

(No Model.)

M. J. WILSON.
PIPE AND NUT WRENCH.

No. 483,336.

Patented Sept. 27, 1892.

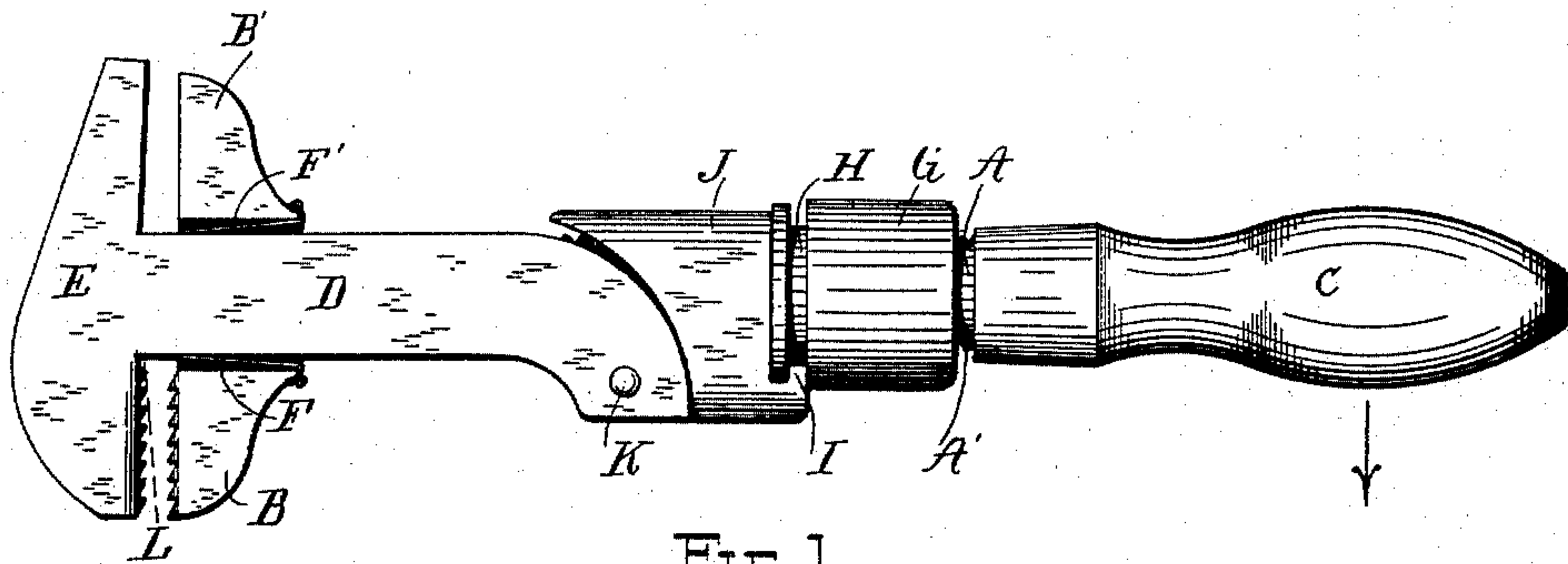


FIG. 1.

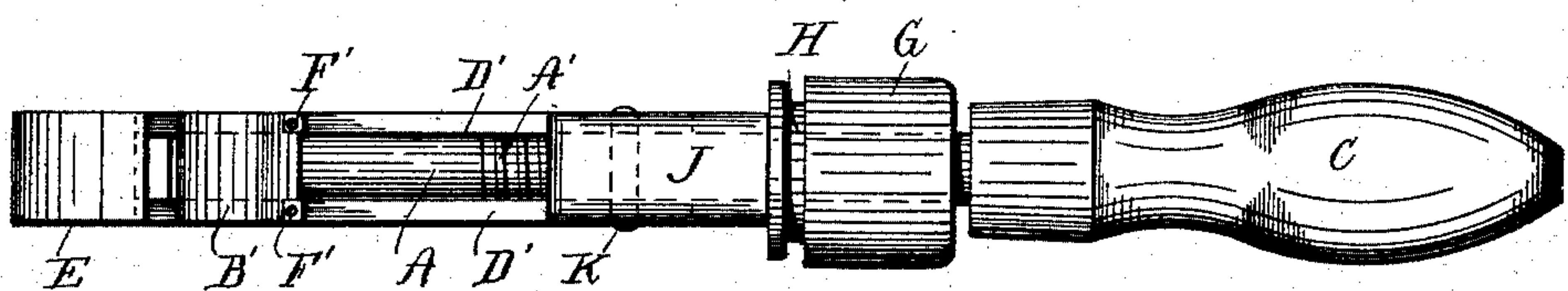


FIG. 2.

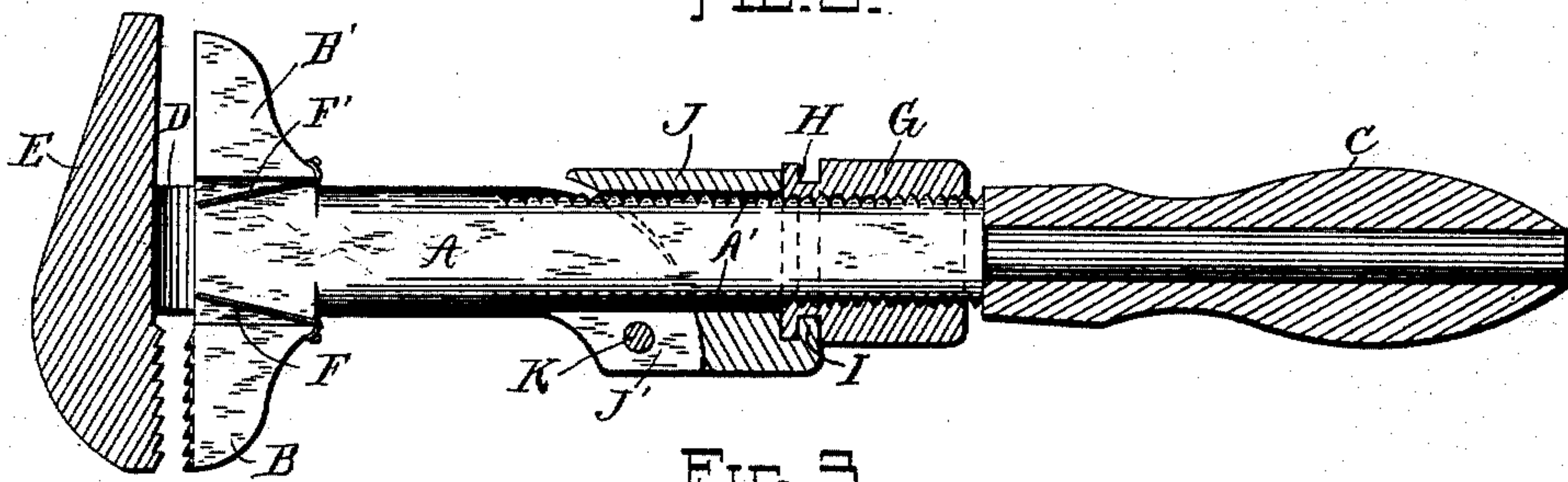


FIG. 3.

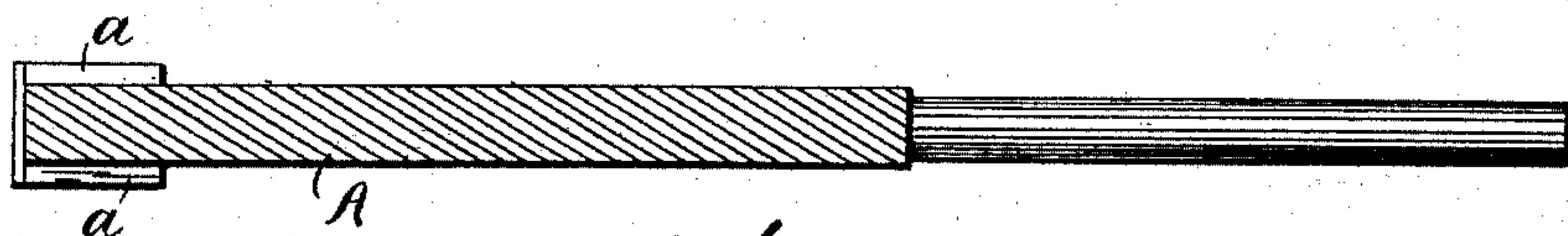


FIG. 4.

WITNESSES:

J. C. Smith.
L. L. Fish.

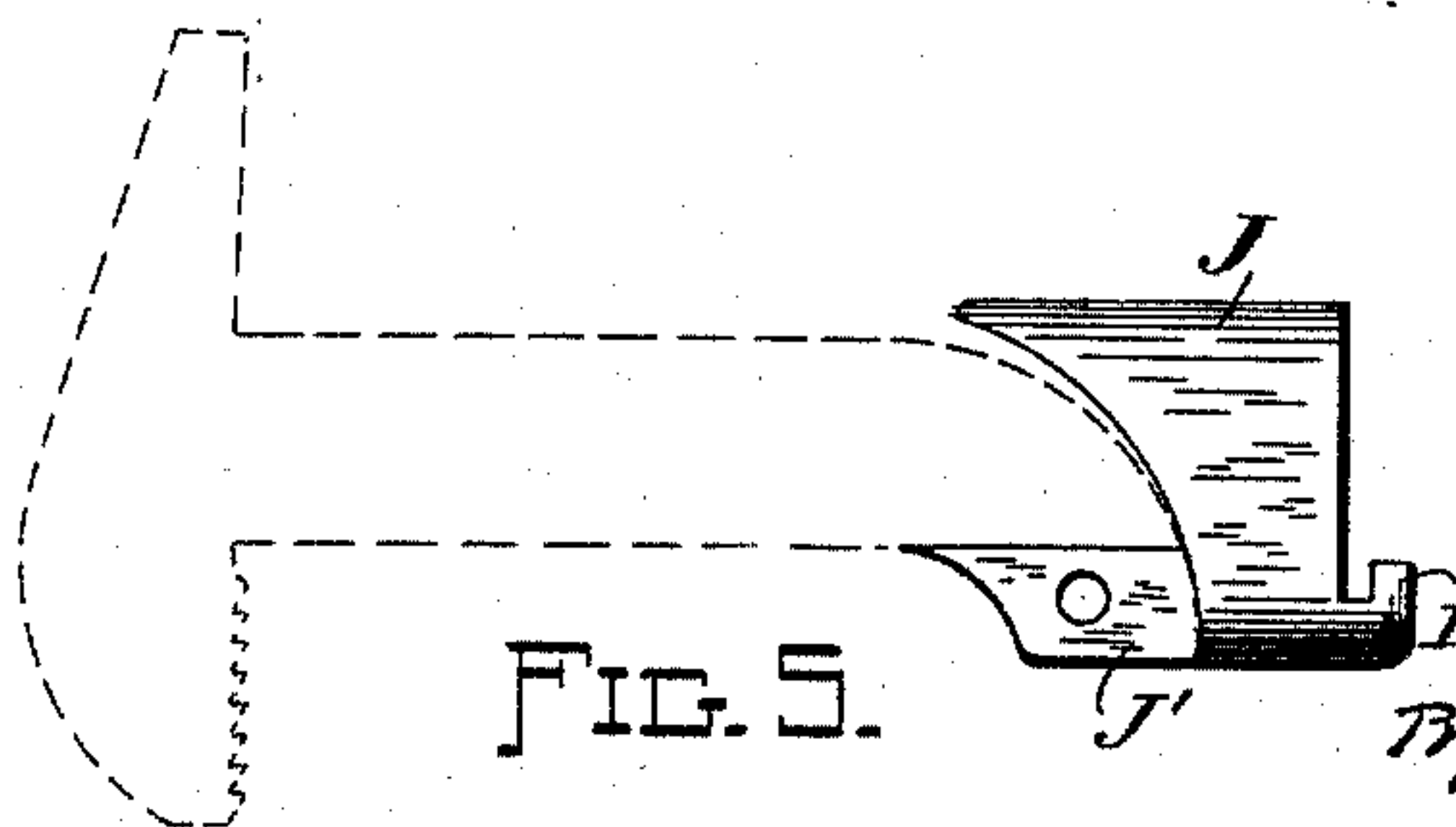


FIG. 5.

INVENTOR:

M. J. Wilson

By W. H. Burridge
att.

UNITED STATES PATENT OFFICE.

MILFORD J. WILSON, OF PAINESVILLE, OHIO.

PIPE AND NUT WRENCH.

SPECIFICATION forming part of Letters Patent No. 483,336, dated September 27, 1892.

Application filed May 21, 1892. Serial No. 433,802. (No model.)

To all whom it may concern:

Be it known that I, MILFORD J. WILSON, a citizen of the United States, residing at Painesville, in the county of Lake and State of Ohio, have invented a certain new and Improved Combination Pipe and Nut Wrench, of which the following is a full, clear, and complete description.

My invention relates to an improvement in combination pipe and nut wrenches in which a double jaw is attached to a shank and a double movable jaw is pivoted to a sleeve adjustable on said shank, said sleeve being operated by a grooved nut threaded on the shank.

The object of the invention is to provide a wrench which may be used both as a pipe and a nut wrench.

That the invention may be seen and fully understood by others, reference will be had to the following specification and annexed drawings, forming a part thereof, in which—

Figure 1 is a side view of my improved wrench; Fig. 2, a top view of the same; Fig. 3, a side view showing the movable jaw, nut, sleeve, and handle in longitudinal section; Fig. 4, a cross-section of the shank, showing the flanges of one of the movable jaws; and Fig. 5 is a view of the sleeve detached, showing the movable jaw dotted.

Similar letters of reference refer to similar parts in the drawings and specification.

The shank A terminates at one end in a fixed double jaw composed of the toothed projection B and the projection B' opposite thereto. A portion of the shank A is screw-threaded, as shown at A', and the end of said shank opposite the double jaw is inserted in the handle C. The double jaw projects both sides of the shank A (best shown in Fig. 4) to receive the bifurcations D of the movable jaw E, one on each side of said shank.

Between the edges D', Fig. 2, of the bifurcations D and the flanges a, Fig. 4, of the stationary jaw are the springs F and F', made fast to the base of the projections B and B', the free terminals of said springs bearing upon the edges D' of the bifurcations D. The portion of the movable jaw E opposite the teeth of the projection B is also serrated.

The threaded nut G has an annular groove H in the exterior thereof which engages the

lug I, said lug forming a part of the sleeve J. Extending from the sleeve J, beneath the shank A, is the tongue J', Figs. 3 and 5, to which the bifurcations D of the movable jaw are secured by the pivot K, there being a pivotal connection of said bifurcations D each side of the shank.

By means of the mechanism comprising the threaded shank A, the annular grooved and threaded nut G, and the sleeve J the opening and closing of the jaws is accomplished.

From the foregoing description it will be readily seen that the wrench can grasp loosely a pipe or bolt with the toothed or serrated surfaces of the movable jaw E and the projection B of the stationary jaw, and by a downward pressure on the handle C in the direction of the arrow in Fig. 1 the movable or pivoted jaw will tighten or take up on the pipe or bolt, owing to the fulcrum K being upon the same side of the shank A as the serrated jaws, as indicated by the dotted line L, Fig. 1, thereby firmly gripping the same. When the handle C is released from the pressure, the resiliency of the springs F, only one of which is shown in the drawings, will cause the jaws to open sufficiently to facilitate the letting go of the pipe or bolt and the turning of the wrench upon the same for the fresh grip without the waste of time and labor consequent upon turning the nut G or removing the wrench. The pipe or bolt is turned by simply raising and lowering the handle C or moving it back and forth, according to whether said pipe or bolt be in a horizontal or vertical position.

It will be equally clear to one skilled in the art that if the opposite smooth surface of the movable head E and the projection B' of the wrench be applied loosely to a nut, as was done with the serrated surfaces of the jaws to a pipe or bolt, and pressure be applied to the handle C in the opposite direction to that indicated by the arrow in Fig. 1 no closing or drawing in of the jaws upon the nut will take place, owing to the fulcrum K being upon the opposite side, so that said nut may be easily and quickly screwed on or off. When the movable jaw E and the projection B' of the fixed jaw engage a nut, said movable jaw is forced back until the lower edges of the bifurcated arm D come in contact with the

flanges *a*, Fig. 4, of the serrated projection B, and the springs F serve to return the movable jaw to its normal position after the nut is released. The springs F' are also instrumental in retaining the movable jaw in its normal position and in connection with the springs F remove rigidity at the time when that quality would be undesirable.

What I claim, and desire to secure by Letters Patent, is—

In a combined pipe and nut wrench, a double jaw projecting on both sides and forming the inside stationary jaw, an integral part of a threaded shank, springs fastened to the base of said jaw, the free terminals of which ex-

tend upward between the projections of the jaws, in combination with a double movable jaw having a bifurcated arm pivoted to one side of a sleeve, said sleeve and movable outside jaw being actuated by an annular grooved and threaded nut upon the shank, in the manner substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MILFORD J. WILSON.

Witnesses:

W. H. BURRIDGE,
L. F. GRISWOLD.