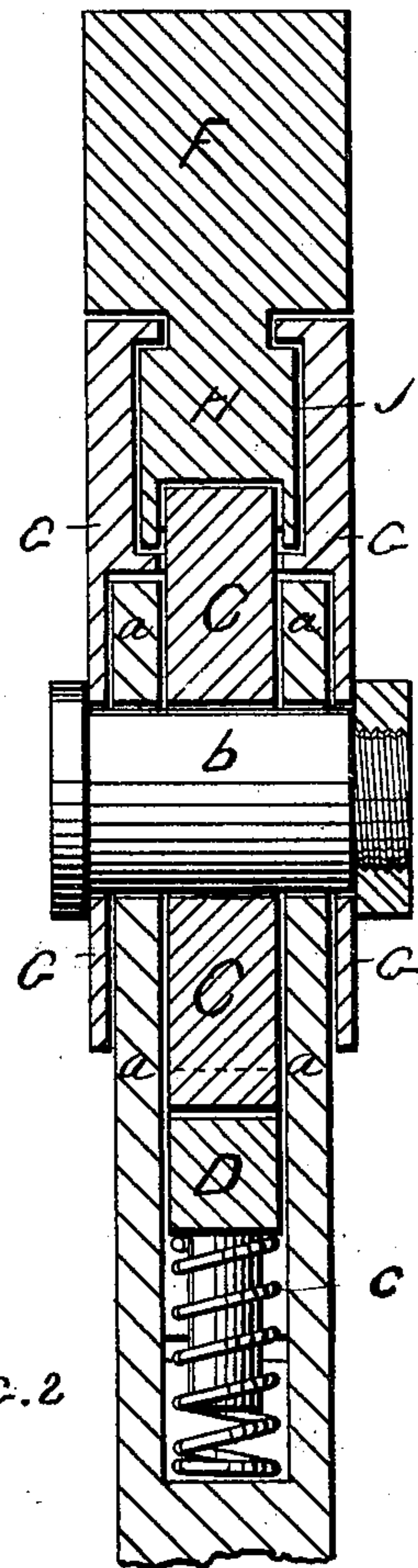
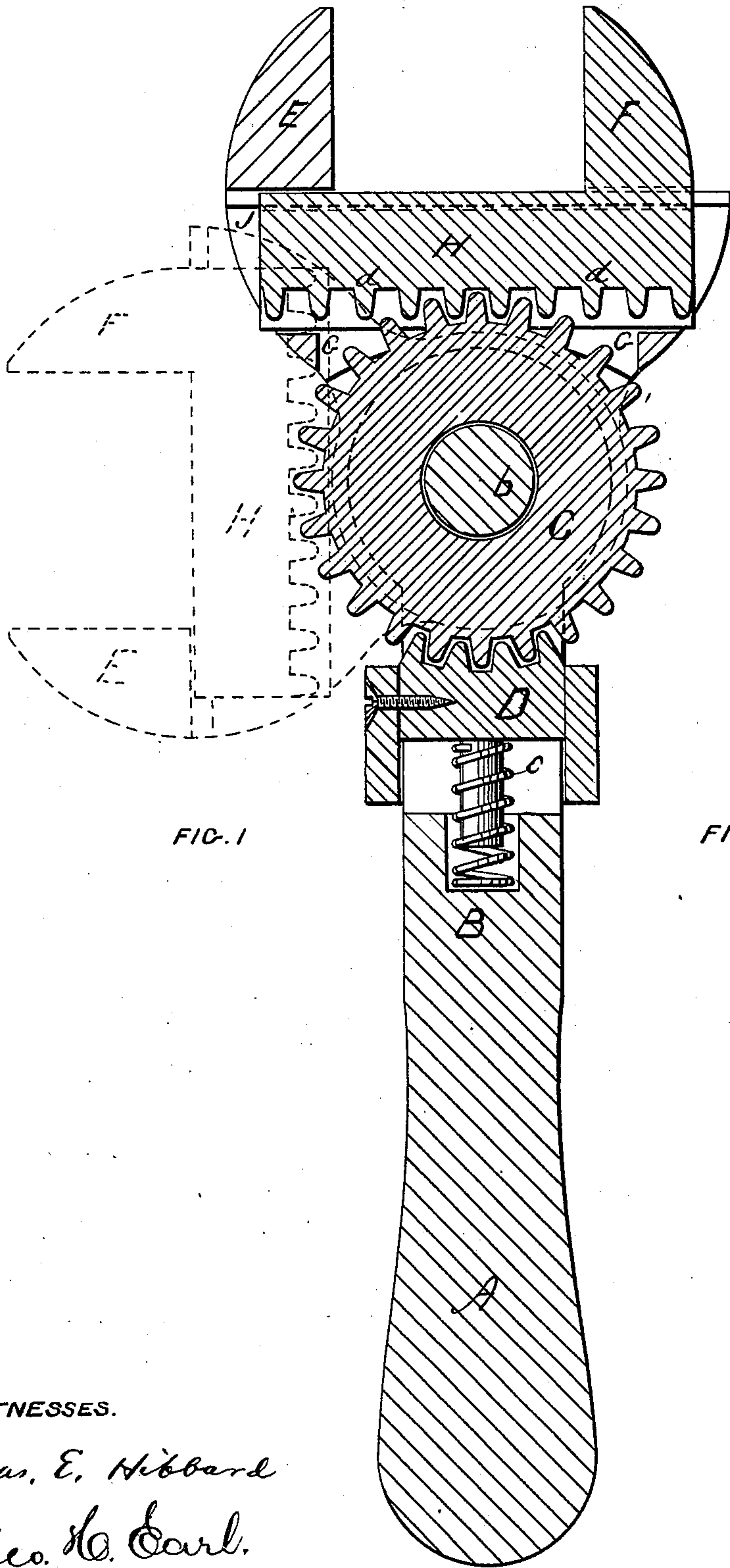


H. W. BRETT.  
Wrench.

No. 207,709.

Patented Sept. 3, 1878.



WITNESSES.

Chas. E. Hibbard  
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# UNITED STATES PATENT OFFICE.

HENRY W. BRETT, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **207,709**, dated September 3, 1878; application filed February 15, 1878.

*To all whom it may concern:*

Be it known that I, HENRY W. BRETT, of Boston, county of Suffolk, and State of Massachusetts, have invented a certain new and useful Improved Wrench, of which the following is a specification:

This improved wrench consists of a shank-bar, carrying at one end a loose pinion-wheel and adjustable pawl, and two jaws, one arranged to swing upon the pivot of the pinion-wheel and the other to slide through the swinging jaw, and to engage with the teeth of the pinion, all substantially as hereinafter described.

In the accompanying plate of drawings, Figures 1 and 2 represent vertical sections on lines at right angles to each other.

In the drawings, A represents a handle, which is at one end of a shank-bar, B, that at the other end, between its tines *a*, carries a pinion-gear wheel, C, arranged to turn on a pivot, *b*, and to be held against turning by the interlock with its teeth of a spring-pawl block, D, which slides on the shank-bar B, and is held in said interlock by its spring *c*; E and F, the two wrench-jaws.

The jaw E swings by its tail-piece G upon the pivot *b* of the gear-wheel C as a center, and the jaw F slides by its bar H in a way, J, of the jaw F, to and from the jaw E, and by its cog-rack *d* engages with the teeth of the gear-wheel C.

With the pawl-block D released from the gear-wheel C, the jaws E and F obviously are free to be swung about the pivot *b* as a center, and thus to be placed for work at either side of the shank-bar B, or at the end thereof, or at any position between the limits of their positions which is obtainable by them at either side of the bar; and with the jaws E and F thus adjusted and held by the spring-pawl D, by pulling or pushing upon the handle, the jaw F, having the rack-bar H, will be moved toward or away from the other jaw, E, and thus the jaws made to grasp or be released from whatever may be between them.

In lieu of a spring-pawl block, a pawl-block arranged to be operated by hand and held in position or interlock with the gear-wheel C by a set-screw or cam, &c., can be used.

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

The shank-bar B, having loose pinion-wheel C and pawl-block D, in combination with jaw E, swinging upon the pivot *b* of the pinion C, and jaw F, sliding through jaw E and gearing with pinion-wheel C, all substantially as described, for the purpose specified.

H. W. BRETT.

Witnesses:

EDWIN W. BROWN,  
GEO. H. EARL.