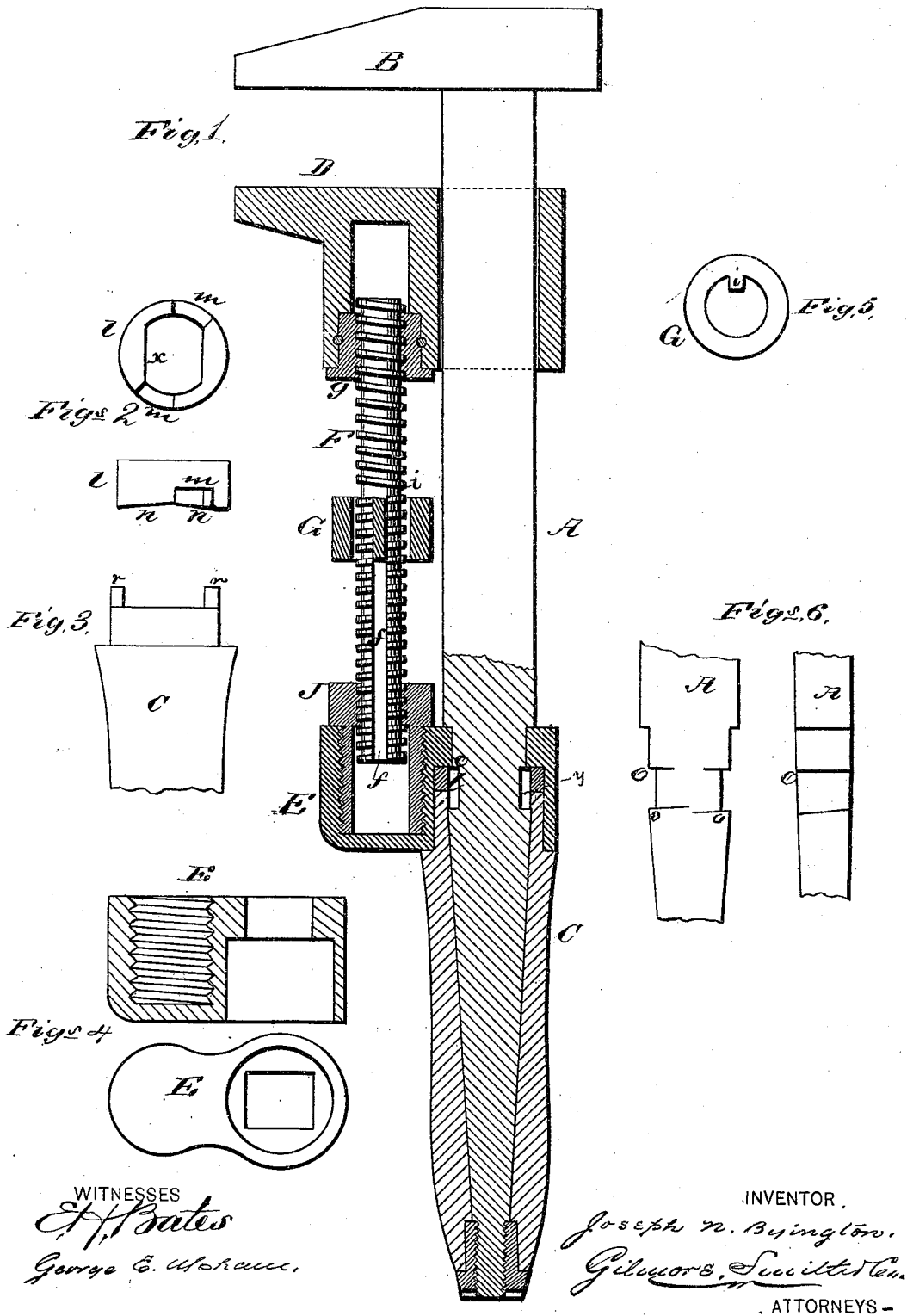


J. N. BYINGTON.
WRENCH.

No. 178,408.

Patented June 6, 1876.



UNITED STATES PATENT OFFICE.

JOSEPH N. BYINGTON, OF WINONA, MINNESOTA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **178,408**, dated June 6, 1876; application filed April 15, 1876.

To all whom it may concern:

Be it known that I, JOSEPH N. BYINGTON, of Winona, in the county of Winona and State of Minnesota, have invented a new and valuable Improvement in Screw-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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical sectional view of my screw-wrench; and Figs. 2, 3, 4, 5, and 6 are detail views of the same.

This invention has relation to hand-wrenches; and it consists in the combination of a right-and-left screw and a slip-nut with the movable jaw of the wrench, as will be hereinafter explained.

In the annexed drawings, A designates the stock of my improved wrench, on one end of which is applied the fixed jaw B, on the opposite end of which is rigidly but removably applied a handle, C. D designates a jaw, which is movable on the stock A, and which is of considerable length, as represented by Fig. 1, for a purpose hereinafter explained. E designates an enlargement, which is rigidly secured to the stock A. The movable jaw D and the enlargement E are both constructed with hollow offsets, as shown by Fig. 1. F designates a right and left threaded screw-shaft, the upper portion of which is tapped through a flanged nut, g, applied to the movable jaw D. The lower portion of this screw F is tapped through a nut, J, which is applied to the enlargement E, and which is serrated for the purpose of facilitating its removal when necessary. G designates a slip-nut, the periphery of which is roughened. This collar is constructed with a spline, which is free to play in a groove, f, made longitudinally in the right-and-left screw-shaft F.

It will be observed from the above description that when the collar G is rotated both the right and left threads of the screw-shaft F operate in their respective nuts to open or close the jaw D.

By the employment of the slip-collar G, provided with the spline i, fitting in the groove f of the screw-shaft F, I am enabled readily to turn the latter in either direction, and at the same time, after the jaws B D have been made to embrace a nut, the collar can be slipped in either direction, up or down, to avoid any interference with any object in the way of the collar in operating the wrench.

It will be seen that the screw-shaft F is independent of the stock A, so that the parts are rendered stronger than in that class of wrenches in which the stock is screw-threaded, and a nut operates the wrench-jaw, whereby I am enabled to make the stock large and employ a small collar, and obtain a better bearing for the lower jaw of the wrench.

Inside of the tubular portion of the enlargement E is a collar, l, which is notched, as shown at m, and double-beveled, as shown at n n. This collar, when applied inside of the enlargement E, bears upon shoulders o, and receives lugs r r, which are formed on the handle C, and draws the parts rigidly together when the handle is rotated. The bore x of the said collar is prismatic, and receives through it a flattened portion, y, of the stock A.

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

1. The right and left screw-threaded shaft F, independent of the stock A, and provided with the groove f, in combination with the sliding collar G, having the spline i, stock A, jaws B D, and base-nut E; substantially as described, and for the purpose set forth.

2. The collar l, constructed with notches m and beveled edges n, and with a prismatic bore, x, in combination with the enlargement E and handle C, having projections r r, substantially as described.

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

JOSEPH N. BYINGTON.

Witnesses:

C. G. MAYBURY,
WM. B. PHELPS.