(No Model.)

J. N. MARSO.

PIPE CUTTER.

No. 554,028. Patented Feb. 4, 1896.

Fig. 1.

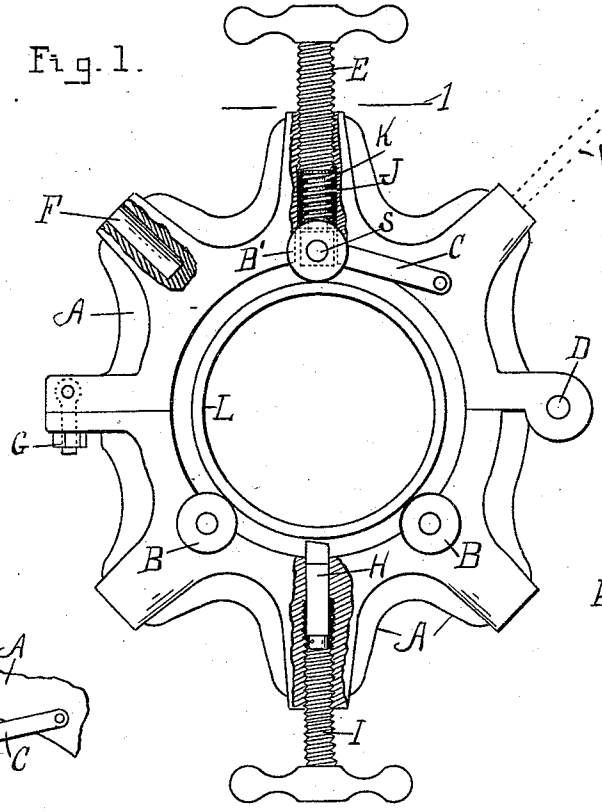


Fig. 2.

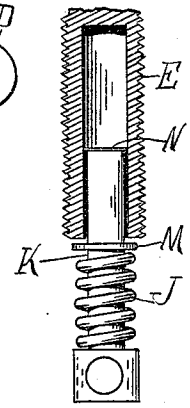


Fig. 3.

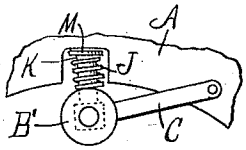


Fig. 4.

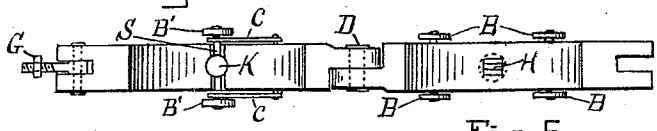


Fig. 5.

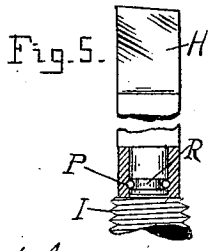
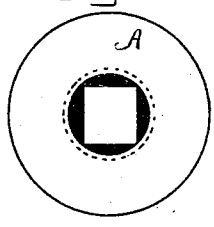


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN N. MARSO, OF JOLIET, ILLINOIS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 554,028, dated February 4, 1896.

Application filed November 29, 1895. Serial No. 570,406. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. MARSO, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, 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, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a side elevation of the pipe-cutter as it would appear applied to a pipe being cut. Figs. 2 and 3 are detail views of the devices for holding the pipe to the cutting-bit. Fig. 4 is a view of the pipe-cutter as it would appear opened to be placed upon the pipe to be cut. Fig. 5 is a detail view showing the manner in which the cutting bit or tool is attached to its feed-screw; and Fig. 6 is a view on the lower end of Fig. 1, looking into the chamber for holding the cutting bit or tool.

This invention relates to certain improvements in pipe-cutters, which improvements are fully set forth and explained in the following specification and claims.

Referring to the drawings, A represents the frame or body of the tool formed in two parts or halves hinged together at D on one side and when closed and secured together, by means of the nut and bolt G, are adapted to encircle the pipe L to be cut, as shown in Fig. 1.

H is the bit which is arranged in a chamber in the body A, and is adapted to be forced into the side of the pipe L to be cut by means of turning the screw I. The said bit is provided on its inner end with an annular groove R, as shown in Fig. 5, which grooved end enters a chamber in the end of the screw I, and is held therein by means of the pins P passing through said screw and groove, as shown in Fig. 5, by means of which connection the said bit and screw are united in such manner that the said screw can be turned without turning the bit, which is seated in a square chamber, and so the bit can be turned around so the tool can be turned in the reverse direction.

The frame A is provided with the friction-wheels B and B′ for bearing against the pipe L. The wheels B are arranged on axles passing through the frame A, as shown particularly in Fig. 4, while the wheels B′ are arranged on an axle passing through the outer end of the sliding rod K, as shown in Figs. 1 and 3. Said rod is arranged so its inner end enters a chamber in the screw E, as shown in Fig. 2, and is provided with a coil-spring J sleeved thereon between the head of said rod and the end of said screw, so that when said screw is turned down it turns against a washer M on said rod which rests against said spring, the washer being prevented from falling off said rod when it is withdrawn from its chamber by reason of the inner end of said rod being headed down, as shown at N, Fig. 2.

The axle of wheels B′ is connected with the frame A by means of the two links C, arranged one upon either side of the tool, as shown in Fig. 4, in such manner that the wheels B′ may be moved to or from the pipe L by means of turning the screw E. The links C prevent lateral movement of the wheels B′ and their axle, but permit them to be adjusted to or from the pipe to be cut, and said wheels are yieldingly held against the pipe through the medium of said coil-spring, which permits the said wheels to the more readily pass over lumps or obstructions that may be on the pipe.

The frame A is provided with bar-holes F for holding a bar V, (shown in broken lines in Fig. 1,) by means of which bar the tool may be turned around the pipe L to be cut, and the tool may be turned in either direction and cut the pipe by turning the bit in either direction. It is intended to have the tool made of any desired size to cut any size of pipe.

In operation the tool or frame A is clamped around the pipe L and locked by means of the bolt and nut G, as shown in Fig. 1. The screw E is then turned up so as to cause the wheels B′ to bear against said pipe and so it will be held firmly between rollers or wheels B and B′. The screw I is then turned up so as to cause the bit H to engage the pipe L. The frame A is then turned around the said pipe by means of the bar V, inserted in the bar-holes F successively as the tool is turned, causing the bit to cut an annular channel or groove in the pipe until entirely severed, the

bit-screw being turned up at each revolution of the tool to cause the bit to take a new cut.

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

1. In a pipe-cutter, the combination of the frame A formed in two parts and hinged together and having the nut and bolt G for locking the two parts of said frame together on the pipe to be cut, and having the bar-holes F, the bit H, screw I attached to said bit, the screw E having a hollow inner end, the rod K having its inner end arranged in the chamber of screw E, coil-spring J sleeved on said rod between its head and screw E, friction-wheels B′ and their axle attached to rod K, links C for pivotally connecting said wheels with frame A, and the friction-wheels B and their axles all arranged to operate substantially as and for the purpose set forth.

2. In a pipe-cutter the combination of the jointed frame A, and the means for clamping it on a pipe to be cut, the adjustable bit H, the friction-wheels B, the hollow screw E, rod K fitting the hollow of said screw and having an axle attached to its outer end, the friction-wheels B′ on said axle, the links C for pivotally connecting said wheels and their axle with the frame A, and the coil-spring sleeved on said rod between its head and screw E all arranged to operate substantially as and for the purpose set forth.

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