

(No Model.)

J. CONWAY.
PIPE CUTTER.

No. 262,534.

Patented Aug. 8, 1882.

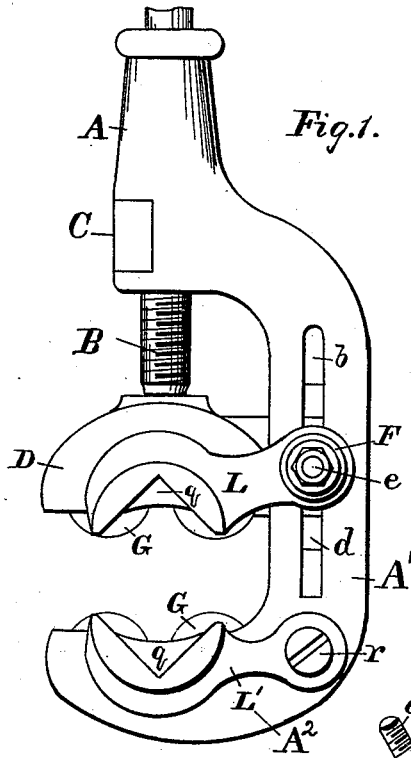


Fig. 1.

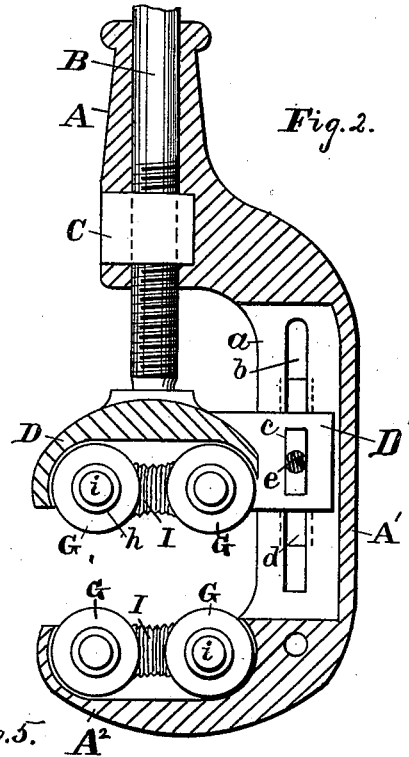


Fig. 2.

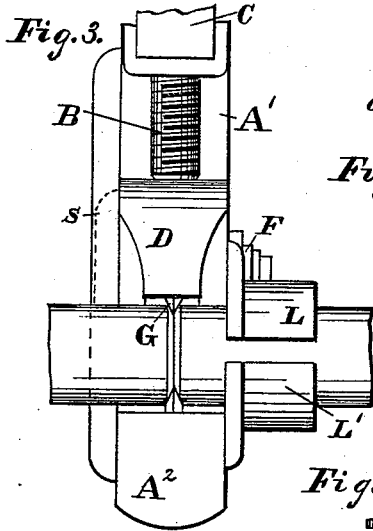


Fig. 3.

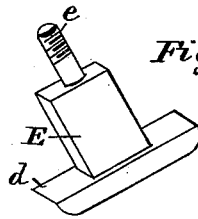


Fig. 5.

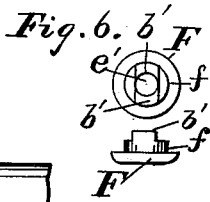


Fig. 6.

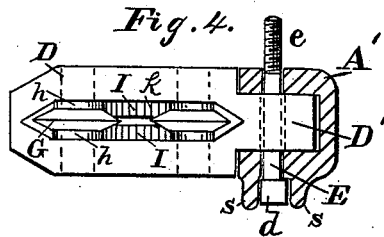


Fig. 4.

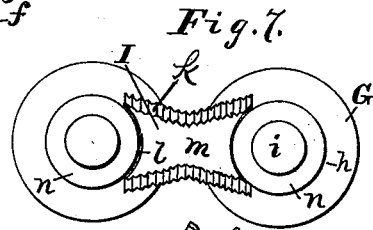


Fig. 7.



Fig. 8.



Fig. 9.

Witnesses:
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Inventor:
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By his Atty,
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UNITED STATES PATENT OFFICE.

JESSE CONWAY, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO
JOHN N. CONWAY, OF SAME PLACE.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 262,534, dated August 8, 1882.

Application filed June 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, JESSE CONWAY, a citizen of the United States of America, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Pipe-Cutters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain improvements in pipe-cutters for cutting wrought or cast iron and other metal pipes, and will first be described, and then designated in the claims.

In the drawings hereto annexed, Figure 1 is a side view of the tool. Fig. 2 is a vertical section of same. Fig. 3 is a front view of same, showing the tool in position on a piece of pipe. Fig. 4 is a view of the movable cutter-head. Fig. 5 is a view of the flat-shanked bolt. Fig. 6 shows two views of the guide-holding plate. Figs. 7, 8, and 9 are views of the trimmer.

The letter A denotes the shank of the tool, through which the screw-rod B of the handle passes. The shank and body A' are made preferably of cast-iron, and a socket is formed in one side of the shank, into which is inserted a stationary nut, C, made preferably of steel. The screw-rod passes through this nut, and when turned its end crowds the movable cutter-head D to the pipe. While the nut fills the socket it is loose in its position. Nothing but the screw-rod is required to keep it in place, and it readily comes out of the socket when the screw-rod is withdrawn. By this arrangement, when the stationary nut becomes worn it may be removed and a new one put in its place, and thus wear on the shank proper is avoided.

From the shank the body A' of the tool curves around, and at its end is the stationary cutter-head A². This body is slotted at a to allow the end D' of the movable head to be adjusted toward or from the stationary head. A transverse slot, b, is also formed in the body each side of the slot a. A slot, c, which coincides with the slot b, is formed in the end D' of the movable head. These slots b and c are to receive the broad flat-shanked bolt E, the long head d of which is on one side of the body

and the screw-threaded end e on the other side. A plate, F, has a hole, e', through its center for the end e of the bolt, and on one side is provided with a round shank, f, on which one of the guides, L, is pivoted, as herein described, and two lugs, b', project from the shank on diametrically opposite sides of the hole e'. These lugs enter the slot b in one side of the body of the tool and prevent the plate F from turning.

The movable and stationary head each carry two steel disks or cutters, G. A shoulder, h, is on each side of each cutter, and a pin, i, passes through the two sides of the head and through the cutter, whereby the cutter is able to rotate. As there are four cutters, it is only necessary when cutting a pipe to work the handle of the tool back and forth through an arc of a circle which shall be a little more than one-fourth. This is a great advantage. The fact that a one-quarter turn back and forth is sufficient to cut a pipe renders it possible to cut pipes which are secured on walls or other special situations without removing them. In cutting pipe in this manner a burr is left on the cut ends, which must be removed before a die can be got on the end of the pipe to cut a thread. To remove this burr and to slightly chamfer the end of the pipe, thereby to facilitate the application of the die for cutting a thread, I provide a steel trimmer, I, having curved serrated edges k. The said curved and serrated edges are also beveled. The curve is to adapt the trimmer to set partly about the cylinder of the pipe. The serrations constitute the cutters, and the bevel, the highest edge of which is next to the edge of the cutters, is to effect the desired chamfering or beveling off of the cut end of the pipe. The ends l of these trimmers are turned out or curved to fit exactly the shoulder h on the side of the cutter, as seen in Fig. 7. The inner sides of the trimmers, as shown at p in Fig. 8, commencing at each of the curved ends, and a portion of the side of the beveled cutter occupies this part of the trimmer. Thus the trimmer is adapted to set close up to the two beveled cutters. The outer side, m, of the trimmer is flat and is

flush with the face or hub side n of the cutter, which latter rests against the inner side of the box of the cutter-head. As the highest edge of the bevel on each side of the two trimmers is about or nearly in line with the edge of the rotary cutters, it will be seen the chamfering of the pipe is effected at exactly the right place. The highest edge of the curved serrated trimmer may run to a point at the center, as indicated in Fig. 8. Thereby the space between the two trimmers (one of which is on each side of the two rotary cutters) may be nearly closed, or the said highest edge may extend more nearly straight, thereby leaving a clear space between the centers of the two trimmers, as shown in Fig. 4.

A guide is employed to insure the proper position of the tool on the pipe, so that all the cutters will have effect on a true circle or line around the pipe. This guide consists of two plates, L and L' , each having a V-shaped or right-angled notch, q , which confront each other. These right-angled notches are designed to clasp the pipe, and thereby determine when the tool sets in proper position to cut true. Each guide at the end opposite from the notch q is pivoted, so that the notched ends may move to and from each other. The guide L is loosely pivoted on the round shank f of the plate F , and is thereby moved or adjusted whenever the cutter-head D is moved. While the guide L is thus moved whenever the cutter-head D is adjusted to suit pipes of different size, the fact that the guide is loosely pivoted makes it so far independent of the cutter-head that it will rest lightly upon the pipe although the cutter-head is being crowded by the screw B to the pipe. The guide L' is loosely pivoted by the screw-bolt r to the body of the tool.

When the tool is on the pipe, and before commencing to cut, the two guides should, by one hand of the operator, be brought to clasp the pipe, whereupon any deviation of the tool from a position at right angles to the pipe is

corrected. After the cutting has commenced the guides need no longer clasp the pipe.

As heretofore indicated, the flat-shanked bolt E carries the cutter-head D by moving in the slots b . It should be explained that the long head d of this bolt occupies a straight guideway formed on the side of the body A' by two parallel ribs, s , which extend lengthwise of the body. This guideway and the long head of the bolt which carries the cutter-head moving in the guideway give stability to the movable cutter-head.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a pipe-cutting tool, the combination, with the movable cutter-head and slotted body in which the cutter-head moves, of a guideway formed on the side of the body by two parallel ribs, s , and a flat-shanked bolt to carry the cutter-head, and said bolt provided with a long head, d , which occupies the guideway, as set forth.

2. In a pipe-cutting tool, the combination of two rotary disk-cutters, G , each cutter having a hub-shoulder, h , on each side, and a steel trimmer, I , provided with a beveled and serrated edge, k , and having one side adapted to set close up to the side of the two cutters, while the two ends fit the aforesaid shoulders, as set forth.

3. In a pipe-cutting tool, the combination, with the tool-body, of a cutter-head carrying rotary disk-cutters, and a guide-plate having at one end a V-shaped or right-angled notch to rest upon the pipe, and the other end loosely pivoted, whereby the notched end may move independent of the cutter-head, as and for the purpose set forth.

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

JESSE CONWAY.

Witnesses:

JOHN E. MORRIS,
JNO. T. MADDOX.