

Sept. 23, 1924.

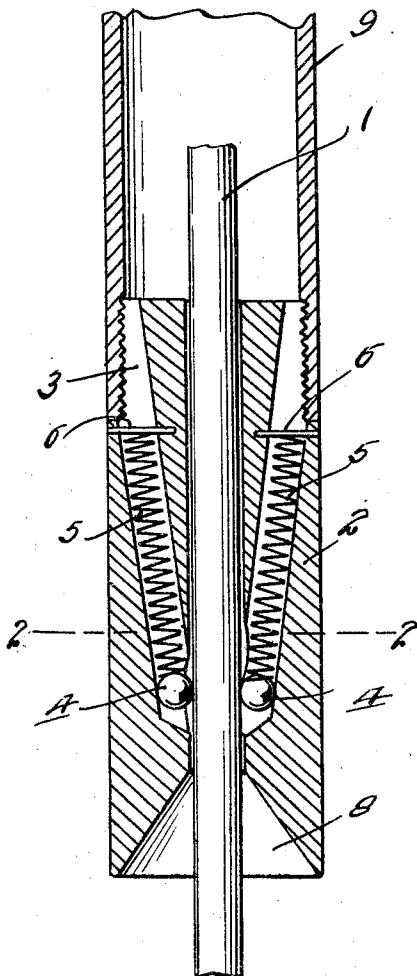
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E. V. OSWALD

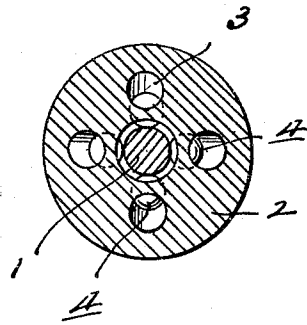
FISHING TOOL

Filed May 16, 1923

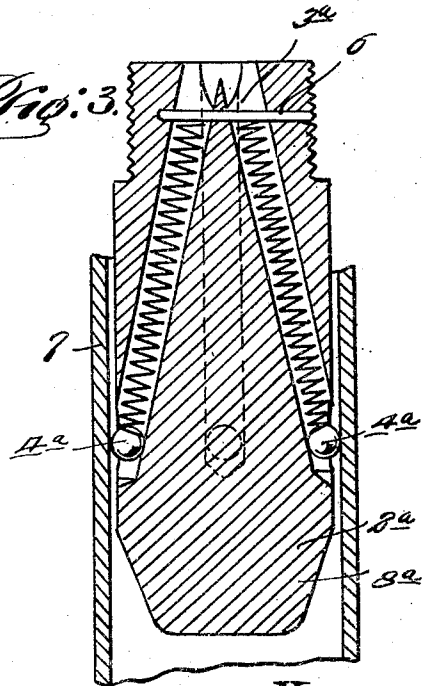
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

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## FISHING TOOL.

Application filed May 16, 1923. Serial No. 639,244.

*To all whom it may concern:*

Be it known that EMIL V. OSWALD, a citizen of the United States, residing at Lost Hills, in the county of Kern and State of California, has invented certain new and useful Improvements in Fishing Tools, of which the following is a specification.

This invention has reference to fishing tools for picking up lost sucker rods out of an oil well or from any well or the like as when the rod passes through the center of the balls employed and the balls pull down in the back and make it impossible to then pull out of the fishing tool even though the rod be worn considerably. The tool will take hold as the tool is not limited to but four holes. It should have as many holes with balls as possible without losing its strength.

The structure is such as to provide great strength together with positive grip and moreover the device will work in very small space and is simple to handle. Moreover, the device is provided with a taper hold which comes out on the outside and may then be used to grip pipe tubing or anything that has to be brought from the inside.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification with the understanding, however, that the invention is not confined to any strict conformity with the showing in the drawings but may be changed and modified so long as such changes and modifications mark no material departure from the salient features of the invention as expressed in the appended claim.

In the drawings:

Figure 1 is a longitudinal section of a gripping device for letting the tool down the hole to get a firm hold on the tool;

Figure 2 is a section on the line 2—2 of Figure 1; and

Figure 3 is a view similar to that of Figure 1 but showing the arrangement embodying means for gripping a tube instead of a rod.

Referring to the drawings, there is shown in Figures 1 and 2 a pump rod 1 of taper conformation extending through a block 2

and traversing a circular series of passages 3 tapering toward a longitudinal center line represented by the rod 1. The block 2 is provided with a circular series of converging passages represented by the converging bores 3 in each of which there is lodged a ball 4 so located that the convergence of the passages 3 tends to bind the balls 4 against the rod 1 and the springs 5 extending lengthwise of the passages 3 tends to force the balls 4 into contact with the rod 1, the pressure of the balls upon the rod being determined by the inclination of the passages 3 and by the effect of pins 6 traversing the passages 3 and bearing on the springs 5.

In Figure 3 there is a circular series of passages 3<sup>a</sup> arranged reversely to the passages 3 so that the balls 4 under the influence of the springs 3<sup>a</sup> are forced outwardly against the inner wall of a casing 7 and acting in the reverse manner to the balls 4 as arranged in the structure of Figures 1 and 2.

The arrangement shown in Figure 1 is such as is employed for fishing the sucker rod 1 to lift the rod in case it is lost in a well while the arrangement shown in Figure 3 is designed to recover a casing which has been lost in the well.

In the structure shown in Figure 1 the block 2 is formed at the lower end with an inverted taper recess 8 so that the block 2 may be lowered into the well and the recess 8 will engage the upper end of the sucker rod 1 and be guided thereby into engagement with the block in such position that the balls 4 will jam into engagement with the rod 1 so as to lift the rod when lifting force is applied thereto.

In the structure shown in Figure 3 the lower end of the block 2<sup>a</sup> on being lifted will cause the balls 4<sup>a</sup> to jam against the tubing 7 and lift it against the possibility of escape, the pins 6 facilitating this lifting action and the taper form of the lower end 8<sup>a</sup> of the block aiding in this gripping or jamming action.

The upper end of the blocks 2 and 2<sup>a</sup> are provided with countersunk threads to permit the application of a tubing extension 9 whereby the block 2 or 2<sup>a</sup> may be lowered into the well to bring it into proper relation to the rod to be fished.

What is claimed is:

A fishing tool adapted for use in deep wells comprising a body, a series of bores arranged about the axis of the body, said bores being open throughout their lengths, gripping balls within the bores, springs located within the bores and bearing against the balls, pins disposed transversely across the bores and confining the upper ends of the springs, and a tube connected with the body and having an end portion which surrounds the upper open ends of the bores. 10

In testimony whereof I affix my signature.

EMIL V. OSWALD.