

1,379,545.

T. J. FONDA.
INSIDE PIPE CUTTER.
APPLICATION FILED JULY 23, 1920.

Patented May 24, 1921.

Fig. 1.

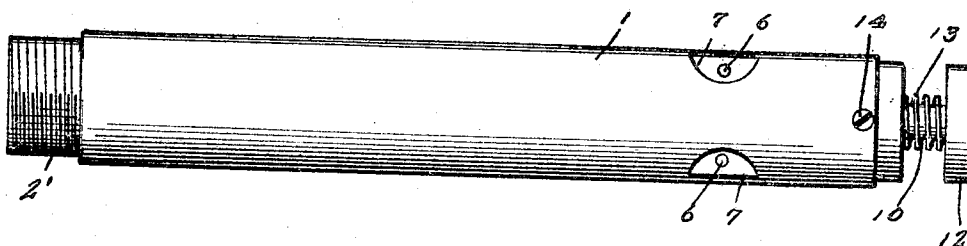


Fig. 2.

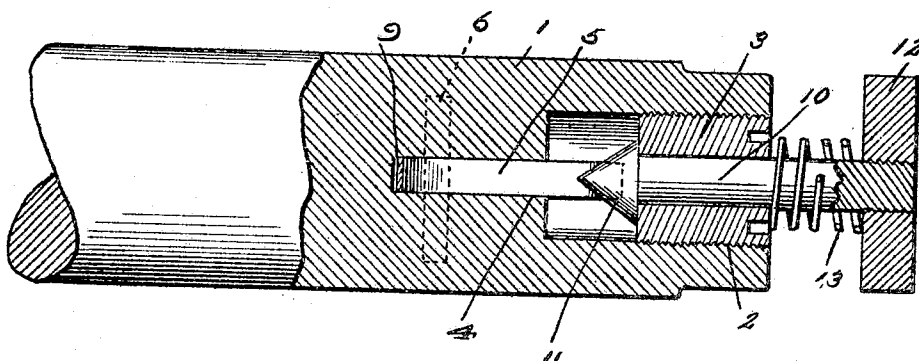


Fig. 3.

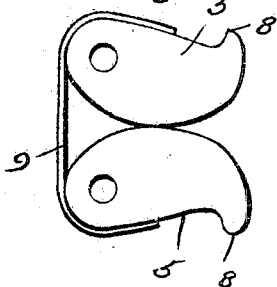
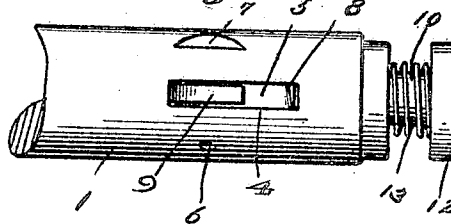


Fig. 4.



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WITNESSES

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TROY J. FONDA, OF OCONTO, NEBRASKA.

INSIDE PIPE-CUTTER.

1,379,545.

Specification of Letters Patent.

Patented May 24, 1921.

Application filed July 23, 1920. Serial No. 398,420.

To all whom it may concern:

Be it known that I, TROY J. FONDA, a citizen of the United States, residing at Oconto, in the county of Custer and State of Nebraska, have invented new and useful Improvements in Inside Pipe-Cutters, of which the following is a specification.

This invention relates to a pipe cutting device and the principal object of the invention is to provide means for cutting the pipe from the interior thereof.

The invention is designed to cut pipes becoming stuck in wells and the like so as to prevent loss of the entire section of the pipe. It is a well known fact that when sand or gravel enters a pipe in a well the pipe becomes stuck and cannot be removed so that the entire length of pipe is lost unless it can be cut off above the point where it is stuck.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation of the invention.

Fig. 2 is an enlarged sectional view of the lower end of the device.

Fig. 3 is a view of the cutters and their holding spring.

Fig. 4 is a fragmentary elevation of the lower part of the device and taking a quarter turn from Fig. 1.

In these views 1 indicates a side shaft having its upper end reduced and screw threaded, as at 2', to receive the connecting rod. The other end is provided with a screw threaded socket 2 which receives a screw threaded bushing 3. This end of the shaft is provided with the slots 4 which communicate with the socket and are oppositely arranged. These slots receive the cutters 5 which are pivoted at their upper ends by the pins 6 which pass through holes formed in the shaft and in the cutters. Recesses 7 are formed in the shaft at one end of these soles to permit the pins to be placed

in position. The lower ends of the cutters 55 are provided with outwardly projecting cutting parts 8 which are adapted to extend from the slots to engage the pipe to be cut. A spring 9 engages the upper ends of the cutters and tends to hold them pressed together with the cutting parts lying within the slots and thus out of contact with the walls of the pipe to be cut.

The means for forcing said cutters apart to project the cutting portions from the slots consists of a bolt 10 having a cone-shaped head 11 for engaging the lower curved edges of the cutters to force them apart and this bolt passes through the bushing and has its ends screw threaded to receive a nut 12. A spring 13 is carried by the bolt and pressed against said nut 12 and the outer end of the bushing. The bushing holds the bolt in place and the spring tends to hold the head of the nut away from the cutters. The bushing is held against turning movement by the small screws 14.

The shaft after being screwed to the end of the operating rod is lowered in the pipe which has become stuck, until the nut 12 strikes the obstruction in the pipe. This will force the nut and bolt upwardly against the tension of the spring 13 so as to cause the head 11 on the bolt to engage the cutters and force them apart. This movement of the cutters will project the cutting edges against the inner wall of the pipe and then the device is rotated so as to cause said cutting edges to cut the pipe just above the obstruction. In this way all the pipe above the obstruction is saved.

It will of course be understood that the devices may be made in different sizes so as to be used with different sizes of pipes.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A device of the class described comprising a body having a screw threaded socket and slots in its sides communicating with said socket, cutters pivoted in said slots and hav-

ing their cutting edges projecting outwardly, spring means for holding said cutters inwardly with the edges within the slot, a bushing in said socket, a spreader
5 bolt carried by the bushing and having its enlarged upper end adapted to engage the cutters for forcing their edges outwardly, a nut on the lower end of the bolt for engaging the obstruction and a spring for normally holding the bolt out of engage- 10 ment with the cutter.

In testimony whereof I affix my signature.

TROY J. FONDA.