Sept. 23, 1941. T. K. TAYLOR 2,256,768

FISHING LINE SINKER

Filed Oct. 14, 1940

Fig. 1

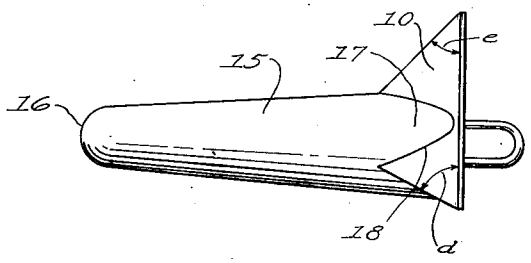


Fig. 2.

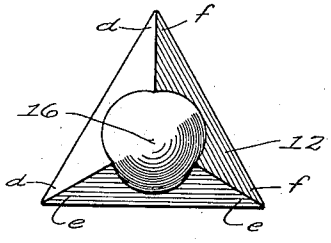


Fig. 3.

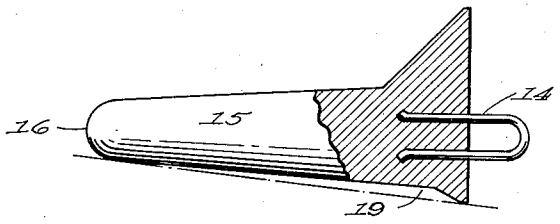


Fig. 4.

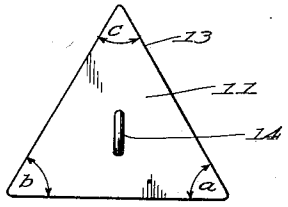
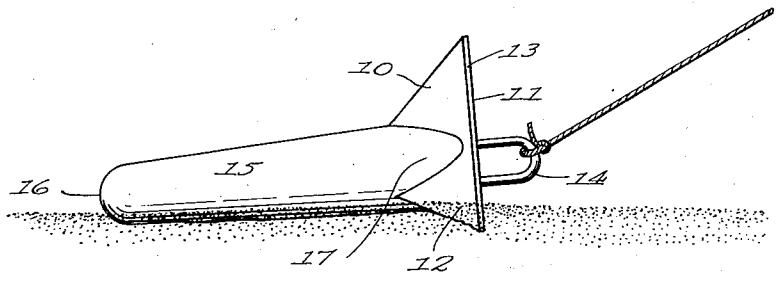


Fig. 5.



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FISHING LINE SINKER

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8 Claims. (Cl. 43—52)

This invention relates to fishing line sinkers and is useful both for hand lines as well as rod casting and trolling.

One of the difficulties experienced with conventional sinkers is their tendency to wobble or jiggle in the water in response to pressures created by the presence of waves, currents and eddies. Such movement of the sinker is not conductive to retaining a taut line and, moreover, frequently gives a false indication of a nibble or a bite. Both of these conditions are sources of aggravation to a fisherman. Moreover, the use of a sinker which offers appreciable wind resistance interferes with casting as does the necessity for an unduly heavy sinker, and this latter characteristic also detracts from the sensitivity of the line.

The principal object of the invention is to provide a sinker which will be self-anchoring in the sand or mud. That is, the sinker is so constructed that (1) it will embed itself in the ooze, (2) it offers a minimum of flat surface resistance to pressures set up by waves, currents and eddies; and (3) such currents actually build up a protective sand or mud anchoring foundation about the sinker somewhat after the manner of a jetty. Thus, the usually experienced dragging of the sinker indicated by jiggling or wobbling thereof and the formation of slack in the line are reduced to a minimum.

Another object of the invention is to provide a sinker which will always come to rest in longitudinally extended position so as to assure that the sinker will promptly anchor itself.

A further object of the invention is to provide a sinker which is free from obstructions such as would cause the hooks to catch in the sinker when the line is being thrown out. Hence, there is no danger of the sinker producing entanglement of the line.

In addition to the foregoing objects, it is an equally important object of the invention to provide a sinker having reduced wind resistance which is quite important in rod casting.

Another important object of the invention is to provide a sinker which, by reason of its construction, is appreciably lighter than a sinker which would customarily have to be used in order to hold the line to the bottom and in taut condition. This likewise contributes to better casting, enables a less expensive sinker to be used, and also makes the line more sensitive to a bite or nibble.

The sinker of the present invention may be cheaply manufactured and sold at the modest price generally associated with such articles.

In the accompanying drawing, I have illustrated a preferred embodiment of the invention. It is to be understood that the construction is subject to modification within the scope of the invention which is considered to include a structure capable of particularly producing the advantages above recited as well as other improved results.

Referring to the drawing,

Figure 1 is a side elevation of the sinker;

Figure 2 is a rear elevation thereof;

Figure 3 is a view partly in side elevation and partly in section;

Figure 4 is a front elevation; and

Figure 5 is a view showing the sinker longitudinally extended and resting on the bottom with one of its enlarged relatively sharp angled sides embedded in the sand or mud and with the sand or mud forming a protective barrier or casing about the head and body of the sinker.

The sinker of this invention is preferably constructed of lead or other suitable metal which is not affected by fresh or sea water and which may be cheaply molded or cast.

Referring to Figure 1, the sinker includes at its heavy end an enlarged head 10. This head may be of any desired shape which will produce the advantages herein described. It is here illustrated and is preferably of generally frustro-pyramidal configuration. In the form shown, the head includes a triangular base 11 forming the face of the sinker as shown in Figure 4 and sides 12 extending in inclined relation inwardly and rearwardly thereof as shown in Figures 1, 2 and 5. Preferably, but not necessarily, the pyramidal structure is equi-angular or equilateral. For example, in a 4 ounce sinker which is a popular size, the face angles *a*, *b* and *c* are equal, i. e., 60° angles, as are the side angles *d*, *e* and *f*. Thus, the edges of the base are of equal length and the sides of the pyramidal-shaped head are of equal area and have a relatively sharp slope with respect to the base 11 and to each other, e. g., 60°. The marginal edge portion 13 of the face 11 which is defined by the joint between the base 11 and the angularly disposed sides 12 is preferably relatively sharp as shown. A suitable eye 14 for attaching the line to the sinker is molded into the head and extends outwardly therefrom substantially centrally of the face 11 as shown in Figures 3 and 4.

This construction of the head allows a substantial amount of weight to be located at the

enlarged end of the sinker and it will be observed here that the only substantial flat area is on the front or face of the heavy end. In this connection, the face 11 may be curved if desired, but this is not necessary and, in fact, the flat face cooperates to assist in the self-anchoring of the sinker. Moreover, the construction described permits a symmetrical sinker to be produced having a body of progressively decreased weight.

The greatest cross-sectional area of the sinker is defined by the face 11, and the frustro-pyramidal head is extended rearwardly to form, within lines or planes projected from the perimeter of the face 11, an integral tapering elongated body 15 of less cross-sectional area than the face 11. It will be observed that this body is substantially conical, affording a progressive decrease in weight from the head to the end of the sinker and is considerably longer than the head. The body is rounded in cross-section substantially throughout its length and terminates preferably in a rounded end 16.

The head and body are integrally joined in the molding of the fluid metal by merging of the body into the inclined sides of the head as shown in Figures 1 and 5. That is, portions 17 of the body are molded integral with the sides 12 of the pyramidal structure, substantially centrally with respect to each of the sides, forming curved ridges of progressively increasing arcuate dimension as shown at 18. The sides are thus interrupted by the curved ridges and present a minimum of flat surface area. Moreover, the ridges form with the sides an anchoring surface when the sinker is resting in the sand or mud.

By reason of the rounded construction of the body and the manner in which it is integrally connected to the head, as well as the construction of the head, namely, the steep angle of its sides 11, there is presented relatively little flat surface resistance to the action of waves, currents and eddies as compared to the usual sinker and which cause the conventional sinker to wobble or jiggle. That is to say, the water will swish and eddy about the body 15 and the head 10 without meeting any substantially flat areas which would afford resistance to the currents and present the likelihood of movement of the sinker. The only flat area is presented by the face 11, and this is at the heavy front end of the sinker so that pressures directed on said face 11 must overcome the entire weight of the sinker plus the frictional resistance offered by the anchored sinker.

The body is centered with relation to the center of the face 11. That is, the axis of the body passes through the center of the face 11 whereby should the sinker land on any of the corners of the head, the weight is so distributed as to cause the sinker to come to rest on one of the edges 13 as shown in Figure 5. The body with its progressively decreased weight away from the head also contributes to this result in that there is sufficient weight in the body to maintain the sinker always longitudinally extended, resting on one edge 13 and the end of the body as shown in Figure 5. In other words, the sinker will always come to rest quickly in the best position for anchoring it in the sand or mud.

Referring to Figure 3, it will be observed that since the head has sloping sides and the body extends from the head within lines defining the greatest area of the sinker, namely, lines projected from the face 11 and is of conical configuration, there is defined by the head and body, a recess 19 on each side of the head. This recess extends longitudinally of the surface of the sinker and around the same, and is unobstructed. It progressively decreases in area rearwardly from beneath the adjacent side of the head to near the end of the body as shown.

Referring to Figure 5, the provision of the recess allows the head, by reason of its location at the heavy end and its sloping side to quickly embed itself and anchor the sinker in the ooze of the bottom without tipping up the tapering body which has sufficient weight to overcome this possibility and cause the sinker to always lie in longitudinally extended position. Moreover, the recess permits the currents and eddies to pass under the sinker and there is built up a sand or mud casing or anchoring foundation which fills up the recess 19 and also extends about the body and the head in much the same manner as a jetty will build up a sand beach. The smooth configuration of the head and body presenting a minimum of flat surface reduces substantially the tendency of the sinker to move in response to pressures created by waves, currents or eddies. It will be observed, therefore, that the structure of the sinker and the configuration thereof cooperate substantially in enhancing the anchoring function of the sinker. Moreover, this anchoring of the head is assisted by the provision of the ridge in the side wall of the head which creates a somewhat irregular surface for engagement with the mud or sand

The presence of the flat surface area 11 insofar as it might be responsive to the pressures of currents, eddies or waves to move the sinker is completely negatived. In order for the sinker to move longitudinally under pressure conditions acting on the face 11, it is necessary (1) to lift the heavy end from its anchored position which will be resisted by the whole weight of the sinker and by the engagement of the rounded end 16 with the bottom; (2) to move the sinker bodily longitudinally against its whole weight; and (3) to overcome the frictional resistance occasioned by the anchoring and seating engagement of the entire length of the sinker with the bottom and the mud or sand casing. As stated above, if desired, the face 11 may have a rounded contour, but since it does not cause movement of the sinker as will be appreciated, this is not necessary. The important consideration is to have the sinker anchored at its heavy end and to have the weight so distributed that the body acts to at all times exert the pressure of its weight upon the head, whereby the head is embedded and the body engages the bottom with the area of the recess 19 completely filled with sand or mud. Since the sinker is anchored at its heavy end, and for the major portion of its exposed surface, presents a rounded contour and at its head has a combined curved and sharp sloping contour, the water swishes about the lateral area without causing the sinker to jiggle or wobble or otherwise objectionably move. This result is also insured by the building up of the sand about the body and head of the sinker as shown in Figure 5.

The provision of a sinker in accordance with this invention assures that the line will be maintained taut and since a lighter weight sinker may be employed than would customarily be necessary, the fishing line is more sensitive to a bite or nibble. The lighter weight sinker, of course, greatly facilitates casting and drawing in the line

and, moreover, enables a less expensive sinker to be used.

I claim:

1. A fishing line sinker having an enlarged head at one end, and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said head and body defining recesses extending longitudinally of the surface of the sinker and on all sides.

2. A fishing line sinker having a substantially frustro pyramidal head at one end, and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said head and body defining recesses extending longitudinally of the surface of the sinker and on all sides.

3. A fishing line sinker having an enlarged head at one end, and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said head and body defining recesses extending longitudinally of the surface of the sinker and around the same and decreasing in area from said head toward the free end of said body.

4. A fishing line sinker having an enlarged head at one end, and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said head and body defining recesses extending longitudinally of the surface of the sinker and around the same, said body having a rounded surface.

5. A fishing line sinker having a substantially frustro pyramidal head at one end, and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said body merging into said head and forming ridges on the surfaces of the sides of the head, said head and body defining an unobstructed recess extending longitudinally of the surface of the sinker and continuously around the same.

6. A fishing rod sinker having an enlarged substantially frustro pyramidal head at one end, said head having a triangular front face, and an integral elongated tapering body of reduced cross-section extending from said head, said head and body defining an unobstructed recess extending longitudinally of the surface of the sinker and continuously around the same, said recess decreasing in area from said head toward the end of said body and said body having a rounded surface.

7. A fishing line sinker having an enlarged head at one end and an integral elongated body progressively reduced in cross-section in a direction away from said head, said head and body defining recesses extending longitudinally of the surface of the sinker on all sides of the same, one wall of each recess being longer than another and the recess decreasing in area from said head toward the free end of said body.

8. A fishing line sinker having an enlarged head at one end and an integral elongated body progressively reduced in cross-section in a direction extending away from said head, said head and body defining a recess extending longitudinally of the surface of the sinker and continuously on all sides of the same.

THOMAS K. TAYLOR.