

(No Model.)

F. S. COOK.
WRENCH.

No. 452,518.

Patented May 19, 1891.

Fig. 1.

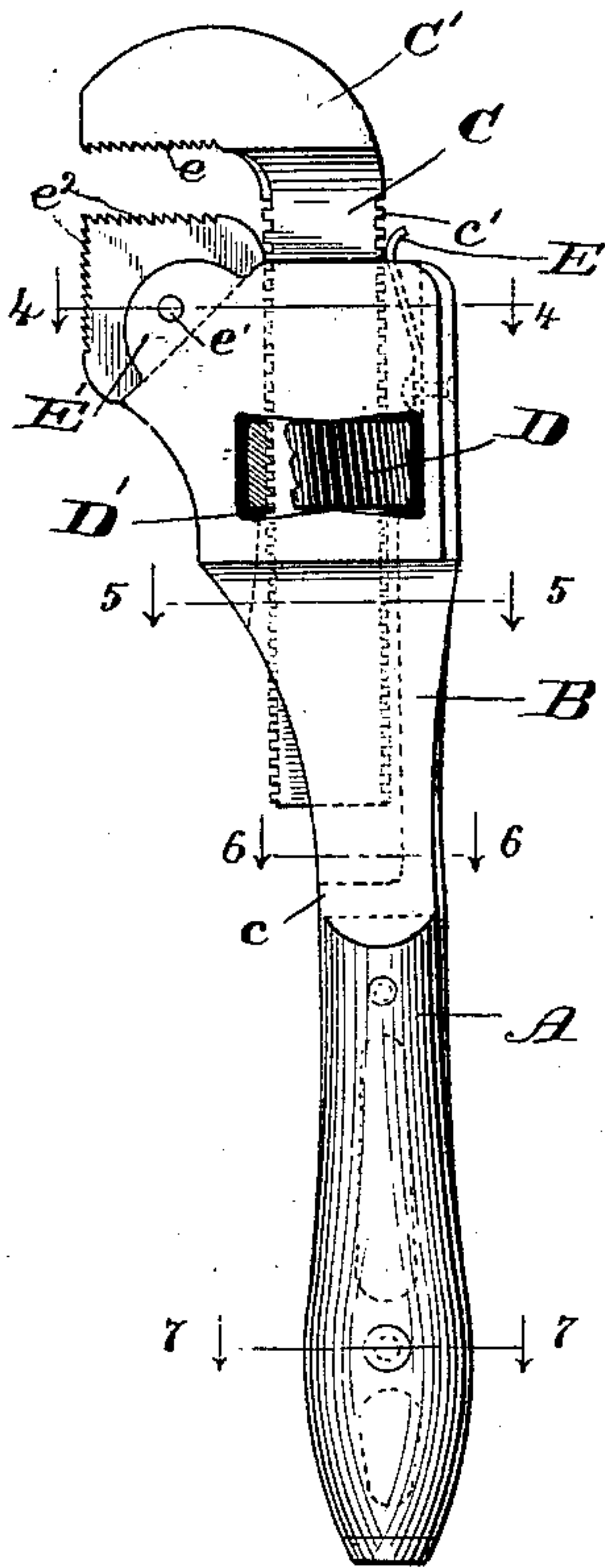


Fig. 2.

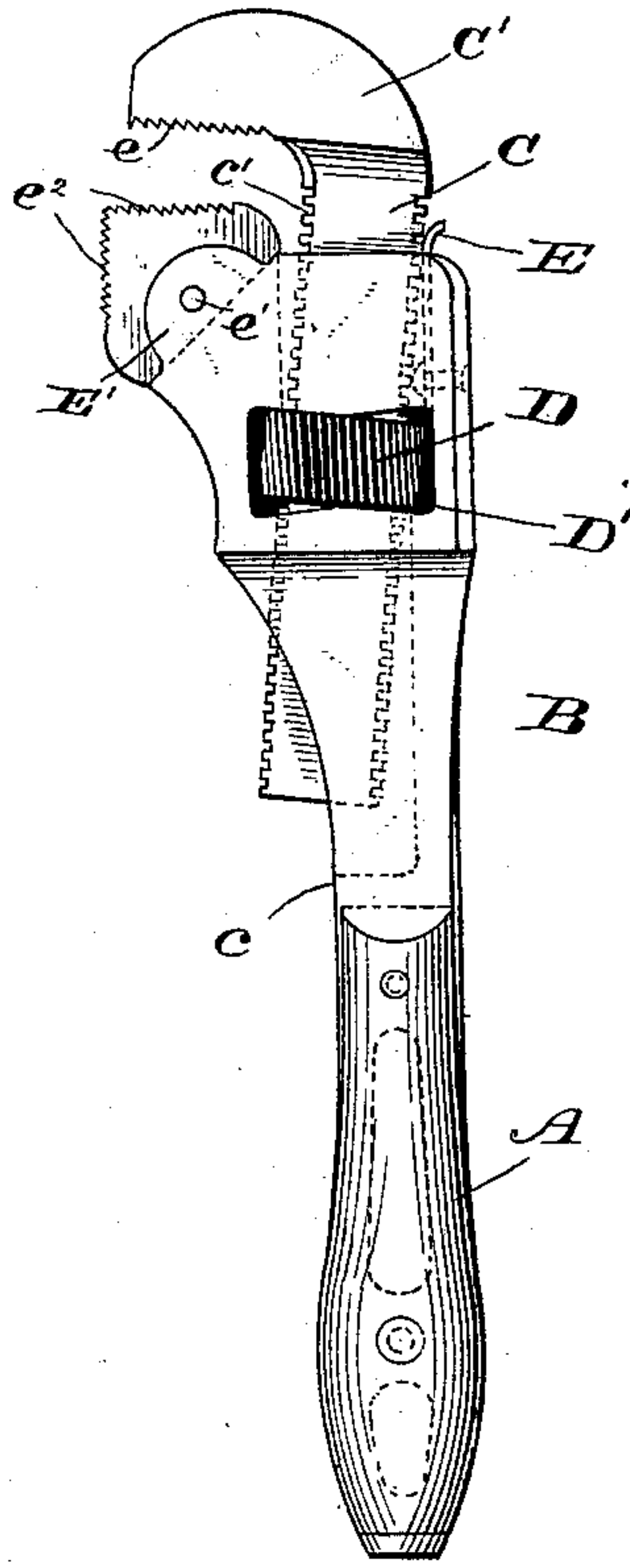


Fig. 3.

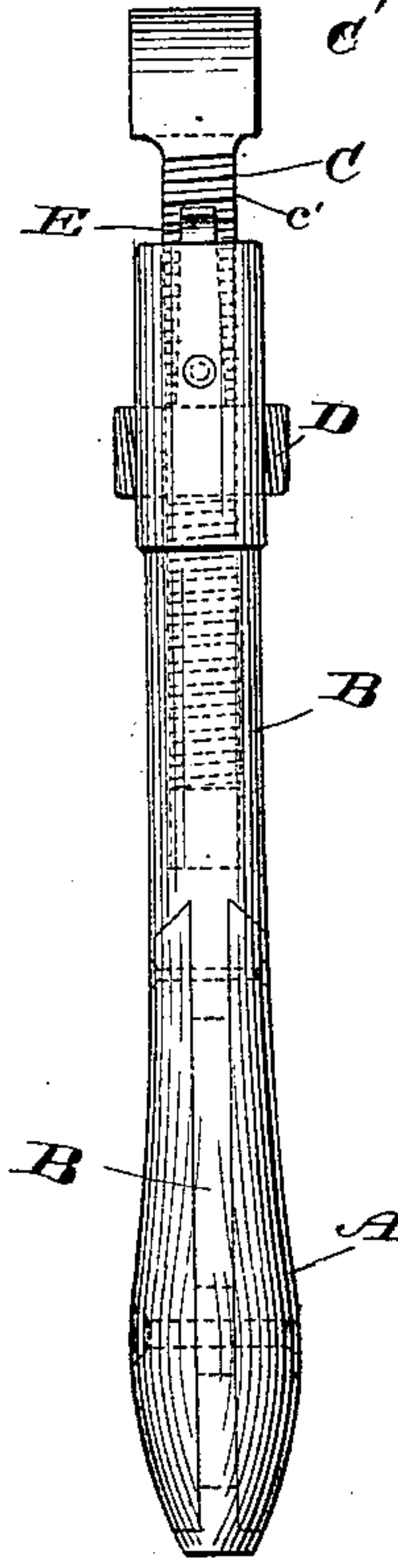


Fig. 4.

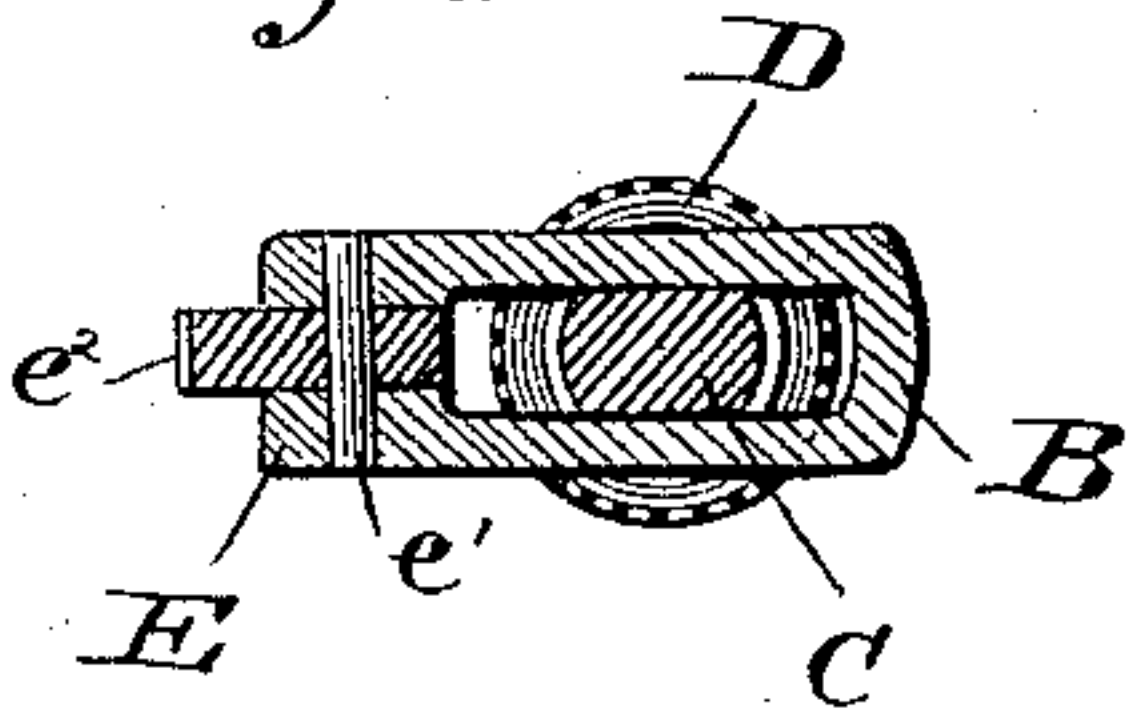


Fig. 5.

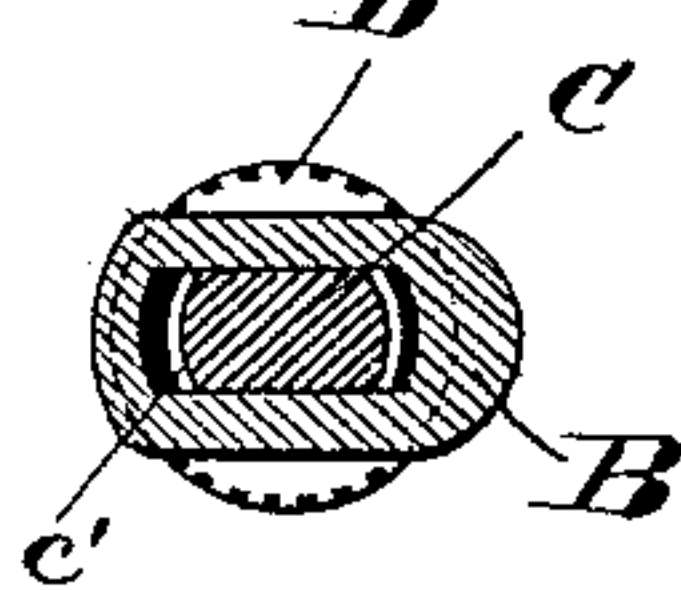
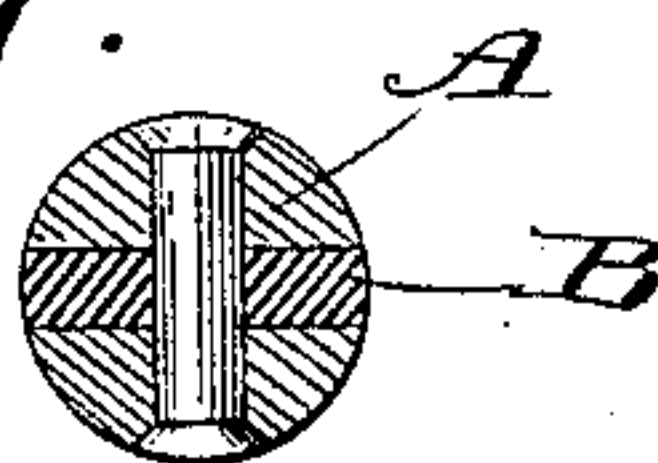


Fig. 6.



Fig. 7.



Witnesses.
Arthur Johnson.
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Inventor
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By his Attorney.

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UNITED STATES PATENT OFFICE.

FRANK S. COOK, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE CAPITOL MANUFACTURING COMPANY, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 452,518, dated May 19, 1891.

Application filed January 19, 1891. Serial No. 378,372. (No model.)

To all whom it may concern:

Be it known that I, FRANK S. COOK, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates chiefly to pipe-wrenches or wrenches used in analogous situations. In such wrenches there is usually a vibratory motion of one or the other jaw, causing one jaw to wear out much more rapidly than the other. In ordinary wrenches, therefore, where both jaws will wear unequally as a rule, there is no provision for compensating this wear, and the wrench must be thrown away for scrap-iron when too badly worn to be used in one jaw or the other, as neither jaw could feasibly be sharpened in its serrations so as to increase its hold. The life of the wrench would be, therefore, much shortened.

This invention, in order to obviate such waste and disadvantage, consists in employing a jaw reversible as to both faces attached to the handle or shank in such manner that when one face is worn it can be reversed, turned around, and a fresh face presented in opposition to the other jaw, giving a greater permanency to the wrench, and so, also, that when it is entirely worn on both faces or all faces a new jaw may be substituted.

For the purpose of explaining such invention and also for the purpose of explaining additional features of the invention other than those above enumerated, I have chosen to select a wrench of that type known as a "pipe-wrench," and therefore in the accompanying drawings—

Figure 1 represents in side elevation and in one position of action, a pipe-wrench with the said improvements applied; Fig. 2, a similar side elevation in a different position of action; Fig. 3, a rear elevation of said wrench; Figs. 4, 5, 6, and 7, cross-sections on the correspondingly-numbered line in the first figure.

A may be a wooden handle or any appropriate handle, and B a shank of metal. Through this shank may be a straight or inclined perforation, or one allowing a vertical

movement of the tang C of the outer jaw C', but preferably it is made in such manner as to allow vertical play of said tang, and provided with a shoulder c, against which said tang may come in its adjustments. The tang C has screw-threads c', as shown, upon which works a fluted nut D, arranged in a dice-box or hour-glass-shaped recess D', whereby the tang of said outer jaw can be moved inward or outward, or both, against the shoulder in the shank of the handle or main shank, but as a rule allowed to play slightly in and out, rocking upon the re-entrant shoulders of the recess. A spring E will advisably press upon the top of the outer end of the tang or otherwise upon the bottom of the inner end, so as to hold the jaw to the work. The inner jaw, which is fixed to the shank of the handle opposite the outer jaw, has a serrated face e. The inner and opposing jaw, however, which is secured by means of a pin e' and ears E', between which it fits, making a fixed seat, has two or more serrated faces e², so that whenever one face becomes worn the pin may be drawn out and another face presented. Herein are shown only two faces, but it is obvious that such jaw with suitable provision may be made with three faces or four faces, as desired.

I do not intend to limit myself herein to any particular construction of wrench so far as the removable jaw is concerned, nor to any particular construction of handle for the wrench; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination, substantially as hereinbefore set forth, of the wrench-shank having the hour-glass-shaped recess, the outer jaw having the screw-threaded tang, and the fluted nut playing in the transverse recess.

2. The combination, substantially as hereinbefore set forth, of the wrench-shank having the hour-glass recess and the longitudinal recess and its shoulder, the outer jaw and its screw-threaded shank, the nut acting upon said shank through such recess and the opposing stationary jaw.

3. The combination, substantially as hereinbefore set forth, of the wrench-shank having the hour-glass transverse recess and the

longitudinal recess, the outer jaw with its screw-threaded shank, the spring pressing thereon, and the fluted nut playing in the transverse recess to adjust the outer jaw.

5 4. The combination, substantially as here-
inbefore set forth, with a wrench, of a re-
versible jaw having two or more toothed
wearing-faces.

5. The combination, substantially as here-

inbefore set forth, with a wrench, of a re- 10
versible jaw having two or more ratchet-faces,
a removable pin to permit interchange of said
faces, and an opposing vibratory jaw.

FRANK S. COOK.

Witnesses:

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