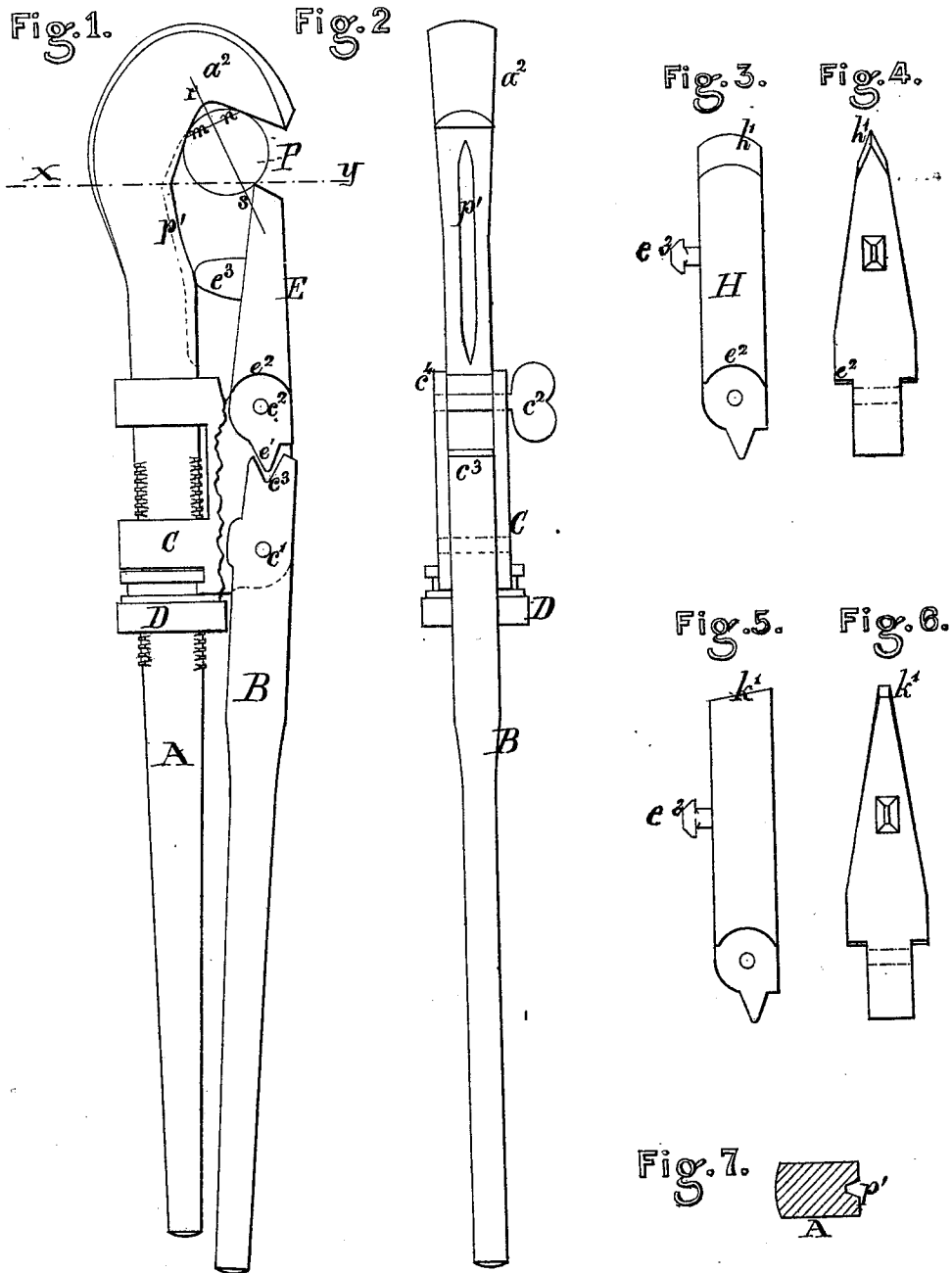


J. S. STEWART.
PIPE TONGS AND CUTTER.

No. 174,927.

Patented March 21, 1876.



Witnesses { *Orlando W. Farland, Jr.*
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James S. Stewart
per *Edward Brown*
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UNITED STATES PATENT OFFICE.

JAMES S. STEWART, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PIPE TONGS AND CUTTERS.

Specification forming part of Letters Patent No. 174,927, dated March 21, 1876; application filed December 1, 1874.

To all whom it may concern:

Be it known that I, JAMES S. STEWART, of Philadelphia, Pennsylvania, have invented an Improved Pipe Tongs and Cutter Combined, of which the following is a specification:

My invention relates to that class of pipe-tongs in which the lever is adjustable longitudinally to permit the jaw to grasp pipes of various diameters. The jaw is pressed upon the pipe by the lever. It is also removable and can be replaced by a cutting-jaw.

My invention consists in means, hereinafter described, whereby the cutter or jaw is steadied by its lateral motion being prevented, and the cutting or holding pressure of the said cutter or jaw sustained, and also in the general arrangement of the several operating parts, as particularly set forth in the following.

In the annexed drawing, Figure 1 is a side view of the tongs, with the slide partly in section. Fig. 2 is an edge view of the same with the jaw removed. Fig. 3 is a side view of one of the cutters. Fig. 4 is an edge view of the same. Fig. 5 is a side view of another form of cutter. Fig. 6 is an edge view of the same. Fig. 7 is a section through the hook on line *xy*.

Similar letters of reference indicate similar parts of the invention in all the views.

A is a bar or handle, having a hook, a^2 , at its end. This hook is shaped like an inverted V, so that the pipe, when being held or cut, shall have a secure and firm bearing upon a point on each side. This form gives great steadiness and accuracy to the cutting-tool while it is revolving around the pipe. Upon the square part of the bar A is fitted the slide C, which is adjusted to position by the grooved nut D working on a screw upon the bar A. To the slide C is hinged the lever B by means of the pin c^1 . The lever is forked at its upper end. The jaw E is hinged upon the slide by means of the pin c^2 . A spur, e^1 , upon the lower end of the jaw fits between the fork c^3 of the lever. The jaw has a shoulder on each side, e^2 , which is fitted to slide in contact with the knuckle c^4 upon the slide. This construction permits of perfect freedom of motion to the joint, at the same time bring-

ing the heavy thrust upon the end of the jaw directly upon the slide, and not upon the pin c^2 . P is the pipe, touching the hook at the points *m n*, the line *rs* passing through the center of the pipe at a right angle with *m n*. A stop upon the jaw E is represented by e^3 , which prevents the point of the jaw from passing nearer to the bar than the line *rs*. Without this stop the jaw would get too near the bar A, and would indent the pipe instead of turning it, and place unnecessary strain upon the working parts of the tongs.

When it is desired to change the tongs into a cutter, the pin c^2 is taken out, and the cutter H substituted for the jaw E. The lower end or joint of the cutter is similar to that of the jaw. The cutting-edge is rounded, as seen in Figs. 3 and 4. The stop e^3 , when employed with the cutter, is in the form of a tapering steady-pin, which fits into the groove p' in the hook A. This answers both the purposes of a stop and guide to prevent lateral motion of the end of the cutter, thereby insuring a true and even cutting-line around the pipe. Figs. 5 and 6 show a square-ended cutter with an edge, K' , of the usual form.

I claim as my invention, and wish to secure by Letters Patent of the United States—

1. In pipe tongs and cutters, a hinged jaw or cutter, provided with the steady-pin e^3 , combined with the bar A, having the groove p' , substantially as and for the purposes specified.

2. A detachable jaw or cutter having the steady-pin e^3 , combined with the bar A, provided with the groove p' , substantially as and for the purposes described.

3. A jaw or cutter having the steady-pin e^3 , and hinged to the adjustable slide C, the bar A, provided with the groove p' , slide C, and lever B, hinged thereto, combined and operating in conjunction, substantially as and for the purposes specified.

In testimony whereof I have hereto subscribed my name in the presence of two witnesses.

J. S. STEWART.

Witnesses:

EDWD. BROWN,
JOHN F. GRANT.