J. C. Conner,

Wrench.

No. 52,487. Fig: 1 Patented Feb. 6, 1866

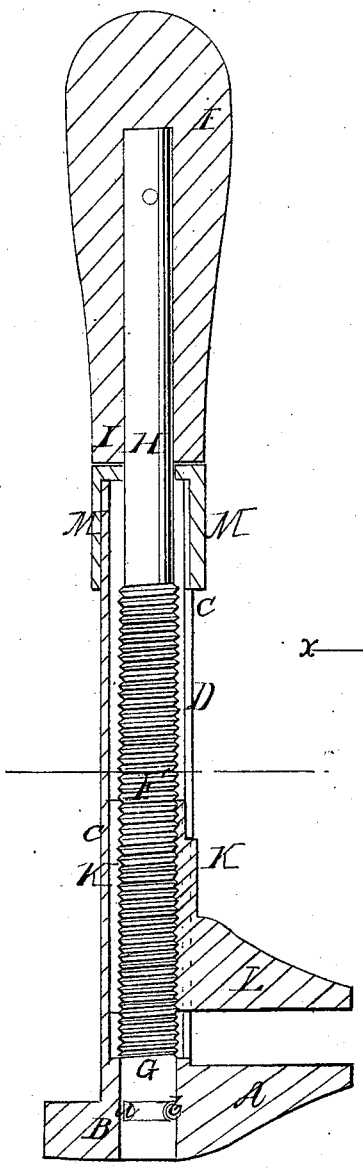
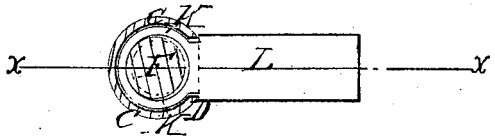


Fig: 2



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN C. CONNER, OF WILLIAMSBURG, ASSIGNOR TO T. J. HENNESSEY, OF NEW YORK, N. Y.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 52,487, dated February 6, 1866.

To all whom it may concern:

Be it known that I, JOHN C. CONNER, of Williamsburg, in the county of Kings and State of New York, have invented a new and useful Improvement in Wrenches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The present invention relates to that class of wrenches in which a stationary and a movable jaw are used; and it consists in attaching to or forming with the heel of the stationary or outer jaw of the wrench, and projecting at a right angle from its inner face, a hollow cylindrical tube or shaft having a slot extending the whole of its length, in which slides and is guided thereby the heel of the movable jaw, which heel is made of a tubular shape, fitting within the said hollow shaft of the stationary jaw, and has screwing into and through it a concentric screw-shaft of the said hollow tube, so secured at one end to the heel of the stationary jaw as to loosely turn therein without disconnecting, to which screw-shaft, at its other end, the handle of the wrench is fixed, so that by turning the said handle to the right or left the said movable jaw will be made to travel toward or away from the stationary jaw, as the case may be, and thus brought to and held at any desired adjustment with regard to it, the above arrangement of the movable jaw imparting rigidness and steadiness to it as it is moved forward or backward by turning its handle, as explained.

In accompanying plate of drawings, my improvement in wrenches is illustrated, Figure 1 being a central vertical section through the wrench, taken in the direction of its length, and Fig. 2 a transverse section taken in the plane of the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

A in the drawings represents the stationary jaw of the wrench, which is to be made of the ordinary shape therefor. From the inner face of its heel portion B, and at a right angle thereto, extends a hollow cylindrical-shaped tube or shaft, C, having a slot, D, extending the whole of its length. Through this hollow tube C passes a concentric screw-shaft, F, turning loosely at one end, G, in the heel of the stationary jaw, to and in which it is secured by a semicircular-shaped groove, *a*, around its periphery, and a tangential stud or pin, *b*, of the jaw, so that it cannot become disengaged therefrom, to the other end, H, of which screw-shaft the handle I of the wrench is fixed in any proper manner.

K a tubular-shaped nut of the heel portion of the movable jaw L of the wrench, which nut plays loosely within the hollow jaw-tube C, and into and through it screws the said screw-shaft F of the wrench, said tube-nut being so formed upon one portion of its length as to nicely fit in the longitudinal slot D of the fixed jaw-tube C, by which it is guided as the traveling jaw is moved toward or away from the stationary jaw by the turning of the wrench-handle to the right or left, as the case may be, acting through the screw-shaft upon the screw-nut of the jaw, as is obvious without further explanation.

M a ferrule attached to and incasing the end of the stationary jaw-tube C next to the handle of the wrench. By thus arranging the movable jaw of the wrench with regard to the fixed jaw, and operating it through the handle, a steady and firm movement is given to the jaw, and, moreover, the leverage for operating it is greatly increased over the ordinary wrenches, having the movable jaw operated by a screw-shaft through the means of a milled ring or nut of the shaft heretofore in use; and, furthermore, the wrench is compact in shape and extremely convenient for use.

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

The stationary jaw A, with its fixed longitudinal slotted tube C, in combination with the screw-shaft F, screwing into the movable jaw L, and incased within and by the said tube with its handle I, said jaw L moving in and being guided by the said slotted tube, substantially as herein described, and for the purpose specified.

The above specification of my invention signed by me this 5th day of December, 1865.

JOHN C. CONNER.

Witnesses:

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