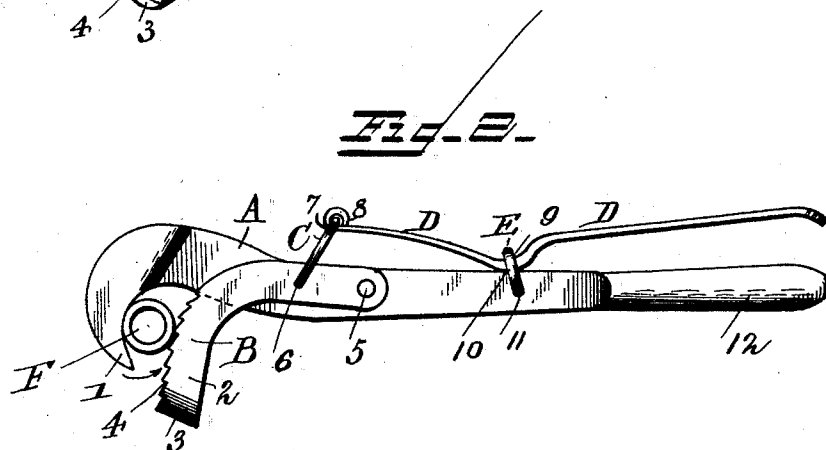
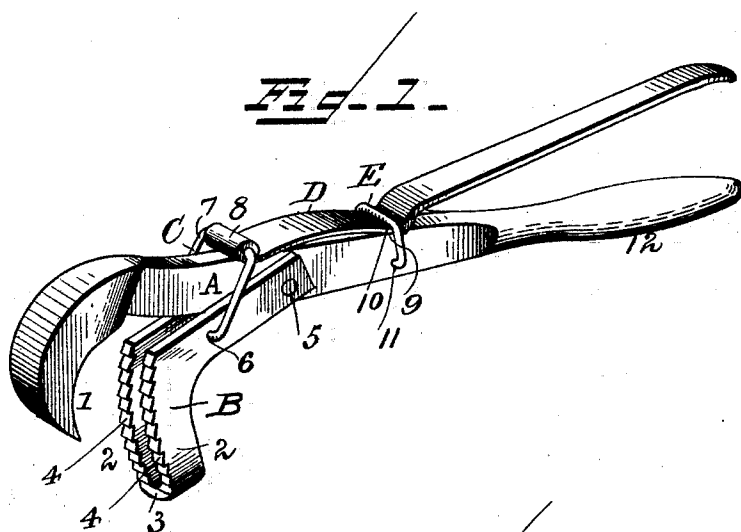


(No Model.)

W. CRAIGE.
PIPE WRENCH.

No. 498,048.

Patented May 23, 1893.



Witnesses
F. L. Ourand
E. H. Monroe.

By *William Craige* Inventor
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UNITED STATES PATENT OFFICE.

WILLIAM CRAIGE, OF PADUCAH, KENTUCKY.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 498,048, dated May 23, 1893.

Application filed March 15, 1893. Serial No. 466,097. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM CRAIGE, a citizen of the United States, residing at Paducah, in the county of McCracken, State of Kentucky, have invented certain new and useful
5 Improvements in Pipe-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to
10 which it appertains to make and use the same.

My invention relates to an improvement in pipe-wrenches, or pipe-tongs.

The invention will first be described in connection with the accompanying drawings, and then pointed out in the claims.
15

In the drawings, Figure 1 is a perspective view of my improved pipe-wrench in its open position. Fig. 2 is a side elevation of the wrench, showing it when closed on a pipe.

20 Referring to the drawings, A is a wrench-stock or lever hooked at its front end to form a fixed jaw 1.

B is a movable jaw, consisting of two curved plates 2 united by the integral end-piece 3,
25 both the plates 2 and the end-piece 3 being provided with teeth 4 which point outward, as shown. The plates 2 are pivoted to the wrench-stock A at 5, one on each side of the stock.

30 C is a link having its ends bent inward and entering holes in the movable jaw, as at 6, between the pivotal point 5 and the outer end. The link C has its free end 7 encircled by one end 8 of a spring-lever D which
35 is bent as shown and passes under a pivot-link E at 9, the spring-lever being bent at this point to form a depression in which the outer side 10 of the pivot-link rests, and to form a rounded projection which contacts
40 with the upper edge of the wrench-stock A and serves as a fulcrum, the spring lever being made of greater thickness at this point, as shown. The pivot-link E is pivotally secured to the wrench-stock by having its ends
45 11 bent inward and inserted into a hole in the stock.

The outer end of the wrench-stock is rounded at 12, and the outer end of the spring-lever bent toward the stock, thereby permitting

both lever and stock to be grasped by the 50 hands.

It will be observed that the spring-lever does not bear any of the strain necessary in turning the pipe F, as the direction of rotation, which is indicated by the arrows, is such
55 as to crowd the movable jaw inward, thus tending to force the teeth deeper into the pipe, and, at the same time, contracts the space between the jaws, or, in other words, clamp the pipe more securely. When the
60 wrench is rotated in the opposite direction the operation is reversed, the movable jaw being loosened, and forced away from contact with the pipe, thus leaving the wrench free to
65 move backward to take a new hold on the pipe. The spring-lever serves to conveniently release the jaw at any time and also, by its elasticity, tends to keep the movable jaw in close contact with the pipe as long as
70 the hand of the operator grasps the end of both spring-lever and wrench-stock, thereby insuring the gripping of the pipe by the teeth on the movable jaw.

Having thus fully described my invention, what I claim as new, and desire to secure by 75 Letters Patent, is—

1. In a pipe wrench, the combination, with a stock having its end bent to form a jaw, of a movable jaw pivoted to said stock, and a leaf spring, having a projecting thickened
80 central portion adapted to rest on said stock and form a fulcrum, said spring being connected at its end to said movable jaw, substantially as described and for the purpose set forth.

2. In a pipe wrench, the combination, with a stock having its end bent to form a jaw, of a movable jaw consisting of a pair of bent plates united at one end and pivoted at their free ends to opposite sides of said stock, and
90 a leaf spring having a projecting thickened central portion adapted to rest on said stock and form a fulcrum, said spring being connected at one end to said movable jaw, substantially as specified and for the purpose 95 set forth.

3. In a pipe-wrench, the combination, with a stock having its outer end bent to form an

outer jaw, of a pair of bent plates united at
their outer end by an integral end-piece, said
plates being pivoted to the stock, one on each
side, and provided with teeth pointing out-
5 ward, a spring-lever bent to form a depres-
sion near its center, a pivot-link resting in
the depression and pivoted to the stock, and
a jaw-link pivotally attached to the outer end
of the spring-lever and to the bent plates for-

ward of the point of attachment of said plates 10
to the stock, substantially as specified and for
the purpose set forth.

In testimony whereof I affix my signature in
presence of two witnesses.

WILLIAM CRAIGE.

Witnesses:

FRANK RIGLESBUGER,
W. F. PAXTON.