

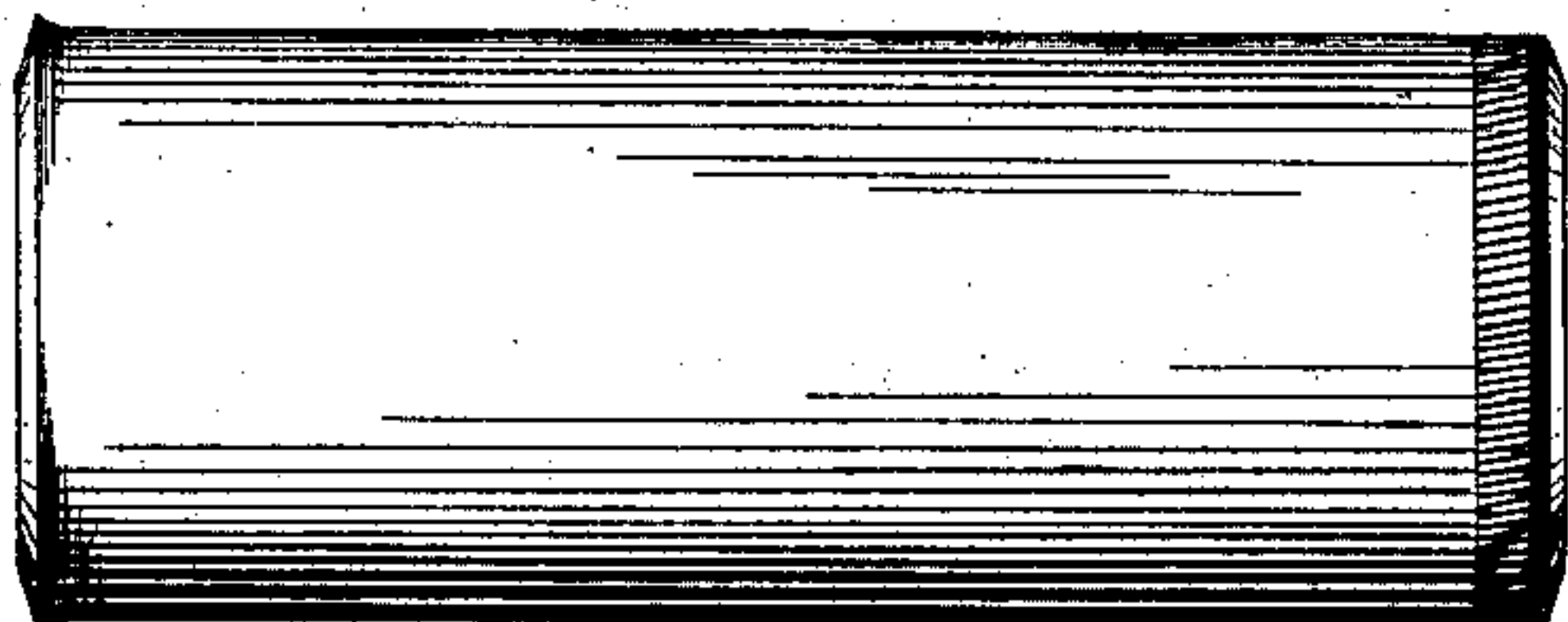
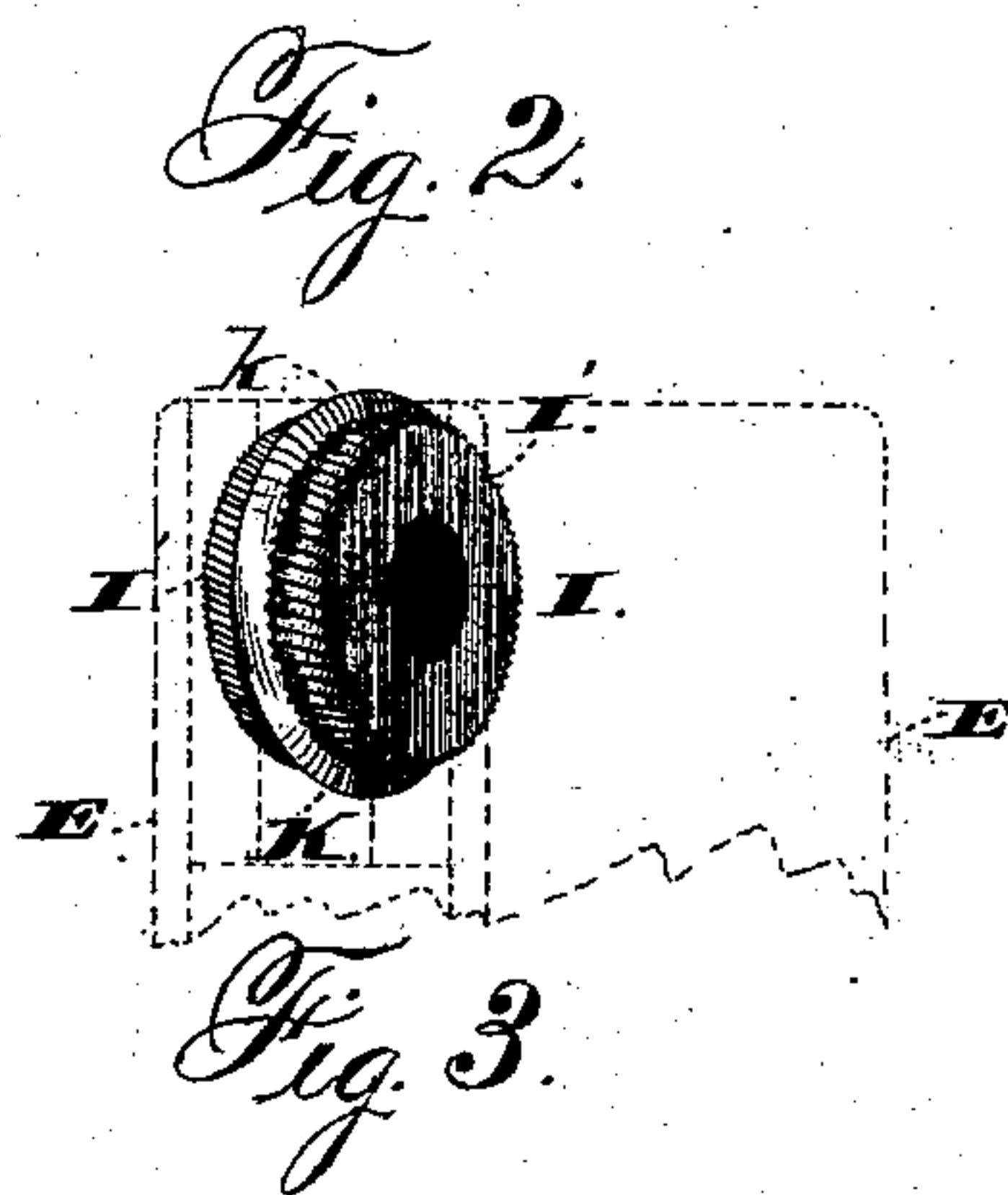
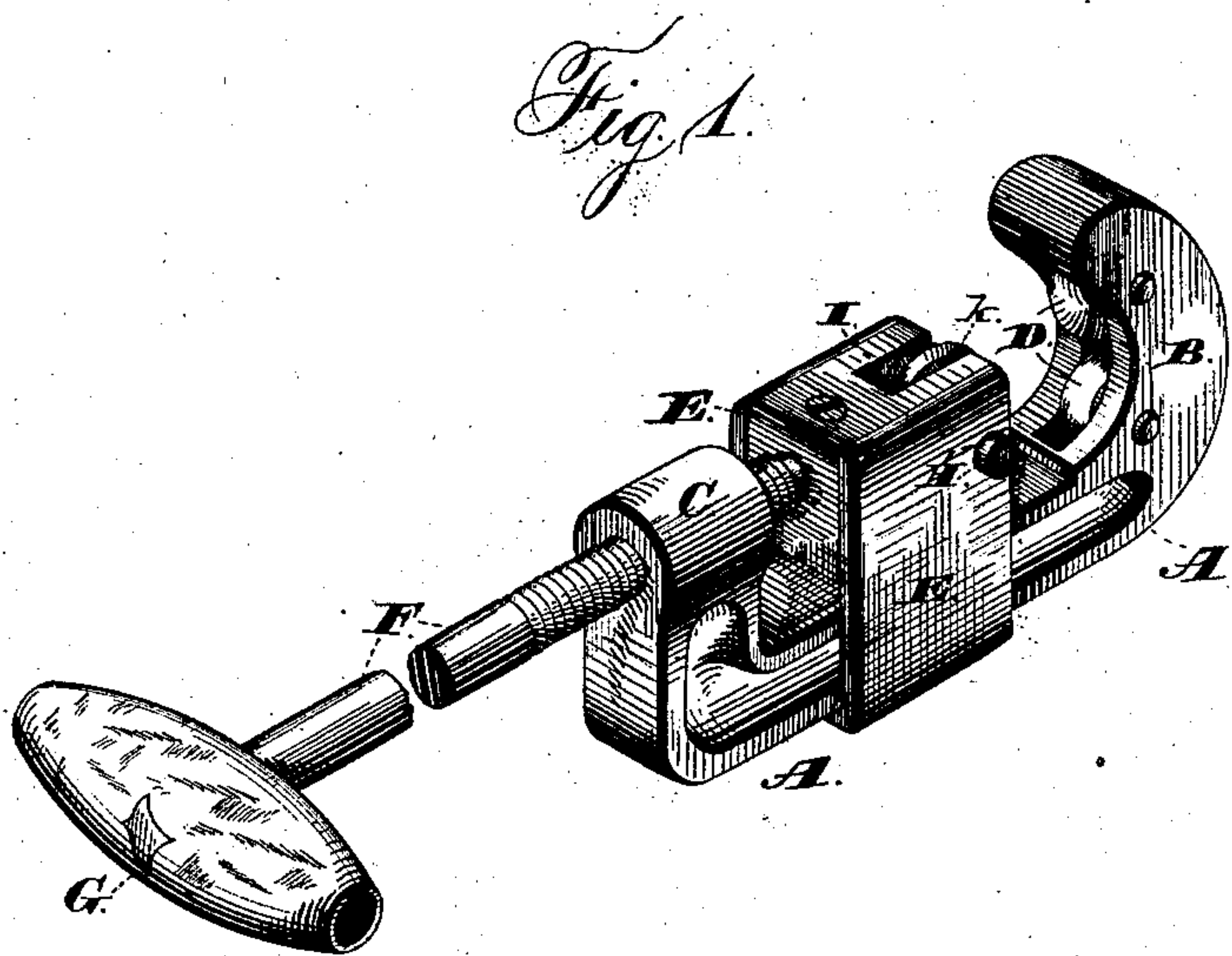
(No Model.)

W. L. SWEETLAND.

PIPE CUTTER.

No. 294,339.

Patented Feb. 26, 1884.



Witnesses:
Jas. E. Hutchinson
Henry C. Hazard

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UNITED STATES PATENT OFFICE.

WILLIAM L. SWEETLAND, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF
ONE-HALF TO FELIX CHILLINGWORTH, OF SAME PLACE.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 294,339, dated February 26, 1884.

Application filed November 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. SWEETLAND, of New Haven, in the county of New Haven, and in the State of Connecticut, have invented certain new and useful Improvements in Pipe-Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 shows a perspective view of my improved pipe-cutter; Fig. 2, a detail view of the burr-removing roller; Fig. 3, a detail view of a piece of pipe, showing one end as cut with my improved cutter and the other as cut with the ordinary form of cutter.

The object of my invention is to provide an improved pipe-cutter which will leave no burr on the ends of the sections of pipe; and to this end it consists in the construction, arrangement, and combination of parts, as hereinafter set forth, and more specifically pointed out in the claims.

In the drawings, A designates the frame of the cutter, hooked at one end, as shown at B, and at the other bent at a right angle to form the arm C.

In a slot in the hooked portion B are journaled the cutter-wheels DD, upon suitable pivot-pins or bolts passing through the portion B. These wheels are preferably made with the lines of their sides, as seen in cross-section, curved down to the cutting-edge; but, if desired, they may be made with a straight bevel. A slide, E, is formed so as to embrace the straight portion of the frame A, and to it is swiveled the end of the usual slide adjusting-screw, F, tapped through the arm C, described above. Upon the other end of the screw is fastened the common form of handle or hand piece G.

In a mortise or slot in that end of the slide which is toward the cutting-wheels in the hooked end of the frame is journaled, on a suitable screw or pivot-pin, H, the collar I, provided with a sharp rib, K, whose edge *k* is a cutting-edge, and is in the same plane with the edges of the wheels D D, described above. On each side of this rib, which is not high enough to cut through the pipe, the face of the roller is sharply knurled, or provided with short sharp cutting-teeth, as shown at I' I'.

The operation of my pipe-cutter is as fol-

lows: The cutter is applied to the pipe and worked in the well-known manner around said pipe. The edges of the cutters D D and of the rib K on the roller I first cut into and form a deep narrow groove in the surface of the pipe. With the ordinary and heretofore known and constructed pipe-cutters, as the cutting-wheels or fixed cutters cut down into the pipe a burr is formed or forced up on the ends of the pipe-sections around the edges of the cut. This burr prevents the placing of the die over the end of the pipe, and must be cut or filed down after the pipe is cut off before the die can be put over the pipe end. With my pipe-cutter, as indicated above, the cutting-rib on the roller journaled in the slide is not high enough to cut through the pipe. The cut around the pipe is at first formed by the two cutter-wheels D D and the cutting-rib K on roller I. When in the process of cutting the pipe the cut is made by the cutting-wheels too deep for the rib K to be longer effective as a cutter, it follows around in the groove cut and serves as a guide. The knurled portions I' I' of the roller-face then come into contact with the pipe on each side of the cut. As the cutting goes on, the portions of the pipe around the edges of the cut are pressed upon with great force by the roller, and the knurling on the face of the latter cuts into each one of the burrs which are formed on the ends of pipe-sections as the cutters go deeper into the pipe. This cutting into the burr by the knurling serves to remove a portion of such burr, and the rest of it is completely rolled or pressed down by the roller, so that no burr remains when the cutting is finished, and the die can be put over the end of the pipe immediately, and without the necessity of further cutting or filing of such end.

I contemplate, if it is desired, using in connection with the two or more cutter-wheels in the hooked end of the frame a knurled roller without any circumferential cutting-rib, as described above. The knurling, as shown, is made with its ridges running across the face of the roller at an angle to the plane of the cutting-edge of the rib K. If desired, it could be cut in spiral, curved, or wave lines, or the face of the roller could be milled or provided with sharp teeth or ridges extending in lines par-

allel to the axis of the roller and at right angles to the plane of the edge of the rib. I prefer that the burr-removing roller be pivoted or journaled in the slide, as shown; but
5 do not limit myself to such a construction of cutter. If desired, one or two such rollers could be pivoted, in place of the cutters, in the fixed arm of the cutter-head, and one or more
10 of the slide.

Having thus fully set forth the nature of my invention, what I claim is—

1. In a pipe-cutter, in combination with the cutting device, means for cutting into and
15 crushing down the burr formed at the edges of the cut, substantially as shown and described.

2. In a pipe-cutter, the knurled or toothed roller adapted to cut and roll down the burr formed on the end of the pipe in the process of
20 cutting, substantially as shown and described.

3. The roller for cutting and rolling down the burrs formed by pipe-cutters upon the pipe at the edges of the cut, provided on its face with knurled or toothed portions, each

adapted to come in contact with and press upon 25 one of said burrs, substantially as shown and described.

4. In combination with the cutter-wheels of a pipe-cutter, the roller, formed with a sharp rib in the same plane with the edges of the
30 cutter-wheels, and having its face on each side of the rib knurled or provided with sharp teeth, substantially as and for the purpose set forth.

5. The burr cutting and removing roller for 35 pipe-cutters, having the sharp rib adapted to cut into but not through the pipe, and the portions of its face on each side of the rib knurled or provided with sharp teeth, substantially as
40 and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 9th day of November, A. D. 1883.

WM. L. SWEETLAND.

Witnesses:

F. CHILLINGWORTH,
LEOPOLD BESSER.