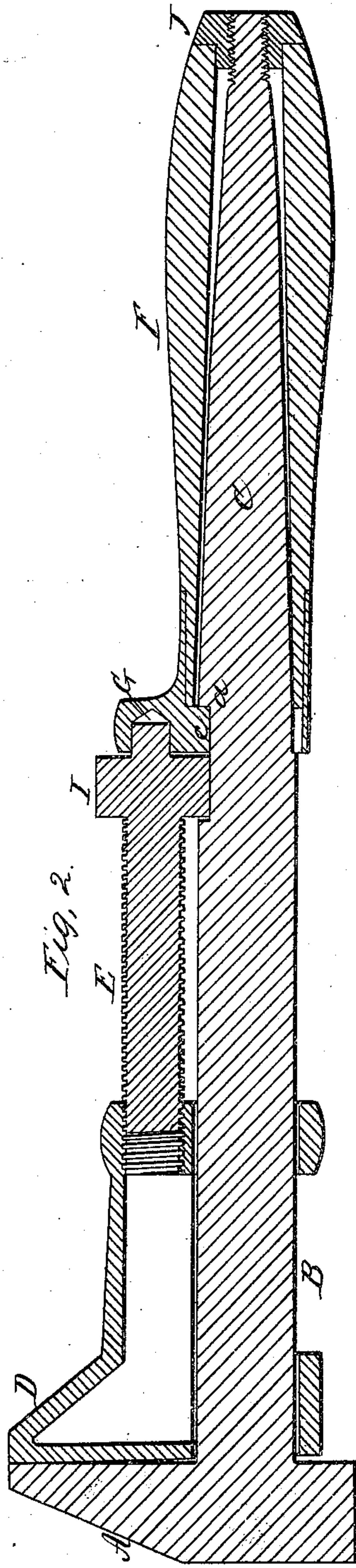
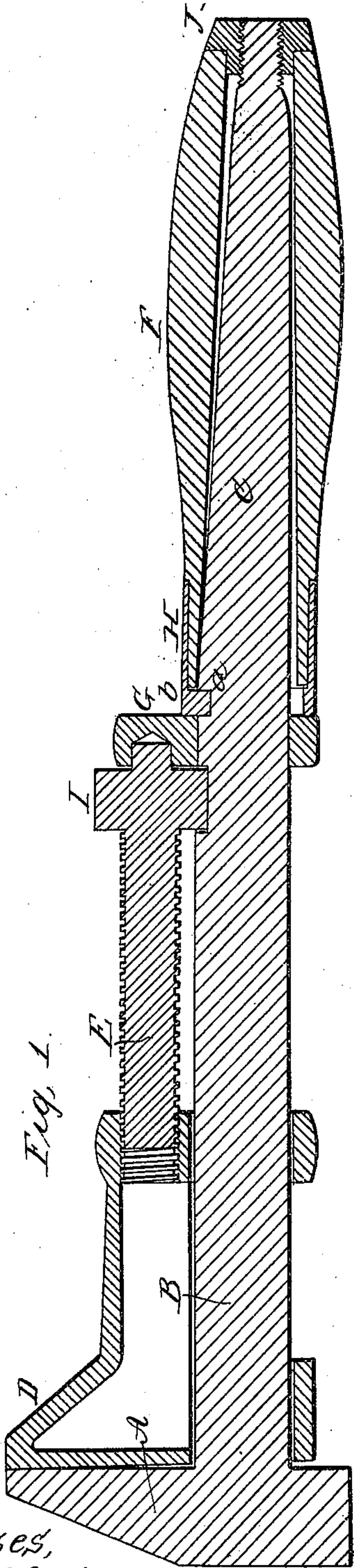


A. G. Coes,
Wrench.

No. 52,968.

Patented Mar. 6. 1866.



Witnesses,
Thos H. Dodge
H. Miller

Inventor,
A. G. Coes

UNITED STATES PATENT OFFICE.

A. G. COES, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 52,968, dated March 6, 1866.

To all whom it may concern:

Be it known that I, A. G. COES, of the city and county of Worcester, and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; and I 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 section of a wrench with my improvements applied thereto; and Fig. 2 represents a similar view with a modification of my invention.

In the drawings, A represents the stationary jaw, B the bar, C the shank, D the movable jaw, E the screw by which the movable jaw is operated, and F the handle, of a Coes wrench with my improvement applied thereto.

As heretofore constructed there has been some difficulty in holding the ferrule G, in which the rear of screw E is stepped, in place, owing to the great back pressure. This pressure is sometimes so great as to force the ferrule back so as to crush or jam up the front of the handle. To remedy this difficulty a notch, *a*, is cut in the upper edge of the shank, into which the projection *b* of the rear part of the ferrule H drops when slipped on, as indicated in Fig. 1 of the accompanying drawings. The ferrule in this instance, it will be observed, is made in two parts, the part G fitting the shank supporting the rear end of the screw E and receiving the back strain or pressure of the rosette I, while the part H abuts against the rear of G and receives the front end of the handle F.

By this mode of construction it will be seen that the back pressure of the rosette against the ferrule is prevented from coming against the handle, since it is all borne by the shank C, in consequence of the projection *b* dropping into the notch *a* in shank C. The handle is therefore not liable to be crushed between the rear screw-nut, J, and the ferrule, nor is the ferrule liable to be forced back out of place.

In Fig. 2 a modification of my invention is shown. In this latter case the ferrule G is all in one piece, and the entire projection *c* drops down into notch *d* in the shank, and thus is held from being pushed back against the handle F. After the handle F has been driven in and nut J screwed up the ferrules in both cases are retained with their projections securely in the notches, as shown in the drawings.

Although Fig. 2 represents a modified form of this invention, yet as the construction of the ferrule employed is essentially different from that employed in Fig. 1, and as it is contemplated to apply for separate Letters Patent therefor, I wish to be understood as laying no claim to it in this patent.

What I do claim is—

Making the ferrule in two parts, as shown at G and H, in combination with holding one of them up against the back pressure of the rosette I and screw E by means of the projection *b* and notch *a*, substantially as set forth.

A. G. COES.

Witnesses:

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