

(No Model.)

J. J. GRIFFIN.
PIPE CUTTER.

No. 565,267.

Patented Aug. 4, 1896.

Fig. 1.

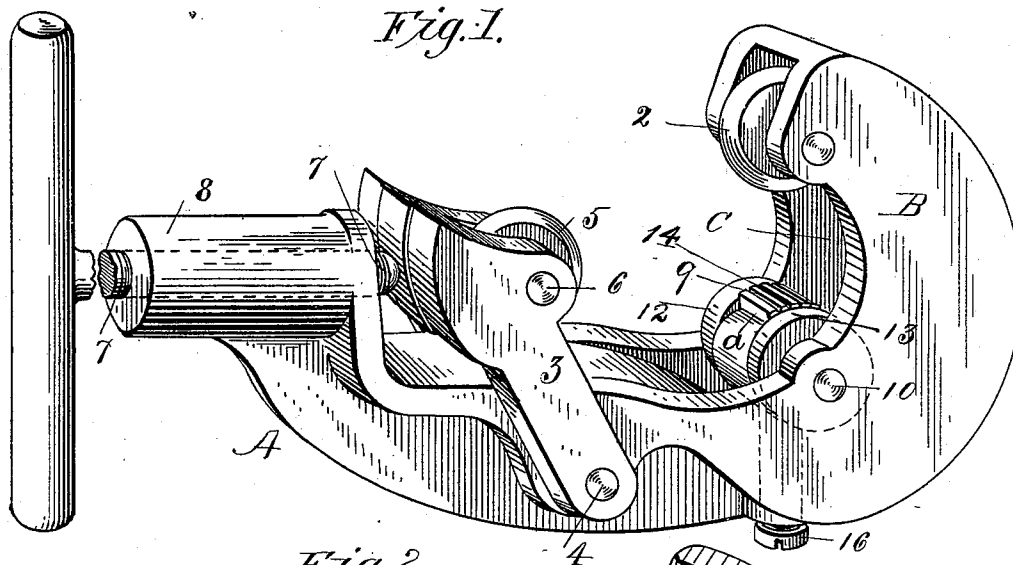


Fig. 2.

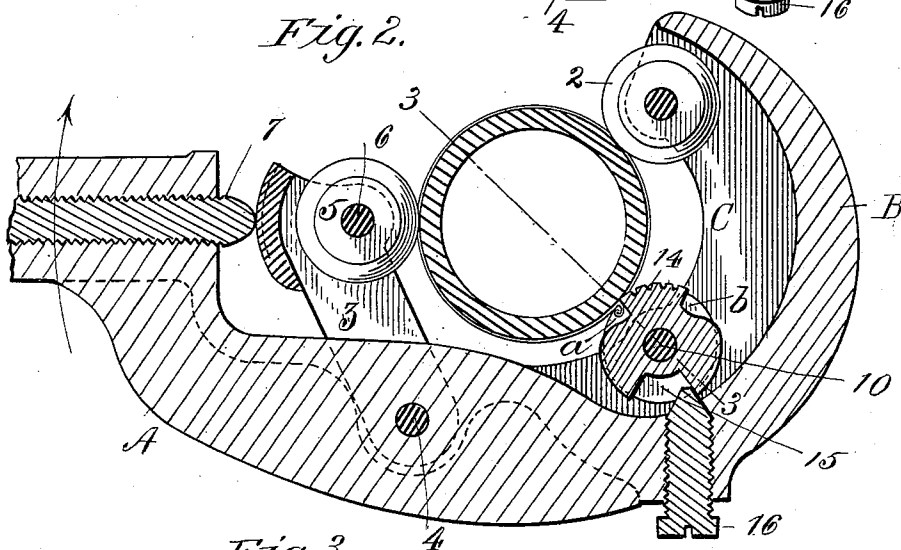
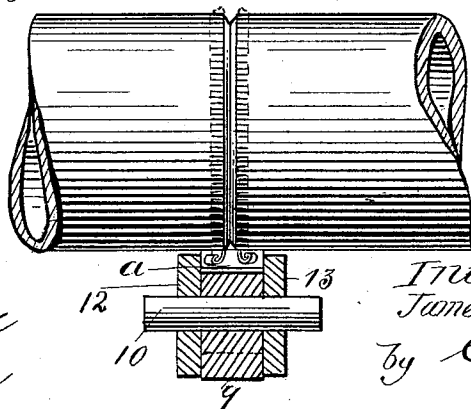


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES J. GRIFFIN, OF THORNDIKE, MASSACHUSETTS.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 565,267, dated August 4, 1896.

Application filed May 29, 1896. Serial No. 593,548. (No model.)

To all whom it may concern:

Be it known that I, JAMES J. GRIFFIN, a citizen of the United States of America, residing at Thorndike, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Pipe-Cutters, of which the following is a specification.

This invention relates to pipe-cutters such as are in general use for cutting metal pipes by steam-fitters and others, which consist of one or more rotary cutters in a fixed jaw and one or more rotary cutters in an adjustable jaw, the latter being operated by a screw adjustment.

The object of this invention is to provide means for removing from the ends of pipes cut by this form of cutter the bur or lip which remains on the end of said pipe in the form of an annular protuberance projecting above the exterior surface thereof, and which now has to be removed by hand before a die-plate can be applied to said pipe for threading the same.

The invention consists of the construction of a pipe-cutter, all as hereinafter described and claimed in the following specification and illustrated in the drawings, in which—

Figure 1 is a perspective view of a pipe-cutter embodying this invention. Fig. 2 is a longitudinal section of the same; and Fig. 3 shows a piece of pipe having a groove made therein by the rotary cutters and showing the cutting-tool for removing the bur from said pipe in a section taken on line 3 3, Fig. 2.

Referring to the drawings, A represents the frame of the pipe-cutter having the usual curved lower jaw B, within the end of which is pivoted the rotary cutter 2. An adjustable yoke 3 is pivotally secured to the frame A at 4, and a rotary cutter 5 is pivoted in said yoke at 6. An adjusting or feed screw 7 passes through a hub 8, threaded to receive said screw. The lower end of the said screw bears against the upper side of the yoke 3, as shown. At a point substantially equidistant from the centers of the said two rotary cutters is secured in said frame the bur-cutting tool 9 for rotary movement on its pin 10. Said curved jaw B is provided with a trough-shaped groove C, within which said cutter 2 and said bur-cutting tool are located. Said cutting-tool 9 is supported on its pin between

two washers 12 and 13 of somewhat smaller diameter than said cutter. The said washers are as much smaller in diameter than the cutting-tool as the thickness of the chip of metal removed from said pipe by said tool, and it is only after the bur has been cut off from the ends of the pipe that the latter rests on the said washers.

In the drawings the difference in the diameters of the cutting-tool and its washers is somewhat exaggerated.

A portion of the periphery of said cutter is cut away, as at *a* and *b*, which leaves a segment-shaped part of said periphery 14, which constitutes the bur-cutting portion thereof, said cuts at *a* and *b* being of such shape as will give the proper pitch to the cutting edge of said segment and permit the easy access to said cutting edge for the purpose of grinding the same and to afford sufficient clearance for the chips removed by the said tool.

In the periphery of the cutting-tool 9 a segment-shaped cut 15 is made, the sides of which cut serve as stops to the rotation of the tool in either direction by the engagement of said sides with the tapered end of a screw 16. By entering said screw 16 more or less into said segmental cut the degree of its rotation in either direction is restricted. The purpose of this adjustment is to permit the presentation of the cutting edges of said part 14 of the cutting-tool at a proper angle to the exterior surface of the pipe to be operated upon, as said cutting edges are ground off from time to time as they become dulled by use. On said segmental part 14 of the cutting-tool and between the cutting edges thereof are a series of grooves parallel with said cutting edges.

The arrow across the part of the handle of the frame or stock A in Fig. 2, near the jaw B thereof, indicates the direction of the movement which is given to said stock in cutting off pipe. If said pipe-cutter stock is now turned in the opposite direction, the bur-cutting tool 9 will be rotated on its pin by the engagement of the grooved periphery of the segment 14 with the surface of the pipe, and the opposite corner of the said segment is brought into operative position against the surface of the pipe.

It will be observed that in whichever direc-

tion the pipe-cutter is revolved the cutting edge of the segment will always be in approximately the same position relative to the other two bearing-points for said pipe—viz., the
 5 two rotary cutters 2 and 5—and said cutting edges can be ground with reference to operating on said pipe at such a point between said
 10 two cutters and at such an angle to the circumference of the pipe as to offer the least resistance to the operation of said pipe-cutter.

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

1. In a pipe-cutter, a frame or head having
 15 one rotary cutter in a fixed part thereof and another adjustably supported thereon, a rotatable bur-cutting tool secured in said fixed part of said frame, said cutter having two cutting edges, and a surface between said edges
 20 concentric with the pin on which said cutter rotates, a segment-shaped cut in said cutter and a tapered screw engaging with the sides of said cut, for restricting the degree of rotation of said cutter, substantially as described.
- 25 2. In a pipe-cutter, a head, one or more rotary pipe-cutters hung on said head combined

with a revoluble bur-cutting tool having a segment-shaped bed of cutting-teeth on its periphery extending in opposite directions, and means for permitting a reciprocally-rotating movement of said tool, whereby the
 30 teeth at either extremity of said bed are brought to position for cutting action upon the bur of a piece of pipe, substantially as set forth.

3. A pipe-cutter head, one or more rotatable pipe-cutters hung thereon, combined with a revoluble bur-cutting tool having a recess
 35 15, in its periphery, and a segment-shaped bed on its periphery opposite said recess having cutting-teeth thereon extending in opposite directions, and a fixed stop-pin 16, in said head, one end of which enters said recess, whereby the revoluble movement of said tool
 40 in opposite directions is limited, and either end of said tooth-bearing bed is brought into
 45 operative position against a bur on a piece of pipe, substantially as set forth.

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Witnesses:

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