

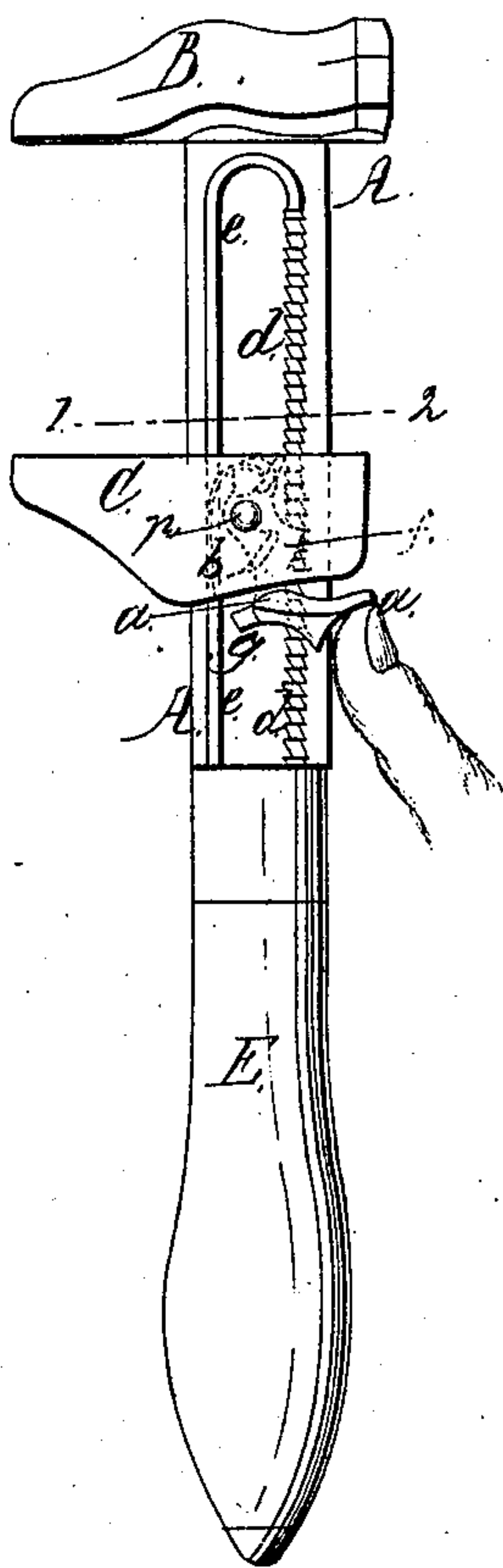
*W. Warwick,*

*Wrench.*

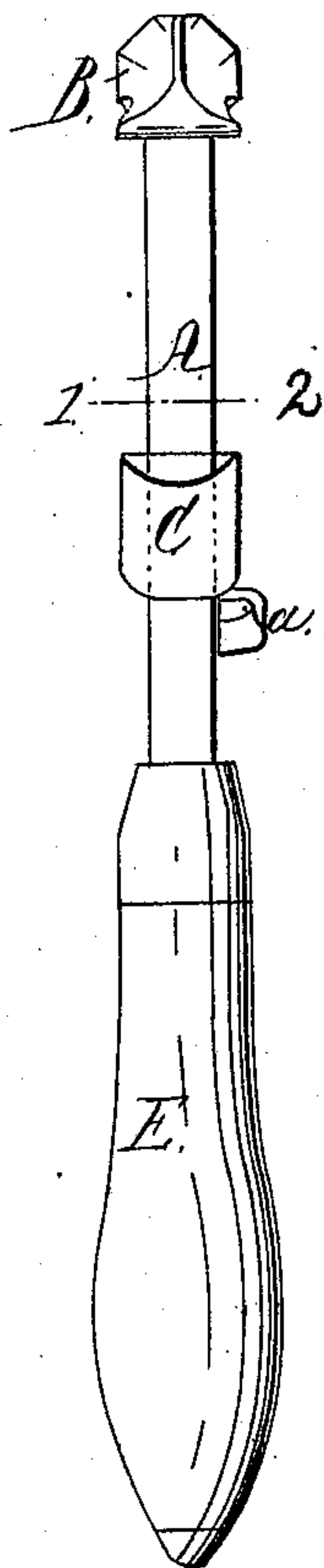
*N<sup>o</sup> 14528.*

*Patented Mar 25, 1856.*

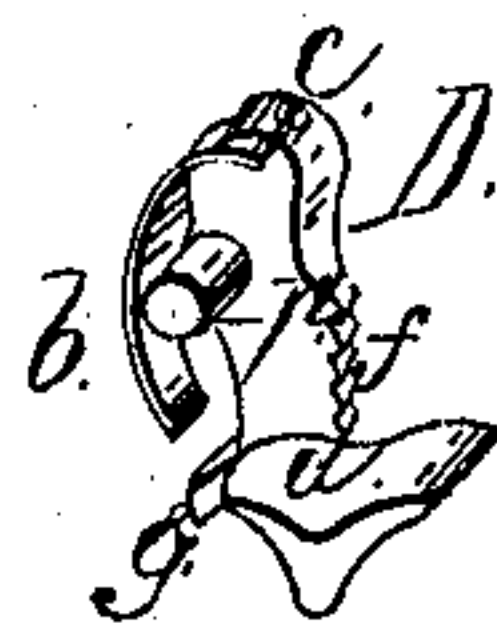
*Fig. 1*



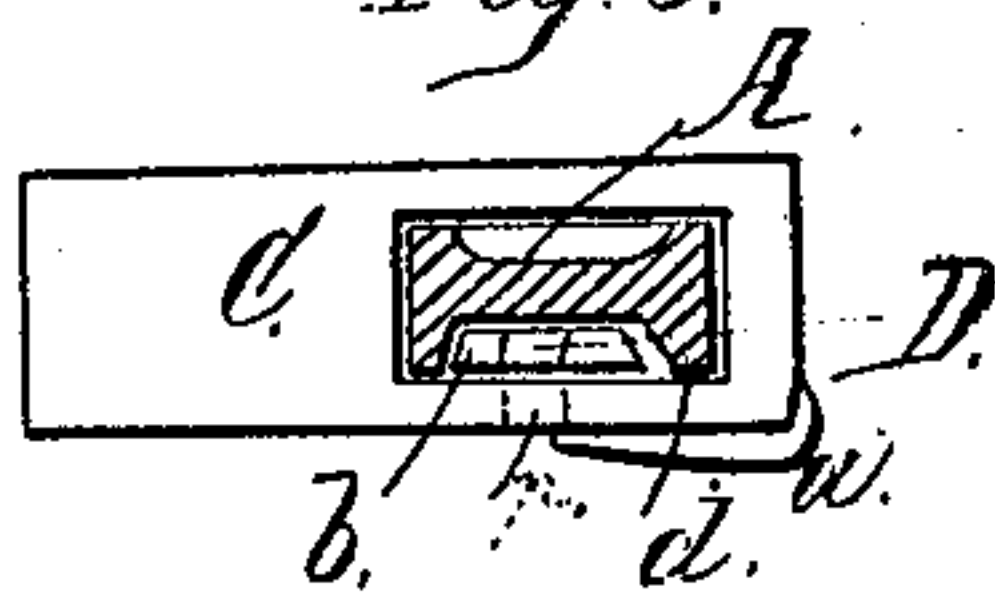
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



# UNITED STATES PATENT OFFICE.

WILLIAM WARWICK, OF PITTSBURGH, PENNSYLVANIA.

## WRENCH.

Specification of Letters Patent No. 14,528, dated March 25, 1856.

*To all whom it may concern:*

Be it known that I, WILLIAM WARWICK, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented  
5 a new and useful Improvement in Screw-Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the construction of the same, reference being had to the annexed drawings,  
10 forming part of this specification, in which—

Figure 1 is a side view; Fig. 2 a front view; Fig. 3 a transverse section through the lines I—II of Figs. 1 and 2; and Fig. 4  
15 a perspective view of the spring pawl D.

In all the figures the same letters refer to like parts.

A is the shank; B the stationary jaw of the shape of a hammer, cast in one piece with the shank.

20 C is the sliding jaw D a spring pawl, with the thumb piece *a*; *b* the spring of the pawl; it is fastened to the same by being inserted into a cut at the upper end of the pawl, and secured there by a pin or rivet *c*.

25 E is the handle made of wood.

The shank A is recessed, and the side *d*, *d*, of the recess is toothed, forming a rack; the other side *e* *e* is smooth; the pawl (D) is placed in the recess, inside of the sliding jaw  
30 B; its teeth *f*, *f*, catch in the teeth *d*, *d*, of the shank, and its spring, *b* bears against the side *e* *e* of the recess. When the pawl is pressed back (by operating with the finger on the thumb piece *a*, as indicated in Fig.  
35 1,) a projection *g* on the pawl, strikes the side *e*, *e*, preventing hereby the spring *b*

from getting overstrained; the sliding jaw C may be set to any distance from the stationary jaw B, corresponding with the size of a screwhead or nut on which the wrench  
40 is to be applied. The sliding jaw can be set however only in so many positions as correspond with the number of the teeth *d*; the closer the latter are spaced the smaller changes can be made in the position of the  
45 jaws; as this is the case in all screw-wrenches with rack arrangement *p* is the pivot of the pawl; it turns in the pivot hole in the sliding jaw C, and is kept by it in its place.

The advantages in the described wrench  
50 are, that it is easy got up, and not liable to get out of order, as the pawl is well protected by being placed inside of the sliding jaw in the recess in the shank A; and that the sliding jaw can be set into any position  
55 in a fast and easy manner. In the described wrench I do not claim the rack, nor do I claim the applying of a spring pawl, as these devices have been used before and are well  
60 known,—but

What I claim herein as new and desire to secure by Letters Patent is:

Providing the shank A with a recess, whose one side *d* *d* is toothed, and the other  
65 *e* *e* is smooth, in combination with a pawl D placed into said recess, on the inside of the sliding jaw C, in the manner substantially as described.

WILLIAM WARWICK.

Witnesses:

HENRY MOESLEY,  
T. B. ATTERBURY.