J. M. EVARTS.

Pipe-Tongs.

No. 167,085. Patented Aug. 24, 1875.

Fig: 1.

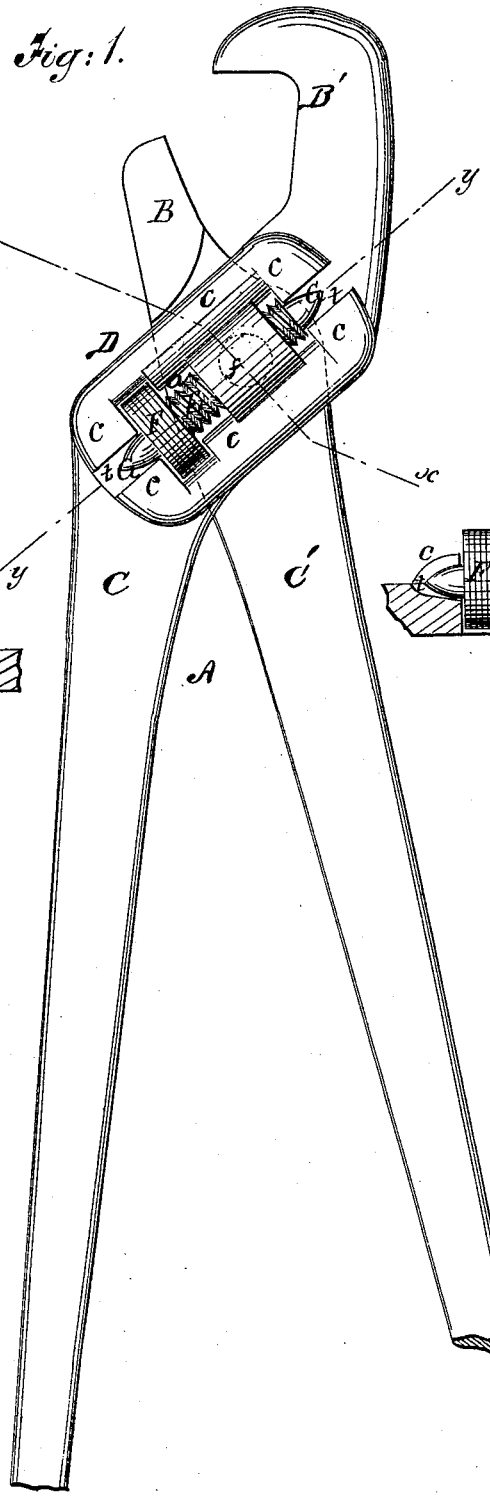


Fig: 2.

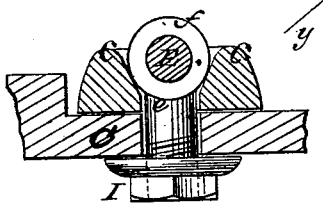
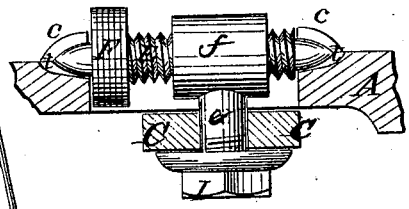


Fig: 3



Witnesses:

H. C. Mattenberg

W. Lovell

Inventor:

James M. Evarts

per Munn & Co

Attys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES M. EVARTS, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN PIPE-TONGS.

Specification forming part of Letters Patent No. **167,085**, dated August 24, 1875; application filed November 24, 1874.

To all whom it may concern:

Be it known that I, JAMES M. EVARTS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Pipe-Tongs; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

The invention consists in a pipe-tongs having a slot surrounded by a beveled or rounded guard, in which the nut and screw for operating the adjustable jaw are located.

The desirability of having pipe-tongs with an adjustable fulcrum, so as to increase or lessen the grasp of the tongs, that it may be accommodated to the different sizes of pipes, has long been recognized, and several devices of this character have heretofore been constructed.

In the accompanying sheet of drawings, Figure 1 is a side elevation of my improved pipe-tongs; Fig. 2, a cross-section of the same, taken in the line *x x*, Fig. 1; and Fig. 3, a cross-section taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts in the several figures.

A represents a pipe-tongs with jaws B B′ of the ordinary form and shape. Into one half, C, of the tongs, and through the angular portion D of the same, as shown in Fig. 1, is formed a slot, *a*. This slot extends nearly the full length of the angular portion D, and surrounding this slot on one side is a raised guard, *c*. The inner sides of this guard, as well as the inner sides of the slot *a*, are beveled or rounded, as shown in Fig. 2. Passing through the slot *a* is a fulcrum *e*, the lower end of which is provided with a screw-thread, and its upper end with a nut, *f*. This nut may be of any desired shape, but is, preferably, cylindrical or curved on its under surface, so that when the fulcrum is in position it will fit the curved or angular inner sides of the slot *a*. Passing through the nut *f*, which has a female thread cut into the same, is a screw, E, which works snugly into the threads in the nut *f*. Each end of this screw is formed with bearings G, and near one end of the same is formed or secured a milled thumb-wheel, F. The fulcrum *e* being passed through the slot, as before described, the other half, C′, of the tongs is, by a hole formed therein, secured to the fulcrum, which passes through said hole, and then held firmly in position by a nut, I. The bearings G of the screw E, when the fulcrum is thus in position, rest in bearings *t*, formed in each end of the guard *c*, and the under surface of the nut *f* rests snugly on the beveled inner sides of the guard *c* and slot *a*.

Having now described the construction of my improved pipe-tongs, its operation is as follows: The thumb-wheel F being turned, the screw is caused to revolve through the nut *f*, and advance said nut, the fulcrum *e*, and the jaw B′, or retract the same to the full extent of the length of the slot *a*, in this way increasing or decreasing the space between the upper and lower jaws, or adjusting the jaws that they may grasp a smaller or greater pipe. The rounded or beveled sides of the guard *c* and the slot *a* permit the nut *f*, with the screw E therein, and the thumb-wheel F, to be wholly, or to a great extent, countersunk below the surface of the guard *c*, so that none of their parts project above the surface of the side of the upper jaw to interfere with the proper working of the instrument, the guard *c* protecting the adjustable screw, &c., from injury.

The beveled or rounded inner sides of this guard and slot, besides protecting the screw, &c., as before stated, also act as guides, wherein the nut *f* of the fulcrum freely slides as the screw E is turned, as before described. Besides, by beveling the slot, as before stated, the fulcrum *e* may be made of very little length, and its strength materially increased thereby, since it would be less likely to be wrenched or broken off than would otherwise be the case.

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

1. In a pipe-tongs, having an adjustable jaw, the slot surrounded by beveled or rounded guards substantially as and for the purpose described.

2. Pipe-tongs constructed with the fulcrum-pin, combined with a screw passing through the head of the same, the ends of said screw lying in bearings and holding the jaws together, substantially as shown and described.

JAMES M. EVARTS.

Witnesses:
A. B. JACOCKS,
CHAS. PETERSON.