

H. Tregellas,

Wrench.

No. 107,425.

Patented Sep. 13. 1870.

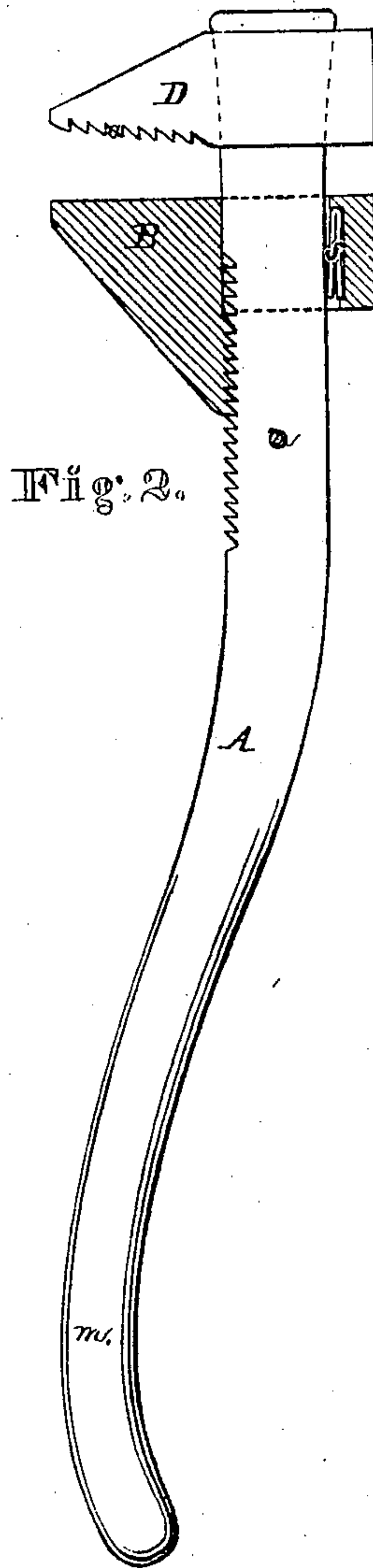
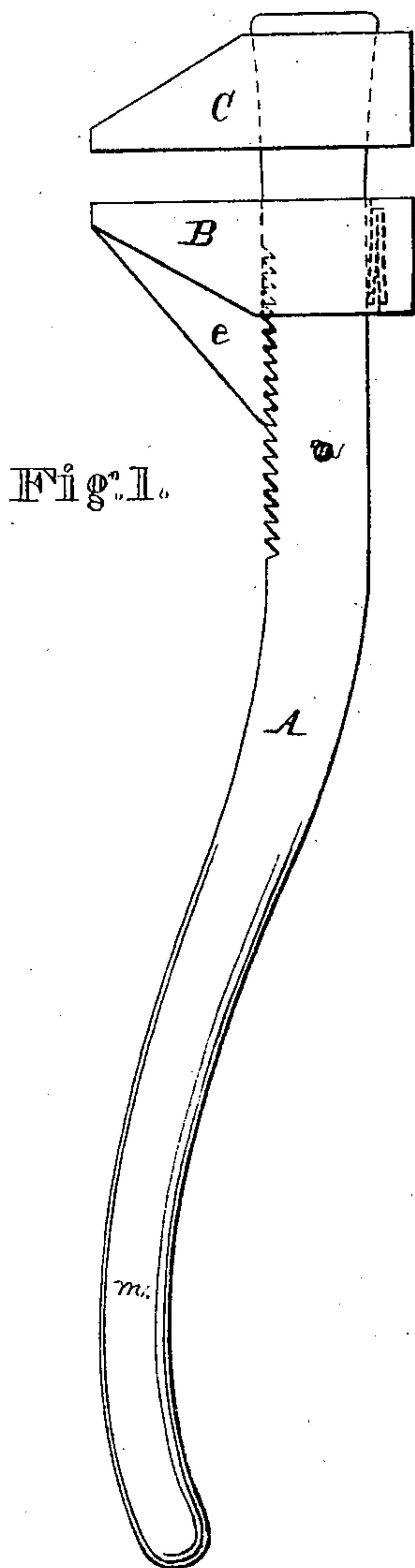
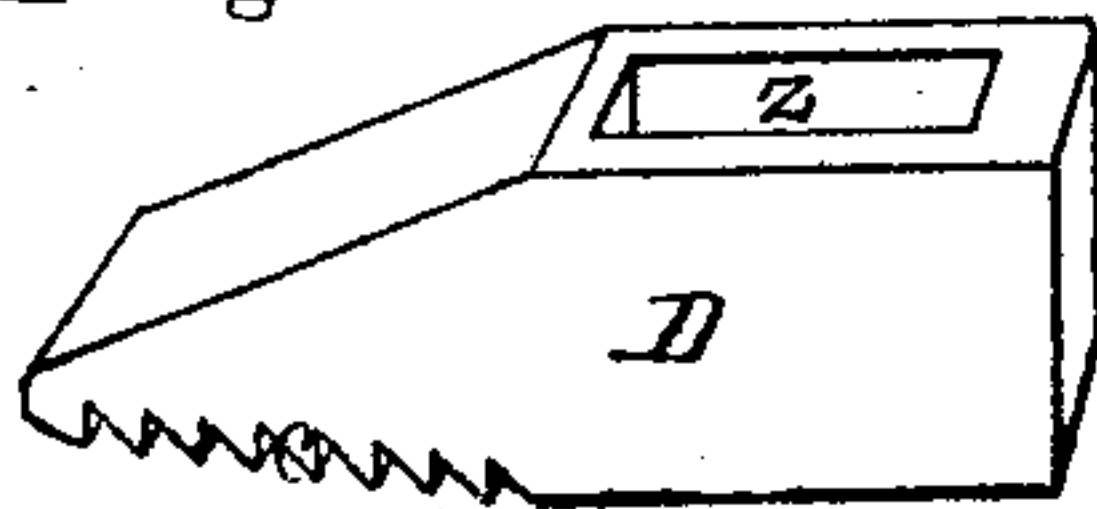


Fig. 4.



Witnesses:
Chas. H. Mason,
Geo. S. Main.

Inventor,
H. Tregellas,
Chipman & Fosmire & Co
Attorneys.

United States Patent Office.

HENRY TREGELLAS, OF CALUMET, MICHIGAN.

Letters Patent No. 107,425, dated September 13, 1870.

IMPROVEMENT IN WRENCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY TREGELLAS, of Calumet, in the county of Houghton and State of Michigan, have invented a new and valuable Improvement in "Wrenches;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a side view of my invention.

Figure 2 is a partial sectional view.

Figure 3 is a detail.

My invention relates to an improvement in wrenches; and

It consists in providing a clamp-wrench, with a removable stationary or end jaw suitable for nuts, and a separate end jaw, with beveled serrated face, designed to replace the former when it becomes necessary to use the instrument as a pipe-wrench.

A represents the wrench-bar, tapering from its upper end, and having its lower portion or handle, *m*, curved in such a manner that it shall be convex on the same side with the operating portions or points of the jaws. This bar is also serrated for some distance between the end thereof and the curved handle, the teeth *a* being perpendicular to the face of the bar on their upper sides, and inclined thereto on their lower sides.

B represents the lower or movable and adjustable jaw, having a triangular bracing extension, *e*, extending downward, and provided on its inner side, adjacent to the bar, with teeth corresponding to those of the bar, but conversely beveled on their upper sides, and perpendicular on their lower sides.

In the rear portion of the slot of this jaw, through

which the handle passes, a recess is formed, in which is seated a spring, *s*, which is arranged to keep the serrated extension engaged with the serrated portion of the bar A.

O represents the removable nut-jaw, provided with a slot, *z*, of which the end walls are beveled to correspond with the inclination of the tapering end of the bar A, and so arranged that it becomes firmly and securely seated when pressed up into place.

D represents the removable pipe-jaw, having its biting-face *c* beveled, for convenience in grasping the pipe, and serrated in such a manner that the teeth are perpendicular to the line of inclination of the beveled face on the side next the heel of the jaw, and inclined to this line on the other side.

n represents a pin, designed to be inserted in the bar A when those jaws which are required for use are in place.

The end walls *z* of the slot of the pipe-jaw D are also beveled, in the manner above described, in connection with the nut-wrench.

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

1. In combination with the removable pipe-jaw D, having beveled serrated face *c* and tapering slot, the movable jaw B, having serrated brace *e* and spring *s*, and the tapering bar A, with serrations *a*, and curved handle *m*, substantially as specified.

2. The removable nut-jaw C, with tapering slot, substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

HENRY TREGELLAS.

Witnesses:

FRANCIS WARD,
JOSIAH TREGELLAS.