Apr. 3, 1923. 1,450,546

J. HANSEN

TROLLING SPOON

Filed May 26, 1921

FIG. 1

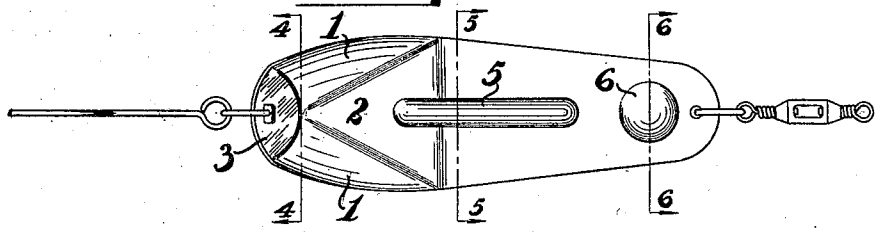



FIG. 2

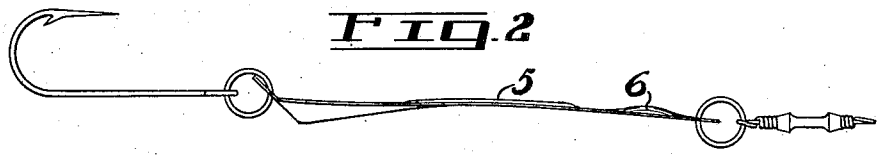



FIG. 3

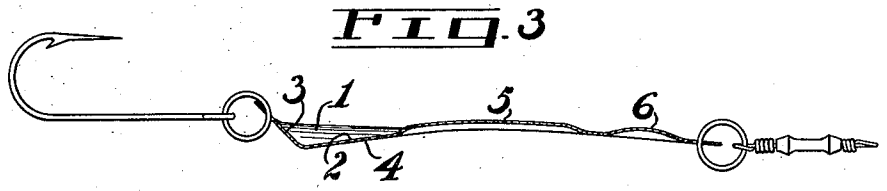



FIG. 4

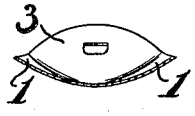


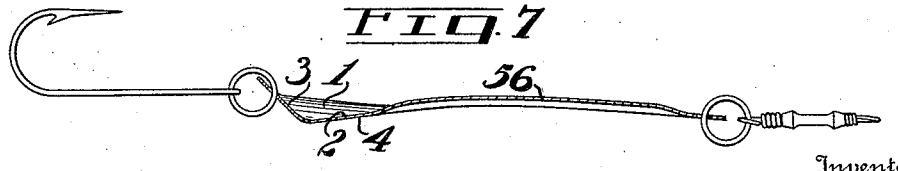

FIG. 5




FIG. 6




FIG. 7




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# UNITED STATES PATENT OFFICE.

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## TROLLING SPOON.

Application filed May 26, 1921. Serial No. 472,732.

*To all whom it may concern:*

Be it known that I, JOSEPH HANSEN, a citizen of the United States of America, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Trolling Spoons, of which the following is a specification.

My invention relates to trolling spoons or spoons which are designed for use as a lure or bait with which to catch fish.

The object of my invention is to provide an efficient bait of a construction which will secure a type of action which will be attractive to fish and one which will have sufficient rigidity and stiffness to retain the form given it at the time of manufacture.

The features of my invention which I believe to be novel and upon which I desire to secure a patent will be specifically set forth in the claims terminating this specification.

The drawings accompanying herewith show my invention in the type of construction which I now prefer to use.

Figure 1 is a face view of the spoon as seen from its concave side.

Figure 2 is an edge view of the spoon.

Figure 3 is a central longitudinal section of the spoon.

Figures 4, 5, and 6 are transverse sections taken respectively upon the lines 4—4, 5—5, and 6—6 of Figure 1, the direction of view in each case being indicated by the arrows accompanying said lines.

Figure 7 is a central longitudinal section of the spoon showing a modification in which the central rib is combined with the slight depression which is shown in the other drawings near the head end of the spoon.

In describing this spoon the head end is supposed to be the end which is attached to the swivel and which is in advance when the spoon is towed through the water, and the rear end is the end to which the hook is attached.

This invention is an improvement upon the type of spoon shown in the patent to H. W. McMahon, No. 1,136,745, patented April 20, 1915. The general type of construction of this spoon conforms to that of the McMahon spoon. It differs therefrom, however, in certain respects which will be hereinafter pointed out.

In conformity with the construction of the McMahon spoon this has two lateral reaction surfaces 1 located at the rear end of the spoon and having their axes diverging forwardly, that is, the general direction of the longitudinal lines of said reaction surfaces while extending forwardly diverge laterally, thus making surfaces which are inclined to the central longitudinal axis of the spoon.

These surfaces 1 may be curved after the manner indicated in the section shown in Figure 4. The degree of curvature and the merging of the lateral reaction surface with the central bottom surface 2, may also be varied so as to be somewhat abrupt or a gradual merger.

The rear ends of the lateral reaction surfaces 1 are connected by a transverse reaction surface 3 which is inclined rearwardly and upwardly as seen in Figure 1. The surface 2 between the two reaction surfaces 1 as it extends rearwardly is inclined away from the general plane of the spoon, as is clearly shown in Figures 2 and 3. This forms a reaction surface 4 on the back or convex side of the spoon.

The above points of construction are included in the spoon of the McMahon patent. It has been found that these surfaces provide a spoon having excellent qualities and one which catches fish. They are much used in catching large fish such a salmon, which in certain varieties often are apt to reach thirty pounds in weight and sometimes much more than this. Being a strong vigorous fish and inclined for fight when caught, spoons used in such work are subject to heavy strains.

It has been found too that a spoon of this character will be somewhat more efficient if the spoon be given a slight curvature in a direction perpendicular to the general plane thereof. This curvature is seen by comparing the direction of the edge of the spoon as shown in Figure 2 and the section as shown in Figure 3 with a straight line. The curve formed by this bending is concave at the side opposite the concavity formed by the reaction surface 1 or at the side which might be called the back of the spoon.

Due to the strain put upon these spoons in catching the large fishes referred to, the spoon is apt to be straightened out and somewhat deformed from the shape which has been found most efficient. To stiffen the

spoon and to thereby insure its retention of the shape given it at the time of manufacture, I have provided the spoon along the line of its central axis with a troughlike ridge or depression 5 which extends sufficiently into the valley formed between the lateral reaction surfaces 1 to prevent bending of the spoon along a transverse line located at the forward ends of these reaction surfaces 1.

The McMahon spoon showed a round hump as 6 which is formed near its front end by forcing the metal to this side. As shown in Figures 1, 2, and 3, the trough-like rib or depression 5 does not extend to this circular hump 6. If desired, however, the two may be merged in one, as has been shown in Figure 7.

The rib 5 may also function in the manner contemplated for the hump 6, that is as a reflecting surface for the light to thereby attract the fish. While the rib 5 is shown as projected towards one side of the spoon, it is evident that the stiffening effect may be equally obtained if it were pressed to the opposite side of the spoon. There would also be a like effect so far as the reflection of light goes, excepting as the spoon in its action tends to have the face side or that which is shown in Figure 1 and which is uppermost in Figures 2 and 3 of the drawings, uppermost in use.

The spoon in actual use has a lateral side swing imparted to its rear end and at the same time a twisting movement about its longitudinal axis, which twisting movement is an oscillating movement and does not develop into rotation. The oscillation is, however, sufficient under certain conditions of speed, to cause the spoon to swing so that its general plane is in a vertical direction, the arc of swing being therefore an approximation to 180°. The amount of this swing will of course vary with the speed with which it passes through the water and other conditions affecting it in use.

The provision of the rib 5 stiffens the spoon so that under all ordinary conditions of use it will retain the shape given to it at the time of manufacture. Any strain which is apt to be placed upon the spoon while fishing, will hardly be sufficient to cause any serious deformity of its shape. The main body of the spoon, at least forwardly of the lateral reaction surfaces 1, is straight in transverse direction except as modified by the trough-like rib 5, and slightly curved in longitudinal direction. This is shown by comparison of Figures 5 and 2.

Figure 7 differs only from the other figures in that the rib 5 has been extended forwardly so as to merge with the hump 6 at the forward end thereof forming the rib 56. The rib 5 may be projected to either side of the spoon. While this is a rib as viewed from one side, it is a trough as seen from the other side. The two terms as herein used are essentially synonymous.

What I claim as my invention is:

1. A trolling spoon having lateral reaction surfaces at each side of its rear end increasing in width rearwardly and a laterally extending reaction surface connecting the rear ends of said lateral reaction surfaces, the body of the spoon forwardly of said lateral reaction surfaces being bent to give it a slight curvature in a lengthwise direction and also having a trough-like rib extending from between said reaction surfaces forwardly through the central section of its length.

2. A trolling spoon having lateral reaction surfaces at each side of its rear end increasing in width rearwardly and a laterally extending reaction surface connecting the rear ends of said lateral reaction surfaces, the body of the spoon forwardly of said lateral reaction surfaces being bent to give it a slight curvature in a lengthwise direction and straight transversely except for a central trough-like rib extending from between said reaction surfaces forwardly of the spoon through the central portion of its length.

3. A trolling spoon having lateral reaction surfaces at each side of its rear end increasing in width rearwardly and a laterally extending reaction surface connecting the rear ends of said lateral reaction surfaces, the floor of the valley formed between said reaction surfaces being rearwardly deflected from the general longitudinal direction of the spoon towards its convex side, the spoon having a longitudinally extending trough having its rear end extending somewhat into the mouth of said valley.

4. A trolling spoon having two symmetrically disposed transversely curved reaction surfaces one at each side at its rear end and a transversely extending backwardly inclined reaction surface at the rear of said side reaction surface, and also having a trough-like longitudinally extending rib having its rear end between and overlapping the forward ends of the lateral reaction surfaces.

5. A trolling spoon having lateral reaction surfaces at each side of its rear end positioned with their axes of curvature laterally diverging forwardly, a transversely extending and backwardly inclined reaction surface joining the rear ends of said lateral reaction surface, the central portion of the length of the spoon being flat in transverse section modified by a central trough-like depression having its rear end extending well into the valley between the said lateral reaction surfaces.

6. A trolling spoon having lateral reac-

tion surfaces at each side of its rear end positioned with their axes of curvature laterally diverging forwardly, a transversely extending and backwardly inclined reaction surface joining the rear ends of said lateral reaction surface, the central portion of the length of the spoon being flat in transverse section modified by a central trough-like depression extending lengthwise thereof from between said reaction surfaces forwardly and having its concavity at the opposite side of the spoon from that formed by the reaction surfaces at the rear of the spoon.

Signed at Seattle, King County, Washington, this 10th day of May, 1921.

JOSEPH HANSEN.