Dec. 16, 1930. L. E. DAVIS 1,785,299

WELL FISHING TOOL

Filed Sept. 28, 1929

Fig. 1.

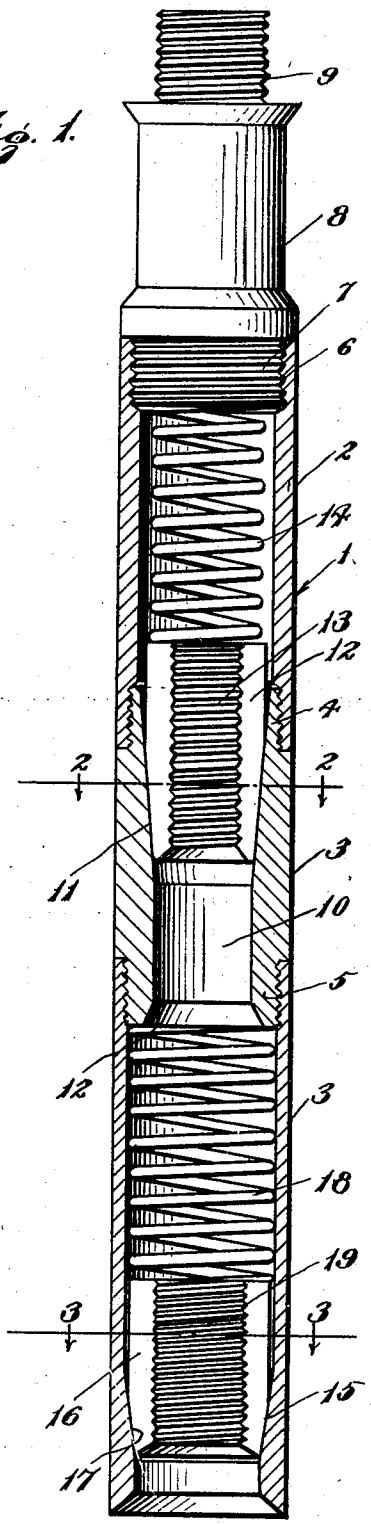


Fig. 2.

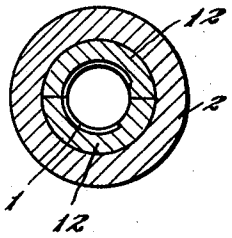
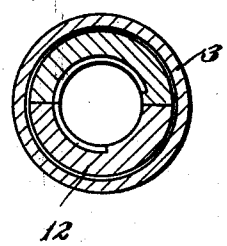


Fig. 3.



L. E. Davis
INVENTOR.

BY Lacey & Lacey,
ATTORNEY.

Patented Dec. 16, 1930 1,785,299

UNITED STATES PATENT OFFICE

LOUIS E. DAVIS, OF SEMINOLE, OKLAHOMA

WELL-FISHING TOOL

Application filed September 28, 1929. Serial No. 395,926.

The present invention is directed to improvements in well fishing tools.

The primary object of the invention is to provide a device of this character which is of extremely simple construction and will effectively operate to engage broken rods or the like in a well so that the same can be conveniently withdrawn therefrom.

Another object of the invention is to provide a device of this character so constructed that objects varying in size may be conveniently gripped for removal from the well.

Another object of the invention is to provide a device of this character wherein the slips or jaws will be positive in operation.

With these and other objects in view, the present invention resides in the novel features of construction, formation, combination and arrangement of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which:

Figure 1 is a central longitudinal sectional view through the device.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is a sectional view on the line 3—3 of Figure 1.

The device comprises a tubular member 1 which consists of upper and lower sections 2 and 3 and an intermediate section 3′, the intermediate section being provided with exteriorly threaded rims 4 and 5, for threaded engagement with the opposed ends of the sections 2 and 3.

The upper end of the section 2 is interiorly threaded, as at 6, for receiving the plug 7 of the head 8, said thread having a threaded shank 9 carried thereby for engagement with a rod or other device which serves to lower the device into the well or lift the same therefrom.

The intermediate section 3′ is provided with a bore 10 which opens at its upper end into the tapered seat 11, said section having a beveled lower edge 12 to serve in guiding the tool into the bore 10 of the section 3′. A pair of slip jaws 12 are mounted in the section 3 and are beveled for a portion of their length for engagement with the tapered seat 11, said slips being interiorly threaded, as at 13, for gripping the rod or broken part. Resting upon the upper ends of the slips 12 is the lower end of the coil spring 14, the upper end of which bears against the plug 7, said spring serving to normally urge the slips downwardly. The spring will be obviously retained within the section 2.

The lower section 3 is provided with a beveled seat 15 and engaged therewith are the slips 16, said slips having beveled surfaces 17 cooperating with the seat 15, and bearing upon the upper ends of the slips is a coil spring 18, the upper end of which bears against the lower end of the section 3. This spring serves to force or urge the slips into engagement with the seat 17. The slips 16 are also provided with threads 19 and it will be observed that the diameter of the slip jaws 16 is greater than that of the slip jaws 12 in order that relatively large objects may be engaged by the jaws 16. Obviously, if the object is of a diameter which will pass freely between the slips 16, it will be engaged by the slips 12. In this manner, objects which vary in diameter may be removed from the well.

Briefly, the operation is as follows:

The device is lowered into the well and if the object is comparatively large in diameter it will engage the slip jaws 16 and as the device is lowered, the weight thereof will cause the broken part which engages the slip jaws to move the same upwardly slightly so that they may spread, during which time the spring 18 will be contracted. As soon as the broken part is fully engaged with the section 3 and the device is lifted, the spring will force the slips downwardly so that the beveled seat thereof will contract the same to firmly grip the broken part. Should the broken part be of a diameter to pass through the slips 16, it will be engaged in a similar manner by the slips 12.

From the foregoing, it is thought that the operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description and it will be understood that various changes in size, shape, proportion and minor details of construction may be resorted to without de-

parting from the spirit or sacrificing any of the advantages of the invention.

What is claimed is:

A well fishing tool comprising similar upper, lower and intermediate tubular sections of like external diameter and having openings therethrough of different diameters, the intermediate and lower sections having the bottom portion of the openings of uniform diameter and the part immediately thereabove tapered, slips in the respective sections having their lower ends tapered and their upper ends of uniform diameter, the slips in the intermediate section being of less external diameter than the slips in the lower section, and springs coacting with the slips to exert a downward pressure thereon to hold their tapered ends in the tapered openings of the respective sections.

In testimony whereof I affix my signature.

LOUIS E. DAVIS. [L. S.]