J. De Galleford,

Pipe Cutter.

No. 76,729. Patented Apr. 14, 1868.

Fig: 1.

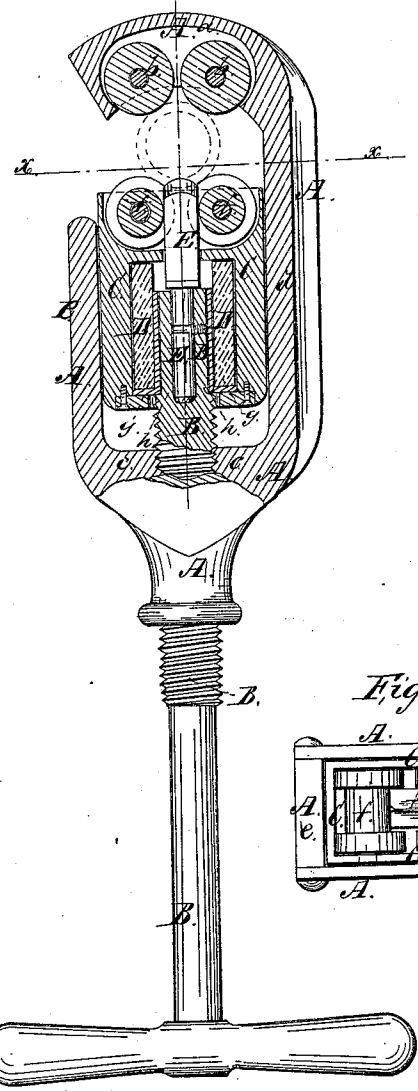


Fig: 2.

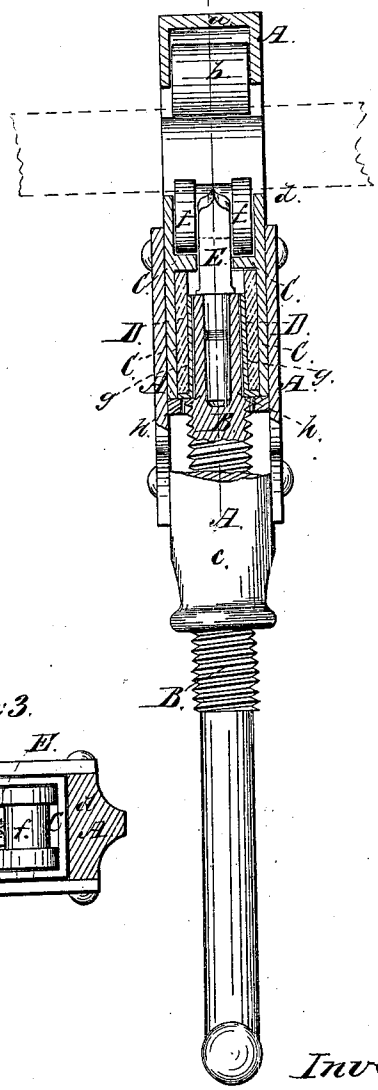
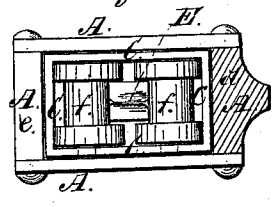


Fig: 3.



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Letters Patent No. 76,729, *dated April* 14, 1868.

IMPROVEMENT IN TUBE-CUTTER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN DE GALLEFORD, of Cohoes, in the county of Albany, and State of New York, have invented a new and improved Pipe-Cutter; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 represents a side view, partly in section, of my improved pipe-cutter.

Figure 2 is an edge view, partly in section, of the same.

Figure 3 is a horizontal section of the same, taken on the plane of the line *x x*, fig. 1.

Similar letters of reference indicate corresponding parts.

This invention relates to a new pipe-cutter, which is so arranged that, although the cutter is held with great power against the tube or pipe to be cut, the support of the pipe in the device will still yield to eccentric projections on the face of the pipe, or to inequalities of the pipe, so that no undue strain will be occasioned by such projecting portions or inequalities, without which scarcely any ordinary pipe or tube is ever made.

The invention consists chiefly in securing the cutting-tool to the end of a screw which works in the lower part of a G-shaped frame, the upper part of which frame forms the rest for the tube, opposite to the cutter, and in letting the said screw abut against a yielding portion of a block that slides within the lower part of the aforesaid G-shaped frame. The pipe to be cut is, by this arrangement, clamped between the block and the upper part of the frame; and, if the tube is not perfectly concentric, the block will yield to such inequalities, while the cutter will always retain its distance from the axis of the pipe.

A, in the drawing, represents a G-shaped frame, made of metal or other suitable material, and of suitable size. In its upper arm, *a*, are the bearings for two parallel friction-rollers, *b b*, as shown.

B represents a screw-rod, screwed through the lower arm, *c*, of the frame A, as shown.

C represents a hollow metallic block, fitted between the sections *d* and *e* of the frame A, so that it can slide up and down, and carrying on its upper face two friction-rollers, *f f*, which are parallel with the rollers *b*, as shown.

The screw-rod B is formed with a shoulder, *h*, near its upper end, said shoulder resting against a bushing, *g*, which is fitted into the block C, and enclosed by a strong rubber spring, D, as clearly shown in fig. 1.

The pipe is clamped between the rollers, *b b* and *f f*, in the manner shown in figs. 1 and 2, the block C being forced up, by means of the screw-rod B, against the pipe until the same is firmly held.

E represents the cutting-tool. The same is fitted so as to turn into the end of the screw B, and projects from the upper face of the block *e*, as shown, and between the rollers *f f*. The rollers *f f* are so close together that the cutter cannot pass between them, unless they were grooved, as in fig. 3. By means of these grooved rollers, the cutter is guided, and its lateral displacement is prevented.

When the pipe is clamped, the device is turned around it, and the spring D will not only yield to inequalities on the pipe, or to projections on the same, but will also allow the cutter to be forced into the device without being itself forced further towards it, the spring being then compressed to allow such motion.

Heretofore, in pipe-cutters, the pipe is generally clamped between the cutting-tool itself and a suitable rest, and the tool is, therefore, subjected to undue strain. By my device, the tool will only have to cut, while the pipe will be clamped by devices which are adjusted independent of the tool.

The cutting-edge of the tool need not be ground to a point, but may be V-shaped, and somewhat rounded, as in fig. 2.

I claim as new, and desire to secure by Letters Patent—

1. A pipe-cutter, consisting of the G-shaped frame A, with its rollers, *b b*, of the screw B, adjustable block C, with its rollers, *f f*, of the spring D, and cutting-tool E, all made and operating substantially as herein shown and described.

2. The grooved rollers *f f*, when arranged, as described, so that they not only serve as supports for the pipe, but also as guides for the cutter, substantially as herein shown and described.

3. The block C, when provided with the spring D, against which the screw B abuts, and when fitted loosely around the cutter E, substantially as described, so that it can yield to projections on the pipe without influencing the position of the cutter, arranged as set forth.

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Witnesses:
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