E. F. BARNES.

PIPE TONGS AND CUTTER.

No. 186,099. Patented Jan. 9, 1877.

Fig 1

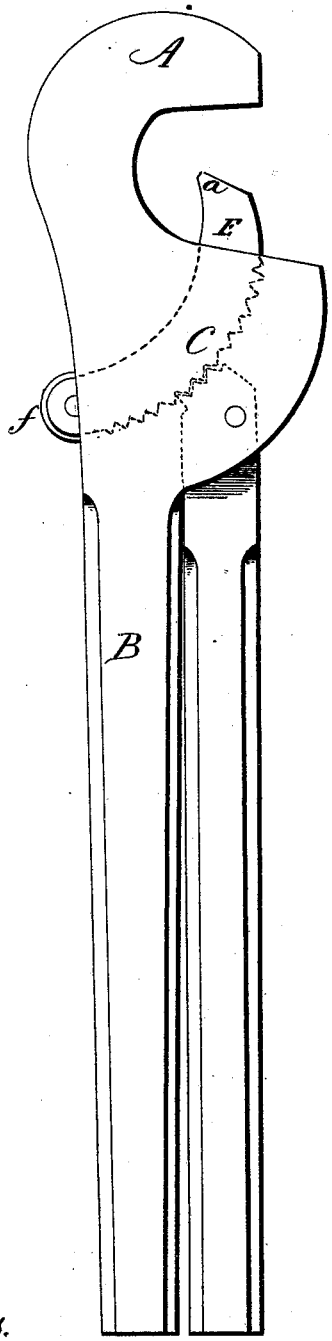
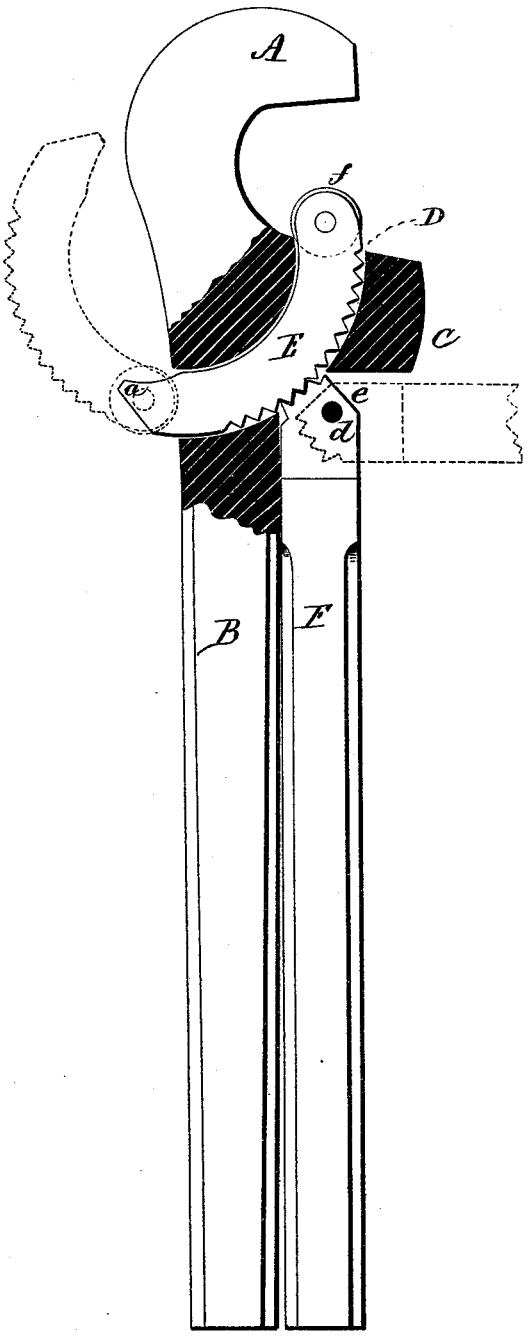


Fig 2.



Witnesses.

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ELBRIDGE F. BARNES, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN PIPE TONGS AND CUTTERS.

Specification forming part of Letters Patent No. **186,099**, dated January 9, 1877; application filed December 20, 1876.

To all whom it may concern:

Be it known that I, ELBRIDGE F. BARNES, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Pipe Tongs and Cutter; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view set as tongs; Fig. 2, the same set as pipe-cutter, partially in section to illustrate the operation.

This invention relates to an improvement in what are commonly called "pipe-tongs"—that is to say, a wrench-like instrument which is employed for turning cylindrical articles, as iron pipes or rods—the object of the invention being, first, to produce an instrument adjustable for various sizes of pipe; and, secondly, an instrument which may be used either as a tongs or wrench, or a cutting device, by which to cut pipe or tubing.

The invention consists in a stationary jaw and handle, combined with a sliding jaw of segmental form, with teeth cut upon its back, and with a lever hung to the fixed jaw, its short arm toothed to correspond to the teeth on the movable jaw, and so that the movement of the said lever will move the said jaw; also, in constructing the said movable jaw with a cutter at one end and griping-surface at the other, so that it may be reversed to present either end to work in conjunction with the fixed jaw, that the instrument may be used either as a cutter or wrench.

A is the fixed jaw, formed on the end of the handle B, the handle constructed with an enlargement, C, in rear of the fixed jaw, and in which there is formed a recess, D. Into this recess a correspondingly-shaped piece, E, is placed, and movable therein to or from the fixed jaw A, so that the end *a* of the piece E, with the jaw A, forms the two jaws by which the thing to be turned is griped. The piece E has teeth formed upon its back, as indicated in Fig. 2, and immediately in rear of the piece E the lever F is hung, as at *d*. The forward end or shorter arm of the lever is constructed with teeth corresponding to the teeth on the back of the piece E, so that by raising the lever the piece E will be drawn back to open the space between the jaws A *a*, and permit the jaws to pass onto the thing to be turned. Then the lever F is brought toward the handle, causing the piece E to close and gripe the article between the jaws A *a*. The upper angle *e* of the lever F is cut away, so that when the lever is raised, say, to a vertical position, as in broken lines, Fig. 2, the teeth of the lever will clear those on the piece E, and in that condition the piece E may be adjusted relatively to the lever, or entirely removed, the said adjustment being necessary when the jaw *a* either runs too close to the jaw A, or not close enough, and it is made by setting the piece E so that different teeth on its back will be engaged by different teeth on the lever.

This same device is applicable to a cutter—that is to say, instead of the jaw *a*, the common circular cutter may be applied, and, being pressed upon the pipe in like manner as the jaw, and turned around the pipe, will cut the pipe in like manner as other circular cutters, so that it is not intended to confine this invention to the jaw only.

By this arrangement of the piece E so as to be removed, one end may be constructed as a jaw, *a*, and the other provided with a circular cutter, *f*. Then either end may be used accordingly as the instrument is wanted for a wrench or cutter, a single instrument, therefore, serving both purposes.

While the piece E is described and represented as being of segmental form, and which is believed to be the best shape for that piece, it will be evident to those skilled in the use of such instruments that it may be a straight piece, with its ends correspondingly constructed. It is, therefore, not the intention to confine this invention to the particular shape of the piece E; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in pipe-tongs, of the fixed jaw and its handle, constructed with a recess in the body, between the two, and a sliding piece arranged therein to form the second or opposing jaw or cutter, and a lever hung to the body of the principal jaw in rear of the said sliding piece, and engaging with

the said sliding piece, to move the said piece to or from the stationary jaw, substantially as described.

2. The combination, in pipe-tongs, of the fixed jaw and its handle, constructed with a recess in the body, between the two, and a sliding piece arranged therein, and constructed one end as a jaw, and the other as a cutter, and made reversible in the said recess, and a lever hung to the body of the principal jaw in rear of the said sliding piece, and engaging with the said sliding piece to move the said piece to or from the stationary jaw, substantially as described.

ELBRIDGE F. BARNES.

Witnesses:
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