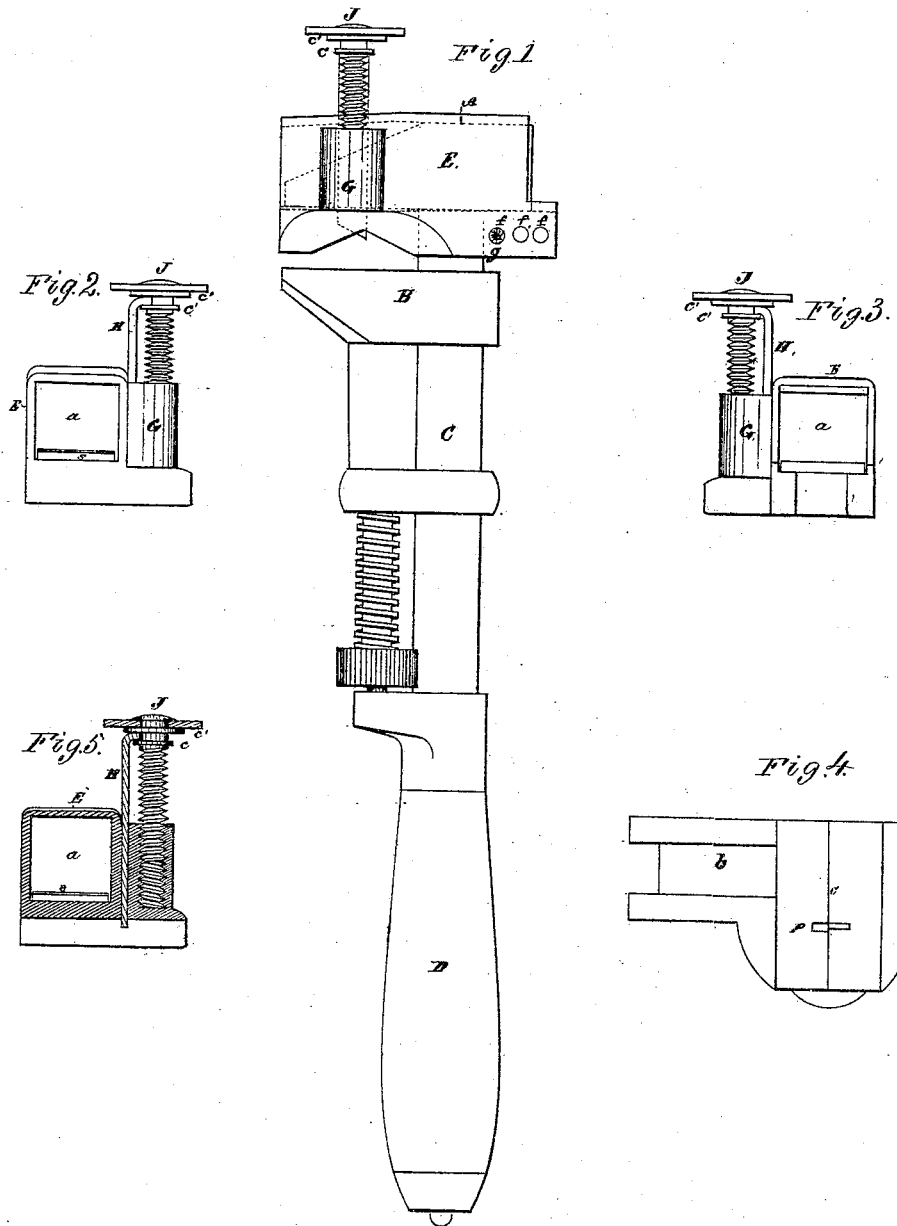


D. HARRIGAN.

Improvement in Pipe-Cutters.

No. 114,939.

Patented May 16, 1871.



Witnesses,

A. L. Hale

W. B. Gay

D. Harrigan,

by his attorney.

A. P. Hale

UNITED STATES PATENT OFFICE.

DENNIS HARRIGAN, OF NORTH SOMERVILLE, ASSIGNOR TO HIMSELF AND
JOEL GAY, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN PIPE-CUTTERS.

Specification forming part of Letters Patent No. **114,939**, dated May 16, 1871.

To all to whom these presents may come:

Be it known that I, DENNIS HARRIGAN, of North Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Cutters; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a side elevation of a wrench having my invention applied thereto. Figs. 2 and 3 are end views of the device as detached from the wrench. Fig. 4 is a bottom view thereof; and Fig. 5 is a transverse section taken through the chisel and its adjusting feed-screw.

The object of my invention is to provide a simple and durable device which can be readily applied to one of the jaws of an ordinary wrench, and thereby convert the latter into an effective implement for cutting off gas and other pipes; and my invention consists in combining an ordinary screw-wrench in a hollow frame or case provided with an angular abutment or recessed jaw, and having a chisel or cutter working through the same, and regulated by a feed-screw, and furnished with means whereby the said abutment may be adjusted in accordance with the size or diameter of the pipe to be severed; also, in the combination of such with an ordinary screw-wrench.

In Fig. 1 of the drawing I have shown an ordinary screw-wrench with my invention applied thereto. In such figure, A is the fixed, and B the movable, jaw; C, the shank of the fixed jaw, and D the handle of the wrench, the said movable jaw being applied to the shank C and provided with means for moving it both toward and away from the stationary jaw in the usual manner. E is a hollow frame, having a rectangular or other proper shaped chamber, *a*, formed within it of a suitable size to receive and fit upon the fixed jaw of the wrench. *s* is a thin flat spring, which is affixed to the bottom of the said chamber, and has its free end bearing against the outer end of the said fixed jaw, the object of such spring being to maintain the abutment or recessed jaw and the movable jaw of the wrench in connection with the pipe to be cut, should the latter vary

from a true cylindrical shape. A slot, *b*, is made through the bottom of the said chamber for the reception of the shank C, such slot having a width corresponding therewith.

On the under side of the said frame E an angular abutment or recessed jaw, *c*, is formed, the same extending transversely thereof and through the base of a standard or block, G, affixed to or forming a part of the frame or device, as shown in the drawing. This abutment or recessed jaw, in connection with the jaw B, serves to grasp and hold the pipe while it (the latter) is being acted upon by the cutter. The chisel H is disposed and works within a slot formed vertically through the said standard, as shown in Fig. 5.

p is a throat or chip-passage, arranged directly in front of the chisel, as seen in Fig. 4. The upper end of the shank of said chisel is bent at a right angle to its body, and its furcated arms embrace the shank of the feed-screw I, and bear against the two annular shoulders *c' c'* thereof, as shown in Figs. 2 and 3. The said screw I works within a corresponding female screw formed in the standard G, and has a thumb-bottom or milled head, J, by which the screw I may be moved either up or down, as may be desirable.

In order to enable the device to operate with equal facility upon a larger or smaller pipe, the said device is to be so formed and applied to one jaw and shank of the wrench as to be capable of being moved laterally with respect to the shank. To effect the proper adjustment and hold the said device in its proper position, a series of holes, *f f f f' f' f'*, are made through the rear lower part of the frame, with which a pin, *g'*, operates. The recessed jaw or abutment being adjusted with respect to the shank of the wrench, the pin is placed in the proper holes to maintain it in such position.

In operating with my improved apparatus the chisel is to be drawn up within its socket, so as not to project below the surface of the recessed jaw. The said jaw and the jaw B are next to be opened a sufficient distance to receive the pipe and so as to turn therein with a slight friction. The chisel is next brought into contact with the pipe by means of the

thumb-screw, such chisel being duly fed downward by the same while the apparatus is revolved around the pipe.

I would remark that I do not limit the application of my device to the stationary jaw of a wrench, as it may be applied with equal effect to the movable jaw thereof.

Having described my invention, what I claim is—

1. The combination of the hollow frame or structure E, as provided with a chisel or cut-

ter, a feed-screw, and angular abutment or recessed jaw, with a screw-wrench, substantially as and for the purpose set forth.

2. In combination with the subject of the foregoing clause, means or mechanism for adjusting the recessed jaw, as and for the purpose set forth.

DENNIS HARRIGAN.

Witnesses:

F. P. HALE,
F. C. HALE.