(No Model.)

M. CAMPBELL.

TAP WRENCH.

No. 260,743. Patented July 11, 1882.

Fig. 1.

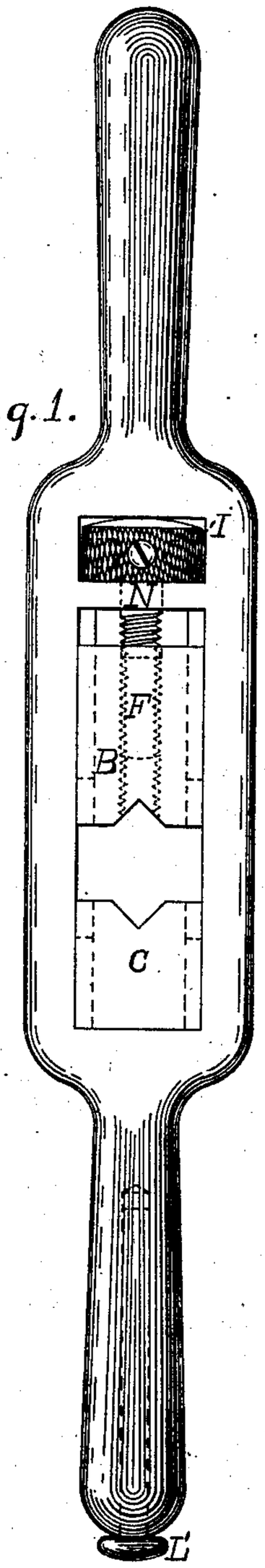


Fig. 2.

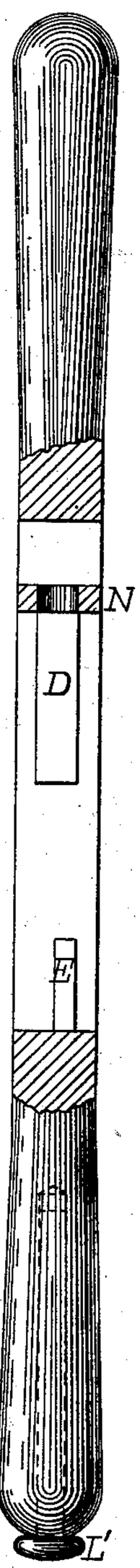


Fig. 3.

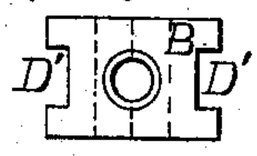


Fig. 4.

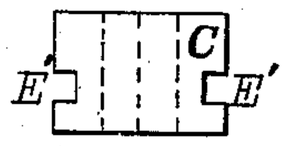
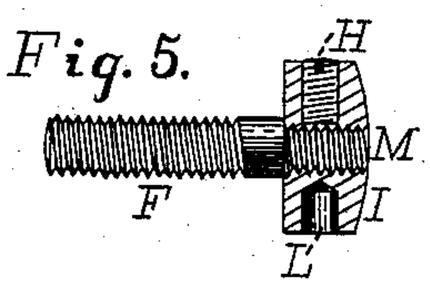


Fig. 5.



Witnesses.
H. H. Swayze
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UNITED STATES PATENT OFFICE.

MALCOLM CAMPBELL, OF HOLYOKE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO EDWARD S. PACKARD, OF SAME PLACE.

TAP-WRENCH.

SPECIFICATION forming part of Letters Patent No. 260,743, dated July 11, 1882.

Application filed April 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, MALCOLM CAMPBELL, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Tap-Wrenches, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

Figure 1 of the drawings is a plan view of my invention, in which B is the sliding jaw, C is the stationary jaw, and F is the screw, of which I is the milled capstan-head, N being a rigid bearing.

Fig. 2 is a sectional side view of the working part of the wrench-frame, in which D is the large spline, corresponding to the grooves in the sliding jaw B, and E is the smaller spline, corresponding to the grooves in the stationary jaw C.

Fig. 3 is an end view of the sliding jaw, showing the grooves D′ D′, corresponding to the splines D.

Fig. 4 is an end view of the stationary jaw C, showing the grooves E′ E′, corresponding to the splines E.

Fig. 5 shows the screw-shaft F, with threaded shank M, a sectional view of the milled capstan-head I, fastened to the threaded shank by means of the set-screw H, L being a perforation for the admission of the capstan-lever pin.

By reference to Fig. 2 it is seen that the large spline D and smaller spline E are placed some distance apart, while each is sufficiently long to hold its corresponding jaw. They are so placed and constructed in order that the wrench-jaws may be removed and changed when desired. The sliding jaw B, having the larger grooves, may be slid upon the smaller splines E into the place for the stationary jaw C, and when in that position it may be slid forward upon its own corresponding splines, D, and drawn into its proper place by the screw F. The sliding jaw having been thus placed in position, the stationary jaw C, which is made a little shorter than the distance between the splines D and E, is easily placed in the wrench-frame and slid into position upon its corresponding splines as seen in Fig. 1. Both of the jaws may as readily be removed by sliding forward and taking out the stationary jaw, and then sliding the movable jaw upon the smaller splines of the stationary jaw, when it can be withdrawn from the wrench-frame. To use the fixed bearing N it is necessary that the shaft and head of the screw F should be separable in order to place the screw in position, and for that purpose the screw is made with false head, as shown in Fig. 5. When the screw is to be placed in position the false head is held in its place in the wrench-frame, and the threaded shank M of the screw-shaft is run in through the bearing and screwed into the false head, and fastened to it by the set-screw H, Fig. 5.

I claim as my invention—

In a tap-wrench, the combination of the adjusting-screw F, held and operated inside of the wrench-frame, and having a false head for the purpose of placing it in a fixed bearing, the fixed bearing N, the large splines D and small splines E to hold the wrench-jaws, placed apart for the purpose of facilitating the removal of the wrench-jaws, the sliding jaw B, and the stationary jaw C, having their sides grooved to correspond respectively to the splines D and E, all combined and operated substantially as and for the purpose set forth.

MALCOLM CAMPBELL.

Witnesses:

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