

H. H. Gilmore,

Pipe Wrench.

N^o 19, 842.

Patented Apr. 6, 1858.

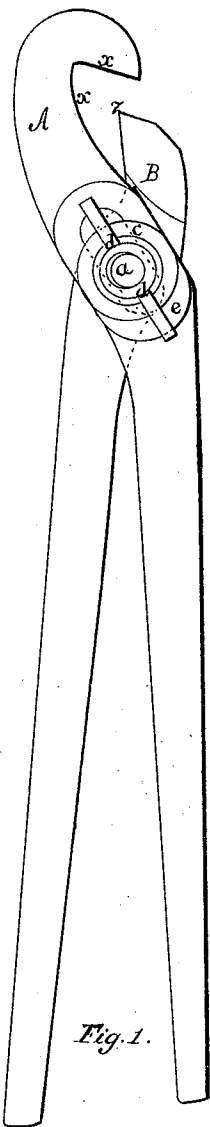


Fig. 1.

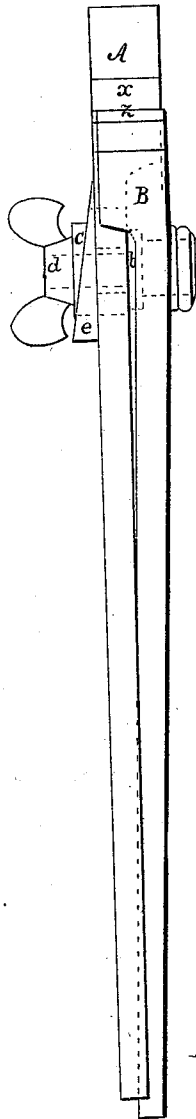


Fig. 2.

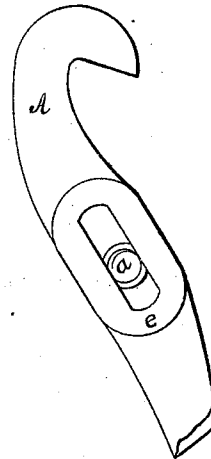


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY H. GILMORE, OF BOSTON, MASSACHUSETTS.

PIPE-TONGS.

Specification forming part of Letters Patent No. 19,842, dated April 6, 1858; Reissued June 12, 1866, No. 2,283.

To all whom it may concern:

Be it known that I, HENRY H. GILMORE, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Adjustable Pipe-Tongs; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of the invention consists in the described method or its equivalent whereby the slotted part of the tongs is so clamped to the pivot that the strain consequent upon the use of the tongs shall not separate the jaws by slipping the pivot in the slotted jaw.

To enable those skilled in the art to make and use my invention I will proceed to describe its construction and operation.

Figure 1 is a side view of a pair of pipe tongs constructed in accordance with my invention. Fig. 2, is a front view of the same, and Fig. 3, is a detail showing the slot and pivot in the hooked jaw.

The hooked jaw (A) and straight jaw (B) are constructed in the parts where the pipe is grasped in the usual well known manner and therefore need no description here, but the part of (A) through which the pivot (a) passes is slotted and increased in size to compensate for the strength lost by the slot. The pivot (a) is secured in (B) so that it can turn therein or so that when (a) is prevented from turning (B) can move about (a) as a center. The collar (b) formed on (a) supports (A) which is clamped between (b) and the washer (c) by the nut (d). (a) is flattened where it passes through the slot in (A) (see Fig. 3) to prevent the pivot from turning therein. The inclined plane (e) forms part of (A) or is fixed to it. The washer (c) under the nut (d) is also an inclined plane; a projection on the under side of (c) fits the sides

of the groove in (A) and prevents the washer from turning with the nut.

It will be obvious from inspection of the drawings that any strain which tends to separate the two parts of the tongs in the direction of their length, or to increase the distance between (x x), surfaces of (A), and the steeled edge (z) of (B), must cause the inclined plane of (c) to move on the inclined plane (e) increasing the distance between the upper surface of the collar (b) and the lower surface of the nut. This cannot be done without stretching or breaking the pivot (a) by direct tensile strain.

The tongs constructed as just described may be set to any desired distance, between (x x) and (z), within the range of the instrument.

A substitute for the inclined planes above described may be made by forming teeth or indentations on the upper surface of (A) and the lower surface of the washer (c) the inclined planes being dispensed with. These teeth would be kept interlocked by the nut (d); to set the instrument it would be necessary to slack the nut and adjust the position of the jaws before tightening it. It is evident that the distance of (x x) from (z) cannot thus be varied by a less amount than the distance of teeth apart and that the strain which tends to separate (x x) and (z) in this construction would exert no tensile strain on the pivot but would be exerted on the teeth or indentations described.

Having described my invention what I claim as new therein and desire to secure by Letters Patent of the United States is:

The combination of an inclined plane or planes or the equivalent thereof with the slotted jaw, for the purpose described.

HY. H. GILMORE.

Witnesses:

J. B. CROSBY,
GORDON MCKAY.