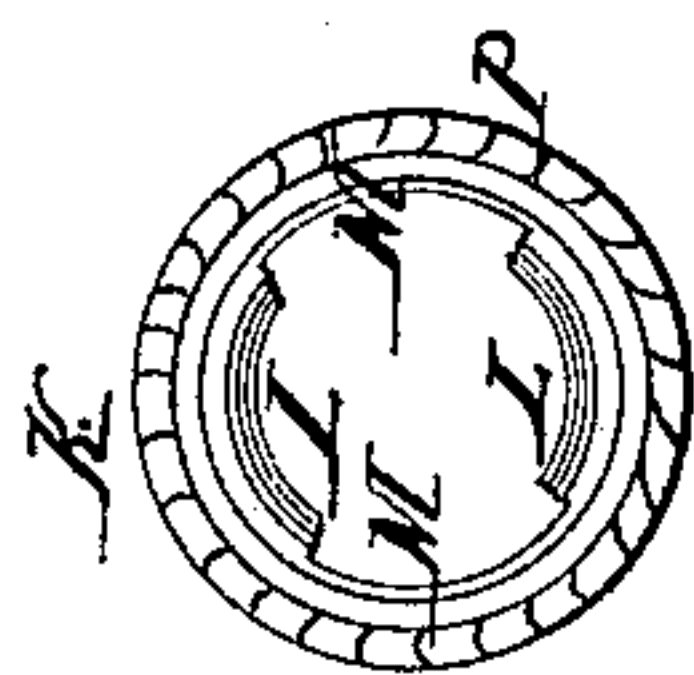


*G. B. Phillips,*

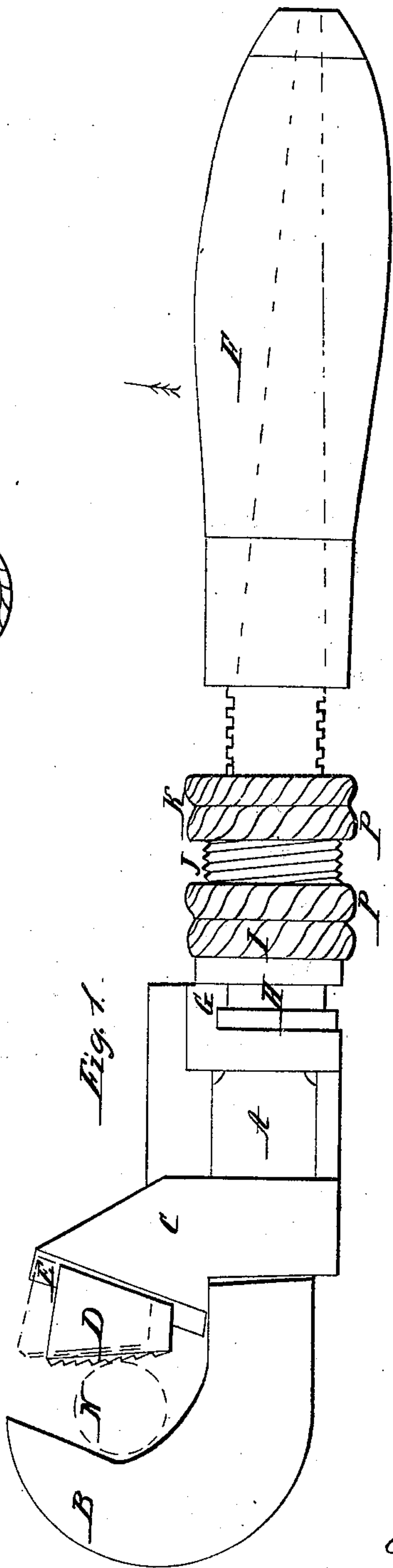
*Pipe Wrench.*

*N<sup>o</sup> 23,857*

*Patented May 3, 1859.*



*Fig. 2.*



*Fig. 1.*

*Witnesses:*  
*John W. Taylor*  
*Stephen D. Haring*

*Inventor:*  
*George B. Phillips*

# UNITED STATES PATENT OFFICE.

GEORGE B. PHILLIPS, OF ALBANY, NEW YORK.

## IMPROVED WRENCH FOR GAS-FITTERS.

Specification forming part of Letters Patent No. 23,857, dated May 3, 1859.

*To all whom it may concern:*

Be it known that I, GEORGE B. PHILLIPS, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Slide-Wrenches for Turning Gas-Pipes and other Round Articles; and I do hereby declare that the same are described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my improvements, I will proceed to describe their construction and operation, referring to the drawings, in which the same letters indicate like parts in each of the figures.

Figure 1 is a drawing of my improved wrench. Fig. 2 is an end view of one of the nuts.

The nature of my improvements consists in a wedge-shaped jaw arranged to slide so as to wedge, grip, or tighten on the article to be turned so as to hold it fast and firm while it is turned; and in a nut containing sections of threads of a female screw arranged to traverse on a bar containing sections of threads of a male screw, so that the nut may be turned and locked to the bar or traverse, as may be desired; also, in a nut with a female screw fitted to a male screw on the before-mentioned nut, so as to traverse the slide and tighten the jaw after the before-mentioned nut is locked to the bar of the wrench.

In the accompanying drawings, A is the main bar of the wrench provided with a hook B at one end made in the form shown in the drawings, to hold gas-pipes and other round articles. A portion of the bar A is made flat, with square edges for the slide C to traverse on, which slide is made in the form shown in the drawings to surround and traverse on the bar A and carry the sliding jaw D, which is wedge-shaped, as shown in the drawings, and provided with a score made dovetailing and fitted to traverse on the dovetail rib E on the slide C, the outer end of this rib being made large enough to prevent the sliding jaw D from slipping off.

The edges of the bar A are rounded between the slide C and the handle F and provided with a screw-thread, as shown in the drawings. The rear end of the slide C is provided with a projection G, fitted to the score

H in the nut I. The small end of this nut I is made large enough inside to traverse and turn freely over the screw-thread on the bar A, and its large end is provided with a female screw fitted to the male screw J on the small end of the nut K, which nut K is provided with two sections of female screw-threads on its inside fitted to the male screw-threads on the edges of the bar A. These sections of the screw-thread in the nut K are shown at L L in Fig. 2, which is an end view of the nut K, and the blank spaces M M on the inside of the nut between the sections of screw-thread L L are so arranged that when the blank spaces are over the screw-threads on the edges of the bar A the nut may be traversed freely on the bar and the slide C moved to carry the jaw D up to the pipe N, (shown in dotted lines,) the jaw D being held or slid from the bar, as shown by dotted lines. When the jaw D comes in contact with the pipe N, the nut K may be turned so as to bring the sections of threads L L in the nut between the threads on the edges of the bar, so as to lock the nut to the bar. Then by turning the nut I the jaw D may be forced tight against the pipe N to pinch it. Now if the handle of the wrench be moved in the direction of the arrow the teeth in the sliding jaw will catch into the pipe N, and the jaw will slide on the dovetail E and grip or pinch the pipe so hard that it will turn with the wrench as far and as much as may be desired, when the handle of the wrench may be turned in the opposite direction and the jaw will slide out so that it may be readily released from the pipe.

One end of the sections of threads in the nut K may be bent or hammered so as to stop the nut on the threads on the bar and prevent it from turning any farther than is proper to lock it to the bar.

Each of the nuts I and K is provided with milled ribs P P on its periphery, so that it may be turned by the fingers.

I believe I have described and represented my improvements in wrenches so as to enable any person skilled in the art to make and use them.

I will now state what I desire to secure by Letters Patent, to wit:

1. The jaw D, arranged to slide, substan-



tially as described, so as to wedge, grip, or tighten and hold the article to be turned, as described.

2. The nut K, arranged to slide freely on the bar A and so that it may be locked to the bar when desired, in combination with the bar when both are constructed substantially as described.

3. In combination with the nut K, the tightening-nut I, arranged substantially as described.

GEORGE B. PHILLIPS.

Witnesses:

JOHN W. TAYLOR,  
STEPHEN R. HAINES.