Title: FISH-HOOK, IN PARTICULAR FOR USE IN A BAITING MACHINE

Abstract: A fish-hook, particularly for use in a baiting machine, comprising of a hook shank (10d, 10d₂) which in its one end is shaped with an eye (14b) for securing to a snell (17) and which at its other end goes over into a hook head (11d) that ends in a point (12d). A section (10d₃) of the hook shank in the transition between the hook shank and hook head (11d) is shaped with a directional change in relation to the hook shank, in which the directional change leads to an increase in the distance between a base (16) for a bait in a baiting machine and the point (12d) of the hook at the same time as the gap and point angle of the fish-hook is mainly retained.
FISH-HOOK, IN PARTICULAR FOR USE IN A BAITING MACHINE.

The present invention relates to a fish-hook, particularly for use in a baiting machine, comprising of a hook shank which in its one end, is shaped with an eye for fastening of a snell and which in its other end goes over into a hook head which ends in a point, as can be seen in the introduction in claim 1.

When baiting fish-hooks in a baiting machine the fishing line is pulled by the speed of the boat at the same time as the fish-hooks are led from a storage container to a baiting place. At the baiting place, the fish-hook is conducted along a base with its shank basically resting on the base and with its eye in the free end of the shank fastened to the snell of the line. The bait is resting on two plates, a small distance above the shank of the fish-hook. Between the plates is a slot through which the head of the fish-hook extends upwards and which guides the hook towards the bait when the fishing line is pulled out due to the speed of the boat.

To obtain good baiting, i.e. that the fish-hook gets a good hold of the bait so that this is securely fastened to the fish-hook, it is important that the point of the hook gets as far up onto the bait as possible. For mechanical baiting, this means that the distance from the plates on which the bait is conducted and the point of the fish-hooks, the so-called gap, at a given hook size, shall be as large as possible. From a baiting point of view, one could
imagine «straightening out» the fish-hook to achieve this, i.e. bend the point in the direction away from the shank of the fish-hook. However, the fishing characteristics of the fish-hook are thereby reduced, i.e. it gets a poorer grip on fish caught on the hook. To obtain good gripping of the fish, the abovementioned gap shall be as small as possible.

A need to be able to achieve better results for line fishing exists, i.e. that more fish which have swallowed a bait remains caught on the hook without getting free. This need can be met by having a different shape of fish-hook than those shapes that are known today.

The object of the present invention is to provide a fish-hook which makes good baiting in a baiting machine possible without reducing the fishing characteristics of the hook.

According to the invention, this is obtained with a fish-hook which is characterised in that a part of the hook shank in the transition between the hook shank and the hook head is shaped with a directional change in relation to the hook shank, in which the directional change leads to an increase in the distance between a base for a bait in the baiting machine and the hook point at the same time as the gap of the fish-hook and point angle is mainly retained.

To provide this directional change, the transition section of the hook shank, according to a preferred embodiment of the invention, is shaped with a downward curvature on the hook shank away from the point of hook.

According to a further preferred embodiment, the transition section is at a smaller distance from the point of the hook than the remainder of the hook shank and runs in parallel with the remainder of the hook shank.

The invention will now be explained further in the following with reference to the enclosed drawings, in which:

Fig. 1 shows a sectional elevation of a normal, standard fish-hook that is used in baiting machines.

Fig. 2 shows a sectional elevation of a first embodiment form of a fish-hook according to the invention.
Fig. 3 shows a section in perspective of the fish-hook in fig. 2.

Fig. 4 shows a sectional elevation of a second embodiment shape of the fish-hook according to the invention.

Fig. 5 shows a sectional elevation of a third embodiment shape of the fish-hook according to the invention.

Fig. 6 shows schematically a sectional elevation of the baiting location in a baiting machine in which the fish-hook according to fig. 1 is used with the hook at a distance from the bait.

Fig. 7 shows a section in perspective of the baiting location in fig. 6.

Fig. 8 shows a corresponding sectional elevation as in fig. 6 with the fish-hook attached to the bait.

Figs. 9-11 show a sectional elevation of the baiting location in which the fish-hook according to figs. 2 and 3 is used, with the fish-hook at a distance from, at the beginning of an attachment with and at a complete attachment to the bait, respectively.

Fig. 12 shows a corresponding sectional elevation as in fig. 6 in which the fish-hook according to fig. 5 is used.

Fig. 1 shows a sectional elevation of a standard fish-hook with a hook shank 10a which at its one end is fitted with an eye (not shown) for securing of the fish-hook to the snell of the line and the other end which runs into a hook head 11a that ends up in a point 12a with a barb 13a. The distance $a_1$, the so-called gap, between the point of the hook and the hook shank is of major importance for the fishing characteristics of the fish-hook, something which will be explained further below.

Fig. 2 shows a first embodiment form of a fish-hook according to the invention with a hook shank main section 10b, hook head 11b, which ends up in a point 12b with a barb 13b. In contrast to the known fish-hook according to fig. 1, the hook shank does not go directly over into the
hook head, but has a transitional section 10b₂ which from a
deflection section 10b₃ runs in parallel with the main
section 10b₁ a distance forward before it starts to bend
and runs into the hook head 11b. This fish-hook has the
same gap, a₂, as the standard fish-hook according to fig.
1, but with improved baiting characteristics, something
which will be explained further below in that the length of
a projection from the hook point 12b to the main section
10b₁ being longer.

Fig. 3 shows an outline in perspective of the fish-
hook in fig. 2 and shows the eye 14b of the fish-hook with
which the hook is secured to the snell of line.

Fig. 4 shows a sectional elevation of a second
embodiment form of the fish-hook according to the
invention. This encompasses a main shank section 10c₁,
which, by way of a transition section 10c₂, which forms an
angle with the main shank section, runs over into the hook
head 11c with point 12c and barb 13c. The main shank
section 10c₁ runs over the transition section 10c₂ by way
of a deflection section 10c₃. The size of the gap, a₃, will
also in this embodiment form be basically the same as in
the embodiment in fig. 1.

Fig. 5 shows a third embodiment form of the fish-hook
according to the invention. It comprises hook shank 10d₁,
which, before it goes into the hook head 11d, is shaped
with downwards deflection 10d₂ in relation to the hook
head. In this embodiment form the gap, a₄, is also
basically of the same size as the known fish-hook, and the
distance to the main shank section is the same. The
characteristics of the fish-hook are still altered,
something which will be explained further below.

Figs. 6 and 7 show a sectional elevation and a
perspective outline, respectively, of a baiting location in
a baiting machine in which the fish-hook according to fig.
1 is used for baiting. At the stage of the baiting which is
shown in figs. 6 and 7, the fish-hook is situated at a
distance from the bait 15 that lies at the base 16. The
base 16 comprises two parallel plates 16a, 16b (fig. 7).
The fish-hook is pulled in the direction of the arrow P secured to the snell 17 of the fishing line along a supporting base 18. The fish-hook is guided towards the bait 15 with the aid of the slot 19 between the two parallel plates 16a, 16b.

Fig. 8 shows a corresponding sectional elevation as in fig. 6, but at a stage of the baiting in which the fish-hook is attached to the bait 15.

The point of the fish-hook is at a distance $h_1$ from the base 16 on which the bait 15 is situated. The distance $h_1$ is less than the gap $a_1$ of the fish-hook.

Figs. 9-11 show a sectional elevation of three stages of the baiting of the fish-hook according to fig. 2. As a consequence of the hook shank section 10b₂, the point 12b of the fish-hook will be at a greater distance from the base 16 than is the case for the fish-hook in fig. 8, i.e. the distance $h_2$ is greater than the distance $h_1$ and the point will thereby be fed into the bait higher up on the bait than is the case for the known fish-hook. Thereby, the bait is better secured to the fish-hook.

Fig. 12 shows a corresponding sectional elevation as in fig. 9 of the embodiment form in fig. 5.

While, in baiting with known fish-hooks, the distance from the point of the hook to the base on which the bait is being fed is considerably smaller than the gap in the fish-hook, the mentioned distance and gap for the fish-hook according to the invention will mainly be the same. Thereby, it is possible to obtain attachment between point of the hook and bait considerably higher up on the bait, and therefore the bait is better secured to the fish-hook. This is obtained without the fishing characteristics of the hook being reduced, i.e. that the fish are caught equally well by the hook. This is because the abovementioned evening out of the difference between the two distances is obtained without the gap of the fish-hook and angle of the point being altered.
PATENT CLAIMS

1. Fish-hook, particularly for use in a baiting machine, comprising of a hook shank (10b₁, 10b₂; 10c₁, 10c₂; 10d₁, 10d₂) which at its one end is shaped with an eye (14b) for fastening of a snell (17) and which at its other end goes over into a hook head (11b, 11c, 11d) which ends up in a point (12b, 12c, 12d), characterised in that a section (10b₂, 10c₂, 10d₂) of the hook shank in the transition between the hook shank and the hook head (11b, 11c, 11d) is formed with a directional change in relation to the hook shank, in which the directional change leads to an increase in the distance between a base (16) for a bait in the baiting machine and the point of the hook at the same time as the gap of the fish-hook (a₂, a₃, a₄) and the angle of the point is largely retained.

2. Fish-hook according to claim 1, characterised in that to provide the directional change, the transition section of the hook shank is formed with a downward deflection (10d₂) on the hook shank away from the point of the hook (12d).

3. Fish-hook according to claim 1, characterised in that the transition section (10b₂) is at a smaller distance from the point (12b) of the hook than the remainder of the hook shank (10b₁) and runs in parallel with the remainder of the hook shank.
**INTERNATIONAL SEARCH REPORT**

**A. CLASSIFICATION OF SUBJECT MATTER**

**IPC7: A01K 83/00**  
According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

**IPC7: A01K**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE, DK, FI, NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**EPO-INTERNAL**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<td>US 5664364 A (THOMAS C. CLARK), 9 Sept 1997 (09.09.97)</td>
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☐ Further documents are listed in the continuation of Box C.  

☐ See patent family annex.

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**Date of the actual completion of the international search**  
**17 July 2002**

**Date of mailing of the international search report**  
**24-07- 2002**

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