(Model.)

W. H. LIGHTCAP.

Wrench.

No. 234,994. Patented Nov. 30, 1880.

Fig. 1.

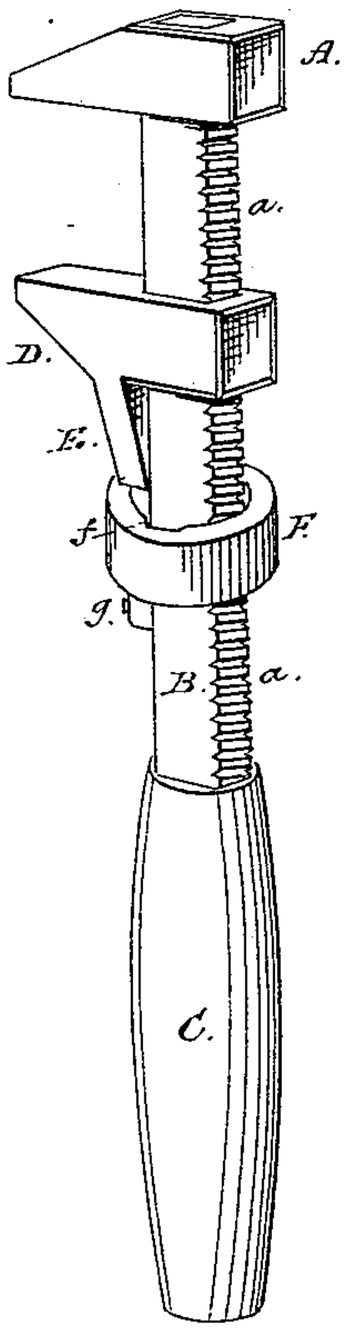


Fig. 2.

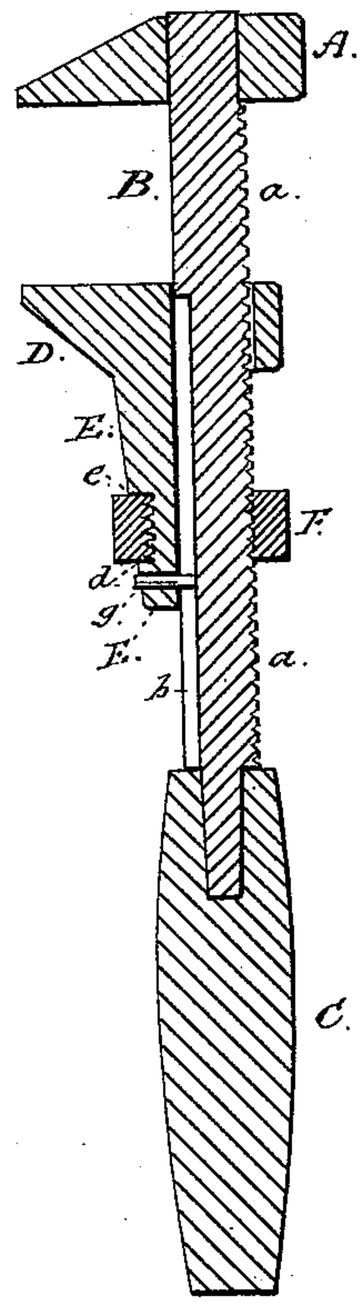
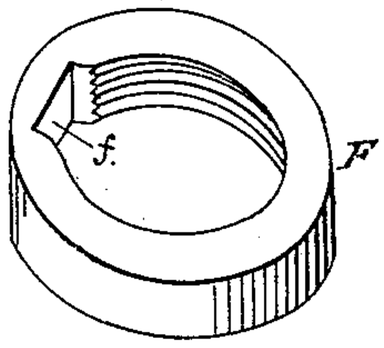


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. LIGHTCAP, OF HAZEL GREEN, WISCONSIN, ASSIGNOR OF ONE-THIRD TO MONROE M. CADY, OF DUBUQUE, IOWA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 234,994, dated November 30, 1880.

Application filed March 22, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM H. LIGHTCAP, of Hazel Green, in the county of Grant and State of Wisconsin, have invented a new and useful Improvement in Wrenches; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention relates to improvements in monkey-wrenches; and the novelty therein consists in the peculiar construction, arrangement, and combination of the various operative parts of my wrench, all as more fully hereinafter described and claimed.

In order that those skilled in the art may know how to make and use my wrench, I proceed to describe the same, having reference to the drawings, in which—

Figure 1 is a view of the same, a little in perspective; Fig. 2, a longitudinal central section of the same. Fig. 3 is a perspective view of the nut separated from the wrench.

Similar letters denote corresponding parts in each figure.

In the drawings, A represents the stationary jaw, and B the shank of the same, made in a well-known form. This shank B has screw-threads *a* upon one side, and upon the opposite side a groove, *b*, extending from the handle end of the shank to a point near the jaw. A handle, C, is attached to the shank B in any convenient or ordinary way.

The movable jaw D is adapted to slide freely up and down over the shank B, and has its shank E provided with a recess, *c*, and upon the outer side of this screw-threads *d*, corresponding in size and pitch with the screw-threads *a* upon the shank B.

F is a nut with an opening adapted to engage closely with the screw-threads *a* and *d* upon the shanks B and E at every point except one, to be hereinafter mentioned, and having screw-threads similar in size and pitch to those upon the shanks B and E.

One portion, *f*, of the interior of this ring is cut away so as to leave a slot or recess of a size sufficient to embrace the threaded side of the shank B. Into this recess *f* the threaded side of the shank B fits quite loosely, so that the nut F and the movable jaw D can be readily moved directly along upon its shank to the point desired. By then turning the nut F in either direction the threads upon its interior will engage with the threads upon the shanks B and E and clamp or lock the movable jaw at any desired point. When the nut F and the movable jaw D have been moved along its shank until jaw D presses the object to be held against the permanently-fixed jaw A, then, by turning nut F in the proper direction, the movable jaw is slightly advanced toward the fixed jaw and firmly clamps the object to be held.

In order to insure the direct central longitudinal movement of the movable jaw D, a pin, *g*, which passes through the extreme end of the shank E, moves in the slot or groove *b* in the shank B′.

The advantages of this wrench consist in its cheapness, in its simplicity of construction, and in its great convenience in use, by reason of the quickness with which the adjustments may be made for the various sorts of work.

Having thus described my invention, what I claim as new therein is—

1. In a wrench, the shank B, carrying the fixed jaw A, and having screw-threads, as described, combined with the movable jaw D, having a screw-threaded recess, *e*, in its shank, and the nut F, screw-threaded and recessed, substantially as described and shown.

2. In combination, jaw A, with its shank B, having screw-threads *a* and recess *b*, movable jaw D, with its shank E, having screw-threads *d* and pin *g*, moving in recess *b*, and nut F, all constructed and arranged to operate substantially as described and shown.

This specification signed and witnessed this 19th day of February, 1880.

WILLIAM H. LIGHTCAP.

Witnesses:

H. R. MARTIN,

MONROE M. CADY.