

(Model.)

J. W. CALEF.
WRENCH.

No. 273,461.

Patented Mar. 6, 1883.

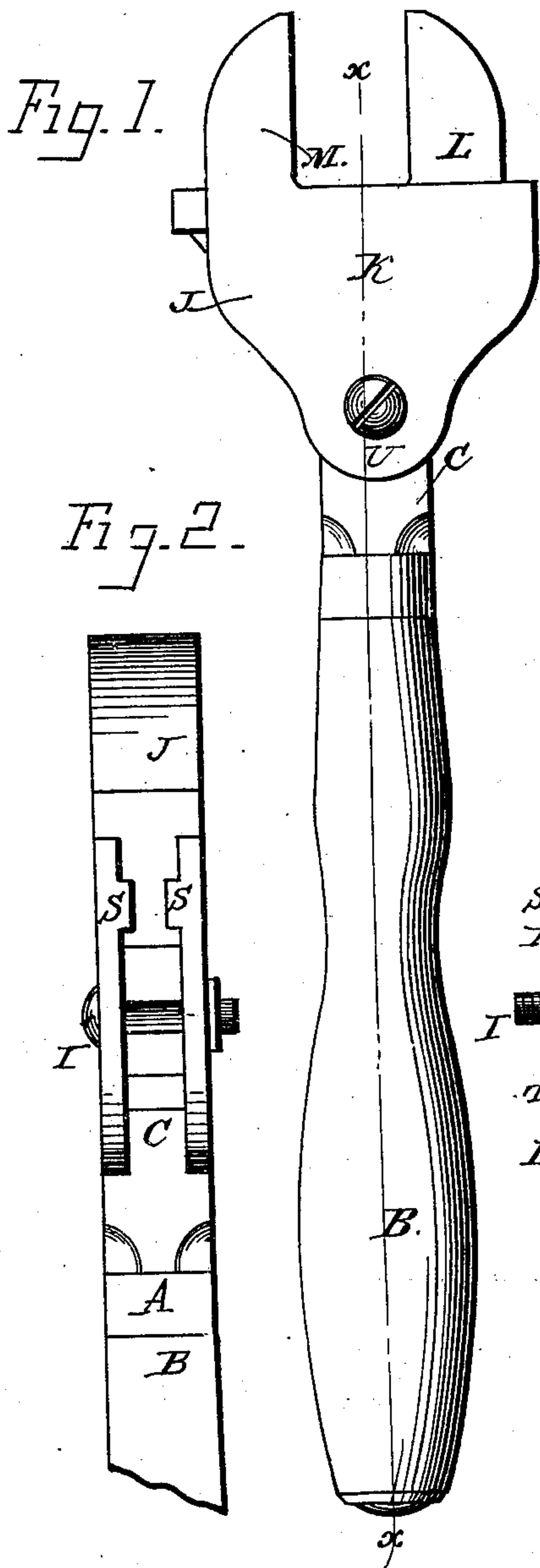


Fig. 2.

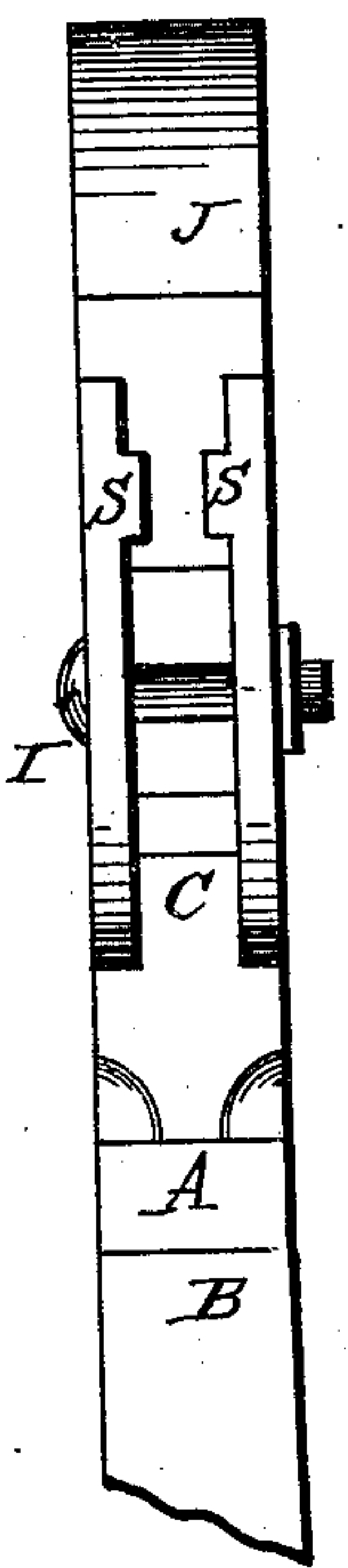


Fig. 3.

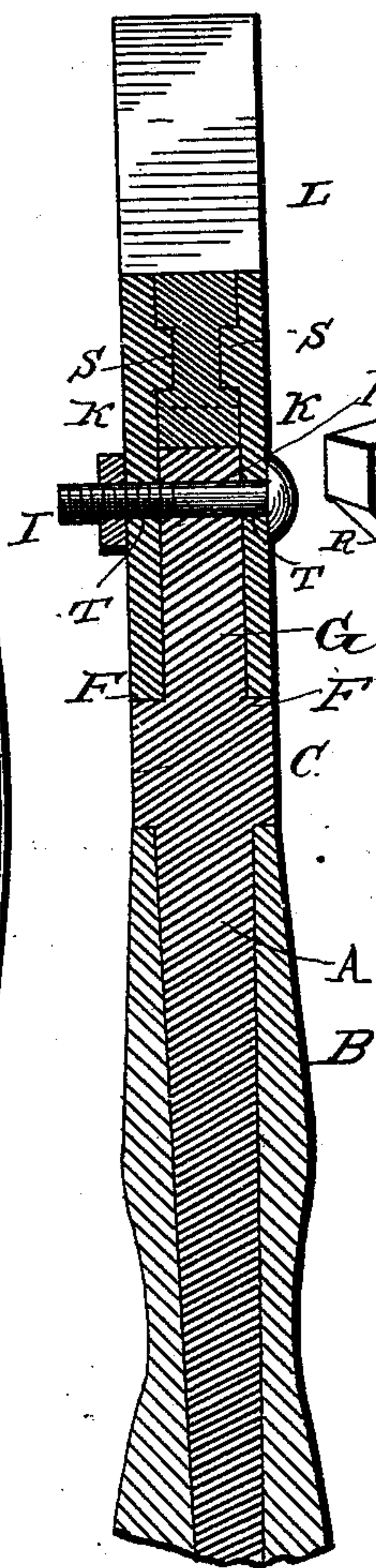


Fig. 4.

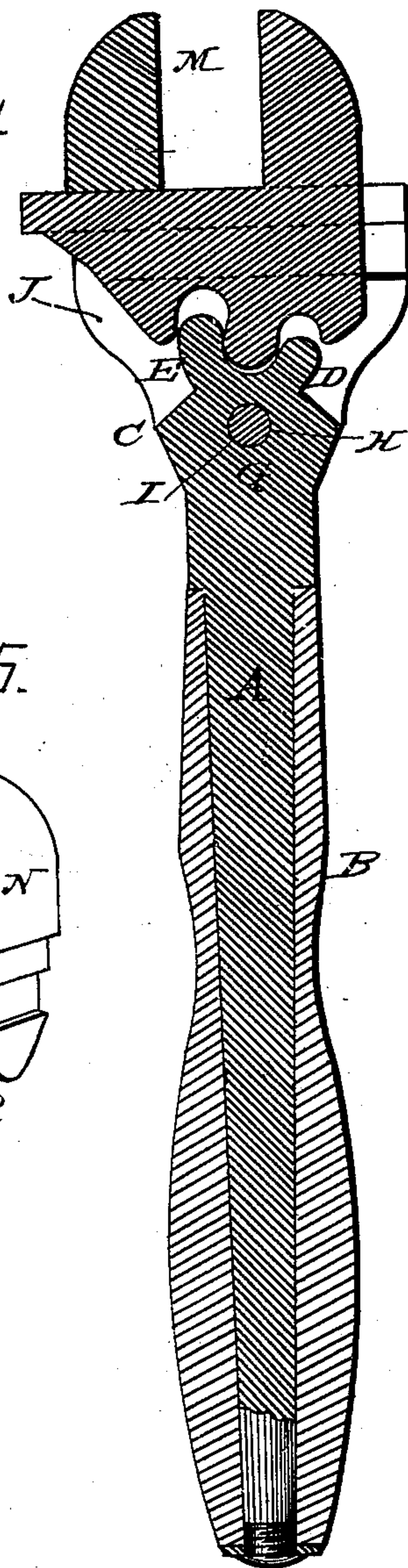
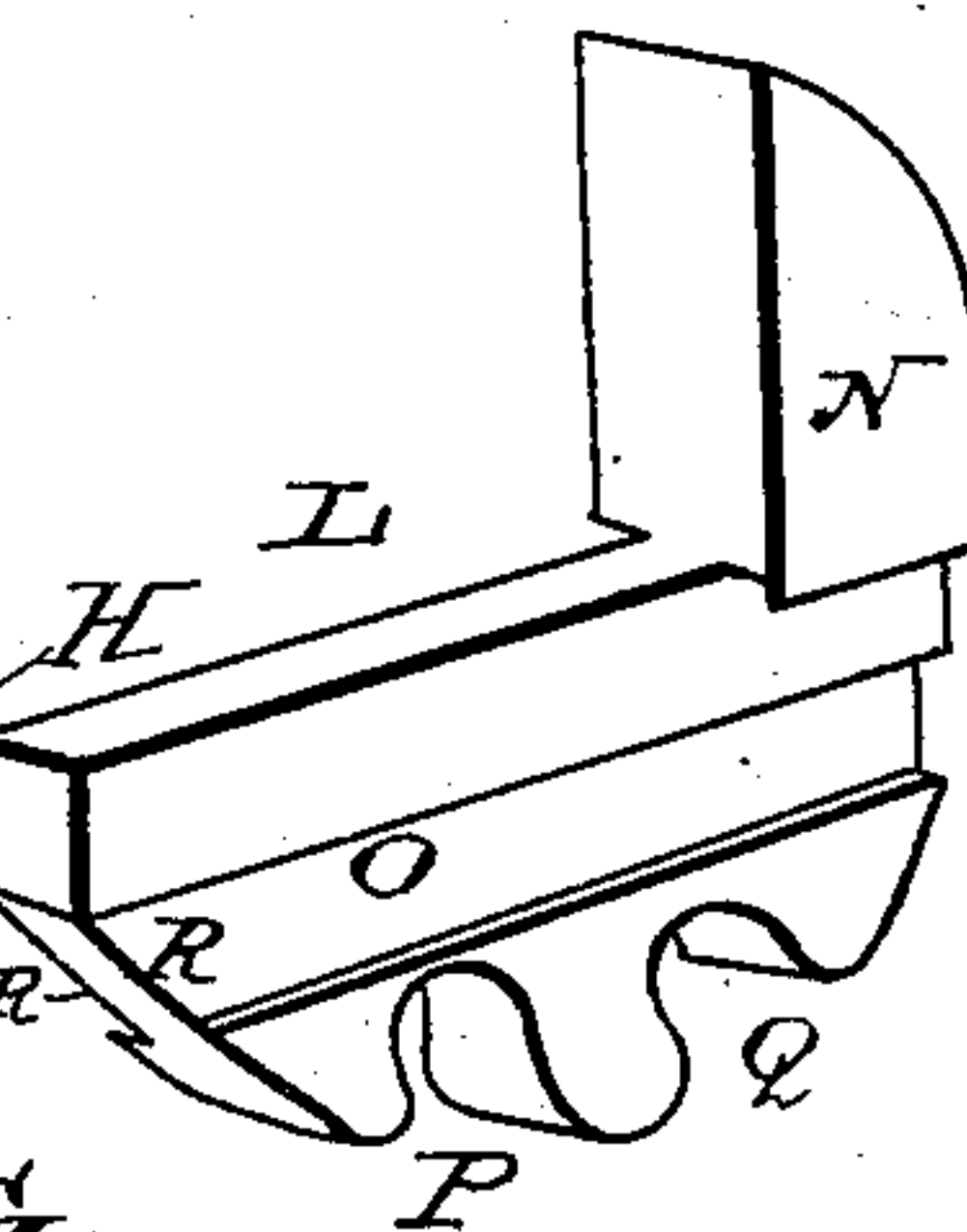


Fig. 5.



WITNESSES:

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JOSEPH W. CALEF, OF NORTH EASTON, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 273,461, dated March 6, 1883.

Application filed February 3, 1883. (Model.)

To all whom it may concern:

Be it known that I, JOSEPH W. CALEF, of North Easton, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved wrench. Fig. 2 is an edge view of the same. Fig. 3 is a longitudinal section on line *x x*, Fig. 1. Fig. 4 is a longitudinal section at right angles to Fig. 3, and Fig. 5 is a detail view of the sliding jaw.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to self-adjusting wrenches; and it consists in the improved construction and combination of parts of the wrench for which Letters Patent No. 226,490 were granted to me on the 13th day of April, 1880, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the stem or shank, which is inserted into a handle, B, and secured therein. The upper part of the shank forms a head, C, which forms two cylindrically-recessed shoulders, F, on each side of the flattened part G of the head, from the upper edge of which project two lugs or ears, D and E. This flattened part G has a perforation, H, through which a pin or bolt, I, passes, which hinges the handle to the rigid jaw J, and the one of the lugs, E, is longer (measured from bolt I) than the lug D.

The jaw J consists of two plates, K, which form a recess for the reception of the flat head G and the sliding jaw L, and a solid jaw-piece, M, which connects their upper edges at one corner.

The sliding jaw L consists of a solid jaw-piece, N, and a flat grooved bolt or plate, O, the lower edge of which has two notches or recesses, P and Q, one preferably deeper than the other, corresponding to the lugs D and E. The sliding bolt or plate O has two parallel grooves, R, one on each side, in which two parallel flanges, S, one on each inner surface of the plates K, fit, keeping the jaw sliding perfectly true. The lower parts of plates K

are perforated at T for the reception of the outer ends of pin I, by which the parts of the wrench are united, and their lower edges, U, are rounded to fit into and turn upon the recessed shoulders F.

It will be seen that the sliding jaw will be operated by turning the handle to one side or the other, when holding the rigid jaw fast, in the same manner as in the formerly-mentioned wrench; but by constructing the two lugs of unequal length (measured from the pivotal pin) and by having the one nearest the rigid jaw-piece the longest, the latter will serve to open the jaws quickly, and to close them on the first part of the throw quickly; but on the last part of the throw the smaller lug comes into operation, closing the jaws slower, with greater nicety, while a larger leverage is obtained at the same time upon the handle by the end of the lug being a shorter distance from the pivotal pin, so that the jaws will close firmer around the nut, enabling the wrench to be used on proportionately-small nuts without danger of its slipping.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination, in a wrench of the described class, of the sliding jaw having upon its lower edge two recesses, with the pivoted handle having upon its flat head two slightly-diverging lugs or ears, of unequal length from the pivotal pin, substantially as and for the purpose shown and set forth.

2. In a wrench of the described class, the combination of the handle A B, having flat perforated head C G, shoulders F, and slightly-diverging lugs D and E, of unequal length from the pivotal pin, the rigid jaw J, having solid jaw-piece M, and lower plates, K, having inside flanges, S, and perforated at their lower parts for the reception of pivotal pin I, and having rounded lower edges, U, and sliding jaw L, having solid jaw-piece N and flat sliding bolt O, grooved at R, and having recesses P and Q at its lower edge, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of witnesses.

JOSEPH WARREN CALEF.

Witnesses:

CHS. F. DARLINGTON,
WM. L. CLARK,
BENJAMIN F. EDSALL.