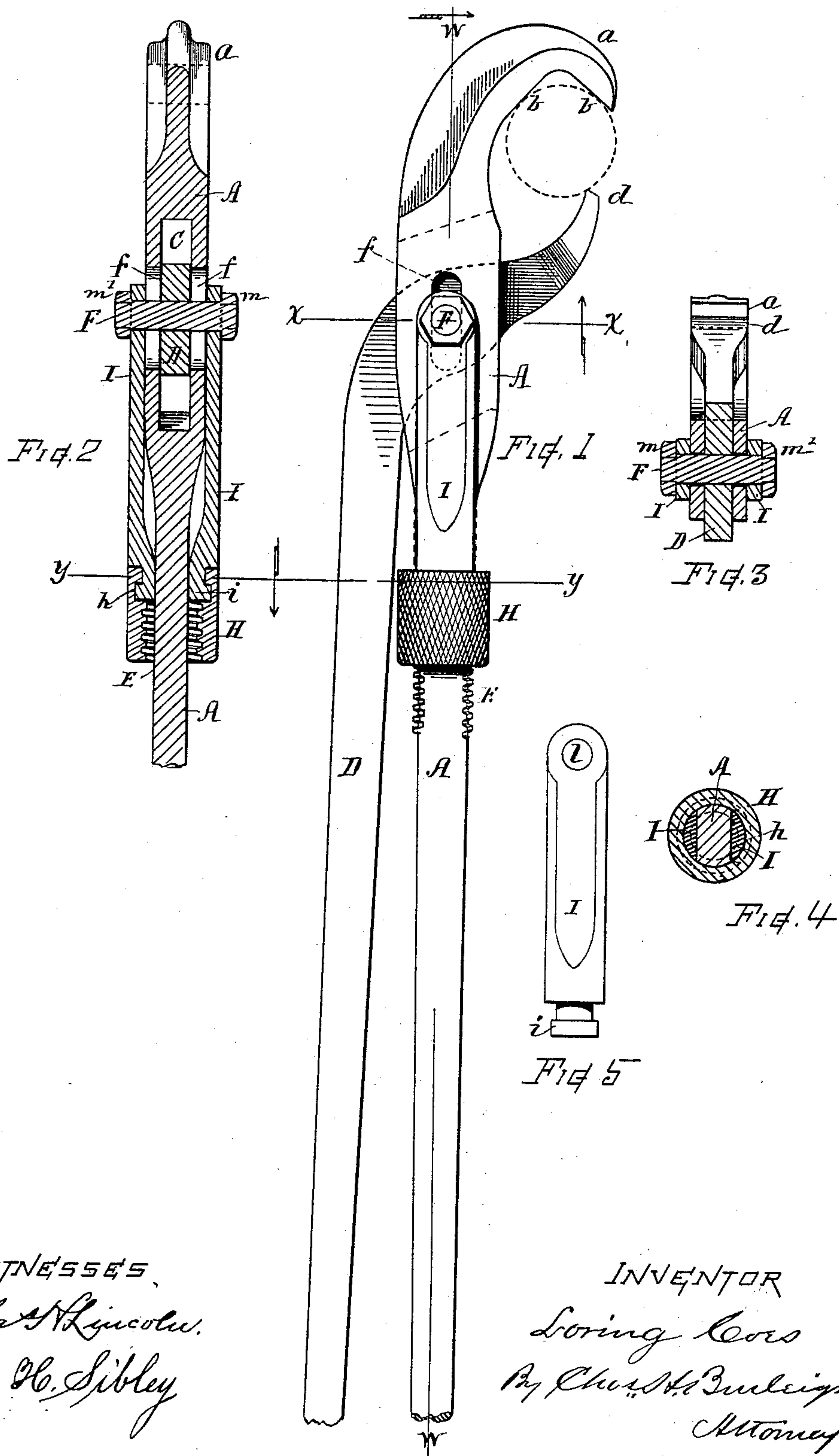


(No Model.)

L. COES.
ADJUSTABLE PIPE TONGS.

No. 366,379.

Patented July 12, 1887.



WITNESSES,
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UNITED STATES PATENT OFFICE.

LORING COES, OF WORCESTER, MASSACHUSETTS.

ADJUSTABLE PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 366,379, dated July 12, 1887.

Application filed February 5, 1886. Serial No. 190,897. (No model.)

To all whom it may concern:

Be it known that I, LORING COES, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Adjustable Pipe-Tongs, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

This invention relates to that class of pipe-tongs which are capable of being adjusted to move the jaws more or less apart or away from each other, so that they may be made to grasp pipes of varying diameters, the object being to improve the construction, so as to render the tongs more practical for manufacture and more desirable and perfect for use.

To this end my invention consists in certain details of construction, as hereinafter fully described, and particularly pointed out in the claim.

In the drawings, Figure 1 is a side view of a pair of pipe-tongs embodying my invention; Fig. 2, a longitudinal section on line *ww* of Fig. 1; Fig. 3, a transverse section on line *xx* thereof; Fig. 4, a similar section on line *yy*; Fig. 5, a side view of one of the fulcrum-bolt-carrier links.

In reference to parts, A denotes the main lever, which is provided with a hook-jaw, *a*, the inner part of which is provided with two approximately straight converging surfaces at *b b*, which act as bearing-surfaces for the pipe which is to be grasped by the tongs. The main lever is further provided with an opening or eye, C, which receives the secondary or gripping lever D, the latter being provided with a fulcrum-bolt, F, in that part which enters the eye of the main lever A, the said bolt projecting from either side of the gripping-lever and extending at either side, so as to project outward through the slots *ff* in the sides of the main lever A.

The fulcrum-bolt F is fitted closely in the gripping-lever D, but can move back and forth in the slots *ff*, to permit the gripping-lever to be moved in the eye C, in the manner to be presently set forth. The gripping-lever D has a chisel end, *d*, for gripping, to be placed between the jaws.

The main lever is furnished with a screw-thread, E, and provided with an adjustable stop consisting of a threaded nut or sleeve, H, fitted on said screw-threaded portion, and rotatable for effecting its adjustment. Intermediate of said stop-nut and the fulcrum-bolt, and secured to the latter, is a fulcrum-bolt carrier adapted to be operated by movement of the nut on the threaded shank, so as to change the relative position of the main and secondary levers to adjust their jaws for grasping pipes of different diameters.

The fulcrum-bolt carrier consists of two metal straps or links, I, arranged at each side of the main lever near its slots *ff*, connected to the ends of the fulcrum-bolt F, and working in conjunction with the nut H in such manner that when the nut is rotated on the threaded shank the fulcrum-bolt carrier moves in response to the action of the screw-threads and forces the fulcrum-bolt along the slots *f*, thus adjusting the jaw *d* of the gripping-lever D toward or from the jaw *a* of the main lever, so that said jaws will accommodate a larger or smaller pipe.

The connection of the link or fulcrum-bolt carrier I with the stop-nut H is effected by means of a lug, *i*, which enters an annular groove, *h*, formed in the nut H. The lugs *i* are locked into the groove *h* before the nut is placed upon the main lever, and are then retained in position after the parts are in place by the links resting against the flattened sides of said main lever, as shown. The opposite ends of said links are fitted over the ends of the fulcrum-bolt F, a suitable hole, *l*, being provided, and are retained thereon by the heads *m* or nuts *m'* of said bolt.

If desired, the links of the fulcrum-bolt carrier can be connected with each other adjacent to the end that works in conjunction with the stop or nut H, the links being coupled or retained in place by a collar or connection that encircles the shank of the main lever.

By constructing and arranging the mechanism in the manner shown, with the gripping-lever passing through an eye in the main lever and the fulcrum-bolt and links disposed as described, I produce a very neat, compact, strong, and desirable instrument, one that can be manufactured with practical facility and at reasonable expense, and which can be conveniently

handled and employed with efficiency in all situations; also, one in which there is no lateral play or excessive backlash to overcome while obtaining a firm grip on the pipe.

5 I am aware that pipe-tongs capable of adjustment for accommodating different sizes of pipe have heretofore been in use, and I do not, therefore, broadly claim adjustability in pipe-tongs.

10 I am also aware that Letters Patent have heretofore been granted for pipe-tongs in which adjustment is effected by moving the fulcrum-pin by a nut upon the shank of the main bar. The construction, form, and dis-
15 position of the parts are, however, different from my improved tongs, and I do not include such within the scope of my claim.

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

20 Pipe-tongs constructed as hereinbefore described, consisting of a main lever screw-

threaded on its shank, and provided with a hooked jaw, *a*, an eye, *C*, and a pair of slots, *f f*, opening laterally into said eye, a gripping-lever, curved as shown, and passing through said 25 eye, a fulcrum-bolt fitted at its center in said gripping-lever, with its ends extending laterally at either side through the respective slots of the main lever, a nut rotatable on the threaded shank of said main lever, and the fulcrum-bolt 30 carriers attached to the ends of the fulcrum-bolt and extending along the sides of the main lever to said nut, with the rear end working in conjunction therewith, all constructed and combined for operation as herein shown and 35 described.

Witness my hand this 3d day of February,
A. D. 1886.

LORING COES.

Witnesses:

CHAS. H. BURLEIGH,
ROBERT A. MORGAN.