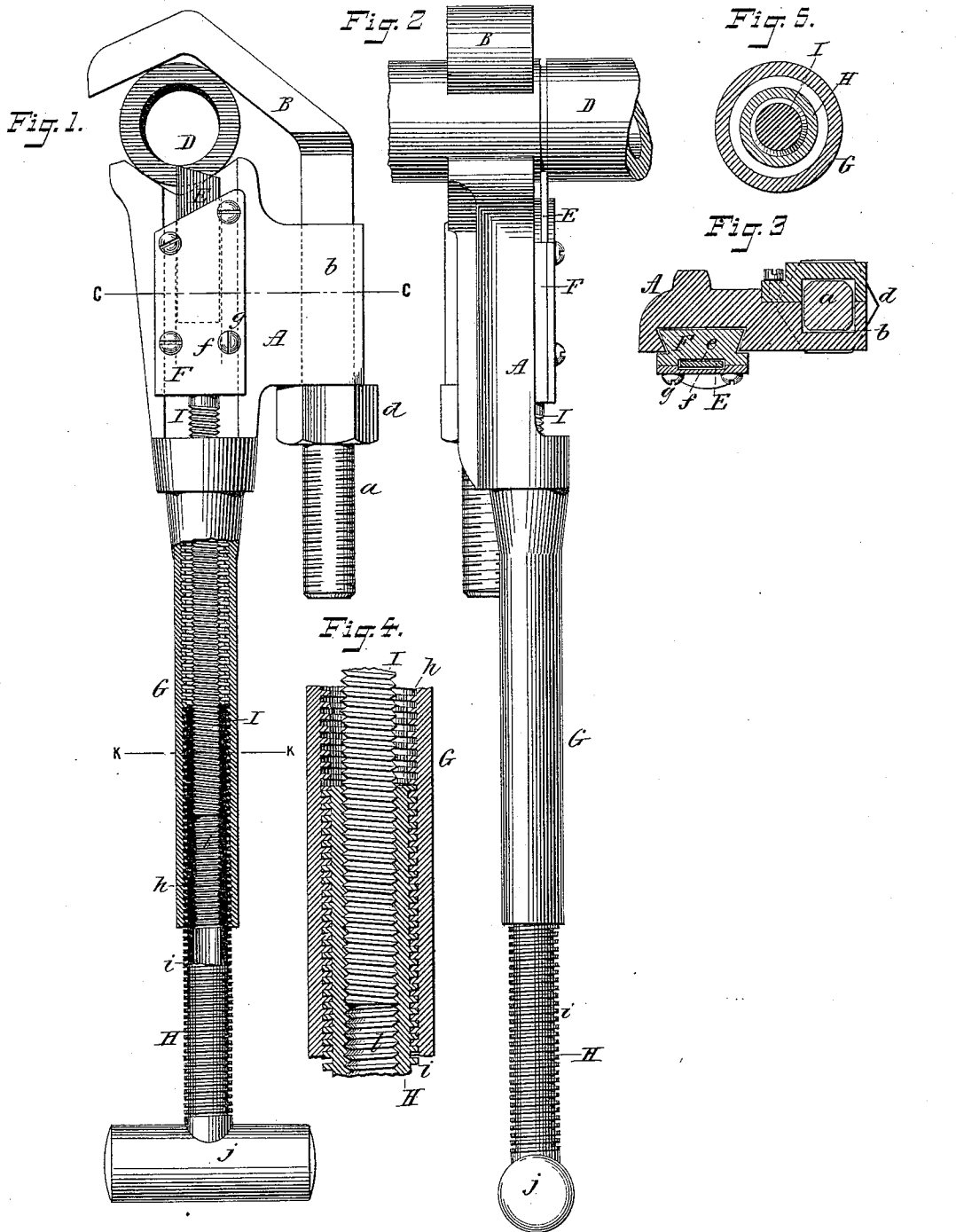


(No Model.)

E. FOERSTER.
PIPE CUTTER.

No. 402,730.

Patented May 7, 1889.



WITNESSES:
Gustav Dietrich
T. F. Bourne.

INVENTOR,
Emanuel Foerster
BY *Briesen, Steele & Krauth*
ATTORNEYS

UNITED STATES PATENT OFFICE.

EMANUEL FOERSTER, OF NEW YORK, N. Y.

PIPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 402,730, dated May 7, 1889.

Application filed June 2, 1888. Serial No. 275,885. (No model.)

To all whom it may concern:

Be it known that I, EMANUEL FOERSTER, a resident of the city, county, and State of New York, have invented an Improved Pipe or Bar Cutter, of which the following is a specification.

The object of my invention is to produce a device that will cut a pipe or bar of varying dimensions, which shall be simple in construction, easily operated, and effective in use.

The invention consists in the details of improvement and the combinations of parts that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, partly broken, of my improved cutting device. Fig. 2 is a side elevation at right angles to Fig. 1. Fig. 3 is a horizontal cross-section on the line *c c*, Fig. 1. Fig. 4 is an enlarged detail sectional view of a portion of the cutter-feeding device shown in Fig. 1. Fig. 5 is a horizontal cross-section on the line *k k*, Fig. 1.

In the accompanying drawings, the letter A represents the head of my improved cutting device, which at its upper part is recessed to fit against a tube or pipe.

B is a jaw that passes at one part over the top of the head A. The shank *a* of said jaw B passes downward through an opening, *b*, at one side of the head A. The lower part of the shank *a* is screw-threaded and receives a nut, *d*, that is adapted to press against the head A to hold the jaw B upon a tube or pipe, D, as shown in Fig. 1.

E is the cutter, which consists of a blade having its end adapted to contact and cut a pipe or bar. This cutter or blade E is carried by a sliding block, F, that is guided in suitable grooves or otherwise on the head A. My preferred mode of securing the cutter or blade E to the sliding block F is to place the cutter in a recess, *e*, in the sliding block F, and to place on the block F and over said cutter E a plate, *f*, that bears upon said cutter and holds it in said recess. (See Fig. 3.) This plate I secure to the block F by means of screws *g*. By this construction the cutter E may be readily adjusted lengthwise on said block F, and be securely held thereon; but

said cutter or blade E may be otherwise held to the sliding head F.

In order that the cutter E will not be fed too rapidly into the pipe by turning the feeding-screw, I construct my feeding device for said cutter as follows:

To the head A, below the sliding block F, is secured a tube, G, that is provided with internal threads, *h*.

H is a tube that is adapted to pass within the tube G, and it is provided with external threads, *i*, that mesh with the threads *h* in the tube G. The tube H carries a cross-piece or handle, *j*, at its outer end. The tubes G H constitute the handle proper, or means for turning the device for cutting a tube or bar. The tube H has internal threads, *l*, that are adapted to receive a screw-rod, I, that is secured at one end to the sliding head F. When the tube H is turned, say, to the right, it will advance within the tube G, its internal threads, *l*, advancing on the threads of the rod I to prevent the tube H pushing the head F too fast. I prefer that the external threads, *i*, on the tube H should be less to the inch than the internal threads, *l*. A good proportion I find to be as follows: The external threads, *i*, ten to the inch, and the internal threads, *l*, and the threads on the rod I to be twelve to the inch. By this means as the tube H is turned to advance within the tube G it will move up ten threads to the inch, and by only acting on ten threads out of the twelve on the rod I will move said rod, and thereby the head F, up the distance of two threads on the rod I, which would be two-twelfths or one-sixth of an inch. With this construction the tube H may be given a whole turn by the operator without fear of pressing the cutter E too deeply into the pipe to be cut; but the relation of the threads *i l* to each other may be varied to suit the desired distance that the cutter shall move at each turn of the handle or tube H. Heretofore where the cutter was moved up the same distance that the handle moved in, the operator had to be careful to give said handle but a very slight turn, otherwise the cutter would be jammed against the pipe and the cutting operation would be prevented or the cutter injured. By my improved feeding arrangement the operator

need not have fear of turning the tube H at a single turn so much as to injure the cutter. With this construction of cutter a rod or pipe of greater thickness can be cut than has heretofore been permissible with a rotary cutter. 5 As the cutter or blade E may be moved farther out from its carrying-head F when desired, the thickness of pipe to be cut is limited only by the length of the cutter E.

10 Having now described my invention, what I claim is—

In a pipe-cutter, a cutting-tool combined with the screw-rod I, connected therewith, in-

ternally and externally threaded tube H on said rod I and engaging with the thread 15 thereof, and internally - threaded tube G around the tube H, the threads on the tubes G and H engaging, whereby the rod I will be moved but a slight degree with relation to the movement of the tube H, substantially as de- 20 scribed.

EMANUEL FOERSTER.

Witnesses:

HARRY M. TURK,
GUSTAV SCHNEPPÉ.