

No. 868,127.

PATENTED OCT. 15, 1907.

J. E. RICHARDS.  
PIPE WRENCH.  
APPLICATION FILED FEB. 28, 1907.

FIG. 3.

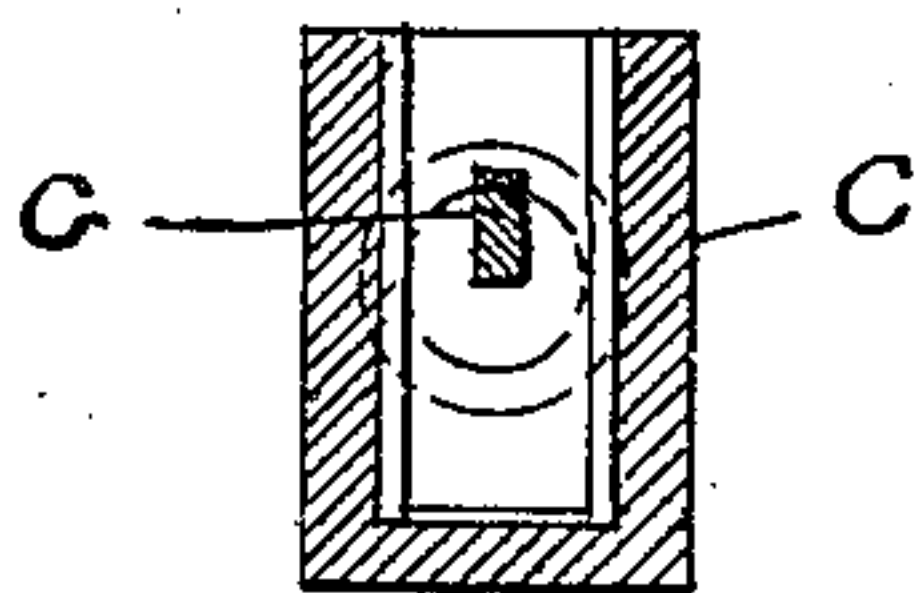


FIG. 1.

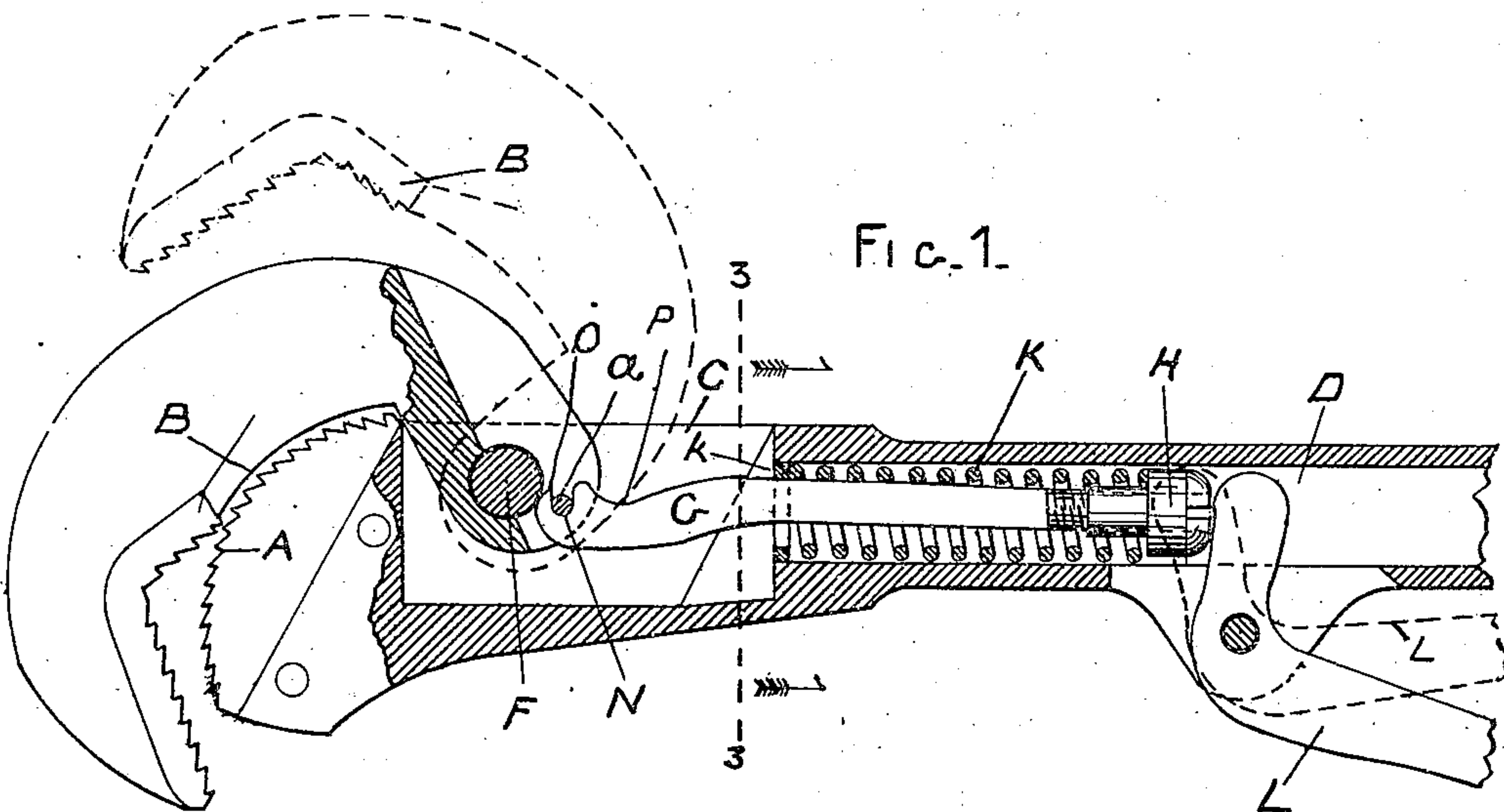


FIG. 2.

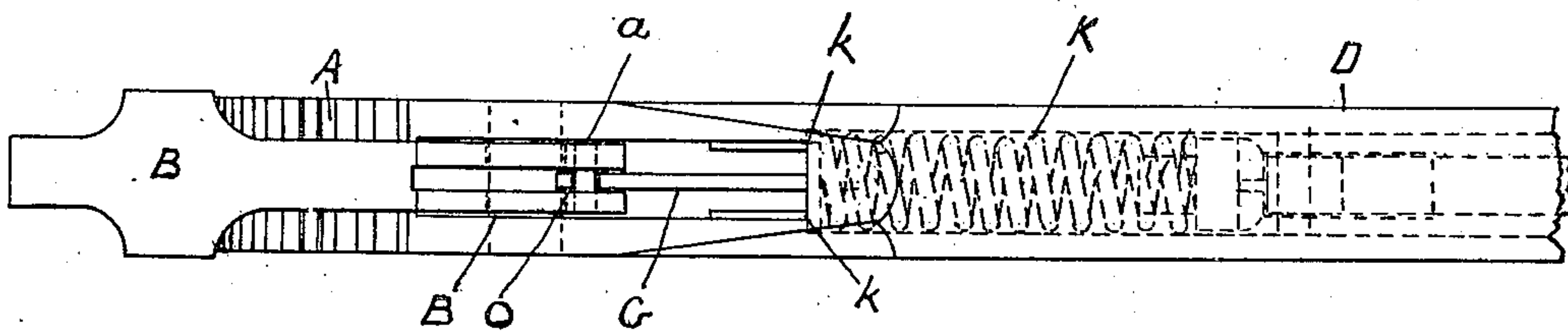
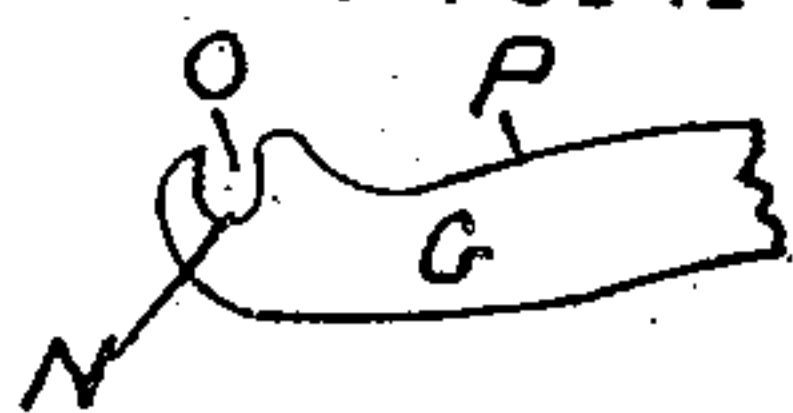


FIG. 4.



WITNESSES.

Marion C. Brown  
Sumner B. Robinson.

INVENTOR.

JOSEPH E. RICHARDS  
BY  
Albert W. Brown  
ATTORNEY.

# UNITED STATES PATENT OFFICE.

JOSEPH E. RICHARDS, OF MELROSE, MASSACHUSETTS, ASSIGNOR TO IRLAND PIPE  
WRENCH COMPANY, A CORPORATION OF MAINE.

## PIPE-WRENCH.

No. 868,127.

Specification of Letters Patent.

Patented Oct. 15, 1907.

Application filed February 28, 1907. Serial No. 359,921.

*To all whom it may concern:*

Be it known that I, JOSEPH E. RICHARDS, a citizen of the United States, residing at the town of Melrose, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

This invention relates solely to a pipe-wrench of the class and character embraced in the Letters Patent of the United States, issued to Frances A. Irland, executrix of David H. Irland, deceased, dated October 3, 1905, No. 800,850.

The invention particularly relates to the hanging or jointing of the operating-rod to, or on the movable or swinging jaw, and its object is to enable the movable jaw to be easily dismounted, or disjointed from the operating rod, first having removed the fulcrum-pin, of the movable jaw, and similarly to be easily mounted on, or jointed to the operating-rod.

To the end stated, this invention consists in providing the hole or bearing at the end of the operating-rod to be hung or jointed on a pivot-pin of the movable jaw with a lateral way or passage leading thereto, all, so that said pivot-pin is thereby enabled to be engaged with said bearing of the operating-rod by simply sliding said pin through said lateral way or passage into its position in said hole or bearing, all as hereinafter more fully appears.

In the drawings, forming part of this specification, a pipe-wrench of the class stated is illustrated, and as having the bearing of the operating-rod for the axial-pin of the swinging or movable jaw adapted as and for the purpose before stated.

Figure 1, in part, is a central longitudinal section and, in part, a side view with the handle and the operating-lever for the operating-rod broken off, and also it shows, in dotted lines, the movable-jaw in its open position, and the operating-lever in its corresponding position therefor. Fig. 2 is a plan view. Fig. 3 is a transverse section, in detail, dotted line 3—3, Fig. 1. Fig. 4 is a view, in detail, of the end of the operating-rod detached to more plainly show the feature of this invention.

In the drawings, A is the fixed jaw; B is the movable or swinging jaw; C is the chambered-shank; D is the tubular-handle; F is the fulcrum-pin of the movable jaw; G is the operating-rod hung at one end on a pivot-pin *a* of the movable jaw B; H is a cylindrical plug or block within the tubular-handle D and having the other end of the operating-rod G fastened to it; K

is a spiral or coiled spring surrounding the operating-rod within the handle D, and confined, end to end, between its said block H and a shoulder *k* at the end of the handle toward the movable-jaw; L is the handle or operating-lever for opening or swinging the movable-jaw from the fixed jaw, against the tension of the spring K, and the reaction of which spring closes the movable-jaw toward the fixed jaw, when the pressure on the operating handle is released, all and otherwise, except as to the feature of this invention to be now described, substantially as described in said Letters Patent and forming of themselves no part of this invention, and therefore needing no further description herein.

The pivot-pin *a* of the movable jaw for the operating-rod G is, as in said patent, fixed to the movable jaw B and it passes transversely through a bearing N at the end of the operating-rod which is to be hung or jointed to the jaw by means of said pivot-pin. O is a lateral way or passage leading from an edge, in the present instance, shown, as the upper edge P of said rod, to said bearing N, and by means of this lateral way O, as is plain, the axial-pin *a* of the movable jaw B can be placed in, or removed from its bearing N of the operating-rod, as may be wished, whereby said jaw by its axial-pin *a* can be easily mounted or jointed on, or dismounted or disjointed from the operating-rod, first, having, if the movable jaw is mounted on the chambered-shank, dismounted the jaw therefrom, and all without disturbing, or detaching, or interfering with, or in any other way disarranging or changing the position or adjustment of any other one of the operating parts of the wrench, the advantages of which are obvious and most especially important when, as is often the case, in the practical use of the wrench, the movable jaw has been broken and it becomes necessary or requisite to replace it with another. This was not possible with the said wrench as it has been heretofore constructed, and its parts assembled.

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

A pipe-wrench comprising a tubular-handle, a longitudinally slotted shank in continuation of said handle, a fixed gripping-jaw at one end of said shank, a swinging gripping-jaw fulcrumed on a pin crossing and lying in part within said slotted-shank, a fixed pivot-pin on said swinging-jaw and at one side of said fulcrum-pin and crossing a vertical slotted-way of said swinging-jaw, a rod having at one end a bearing-hole by which to hang it on the exposed portion of said pivot-pin within said slotted-way,



and which bearing-hole has a way opening at and leading from the upper edge of said rod to said bearing-hole, a head within, and loosely fitting the bore of said handle and having rigidly attached to it the end of said rod opposite to its said end hung on said pivot-pin, a coiled spring confined, end to end, within and between a shoulder of said handle and said head, and a lever fulcrumed and otherwise suitably arranged as when properly operated to move said rod against the tension of said spring, and when

released to permit said rod to be moved by the tension of 10 said spring, all substantially as described, and for the several purposes specified.

In witness whereof, I have hereunto set my hand in the presence of two subscribing witnesses.

JOSEPH E. RICHARDS.

Witnesses:

ALBERT W. BROWN,  
SUMNER B. ROBINSON.