to receive two or three turns of a rope to be wrapped thereon. In this type of capstan winch, the rope is not stacked on the drum during a towing operation. As the drum rotates, the concave shape has the important function of bringing the loaded turn of the rope under tension to slip towards the central part of the concave portion having a smaller diameter. The concave shape also induces the necessary friction between the wrapped turns of the rope and between these turns and the drum, in order for the rope to exert high pulling forces for the displacement of watercrafts having several hundred of tons. This mode of operation permits towing of a watercraft along a lengthy path, the same amount of rope being uncoiled from the drum as is hauled-in thereon. Thus, the concave shape of the drum of D1 cannot be compared to the cylindrical portions of the winch of the invention.

4.2 The halyard winches of pages 20 to 22 of D2 and of pages 12 to 13 of D3 are all of a similar construction and, for the purpose of simplifying the discussion, will be referred to simply as the "halyard winch" in the following.

This type of halyard winch comprises an upper main drum portion having a smaller diameter and an axially shorter lower drum portion having apparently a larger diameter. The two drum portions are separated by a scalloped lip.

The halyard winch is used for hoisting or lowering a sail. To this aim, the halyard, which according to page 13 of D3 is a wire cable attached to the drum by a lock screw to ensure even stacking, is first wound on the smooth main drum portion. In order to avoid that the final wraps become embedded in the coils on the main drum with the risk of damaging the wire, the halyard is fed from the main drum to a separate track (the second drum) for the last few turns. In order to facilitate this operation, the lip between the two tracks has scalloped portions.

The Board cannot follow the contention of the Appellant that all of the features of granted claim 1 were recognizable in the halyard winch of D2 or D3. In the opinion of the Board the considerations made by the Appellant in this respect and in respect of the functional effects of the features are biased by the ex-post facto knowledge of the invention.

The specific and dedicated construction of the halyard winch shows that such a winch has been especially

conceived to wind the halyard, first on one portion, then on the next portion of the drum, whereby both portions are intended to be used simultaneously by one and the same line.

The Appellant does not deny this, but says the intention is irrelevant. All that matters is whether the known halyard winch was "suitable" for allowing alternate and independent use of the drum portions for hauling in a line at different speed ratios, i.e. could be used in this way by someone so minded.

Now, there may well be situations where the suitability of a piece of prior art equipment for a use different to that intended is immediately apparent and unquestionable, so that, given identity between the structural features specified in a claim and the prior art, novelty can be put in issue. But this is not one of them. The lip provided between the drum portions of the known halyard winch has scalloped portions which are specifically intended to allow the line to be passed from one portion of the drum to the other. Whether that lip constitutes a "continuous lip" suitable for obtaining the functional effect stated in the claims, namely to "allow alternate and independent use" of the portions cannot be judged in the abstract and is pure conjecture.

In the Board's view, claim 1 cannot be construed by disconnecting the technical features defined therein from the technical context for which they have been conceived and it is improper to derive from the subject-matter shown in D2 or D3 a functional effect which has never been intended. The lip of the halyard



winch cannot be defined as being continuous to allow alternate and independent use of the drum portions for hauling in a line at different speed ratios.

4.3 The Board therefore concludes that the subject-matter of claim 1 as granted is novel (Article 54 EPC).

5. *Inventive step*

5.1 The Board was not convinced by the argument of the Appellant that, starting from the winch of D1, it would be a simple matter to make the drum portions cylindrical instead of concave. To dispense with the concave shape in this type of capstan would never come to mind of a skilled person, since this would cause the loss of the above mentioned fundamental advantage given by this specific shape and mentioned in point 4.1 above (towing high loads without stacking of the rope). In any case, D1 is an inappropriate starting point for the evaluation of inventive step given that, for the reasons indicated above, it is not a sailboat winch.

5.2 The Board was not convinced either by the argument that, starting from the halyard winch of D2 or D3, it would be a simple matter to eliminate the recesses in the lip in order to provide for an alternate and independent use of the drum portions.

Such a reasoning is obviously inspired by the "ex-post facto" knowledge of the invention. As mentioned above, there is nothing in D2 or D3 about the functional effect of using two distinct diameter portions to obtain different speed ratios when hauling in. If a skilled person had modified and made use of the winch

of D2 or D3, which is especially dedicated to hoisting the halyard of a sailboat, in the way argued by the Appellant, he would have demonstrated, in the Board's opinion, a singular creativity.

- 5.3 In the Boards's view the nearest prior art for the purpose of inventive step is in fact to be seen in a conventional deck winch of the type mentioned in the introductory part of the description of the patent. Starting from this prior art, the problem to be solved could be formulated as: to design a winch able to independently haul in and quickly release different lines attached to different sheets (e.g. a jib sheet in a first mode, a spinnaker sheet in a second mode) and which would be cheaper than the conventional internally two speed geared winches. The Board is satisfied that this problem is solved by the features of the second part of claim 1.

There is nothing in the prior art which could lead the person skilled in the art to modify a conventional deck winch in the manner claimed. More particularly, the documents D1 to D3 do not relate to a winch of the basic type concerned, as explained above, nor make any mention of the problem under consideration.

- 5.4 The Board concludes from the above that the subject-matter of claim 1 as granted involve an inventive step (Article 56 EPC).

6. Dependent claims 2 to 7 relate to further developments of the inventive concept disclosed in claim 1 and contain all of the features of claim 1. The above conclusions regarding novelty and inventive step apply

equally to these claims which likewise meet the requirements of the EPC.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:

S. Fabiani

S. Crane