

Oct. 30, 1928.

1,689,702

R. N. VICKERS

FISHING TOOL

Filed Dec. 29, 1927

2 Sheets-Sheet 1

Fig. 1.

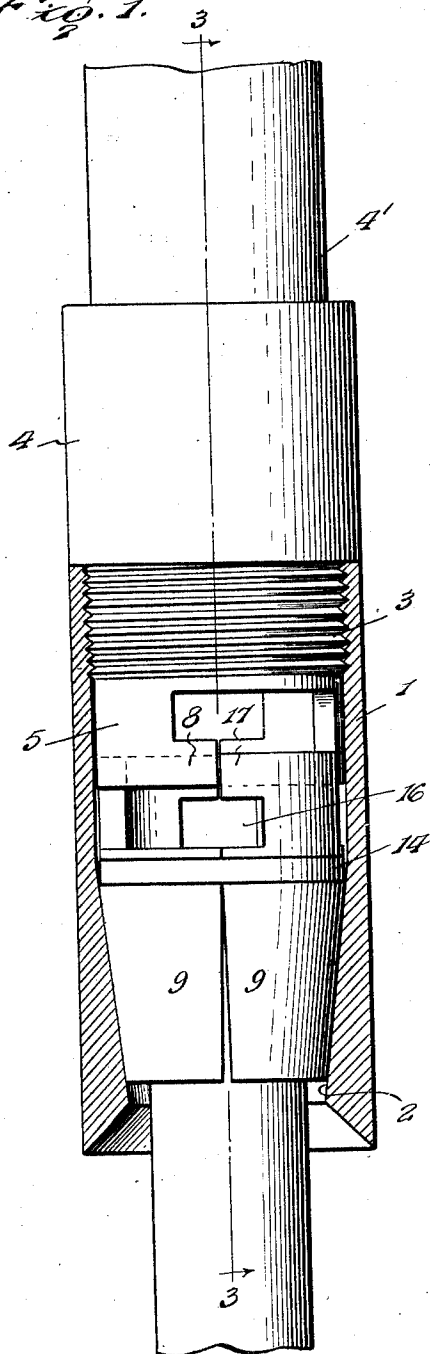
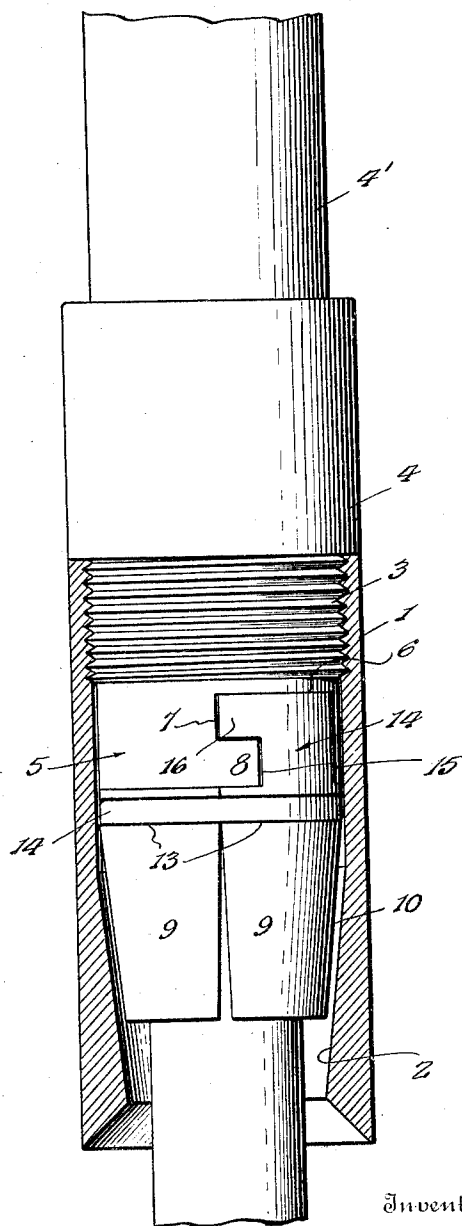


Fig. 2.



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2 Sheets-Sheet 2

Fig. 3.

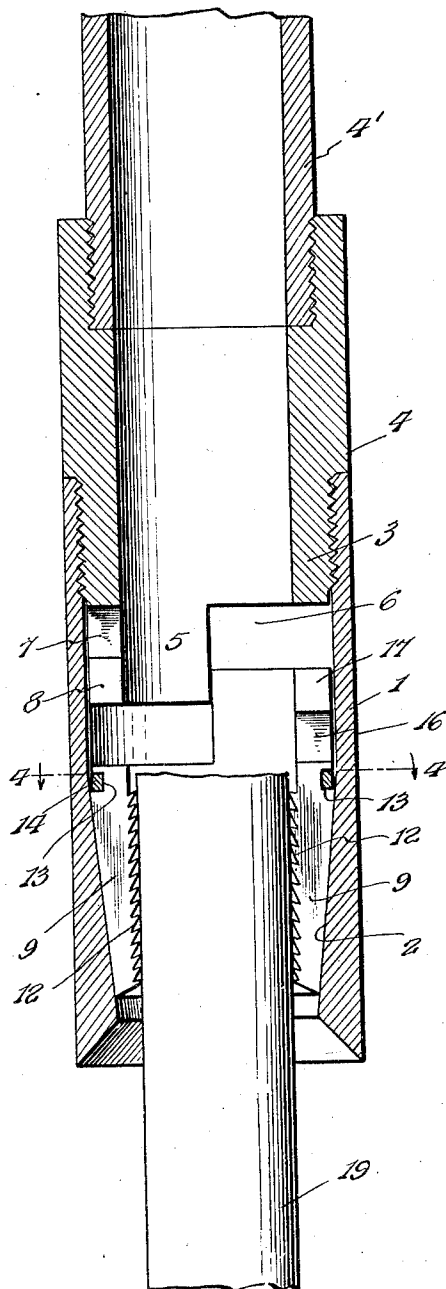


Fig. 4.

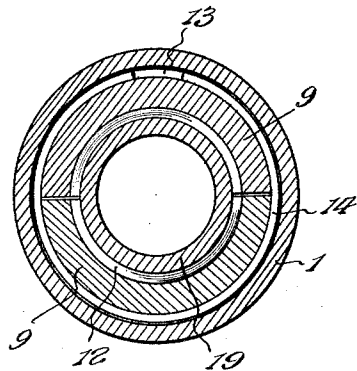
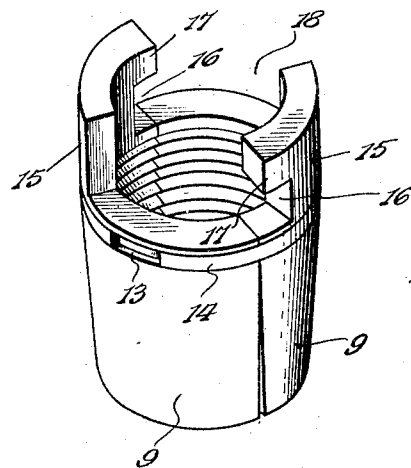


Fig. 5.



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UNITED STATES PATENT OFFICE.

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FISHING TOOL.

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The present invention is directed to improvements in fishing tools.

The primary object of the invention is to provide a device of this character so constructed that it can be readily lowered in the well for the recovering of pipes or casings which have become disconnected from the drilling rig.

Another object of the invention is to provide a device of this character so constructed that should the lost pipe or casing resist all effort to withdraw the same from the well the tool can be operated to release the pipe or casing in order that the tool can be recovered.

With these and other objects in view, this 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 drawing in which,

Figure 1 is a view partly in section and partly in elevation, showing the jaws in their operative position.

Figure 2 is a similar view showing the jaws in position to be disengaged from the pipe or casing.

Figure 3 is a similar view showing the jaws in gripping engagement with the pipe.

Figure 4 is a sectional view on line 4—4 of Figure 3.

Figure 5 is a perspective view of the jaw assembly.

Referring to the drawings, 1 designates a cylindrical body, the lower end of which is formed with a tapered seat 2, while the upper end thereof is threaded for engagement with the threaded reduced collar 3 of the tubular head 4. This head as customary has threaded therein a drill tube 4'.

The lower end of the collar 4 terminates in spaced skirts 5, and resultant recesses 6, one end wall of each skirt having a notch 7 and a resultant lug 8, which are diagonally disposed.

A pair of slip jaws 9 are provided and are semi-circular in cross section and have tapered outer faces for cooperation with the seat 2 of the body 1, said jaws having their inner faces formed with upwardly directed pipe gripping teeth 12.

Near the upper edge of each jaw is formed a groove 13 and in which is engaged a split resilient ring 14 for maintaining the jaws coupled, but at the same time permitting the same to spread. The upper end of each jaw terminates in a web 15, one side edge of each

being provided with a notch 16 and resultant lug 17, which are diagonally disposed for cooperation with the notches 7 and lugs 8 of the skirts 5.

It will be observed that the spaces between the ends of the webs 15 are such that the skirts 5 may enter between the same in order that said webs may enter the recesses 6, the lugs 8 and 17 being capable of interlocking upon rotation of the head and body to the right or left and at which time the jaws are held against rotation which occurs when the same are engaged with the stuck pipe 19.

To remove a lost pipe the body is lowered into the well until the upper end of the pipe is received between the jaws 9, and at which time the skirts 5 and webs are not interlocked, as shown in Figures 1 and 2, thus permitting the jaws to move downwardly upon the tapered seat as the body is drawn upwardly. It sometimes occurs that the pipe is so fast in the well that the same can not be withdrawn, therefore, it is necessary that the jaws be capable of spreading to release the pipe to permit the body to be withdrawn. To accomplish this the body is dropped slightly so that the skirts 5 will fully enter the spaces 18, whereupon the body is turned to the left or right in order that the lugs 8 will interlock with the lugs 17 so that when the body is drawn upwardly the jaws will disengage the seat 2 and owing to the presence of the spring 14, said jaws will now spread and release the pipe, thus permitting the body to be withdrawn from the well.

Having thus described the invention, I claim:

1. A device of the class described comprising a cylindrical body having a seat in its lower end, a collar threaded into the body and having spaced skirts upon its lower end, a pair of yieldably connected jaws mounted in the body for cooperation with the seat, said jaws each having a web upon its upper end and capable of being interlocked with the skirts when the body is rotated in one direction and to be released when the body is rotated in another direction.

2. A device of the class described, comprising a cylindrical body having a seat in its lower end, a collar threaded in the body and having spaced skirts upon its lower end, said skirts having one of their ends provided with lugs, a pair of yieldably connected jaws cooperative with the seat, each jaw having upon its upper end a web, said webs being

spaced to slidably receive the skirts, said webs having one of their ends provided with lugs for interlocking engagement with the lugs of the skirts when the body is rotated in one direction, and to release the same when rotated in another direction.

3. A device of the class described comprising a body having a seat therein, a pair of

jaws engaged in the seat, spaced lugs associated with the body and jaws, said lugs being adapted to lock with each other when the body is rotated in one direction and to unlock when the body is rotated in a reverse direction.

In testimony whereof I affix my signature.
RICHARD N. VICKERS. [L. s.]