(No Model.)

J. M. PRAY.

PIPE TONGS.

No. 438,177. Patented Oct. 14, 1890.

Fig. 1.

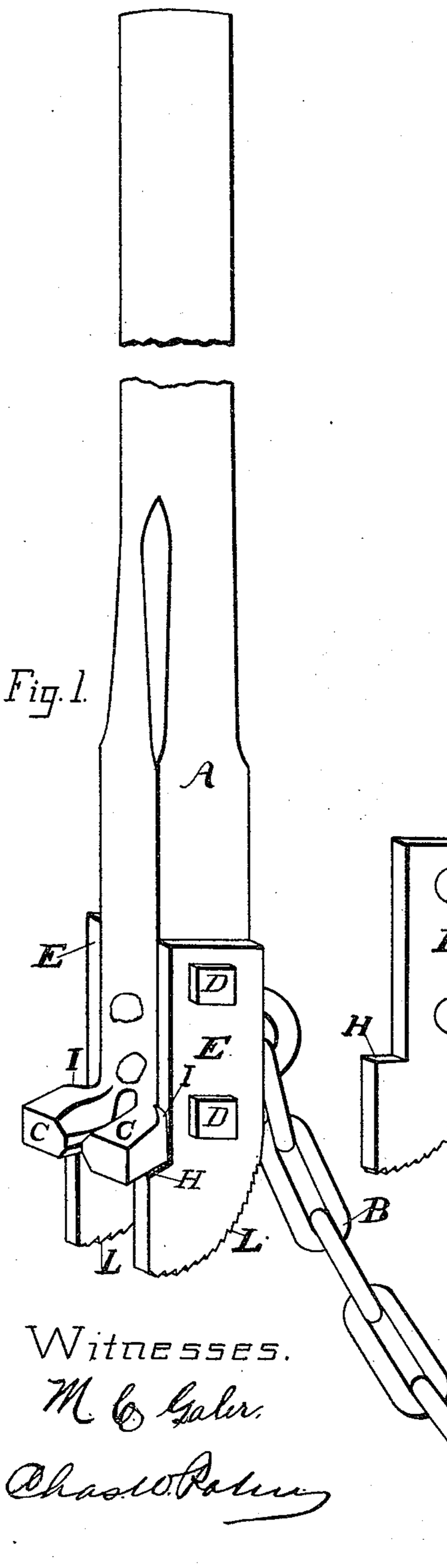
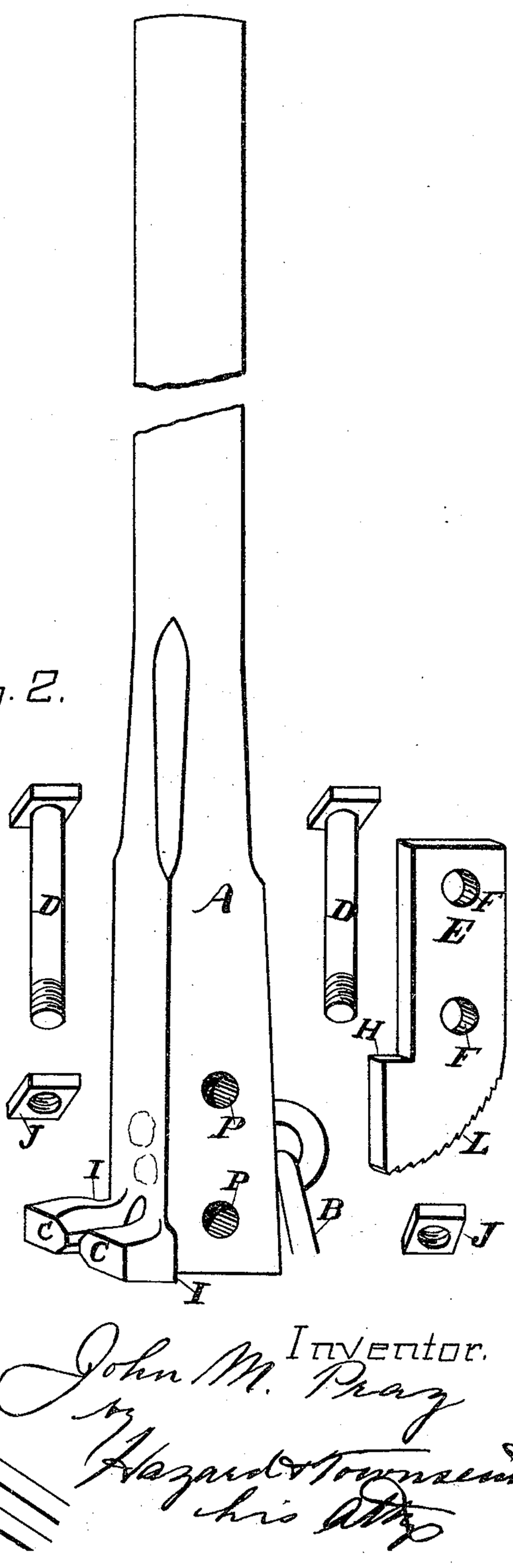


Fig. 2.



Witnesses.
M. C. Galer.
Chas. C. Palmer

John M. Pray Inventor.
by Hazard & Townsend
his Attys

UNITED STATES PATENT OFFICE.

JOHN M. PRAY, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF TO HIRAM H. LEITHEAD, OF SAME PLACE.

PIPE-TONGS.

SPECIFICATION forming part of Letters Patent No. 438,177, dated October 14, 1890.

Application filed October 12, 1889. Serial No. 326,888. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. PRAY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Improvement in Pipe-Tongs, of which the following is a specification.

My invention pertains to that class of chain pipe-tongs in which the jaws are removable; and it particularly relates to the peculiar form of the jaws and head of the stock whereby I am enabled to construct such removable jaws at a much smaller expense than has heretofore been possible, and whereby such jaws may be made lighter and are made more effective in their operation and less liable to break than the jaws heretofore in use.

A further advantage gained by my invention is that I am enabled to produce a jaw that can be made by an ordinary mechanic with common blacksmith-tools.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective view of my tongs ready for use. Fig. 2 shows the same with the jaws detached.

My invention consists of the combination of a broad-headed transversely-perforated stock A, provided with the chain B and provided on one face at its extremity with two forwardly and laterally projecting lugs forming the forwardly-projecting chain-retaining claws C C and the laterally-projecting jaw-sustaining shoulders I I, the two transversely-perforated jaws E E, each provided at one end with the approximately parabolic serrated portion L upon one edge and with the projecting shoulder H upon the other edge, such shoulder forming an offset approximately opposite the upper termination of the parabolic serrated portion, and the lower or forward part of the parabolic serrated portion intersecting the plane of the shoulder H approximately at right angles to the axis of the jaw, and bolts and nuts D D J J to secure the jaws to the stock. I do not lay any claim, however, to the bolts and nuts, and I do not wish to limit my claim to any specific means for securing the jaws to the stock against lateral displacement. Set-screws and various other means may be employed for this purpose without any change in the principle of my invention.

By this construction I not only secure great simplicity of parts, but also a superior mode of operation which enables me to employ jaws of much less weight than heretofore required.

In practice heretofore the jaws have been so constructed that the strain upon the jaws has been necessarily so applied thereto as to wrench the fastenings—that is to say, the pressure in turning a pipe has been necessarily applied to such a point of the jaw relative to the fastening that it has pressed in one direction upon one bolt or fastening device and in the other direction upon another bolt or fastening device. By the form of stock and jaws above set forth the strain upon the jaw is always in the line of radii drawn from the jaw-sustaining shoulders I I, so that the whole strain upon the jaw is in the nature of a crushing force to crush the jaw between the shoulder and the pipe being turned. This enables me to reduce the weight of the jaws very much below the weight of jaws heretofore having the same efficiency.

In the drawings, P P are the transverse perforations through the head of the stock, and F F are the perforations through the jaws.

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

The combination of the stock provided with the chain and provided on one face at its extremity with two forwardly and laterally projecting lugs forming the forwardly-projecting chain-retaining claws C C and the laterally-projecting jaw-sustaining shoulders I I, the two jaws each provided at one end with the approximately parabolic serrated portion L upon one edge and with the projecting shoulder H upon the other edge, such shoulder forming an offset approximately opposite the upper termination of the parabolic serrated portion, and the lower forward part of the parabolic serrated portion intersecting the plane of the shoulder H approximately at right angles to the axis of the jaw, and means for securing the jaws to the stock.

JOHN M. PRAY.

Witnesses:
JAMES R. TOWNSEND,
J. E. REED.