

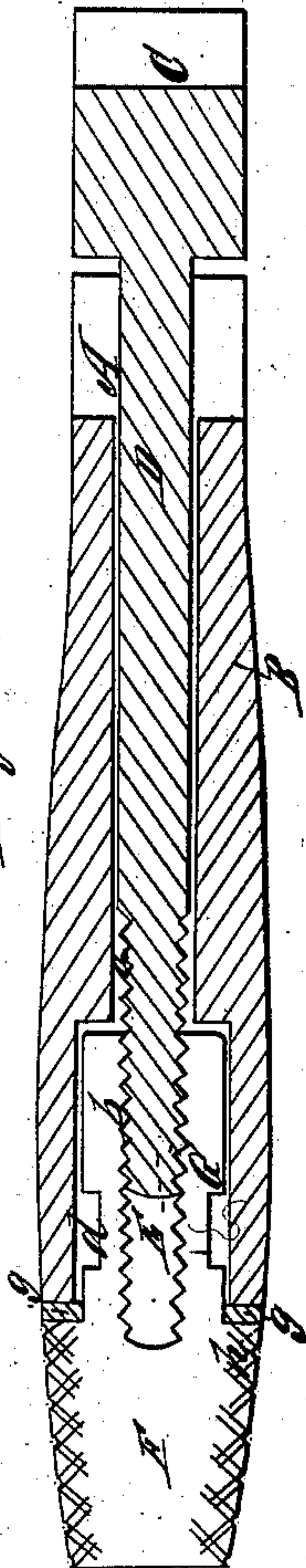
Norton & Farro,

Wrench.

N^o 56,996.

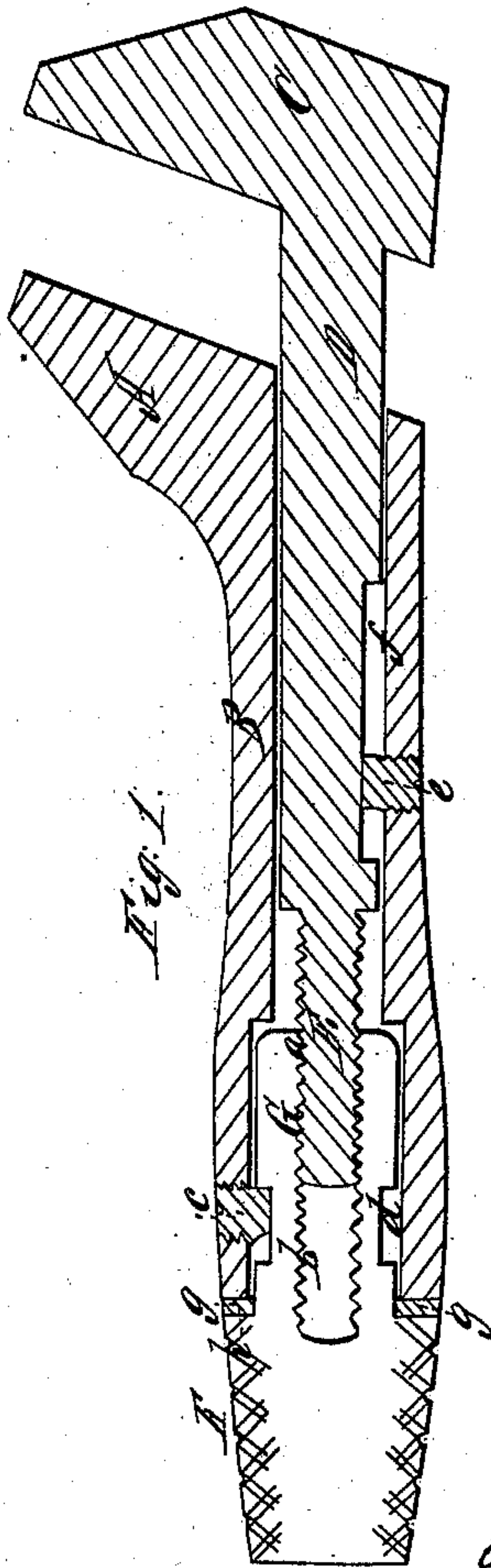
Patented Aug. 7, 1866.

Fig. 2.



Witnesses:
A. C. Fuller
Thos. H. Dodge

Fig. 1.



Inventors:
A. Norton
H. Farro

UNITED STATES PATENT OFFICE.

A. NEWTON AND FRANK FAVRO, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 56,996, dated August 7, 1866.

To all whom it may concern:

Be it known that we, A. NEWTON and FRANK FAVRO, both of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Wrenches; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal central section of the improved wrench, the jaws being partially opened, and Fig. 2 represents a similar section taken at right angles to the first.

Similar letters of reference indicate like parts in both figures.

In the drawings, A represents the stationary jaw, which is connected with the handle part B. We prefer to make the jaw A and handle part B in one piece and of malleable iron. C is the movable jaw, having a shank, D, extending back through a hole in the base of jaw A and handle B, and is milled down or formed with the small end E, upon which is cut a screw-thread, *a*, which works in the thread *b* cut in the front part, G, of the nut F. The front part, G, of the nut F is fitted to turn freely in a hole in the end of handle B, and is retained in position by the set-screw or pin *e*, which passes through handle B into a groove, *d*, in the end G of nut F. The shank D is prevented from slipping out by the set-screw or pin *e*, which passes through the handle B and into a slot, *f*, in the shank D.

g is a washer placed between the shoulder *h* of nut F and the end of handle B, to lessen friction in the operation of the wrench.

In the construction of the wrench we prefer to make the parts A, B, C, D, and F of malleable iron. By making the jaws stand at an angle to the shank D and handle B the wrench can be applied to nuts with greater facility in some cases than if the jaws stood at right angles to the handle and shank of the wrench. If preferred, however, the jaws may be made to stand at right angles to the handle and shank. The movable jaw C is moved out or extended and then drawn back to open and close the wrench by simply turning the nut F, as will be fully understood upon reference to the drawings.

Having described our improved wrench, what we claim therein as new and of our invention, and desire to secure by Letters Patent, is—

In combination with the upper movable or hammer jaw and the stationary lower jaw and handle of a wrench, constructed substantially as described, the tip-nut in the end of said wrench, when arranged and operating as herein shown, and for the purposes set forth.

A. NEWTON.
F. FAVRO.

Witnesses:

H. L. FULLER,
THOS. H. DODGE.