

J. HARTMAN, Jr
Pipe-Wrench.

No. 205,081.

Patented June 18, 1878.

FIG. 1

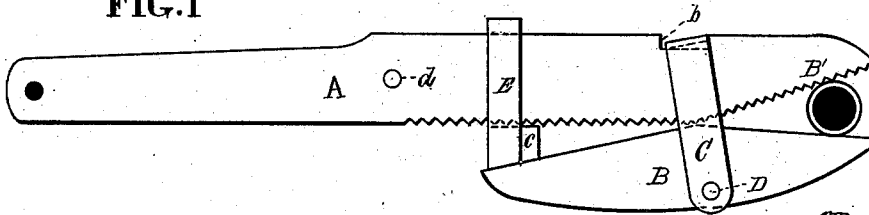


FIG. 2

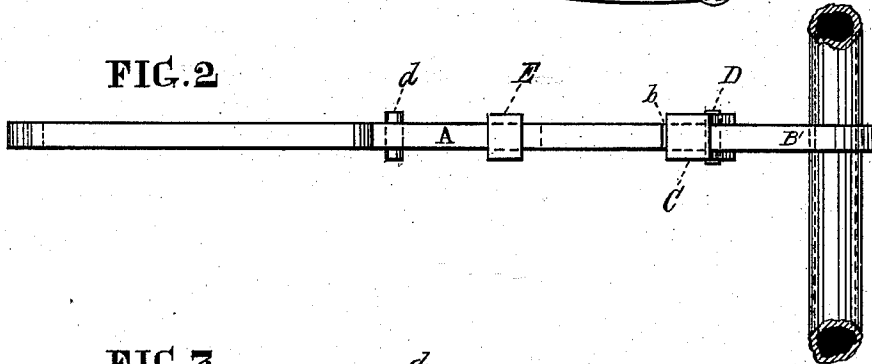


FIG. 3

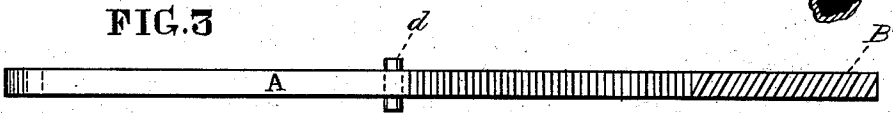


FIG. 4

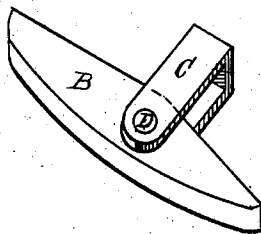
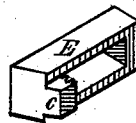


FIG. 5



Witnesses

Thomas J. Bewley

Herman Koehler

Inventor

John Hartman Jr.

per Stephen N. Stick attorney

UNITED STATES PATENT OFFICE.

JOHN HARTMAN, JR., OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN PIPE-WRENCHES.

Specification forming part of Letters Patent No. **205,081**, dated June 18, 1878; application filed November 22, 1877.

To all whom it may concern:

Be it known that I, JOHN HARTMAN, JR., of the city and county of Philadelphia, in the State of Pennsylvania, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved pipe-wrench; Fig. 2, an edge view of the same; Fig. 3, an edge view of the lever A; Fig. 4, an isometrical view of the clamping-jaw B and the yoke C in combination therewith, and Fig. 5 a like view of the slide E.

Like letters of reference in all the figures indicate the same parts.

My invention consists of a pipe-wrench having an operating-lever connected with a clamping-jaw by means of a yoke, there being an intermediate removable slide for pressing the jaw and clamping part of the lever toward each other and upon the pipe, as herein-after fully described.

In the accompanying drawings, A represents the lever of the wrench, which has an inclined and serrated front end for clamping the pipe, in combination with the clamping-jaw B, which is jointed thereto by means of the yoke C.

The yoke is made of a bent strip of metal, the ends of which fit against the sides of the jaw B, and are connected therewith by means of the pivot D. The yoke and jaw are shown in detail in Fig. 4. The closed end of the yoke fits in the depression *b* in the outer edge of the lever. By means of said depression and the pivot D, the jaw B is free to move

either toward or from the jaw B' of the lever A, to vary the distance between the jaws in accommodation to the different sizes of the pipes.

If desired, the order of connecting the yoke with the jaw B and lever A may be reversed by pivoting it to the latter instead of the former and making the depression *b* in the jaw B instead of in the lever; or the yoke C may be closed at both ends and connected with both jaws by means of a depression, *b*, in each jaw.

For holding the jaw B firmly in its clamping position, I employ the removable slide E, which moves freely on the lever A, it having no positive connection with either the lever or the jaw, so that its lug *c* may be pressed against the serrated edge of the lever A and the rear end of the clamping-jaw B, as seen in Fig. 1.

The slide E is shown in detail in Fig. 5.

There is a pin, *d*, confined in the lever A, the ends of which project from the sides of the lever to act as stops for the slide E when the latter is withdrawn from its connection with the jaw B.

Any other suitable device to be pressed between the lever A and the jaw B may be used.

I claim as my invention—

The combination of the lever A, jaw B, yoke C, and removable slide E, operating substantially as and for the purpose set forth.

JOHN HARTMAN, JR.

Witnesses:

STEPHEN USTICK,
THOMAS J. BEWLEY.