

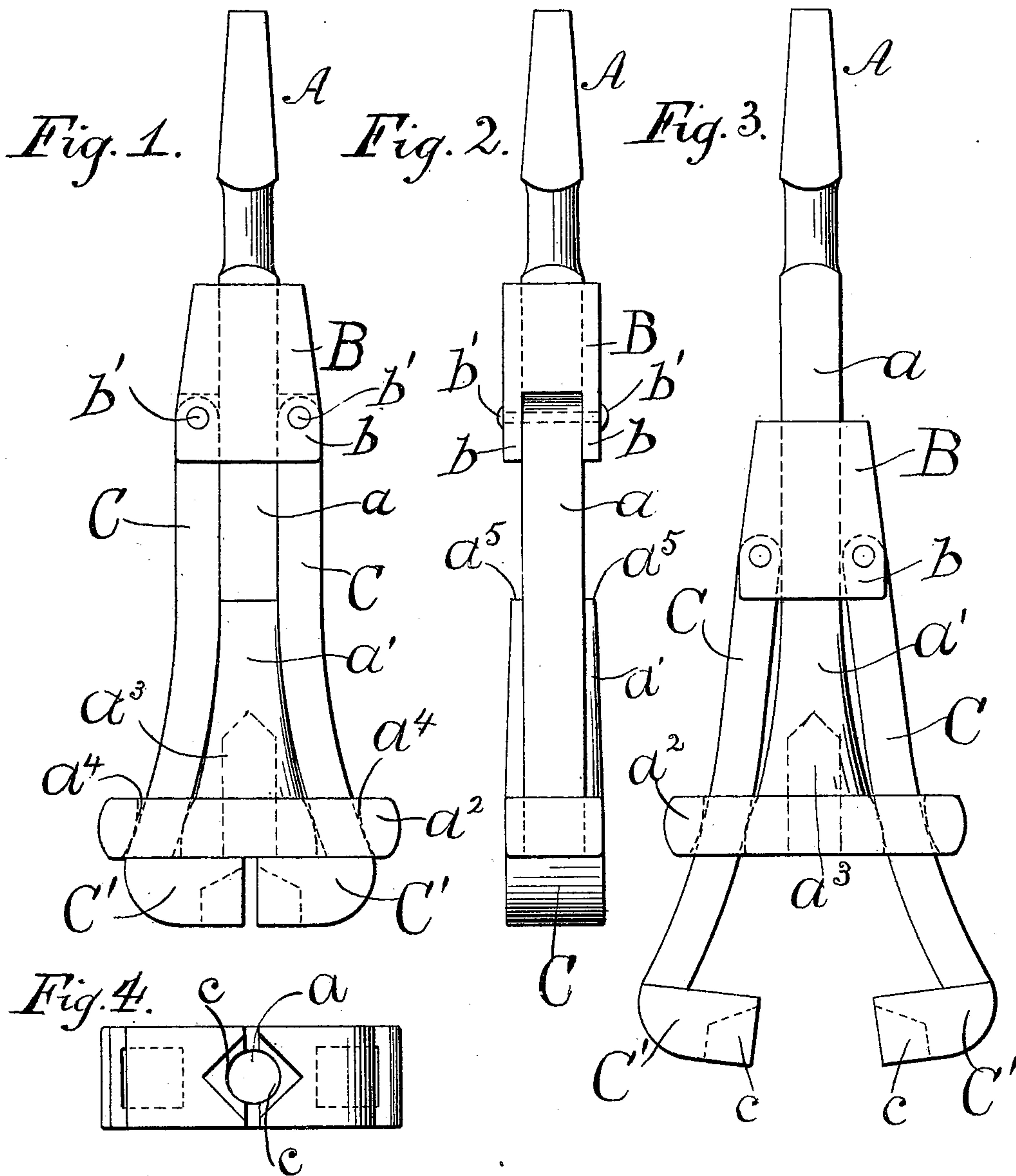
No. 641,641.

Patented Jan. 16, 1900.

S. S. GROVE.
WRENCH.

(Application filed Aug. 10, 1898.)

(No Model.)



WITNESS
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WRENCH.

SPECIFICATION forming part of Letters Patent No. 641,641, dated January 16, 1900.

Application filed August 10, 1898. Serial No. 688,298. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL S. GROVE, a citizen of the United States, and a resident of Summit, county of Cambria, and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to improvements in wrenches; and the object thereof is to provide a device of this character which is adapted for use in connection with an ordinary bit stock or brace. The device is so constructed that pressure exerted against the brace when the wrench is attached thereto causes the jaws of the wrench to securely grip the bolt or nut being operated upon, and it is simple in construction, inexpensive, compact, and durable, and it is designed as a valuable addition to an artisan's kit.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved device, showing the jaws thereof in closed position. Fig. 2 is an edge elevation. Fig. 3 is a side elevation showing the jaws in open position, and Fig. 4 is an inverted plan view.

In the practice of my invention I provide, primarily, an ordinary square bit-shank A, having an elongated squared extension a projected therefrom and formed integrally therewith. This said extension is connected with a conical projection a' , which has a head a^2 formed upon the face thereof. It is further supplied with a recess a^3 , adapted to receive the end of a bolt during the operation of tightening a nut. Surrounding the squared extension a of the bit-shank A is a slide B, having downwardly-extended hangers b formed upon each side thereof. These said hangers engage swinging levers C, which said levers are curved outwardly and pass downwardly through apertures a^4 of the head a^2 , their lower ends forming part of jaws C',

which have squared recesses c therein for engagement with the head of a nut or bolt, the levers C being pivotally connected to the hangers b by means of rivets b' .

It will be noted that the upper portion of the cone a' extends laterally from each side of the shank extension a , whereby shoulders a^5 are formed to limit the downward movement of the slide B, thus preventing the straight portions of the levers C from being jammed within the apertures a^4 by the act of opening the jaws.

In the operation and use of the device the adjacent jaws C' are brought in contact with the opposing corners of a nut or bolt head. Then pressure being brought against the bit-shank by means of a brace adapted to be attached thereto will cause the jaws to tightly clamp the bolt or nut head, whereupon the same may be readily turned to any desired degree, and as soon as pressure is released from the end of the same the jaws may be readily removed from contact with the head of the bolt or nut being operated upon.

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

1. An improved wrench of the class described, comprising the bit-shank A, having the integral elongated squared extension a , carrying the conical or spreading solid projection a' , provided across its bottom or face with the head a^2 , having the apertures a^4 , the recess a^3 formed in the bottom of the cross-head a^2 and adapted to receive and accommodate the bolt in the operation of tightening a nut, the upper portion of the projection a' being provided with the side shoulders a^5 , the slide B surrounding the squared extension a of the bit-shank, and having the downwardly-extended hangers b at each side thereof, and the outwardly-curved levers C pivoted to the hangers b , and passing downwardly through the apertures a^4 and having the jaws C' at their lower ends, substantially as set forth.

2. In an improved wrench of the class described, comprising a bit-shank having the extension carrying the projection provided with the apertured cross-head formed upon

its face, the slide operating upon said extension, and the levers pivoted to the slide and passing through the head, the recess a^3 formed in the bottom of said cross-head to accommodate the bolt in the operation of tightening a nut, substantially as set forth.

In testimony that I claim the foregoing as

my invention I have signed my name, in presence of two witnesses, this 6th day of August, 1898.

SAMUEL S. GROVE.

Witnesses:

HERMAN H. MYERS,

WILLIAM H. SECHLER.