Title: PROTECTED SWIVEL FISHING SYSTEM

Abstract: A fishing rig consisting essentially of a weight, with the weight having a narrow nose and a wider base end, a bore extending end-to-end through the weight and having a larger opening at the base end and a narrower opening at the nose end, a ball-type swivel, with the swivel sitting inside the bore of the weight and having two connective elements located at opposite sides of the swivel closest to the nose end and the base end of the weight, a fishing line passing through the nose end of the weight and tied to the connective element closest to the nose end of the weight, and a fishing hook attached to the connective element closest to the base end of the weight.
PROTECTED SWIVEL FISHING SYSTEM

BACKGROUND OF THE INVENTION

1. Field of the Invention

   The field of invention relates to a fishing system or rig, and more particularly pertains to a new and improved fishing system or rig wherein the same is arranged to substantially remove the problem of line twist and to be especially suitable for bass fishing in the weeds using a soft plastic or rubber worm or the like.

2. Description of the Prior Art

   Conventional bass fishing systems using a plastic worm typically are known as a Texas rig or a California rig. The Texas rig is well known with a directly tied to a worm hook. A slide weight is prepositioned on the line and then slides down over the knot engaging the eye of the hook. The weight is generally bullet shaped. It is also known that the wide end of the slide weight can have a cupped cavity so that it rests over the head of the worm.

   Another known rig is the Carolina rig which has a slip sinker on the line, a glass bead, and then a small barrel type swivel. An 18 to 36 inch leader comes next tied to the hook. The plastic worm or other bait device is rigged on the hook much in the same manner as in the Texas rig. The traditional sinker for this is an egg-shaped slip sinker. However, some rigs are used with a bullet type slip sinker. This rig is used as a method of positioning the bait down to the bottom with the attached sinker bumping the bottom allowing the leader, attached by way of the swivel to trail behind at the same depth hovering off of the bottom.

   A major difficulty in using either of these rigs or most other rigs is the problem of line twist upon retrieval of the lure or bait.

   U.S. Patent No. 2,140,724 to Stefan discloses a sliding sinker which is hollow, elongated and shaped as a pyramid with Figure 1 showing it being sized at least great enough to cover a swivel.
In addition, U.S. Patent Nos. 5,661,922 and 2,926,452 show weed guards for swivels, with the first one being in combination with a slip sinker having a hollow elongated base.

However, there is still a problem in that the Texas rig is subject to line twisting. The line may become adversely torqued. The Carolina rig is subject to weed catching, especially at the hook eye.

SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of fishing rigs now present in the prior art, the present invention provides a fishing rig wherein the same is arranged to protect the line from adverse twisting while avoiding weed catching.

As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and improved fishing rig which has all the advantages of the prior art fishing rig and none of the disadvantages.

To attain this, the present invention provides a fishing lure device consisting essentially of a weight, with the weight having a narrow nose and a wider base end, a bore extending end-to-end through the weight and having a larger opening at the base end and a narrower opening at the nose end, a ball-type swivel, with the swivel sitting inside the bore of the weight and having two connective elements located at opposite side of the swivel closest to the nose end and the base end of the weight, a fishing line passing through the nose end of the weight and tied to the connective element closest to the nose end of the weight, and a fishing hook attached to the connective element closest to the base end of the weight.

The present invention can also be viewed as an improvement in a fishing lure device including a bullet-type weight having an elongated bore extending from end-to-end and tapering at one end, where the narrowest bore diameter is adapted to allow a fishing line to pass through the narrow end of the bore, the bore being large enough to completely house a ball-type swivel, the swivel having two connective elements, one at each end and
being adapted to allow the fishing line to be tied, the improvement comprising a hook directly attached to the connective element at the wide end of the bore.

One of the main points of the invention resides in eliminating the line twist that occurs upon retrieval of the bait. When used in worm fishing, the hollowed out worm weight or the invention rests atop the worm head without interfering with the operation of the swivel/hook combination. Without the hollowing out of the worm weight, there would interference with the operation of the system. The invention allows any "bait" (not necessarily a worm, plastic or otherwise) attached to the combined swivel/hook, to turn freely, eliminating lien twist to be transferred up the line. This makes for a more natural bait presentation and less stress on the line, reel and rod and more hook-ups near the boat and less loss of fish. Further, at the point of strike, a fish will attempt to throw the hook by turning and twisting. With the free turning swivel/hook combination, the fish does not have the leverage to throw or spit the hook, instead it keeps turning resulting in less hook throwing and more fish being caught. Additionally, by eliminating the leader and attaching the swivel directly to the hook eye, two fail points of the fishing system are eliminated, namely the two otherwise necessary knots.

The system of the present invention is adaptable and useable with any type, brand, or style of bait, swivel, or hook.

However, the invention resides not in any one of these features per se, but rather in the particular combination of all of them herein disclosed and claimed and it is distinguished from the prior art in this particular combination of all of its structures for the functions specified.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will form the subject matter of the claims appended hereto. Those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for
carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms of phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. The abstract is neither intended to define the invention of the application, which is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

It is therefore an object of the present invention to provide a new and improved fishing system which has all the advantages of the prior art fishing rigs and none of the disadvantages.

It is another object of the present invention to provide a new and improved fishing system which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new and improved fishing system which is of a durable and reliable construction.

An even further object of the present invention is to provide a new and improved fishing system which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby making such a fishing rig economically available to the buying public.

Still yet another object of the present invention is to provide a new and improved fishing system which provides in the apparatuses and methods of the prior art some of the advantages thereof, while simultaneously overcoming some of the disadvantages normally associated therewith.

These together with other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the
invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a cross sectional view of the invention, the artificial worm shown not being a part of the invention.

FIG. 2 is a sectional view of a bullet shaped weight especially suitable for use with the present invention having certain dimensions indicated thereon and described below.

FIGS. 3A and 3B are side views of a worm hook suitable for use with the present invention.

FIGS. 4A and 4B are sectional views of another bullet weight and a special bead for a second embodiment of the present invention.

FIG. 5 shows a perspective view of the second embodiment.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference now to the drawings, and in particular to FIGS. 1 to 3B thereof, a new and improved fishing rig embodying the principles and concepts of the present invention and generally designated by the reference numeral 10 will be described.

More specifically, the fishing system 10 as embodied is a No. 2 bent shank worm hook 40 having a No. 10 crushed barrel swivel 30 attached directly thereto. A special design worm weight 20 of bullet shape is slid onto the line 12 and the line 12 is then tied to the barrel swivel 30. The worm weight 20 has a small bore or hole 22 extending all the way through it for the fishing line 12 to pass through and a second cavity or hole 27 bored partially in having an 1/8 inch diameter and a 3/8 inch depth which is just sufficient in size to completely cover the barrel swivel 30. In use, a soft worm 11 is rigged in the usual
Texas rig fashion on the bent shank worm hook 40 with the worm 11 weight covering the swivel 30. The invention permits the twisting and turning of the soft worm 11 while protecting the swivel 30 from weeds.

The bullet shaped weight 20 is designed specifically to completely cover the swivel 30 while allowing the swivel 30 to turn. The weight 20 has a narrow nose end 24 and a wider base end 26, a bore 22 extending end-to-end through the weight and having a larger opening 27 at the base end 26 and a narrower opening 25 at the nose end 24. As such, several sizes and weights are needed for the various size swivels and hooks. All of the weights 20 contemplated for use with the present invention are made of a lead, brass or steel composition. The specific composition is known in the art and forms no part of the invention being claimed. As shown in Figure 2, dimension x is the overall length of the weight. \(X_1\) is the length of the narrow end portion of the bore. \(X_2\) is the length of the base end of the bore. \(Y_1\) is the diameter of the bore at the nose end, while \(Y_2\) is the diameter of the bore at the base end. \(Z\) is the diameter of the base end of the weight itself. Certain preferred dimensions in inches are:

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<th>weight size</th>
<th>x</th>
<th>(X_1)</th>
<th>(X_2)</th>
<th>(Y_1)</th>
<th>(Y_2)</th>
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The swivel 30 can be a standard ball or barrel swivel, a #10 or 12 size being particularly convenient. Generally a 30 Lb. test swivel is suitable. Steel is the preferred composition, but brass and other known materials are also suitable. The swivel has connective elements or eyes 32 at each end independently spinnable. The size of the swivel 30 is determined by the fishing conditions and the bass being sought. Once the swivel 30 is selected, the particular weight size is determined in order to totally cover the swivel 30 and yet permit the swivel 30 to spin freely.

The preferred hook 40 is a bent shank worm hook, known in the art. #01, 02, and 03 worm hooks are particularly suitable for use in the present invention. As known in the
art, barbed hooks for holding the artificial worms are preferred. The hook 40 is directly attached at its eye 42 to the end of the swivel 30.

A second embodiment is shown in Figures 4A, 4B, and 5. The same reference numerals are used for identical parts as in the first embodiment described above. The second embodiment differs in that the bullet shaped weight 20a additionally has a chamfer 29 at the larger opening 27, in that an added special "bead" 50 is provided, and in that the hook is shown as a jig rather than as a worm hook 40. A jig has a straight shank hook 44 attached to a weighted head 46. The swivel 30 is directly attached to the eye 42 of the jig. The special bead 50 is semi-spherical (generally round top shape) and is designed specifically to substantially cover the swivel 30 while allowing the swivel 30 to turn. The bead 50 has a bore extending end-to-end through the bead and having a larger opening 57 at the base end and a narrower opening 55 at the top end. A chamfer 59 can be provided at the larger opening 57. As such, several sizes and weights are needed for the various size swivels and hooks. All of the beads 50 contemplated for use with the present invention are made of a lead, brass or steel composition. The specific composition is known in the art and forms no part of the invention being claimed.

As shown in Figure 5 in a semi-exploded view, the bullet shaped weight 20a covers the top portion of the special bead 50 which in turn covers the swivel 30 in the same manner as in the first embodiment.

As to the manner of usage and operation of the instant invention, the same should be apparent from the above disclosure, and accordingly no further discussion relative to the manner of usage and operation of the instant invention shall be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.
Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention of the United States is as follows.
WHAT IS CLAIMED IS:

1. A fishing rig consisting essentially of a weight, with the weight having a narrow nose end and a wider base end, a bore extending end-to-end through the weight and having a larger opening at the base end and a narrower opening at the nose end, a ball-type swivel, with the swivel sitting inside the bore of the weight and having two connective elements located at opposite side of the swivel closest to the nose end and the base end of the weight, a fishing line passing through the nose end of the weight and tied to the connective element closest to the nose end of the weight, and a fishing hook attached to the connective element closest to the base end of the weight.

2. An improvement in a fishing rig including a bullet-type weight having an elongated bore extending from end-to-end and tapering at one end, where the narrowest bore diameter is adapted to allow a fishing line to pass through the narrow end of the bore, the bore being large enough to completely house a ball-type swivel, the swivel having two connective elements, one at each end and being adapted to allow the fishing line to be tied, the improvement comprising a hook directly attached to the connective element at the wide end of the bore.

3. A fishing rig consisting essentially of a weight, with the weight having a narrow nose end and a wider base end, a bore extending end-to-end through the weight and having a larger opening at the base end and a narrower opening at the nose end, a semi-spherical bead having a top end and a base, a bore extending end-to-end through the bead and having a larger opening at the base and a smaller opening at the top end, the bead sitting partially inside the bore of the weight, a ball-type swivel, with the swivel sitting inside the bore of the bead and having two connective elements located at opposite side of the swivel closest to the top end and the base of the bead, a fishing line passing through the nose end of the weight, the top end of the bead and tied to the connective element
closest to the nose end of the weight and the top end of the bead, and a fishing hook attached to the connective element closest to the base of the bead.
### INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 A01K9/00 A01K85/00

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)

IPC 7 A01K

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

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

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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<td>US 4 649 663 A (STRICKLAND RICHARD C) 17 March 1987 (1987-03-17) the whole document</td>
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<td>US 1 766 532 A (PFLUEGER CHARLES T) 24 June 1930 (1930-06-24) the whole document</td>
<td>2</td>
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<td>A</td>
<td>US 3 740 889 A (SCOTT B) 26 June 1973 (1973-06-26) column 3, line 51 -column 4, line 23; figure 7</td>
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<tr>
<td>A</td>
<td>US 5 040 325 A (HERRMANN HEINZ A) 20 August 1991 (1991-08-20) column 1, line 55 -column 2, line 11; figure 1</td>
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

**Date of actual completion of the international search**

1 October 2001

**Date of mailing of the international search report**

09/10/2001

**Name and mailing address of the ISA**

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Authorized officer

Verdoot, S
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<td>US 4649663 A</td>
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