

(No Model.)

C. J. PIHL.
TAP WRENCH.

No. 594,212.

Patented Nov. 23, 1897.

Fig. 1.

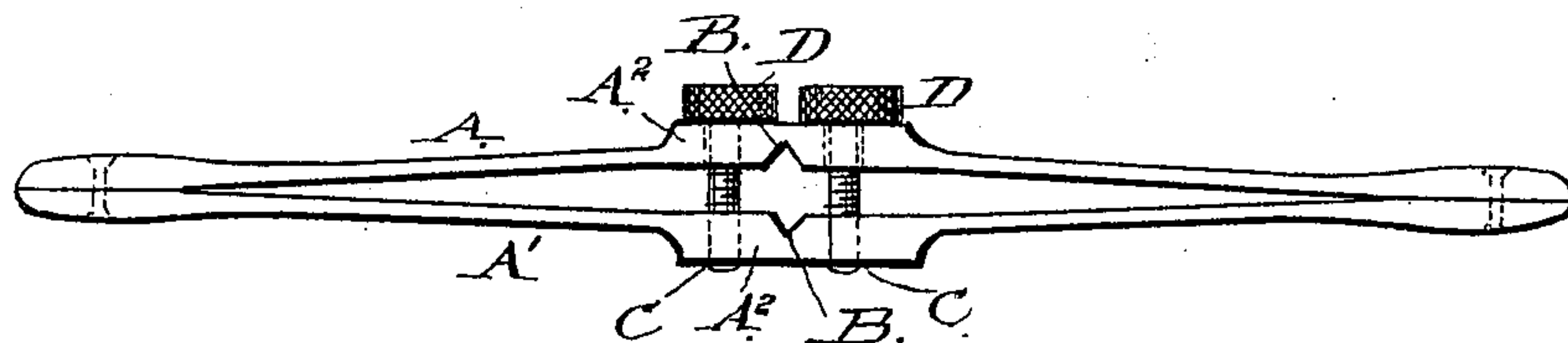
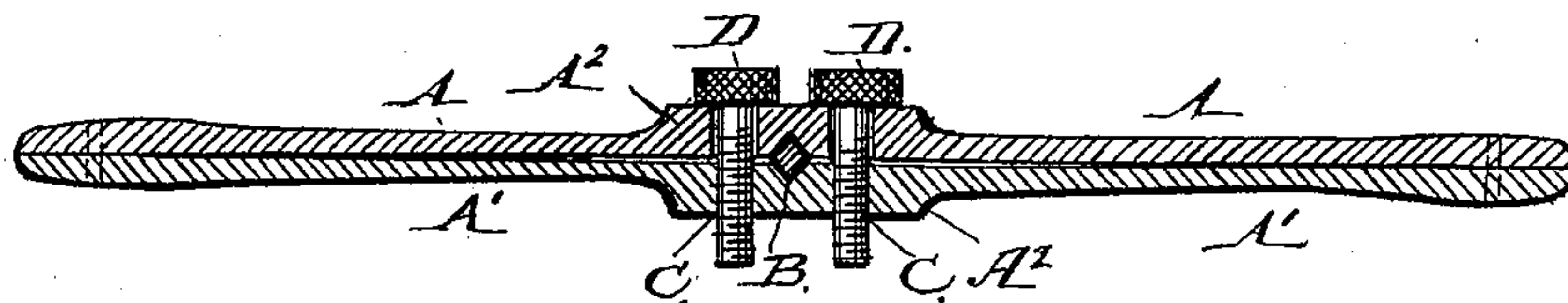


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

CARL J. PIHL, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
ALFRED A. FISHER, OF SAME PLACE.

TAP-WRENCH.

SPECIFICATION forming part of Letters Patent No. 594,212, dated November 23, 1897.

Application filed May 14, 1897. Serial No. 636,449. (No model.)

To all whom it may concern:

Be it known that I, CARL J. PIHL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Tap-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of implements known as "tap-wrenches," and is designed for holding taps, reamers, augers, and tools of a kindred nature; and it consists in the improved tap-wrench which I shall hereinafter describe and claim.

The object of the said invention is to provide a tap-wrench of the character described which will removably and firmly hold a tap, reamer, or like tool or device in place for use without any liability of accidental displacement and which may be adjusted to accommodate tools or shanks having operating faces or heads of different diameters.

In the accompanying drawings, in which like letters of reference indicate corresponding parts, Figure 1 is a side elevation of a tap-wrench embodying my invention. Fig. 2 is a longitudinal sectional view of the same.

In carrying out my invention I forge, cast, or otherwise form two pieces of steel or other metal of the shape shown to form the companion members A A', each of which has a thickened central portion A², constituting a jaw proper. The outer extremities of these members A A' are also preferably made thicker than the portions between them and the thickened center, and the inner adjacent sides of the members are slightly arched or curved in reverse directions, so that when the said members are united by the act of welding, riveting, or otherwise permanently uniting their end portions the portions of the members between the opposite ends are normally separated, so that the matching notches or V-grooves B, which are made in the inner faces of the members A A', may be readily fitted to the tap, reamer, or other tool. By this construction the wrench is longitudinally and centrally slitted for nearly its entire length, and the slit is widest at the central part of the wrench when open and thence gradually narrows toward each end and ter-

minates short of said ends, the said ends being closed and permanently united, as before stated.

Through the central or jaw portions A² of the wrench are made threaded openings C, preferably on each side of and equidistant from the tool-holding notch or groove B; but I do not limit myself to this precise arrangement, as more than one set of notches of different sizes may be made in the jaws, if desired, without departing from the spirit of my invention. These openings C are designed to engage the clamping or thumb screws D, which engage the openings in both jaws and have milled or knurled heads, by means of which they may be grasped and turned by the fingers to tighten said jaws.

When the wrench has been fitted to the tap or tool and the screws are turned, the jaws are drawn toward each other, the slit in the wrench gradually closing and the curved inner faces of the members A A' being drawn straight, or approximately so, and parallel with each other, while the tap or wrench is tightly clamped in the tool-holding notches or grooves in the jaws.

Both members of the wrench are elastic or yielding and both move in unison on tightening or loosening the screws, and in wrenches having but one pair of tool-holding grooves or notches the clamping-screws may be brought so close to each other that both may be operated at the same time, thereby equalizing the pressure and clamping action on both sides of the inserted tool.

While I have described the wrench as made of two members permanently united at opposite ends, I do not wish to be understood as thus limiting my invention, as the wrench may be made of a single forged or cast integral piece, with the slit produced by sawing or otherwise to produce the two elastic members normally separated from each other by a slit which extends longitudinally for nearly the entire length of the wrench.

A wrench of the character described is simple and effective, and the tool can be fixedly secured between the jaws by a slight adjustment of the clamping-screws, thus permitting the tool to be quickly inserted and secured against movement or removed therefrom

when desired. It also possesses extreme lightness and is delicate in its adjustment and is of a sensitive character to avoid the breaking of taps and tools.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an article of manufacture, a tap-wrench consisting of opposing yielding and
10 curved metallic members united at their ends to provide an intermediate space widest at the center of the wrench and gradually tapering toward each end, and provided with a socket for receiving a tool, and a pair of screws equi-
15 distant from the socket and in such relation that both screws are operated by the same movement of the fingers.

2. A tap-wrench consisting of two opposing spring members having oppositely-curved

inner faces and permanently-united closed 20 ends, and normally separated to form a central longitudinal slit widest at the central portion of the wrench and gradually tapering toward and terminating short of each end, said members having a tool-holding recess, and a 25 clamping-screw on each side of said recess and entering the wrench from the same side for simultaneously drawing the members toward each other to secure the tool, said members simultaneously expanding when the screws 30 are loosened.

In testimony whereof I affix my signature in presence of two witnesses.

CARL J. PIHL.

Witnesses:

A. A. FISHER,
H. O. JONES.