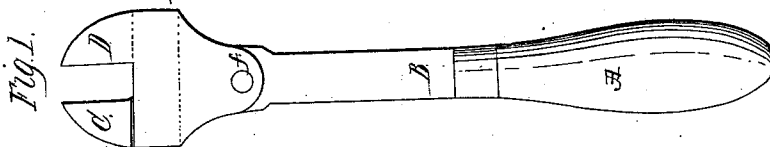
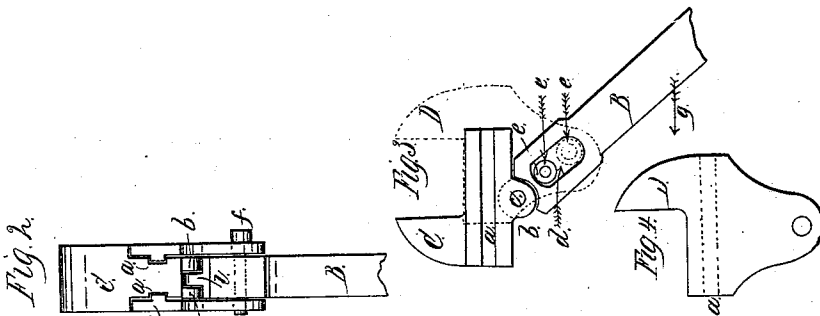
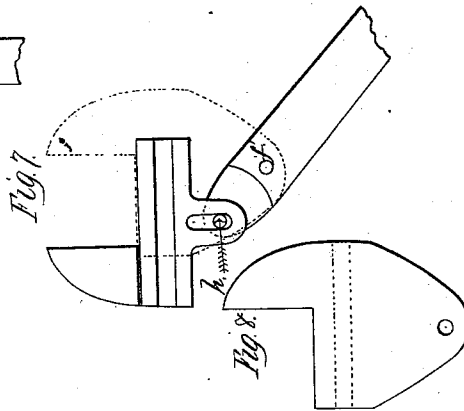
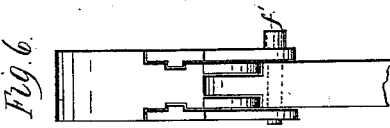
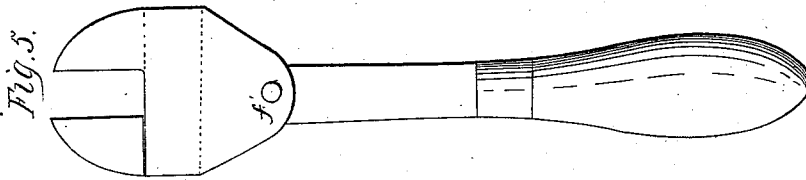


P. Sommer,
Wrench.

N^o 61,575.

Patented Jan. 29, 1867.



Witnesses
Edw. A. R. R. R.
Thos. Lang

Inventor,
P. Sommer
by his attorney
S. S. K. K.

United States Patent Office.

PHILIP SOMMER, OF NEWARK, NEW JERSEY.

Letters Patent No. 61,575, dated January 29, 1867; antedated January 17, 1867.

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, PHILIP SOMMER, of the city of Newark, county of Essex, in the State of New Jersey, have invented a new and improved "Wrench;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which like parts are indicated by like letters in the several figures.

The nature of my invention consists in constructing a simple, economical, and effective self-adjusting wrench; the stronger the pressure or pull, the stronger the "grip."

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation. In the drawings—

Figure 1 represents an elevation of my wrench.

Figure 2 a part side view of the same.

Figure 3 shows the open condition of the wrench, one jaw being removed, but shown in red ink outline.

Figure 4 is an elevation of one jaw.

Figures 5, 6, 7, and 8, show a modification of my wrench, to be presently explained.

In the several figures, like parts are indicated by like letters.

A represents the handle, B the staff. The head, or wrench proper, is composed of two parts or jaws, C and D, which slide upon each other, for which purpose the lower parts have a mortise and tenon, or dove-tail formation, as seen at *a*, fig. 2. The horizontal arm of C has two lugs, *b*, by which it is pivoted to staff B by pin *c*, fig. 3, the top of said staff having a lug, *l*, entering between those *b* of C. In the upper part of B there is an oblong slot, *d*, in which plays a roller, *e*. A pin, *f*, passing through the two lower cheeks of D, also passes through this roller, and secures D to B. In its normal condition, or when the wrench is closed to its fullest extent, or nearly so (as seen in fig. 1,) this roller is in the position shown in black lines, in fig. 3, that is, it is at or near the top of the slot. When the jaws are open, it moves down, and when it reaches the bottom of the slot, as seen in red lines, (fig. 3,) it limits the opening of the jaws C and D. Reversing the movement, or closing the jaws, the roller *e* moves up the slot *d*, and when it reaches the top, limits the closing of the jaws. It will readily be seen that if a nut be clasped by the wrench, say in its open condition, shown in fig. 3, and the staff be pulled in the direction of arrow, *g*, (shown in said figure,) that the jaws C and D will not only close upon a nut, bar, or other body, but that the harder the pull, the harder will be the grip of the jaws C and D. In my modification referred to, illustrated in figs. 5, 6, 7, and 8, instead of the slot in the staff B, I have a slot in each of the lugs, (corresponding to those of *b*, in fig. 3,) and instead of a roller, a pin, *h*, passing through the top part of the staff, passes through the lugs on each side, and plays up and down in the slots of these lugs, the jaws operating similarly to those before described. One jaw is also pivoted to upper part of staff, by pin *f'*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination of the jaws C D, staff B, and roller *e*, constructed, arranged, and operating in the manner substantially as shown and described, and for the purpose set forth.

PHILIP SOMMER.

Witnesses:

S. S. FAHNESTOCK,

JOHN S. HOLLINGSHEAD.