(No Model.)

J. J. O'DONOHUE.

PIPE CUTTER AND THREADER.

No. 547,615. Patented Oct. 8, 1895.

Fig. 1.

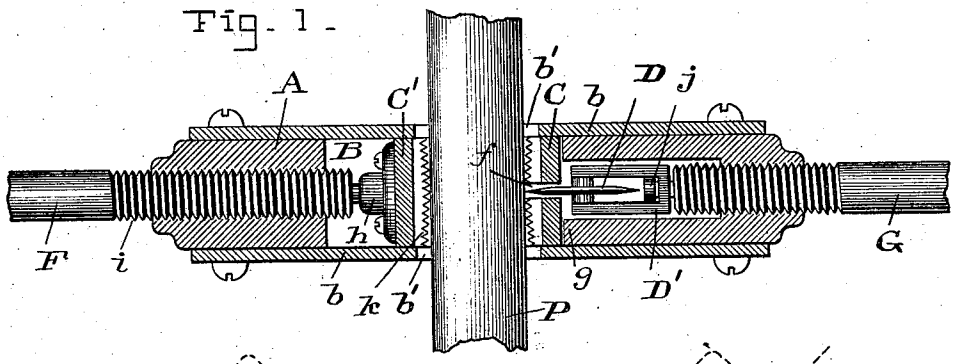


Fig. 2.

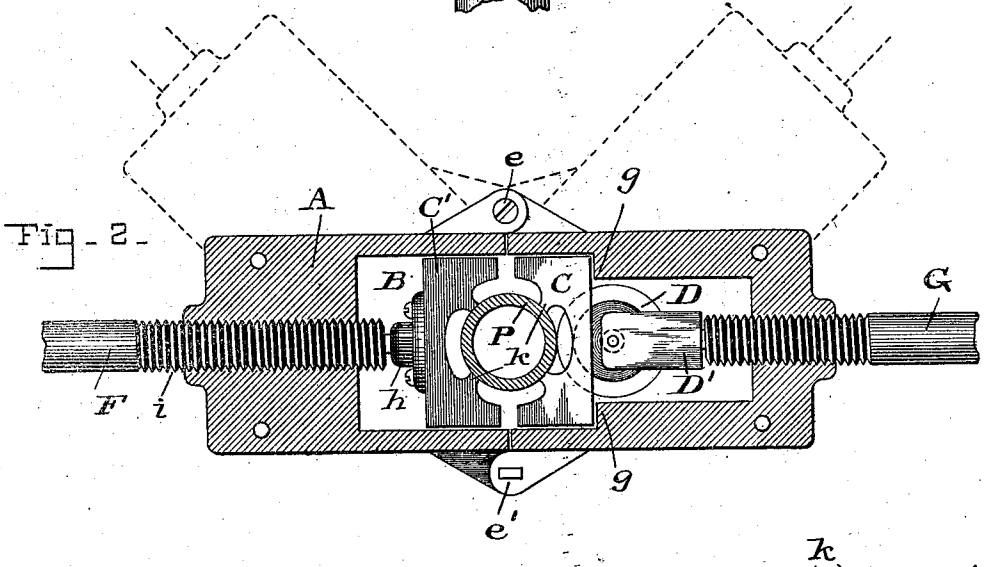


Fig. 3.

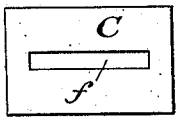


Fig. 4.

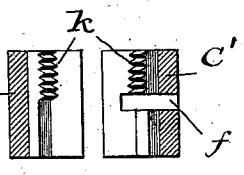
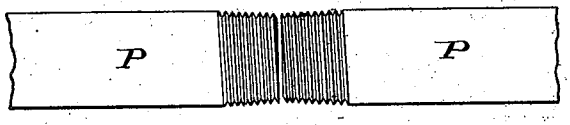


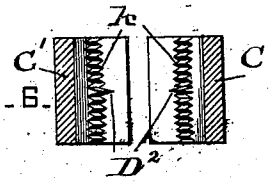
Fig. 5.



Witnesses:—

L. I. Van Horn,
Charles B. Mann Jr.

Fig. 6.



Inventor:—

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UNITED STATES PATENT OFFICE.

JOSEPH J. O'DONOHUE, OF BALTIMORE, MARYLAND.

PIPE CUTTER AND THREADER.

SPECIFICATION forming part of Letters Patent No. 547,615, dated October 8, 1895.

Application filed March 23, 1895. Serial No. 542,916. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH J. O'DONOHUE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Pipe Cutters and Threaders, of which the following is a specification.

This invention relates to an improvement in tools for threading and cutting pipes.

The invention will first be described, and then pointed out in the claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a horizontal longitudinal sectional view showing the tool applied on a pipe ready to operate. Fig. 2 is a vertical longitudinal sectional view of the tool and shows by dotted lines how the head separates and may be swung open to admit a die or a pipe. Fig. 3 is a rear end view of one of the die-halves. Fig. 4 shows a modified form of threading-die for threading only one of the cut ends of a pipe. Fig. 5 is a view showing a pipe that has been cut into two parts and both parts threaded at the point of separation. Fig. 6 is a modification of the cutting and threading die.

Referring to the drawings, Figs. 1 and 2, A designates an oblong box or head closed at each side by plates *b* and having a chamber B, which contains the thread-cutting die C C′ and pipe-cutting disk D. An opening *b′* is made through its side plates for insertion of the pipe P, which is to be cut and threaded. The said head is made in two halves or two sections jointed together by a hinge *e*, so as to open and close together and admit the pipe or a die, and provided with a lock or latch *e′* to hold the two sections closed when the pipe or die is inserted.

The thread-cutting die may be of any size to suit different sizes of pipes, and is formed of two halves or parts C C′, one of which C has a slot *f* through it for the insertion of a cutting-disk D, hereinafter described. This half of the die is stationary within the chamber, resting against shoulders *g*, while the other die-half C′ has on its rear a socket *h*. A rod F has screw-threads *i*, which fit in and pass through one end of the head, and this rod is provided at its end within the chamber B with a swivel head or ball, (not shown,) which connects with the socket *h* on the half-die C′. By this construction the turning of the rod F will cause the half-die C′ to move forward toward the pipe P or move back, according to the direction the rod is turned. The two halves C C′ of the threading-die thus take close about the pipe. Another rod G, similar to the rod F, passes through the opposite end of the head, and its end in the chamber B has a ball or head *j*, on which the head D′ of the cutting-disk D is mounted. The cutting-disk takes into the slot *f* in the stationary half of the threading-die. It will thus be seen that by turning the rod G the cutting-disk may be advanced against the pipe P or moved back from the pipe.

The two rods F G at their outer ends should have suitable handles (not shown in the drawings) to facilitate their turning, and also to serve as hand-grasps when revolving the tool about a pipe P, which latter should be held fast by the pipe-tongs or other means to prevent it from turning.

To operate this tool the lock device or latch *e′* should be loosened or opened to allow the two hinged parts of the head A to turn on their hinge *e*, as indicated in broken lines in Fig. 2. The cutting-disk D and the half-die C′ are both retracted by turning the rods G and F, respectively. The tool is now ready to be set astride of a pipe P, and then the two hinged parts of the head are brought together and the lock device or latch *e′* secured. The half-die C′ is then moved forward until the pipe is gripped between the two halves C C′ of the die. The rod G is then turned to force the edge of the cutting-disk D into the side of the pipe P. Then the entire tool is revolved around the pipe. By this revolving operation the pipe is partly cut through, but not entirely. The cutting-disk is then retracted, and the rod F turned to slightly force the thread-cutters *k* into the side of the pipe. The tool is then turned backward and forward about a quarter-turn or a little more on the pipe in the usual manner for thread-cutting, while the rod F at the same time is occasionally turned slightly to force the thread-cutters still farther into the side of the pipe. When the thread has been cut, the tool may be removed from the pipe and the latter readily broken into two parts where the disk D made its cut.

The modification shown in Fig. 4 shows a a style of threading-die in section, which will cut a thread only on one of the cut ends of the pipe.

The modification shown in Fig. 6 shows a section of the two parts of a thread-cutting die and each part at the center of the line of thread-cutters *k* is provided with a blade D^2 to cut the pipe into two parts. In this instance the blades have a slight pitch like the thread-cutters *k*, but project relatively longer than the latter. The line of cut made by these blades D^2 will be spiral and parallel with the line of cut made by the thread-cutters *k*. By this modification of blade a separate revoluble disk-cutter is dispensed with.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A pipe threader and cutter having in combination a head made in two parts which are hinged together at the center; a thread-cutting die made in two halves and confined in the said head; and a cutter to cut the pipe in two parts and acting in cooperation with the thread-cutter.

2. A pipe threader and cutter having in combination a head made in two parts which are hinged together at the center; a thread-cutting die made in two halves and confined in the said head; a screw rod, F, to operate or move one of the halves of the thread-cutting die; a cutting disk to cut the pipe and said disk working in a slot in one of the halves of the thread-cutting die; and a screw rod, G, to move the said cutting disk.

In testimony whereof I affix my signature in the presence of two witnesses.

JOSEPH J. O'DONOHUE.

Witnesses:

CHARLES B. MANN, Jr.,

THOS. C. BAILEY.