

No. 845,187.

PATENTED FEB. 26, 1907.

J. MACLEAN:

WRENCH.

APPLICATION FILED AUG. 24, 1906.

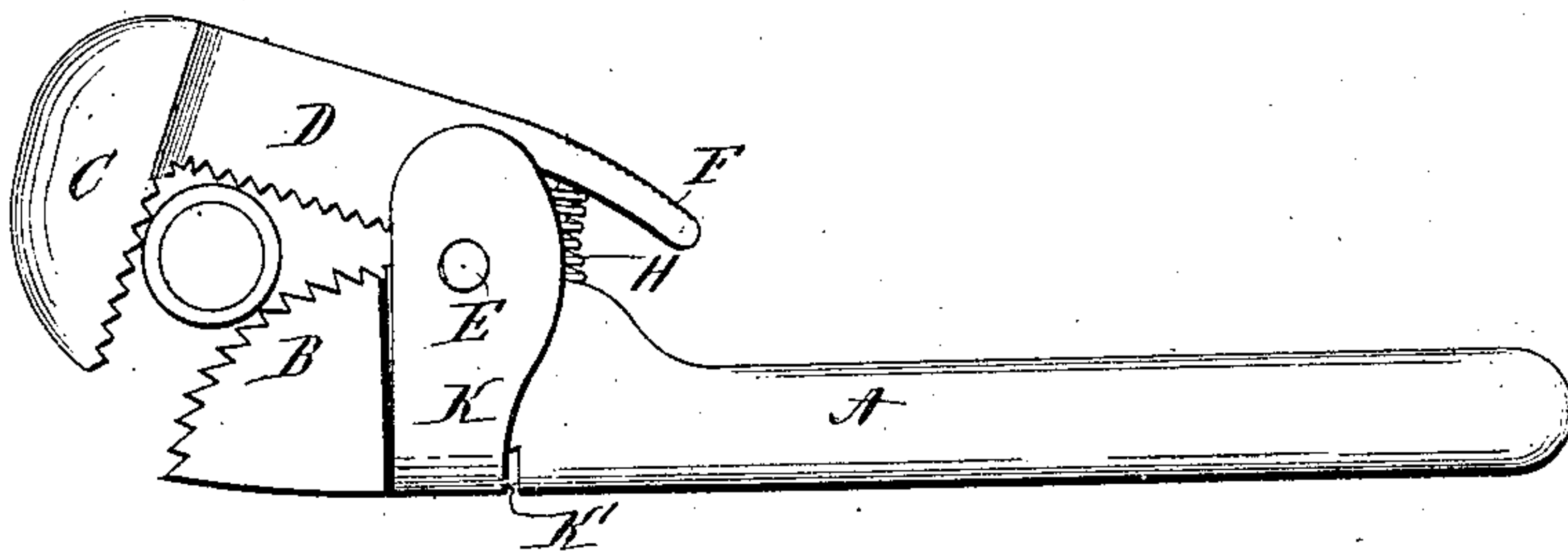


Fig. 1.

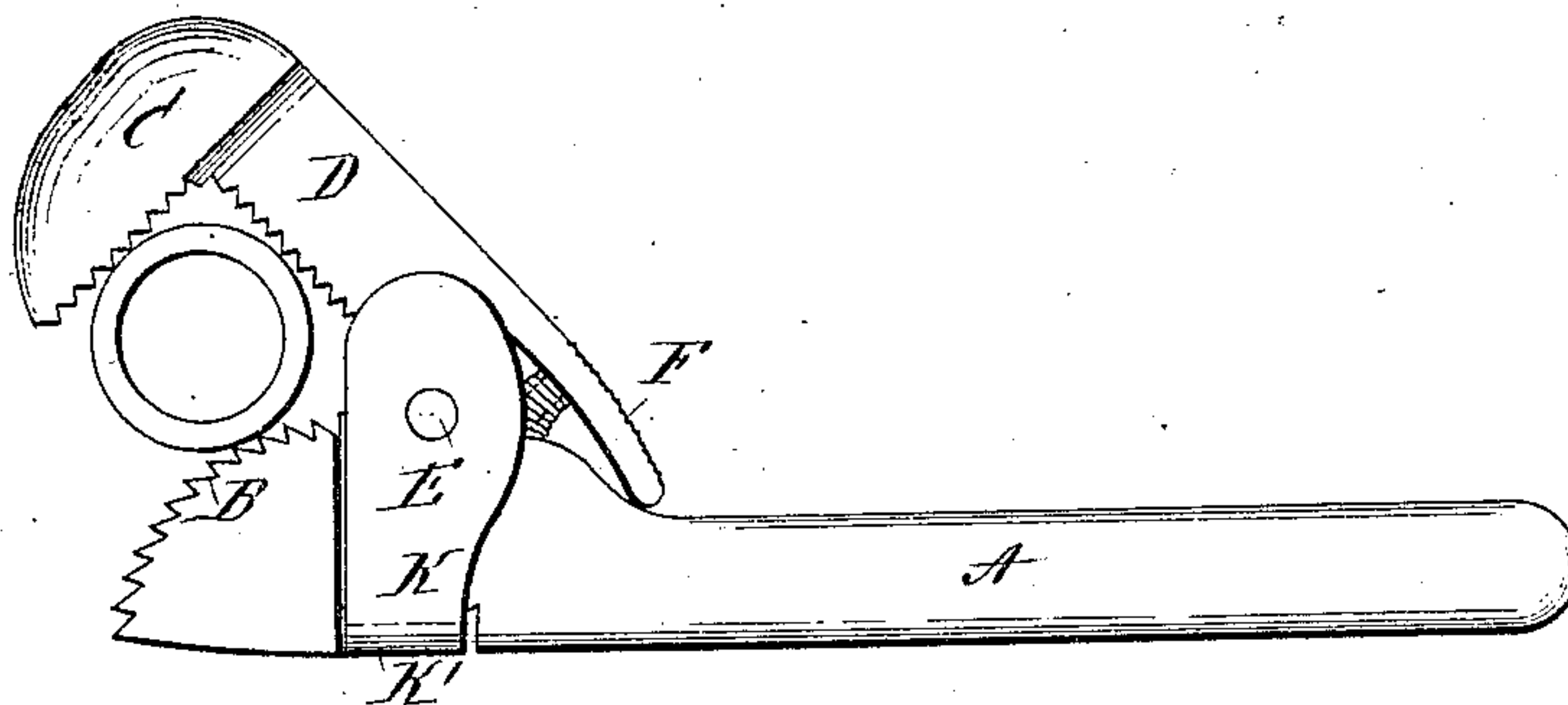


Fig. 2.

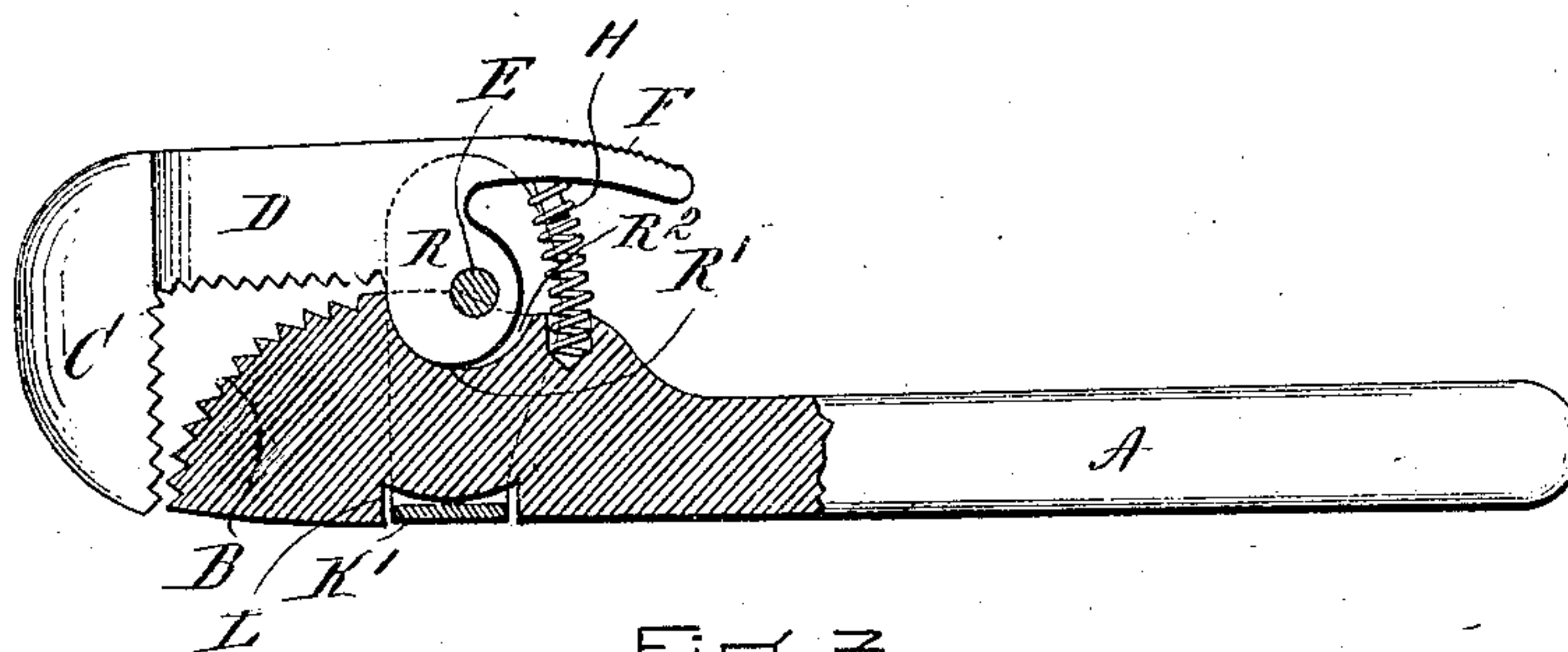


Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES MACLEAN, OF BOSTON, MASSACHUSETTS.

WRENCH.

No. 845,187.

Specification of Letters Patent.

Patented Feb. 26, 1907.

Application filed August 24, 1906. Serial No. 331,938.

To all whom it may concern:

Be it known that I, JAMES MACLEAN, a citizen of the United States, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Wrenches, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to that class of wrenches that are more particularly applied to round rods or pipes, although it may be applied to any use for which the ordinary wrench is suitable, and consists in the peculiar construction and arrangement of parts, which may be best understood by the full description.

The wrench is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the wrench as it appears when applied to a small pipe. Fig. 2 is an elevation showing the wrench as applied to a large pipe. Fig. 3 is a view partly in elevation and partly in vertical section.

The handle and fixed jaw of the wrench is of one piece and is indicated on the drawings by A B. The fixed jaw B is nearly in quadrant form and has teeth or notches, as shown. A recess R', approximately semicircular in form, is made in the head of the part A B. (See Fig. 3.)

The moving jaw of my wrench is indicated by C D. The parts C and D are made at right angles to each other and are provided with teeth, as shown. The part D has a cam-shaped piece R, which lies loosely in the recess R'. (See Fig. 3.) A yoke-piece K K' serves in connection with the pivot-pin E to hold the two jaws of the wrench together loosely.

F is an extension from the part D and serves as a thumb-piece by which the user of the instrument may operate the moving jaw C D of the wrench. A spring H reacts

against the thumb-piece F and causes the moving jaw to close or to grip onto the object that is being acted upon.

A feature of this wrench is that the part R is cam-shaped and turns on an eccentric-pin which is in a loose rocking yoke K K'. The socket at L furnishes a curved surface for the yoke to rock upon. As the cam part R is loose in the socket R', (there being a clearance-space, as shown at R²,) it is evident that the moving jaw is quite free in its movements. Thus when open it will when operated by the spring only loosely grip the pipe or bolt, but as soon as the handle A is operated upon then the cam eccentric R will draw the jaw C D inward and firmly seize the pipe and hold it with an increasing pressure. To relieve the wrench, it is only necessary to swing the handle A slightly in the reverse direction. This action will at once allow the moving jaw to drop back, and the wrench will be free for another adjustment or to be removed altogether.

I claim—

A wrench comprising a handle, a fixed jaw quadrant-like in shape and having teeth on its curved portion, a semicircular socket formed at the rear of the toothed part of the fixed jaw, a movable jaw provided with teeth as described and having a cam-shaped eccentric constructed to work loosely in the said semicircular socket, a loosely-fitting yoke attached by an eccentrically-located pivot to the said cam-shaped eccentric; substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 17th day of August, A. D. 1906.

JAMES MACLEAN.

Witnesses:

JOHN BUCKLER,
HARRY C. LUCE.