(No Model.)

W. A. BRADFORD.

WRENCH.

No. 263,471. Patented Aug. 29, 1882.

Fig. 1.

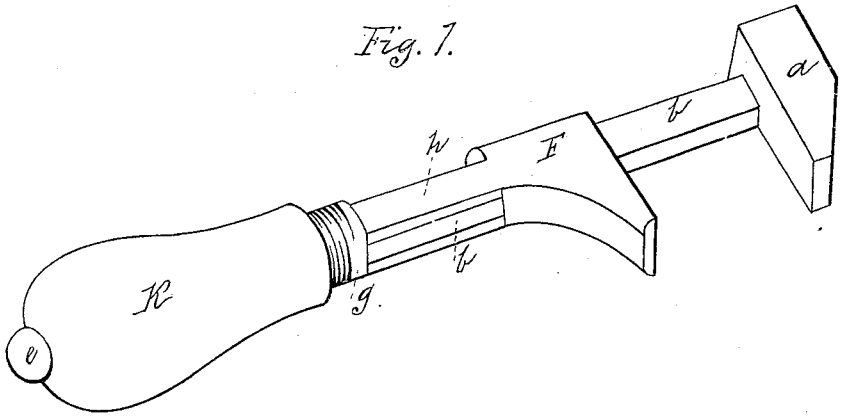


Fig. 2.

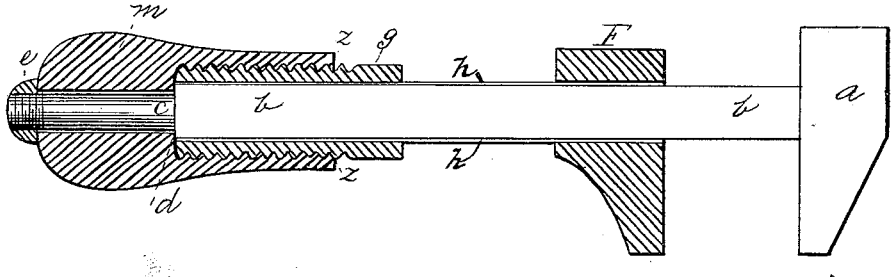
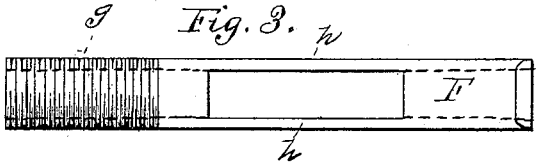


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM A. BRADFORD, OF GOSHEN, INDIANA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 263,471, dated August 29, 1882.

Application filed July 8, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. BRADFORD, a citizen of the United States, a resident of Goshen, in the county of Elkhart and State of of Indiana, 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 drawings, making part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my wrench. Fig. 2 is a vertical sectional view of the same, and Fig. 3 is a detailed view of the slide F detached from the wrench.

This invention has relation to wrenches having parallel moving jaws; and it consists in the construction and novel arrangement of the squared shank of the main jaw, having a spindle end on which the handle turns, the longitudinal squared bearing of the movable jaw which slides on the squared shank, and the cylindrical threaded exterior bearing of the stem-sleeve of the movable jaw engaging the interior thread of the handle, all as hereinafter set forth.

In the accompanying drawings, the letter *a* designates the main jaw of the wrench, which is formed with a squared shank, *b*, which terminates in a rounded spindle end, *c*, below a shoulder, *d*. On the end of the spindle *c* a thread is formed to engage a nut, *e*.

F indicates the movable or inner jaw, having an exteriorly-threaded sleeve-stem, *g*, which is connected to the jaw by means of the branches *h*. Between these branches, and through squared bearings in the head and sleeve-stem of this jaw, extends the squared shank *b* of the main jaw, which is of greater length than the hollow stem of the inner jaw, the latter being designed to slide thereon when the jaws are opened or closed.

K represents the handle, which is cylindrically recessed in its upper portion to receive the threaded sleeve-stem *g* of the movable jaw, and is formed with an interior screw-thread to engage the thread of said stem. In the lower portion of the handle an axial bearing, *m*, is made to engage the spindle *c* of the shank *b*. The handle is held on the spindle by the nut *e*, and when turned on said spindle moves the threaded stem of the inner jaw in or out of its threaded recess *z*, thereby opening or closing the jaws.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

A parallel-moving wrench, consisting of the main jaw *a*, having a squared shank, *b*, and spindle end *c*, the movable jaw having an interior squared bearing extending through its stem and an exterior threaded bearing, *g*, on said stem, the rotary handle pivoted on the spindle of the main jaw and having the threaded recess *z*, engaging the threaded stem of the movable jaw, and the fastening-nut *e* on the end of the spindle, substantially as specified.

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

WILLIAM A. BRADFORD.

Witnesses:
MAX DEMBUFSKY,
RUSSELL MORTON.