

A Fish Hook and Knot Therefor

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Technical Field

The present invention relates to fishing hooks.

Background of the Invention

5 Fishing hooks have conventionally consisted of a hook portion from which there extends a shank. The shank terminates with an eyelet which cooperates with the fishing line to secure the hook to the fishing line.

Securing the line to a conventional fishing hook is reasonably tedious and time consuming. These problems are exacerbated in cold weather or if the user is wearing
10 gloves. Still further, conventional attachment methods are known to fail in that the hook becomes detached.

In the construction of commercial fishing lines, the hooks are secured to the line by means of a mechanically constructed knot. These knots formed by machine frequently over-stress the line, which can result in failure of the line.

15 Object of the Invention

It is the object of the present invention to overcome or substantially ameliorate the above disadvantages.

Summary of the Invention

There is disclosed herein a fish hook comprising:
20 a hook portion;
a shank extending from the hook portion; and
a line attachment portion to engage a fishing line to secure the fishing line to the hook, said attachment portion comprising a pair of legs which extend to a junction, with one of the legs having a free end, and the other leg being a continuation of the
25 shank, said legs each having a line engagement portion, with the line engagement portions being spaced by a distance of one times the diameter of the fishing line.

Preferably the slot has a length of at least five times the diameter of the fishing line.

Preferably the leg having the free end has an end part to aid in guiding the
30 fishing line into the slot, which end part divergs from the other leg.

If the hook is formed of plastics material, preferably the distance between the line engaging portions is between one and two times the line diameter.

There is further disclosed herein a method of forming a knot to attach a fishing line to a fishing hook, the hook having a shank terminating at one end with a line
35 attachment portion and terminating at another end with a hook portion, said method including the steps of:



locating two portions of the line together so that the line portions are generally co-extensive;

wrapping the co-extensive portions about the shank to form pairs of convolutions, with each pair consisting of a convolution from each coextensive portion, a first one of the pairs being located closer to the hook portion and a second one of the pairs being located closer to the attachment portion, with said line extending from one of the first convolutions back upon itself to the other of the first convolutions so that the line forms a loop;

passing said loop over said attachment portion so that the line crosses itself adjacent said first pair of convolutions with the convolution closest to the hook portion having the line extending from it over the other convolutions;

moving the line extending from the other convolution of the pair closest to the hook portion, away from the shank;

moving the convolutions to said retaining means and applying a force to one or both of the lines extending from the pair of convolutions closest to the retaining means away from the convolutions so as to diminish the size of the loop so that the line forming the loop abuts the convolutions.

Brief Description of the Drawings

A preferred form of the present invention will now be described by way of example with reference to the accompanying drawings wherein:

Figure 1 is a schematic side elevation of the steps of applying a fishing line to a fishing hook;

Figure 2 is a schematic side elevation of the fishing hook of Figure 1 with the fishing line attached thereto;

Figure 3 is a schematic top plan view of the fishing hook and line of Figure 2;

Figure 4 is a schematic bottom plan view of the fishing hook of Figure 2;

Figure 5 is a series of schematic illustrations of the steps of applying a fishing line to a fishing hook;

Figure 6 is a schematic side elevation of a modified construction of the hook of the previous embodiments;

Figure 7 provides four end elevations of alternative hook portions of the hook of Figure 6; and

Figure 8 provides three schematic side elevations of portions of the hook of Figure 6.

Detailed Description of the Preferred Embodiment

In the accompanying drawings there is schematically depicted a fish hook 10. The fish hook 10 has a hook portion 11 extending to a shank 12. The shank 12 extends



to an attachment portion 13. The attachment portion 13 in this embodiment is of a "U" configuration in that a pair of spaced legs 14 and 15 are provided. The leg 15 is a continuation of the shank 12, while the leg 14 has an end part 16 which divergs with respect to the other leg 15.

5 The fishing line 17 is attached to the hook 10 in the following manner.

The hook is held between the thumb and a finger with the hook portion 11 closer to the palm of the hand. The attachment portion is exposed as best seen in Figure 1(A).

10 The line is then gripped and wrapped around the shank three or four times. This is shown in Figure 1(C). Thereafter the convolutions of the line 17 are held as shown in Figure 1(D). In that regard it should be appreciated that the line can be wrapped clockwise or anti-clockwise about the shank 12.

15 The free end of the line is released and the other portion of the line extending from the shank 12 is gripped and pulled so that the coils 18 are pulled into the slot 19. The finished assembly is best seen in Figures 2 to 4.

20 Preferably the legs 14 and 15 have line engaging portions 33 separated by a distance of at least one times the diameter of the line 17. When the hook 10 is formed of plastics material, preferably the portions 33 are spaced by one to two times the line diameter. It is also preferred that the slot 19 defined between portions 33 has a length of approximately five times the diameter of the line 17.

It is further preferred that the slot 19 taper towards the end junction 20.

To remove the line 17, the coils 18 are moved down the shank 12 towards the hook portion 11.

25 The above described preferred embodiment has the advantages of making it easy to attach the line 17 to the hook 10. By providing a slot 17 the tedious step of trying to thread the line through the eye of a conventional hook is eliminated.

30 In Figure 5 there is illustrated an alternative knot 32 to that employed in the embodiment of Figures 1 to 4. In this embodiment the fishing line 17 is held so as to provide two generally co-extensive line portions 20 and 21. The portions 20 and 21 are wrapped around the shank 11 as best seen in Figure 5(B) so as to form at least two sets 22 and 23 of convolutions. Each set 22 and 23 consists of a pair of convolutions 24 and 25 and 26 and 27. The set of convolutions 22 is closest to the hook portion of the hook 10, while the set of convolutions 23 are closest to the attachment portion 13. Extending from the set 22 is a loop 28 which is passed over the attachment portion 13 so that the line portion 20 is on the side of the shank 11 that can be seen while the portion 21 is on the other side of the shank 11. The loop 28 is then located in the position shown in Figure 5(D). Thereafter the line portion 21 is gripped so as to form a further loop 29 from material forming the loop 28. This configuration is seen in Figure 5(E). Thereafter, the convolutions are moved into engagement with the

attachment portions 13 as best seen in Figure 5(F). Thereafter one or both of the line portions is pulled so as to decrease the size of the loop 29 so that a knot 32 is formed. Figure 5(H) is the top plan view of the knot 32, while 5(G) is the bottom plan view.

In Figure 6 there is schematically depicted a fishing hook 40. The hook 40 is similar to the previous embodiments except that in the present instance the hook 40 is formed of plastics material and would preferably be moulded therefrom. The hook 40 has a hook portion 41 extending to a shank 42. The shank 42 extends to an attachment portion 43. The arrangement is basically the same as the previously discussed embodiments. However, the attachment portion may end with an enlarged part 44 as shown in Figure 8(A) or a transversely extending projection 45 as shown in Figure 8(B).

The shank 42 is of a "T" transverse cross section so as to provide a longitudinally extending ridge 46 extending from a base 47. The ridge 46 may also extend to the hook portion 41. The ridge 46 may be straight as illustrated in Figure 7(B) or may follow a curved path as shown in Figure 7(A). As a further alternative, the ridge 46 may be provided with barbs as shown in Figure 7(C) and 7(D). As a further alternative the hook portion 41 may terminate with a barbed end 48 provided with smaller barbed portions 49 as shown in Figure 8(C). The ridge 46 may include the barbs to aid in holding bait on the hook portion 41. The ridge 46 may also be applied to the hook portion 41.

The hook portion 41 may also be of a triangular transverse cross section as shown by the cross sections 50.

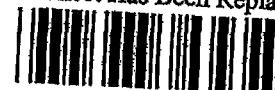
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CLAIMS



1. A fish hook comprising:
a hook portion;
a shank extending from the hook portion; and
5 a line attachment portion to engage a fishing line to secure the fishing line to the hook, said attachment portion comprising a pair of legs which extend to a junction, with one of the legs having a free end, and the other leg being a continuation of the shank, said legs each having a line engagement portion, with the line engagement portions being spaced by a distance of at least one times the diameter of the fishing
10 line.
2. The fish hook of claim 1, wherein the line engagement portion converge toward said junction.
3. The hook of claim 2, wherein a slot is defined between said line engagement portions, which slot is approximately 5 times the diameter of the line.
- 15 4. The hook of claim 1 or 3, wherein said leg terminates with an end part which converges toward the other leg from an extremity of the end part.
5. The hook of claim 1 when formed of plastics material, wherein the line engaging portions are spaced by a distance of between one and two times the line diameter.
- 20 6. A method of forming a knot to attach a fishing line to a fishing hook, the hook having a shank terminating at one end with a line attachment portion and terminating at another end with a hook portion, said method including the steps of:
locating two portions of the line together so that the line portions are generally co-extensive;
25 wrapping the co-extensive portions about the shank to form pairs of convolutions, with each pair consisting of a convolution from each coextensive portion, a first one of the pairs being located closer to the hook portion and a second one of the pairs being located closer to the attachment portion, with said line extending from one of the first convolutions back upon itself to the other of the first convolutions so that the
30 line forms a loop;
passing said loop over said attachment portion so that the line crosses itself adjacent said first pair of convolutions with the convolution closest to the hook portion having the line extending from it over the other convolutions;
moving the line extending from the other convolution of the pair closest to the
35 hook portion, away from the shank;
moving the convolutions to said retaining means and applying a force to one or both of the lines extending from the pair of convolutions closest to the retaining means away from the convolutions so as to diminish the size of the loop so that the line forming the loop abuts the convolutions.





7. A knot to secure the hook of claim 1 or 5 to a line, said knot comprising:

a first portion of said line extending to said other leg and being wound thereabouts to provide a plurality of convolutions extending from said line portion away from said junction; and

a further line portion extending from the convolutions back over the convolutions and passed a junction so as to pass between said junction and said first line portion.

8. A knot to secure the hook of claim 1 or 5 to a line, said knot comprising:

a pair of generally parallel coextensive line portions would about said other leg and extending to a loop joining the line portions, the loop extending between the two legs adjacent the junction with said line portions passing between the loop and the junction.

9. A hook substantially as hereinbefore described with reference to the accompanying drawings.

10. A knot substantially as hereinbefore described with reference to Figures 1 to 4 of the accompanying drawings.

11. A knot substantially as hereinbefore described with reference to Figure 5 of the accompanying drawings.

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