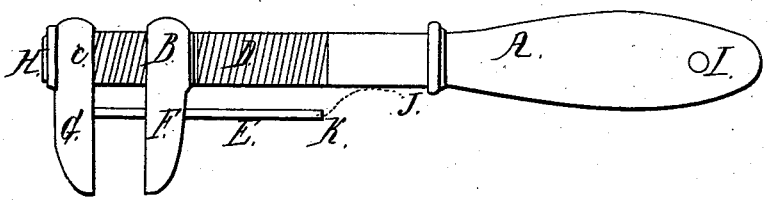
J. Williams, Jr.

Wrench.

No. 2,991. Patented Mar. 4, 1843.



Inventor,
John Williams Jr.

UNITED STATES PATENT OFFICE.

JNO. WILLIAMS, JR., OF SALEM, NEW YORK.

SCREW-WRENCH.

Specification of Letters Patent No. 2,991, dated March 4, 1843.

To all whom it may concern:

Be it known that I, JOHN WILLIAMS, Jr., of Salem, in the county of Washington and State of New York, have invented a new and useful Improvement in Screw-Wrenches; and I do hereby declare that the following is a full and exact description of the same.

The nature of my invention, consists in cutting the thread of the screw, which is to operate the wrench, directly through the heel of the inner or movable jaw, without the intervention of any swivel piece, or other apparatus, the thread on the handle or stock, being fitted through this, is made to turn freely in the opposite jaw, through which it passes, being relieved at that point of its thread, and united on the outside, to prevent its pulling off, a small pin passing through the inner jaw, and affixed to the outer, prevents their revolving unequally, thus rendering the instrument much more simple, the great desideratum in all machines.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction, and operation.

In the accompanying draft, B represents the movable jaw, through which the handle or stock A, passes, the thread of the screw D, fitting it exactly, the end of the handle at C, is freed of its thread; and turned smooth, so as to pass easily through the eye of the stationary jaw G, at C, which is countersunk on the outside, and the end of the handle at H is riveted down upon it, but not so closely, as to prevent a free motion in the joint.

E, F, G, is a small pin screwed or otherwise fastened with the jaw G, and passing freely through a hole in its opposite pillow at F, in order to keep the two in the same line as they revolve. It is evident now if the handle or stock is turned to the right hand (provided the thread of the screw is left handed) that the movable jaw F, B, will be carried by the thread in it and on the stock, up against C, G, or against a bolt head or any other object placed between the jaws, or if the handle is turned to the left they will be opened, or if the thread of the screw be right handed vice versa.

If it is required to render the parts more rigid, a nut may be added at the outer end of the stock at H, or a spring as at J, K, either pressing against the handle at L, or extending under the hand. The jaws may in this case be extended back so as to form the face of a hammer.

The different parts may be varied without materially changing the effect, for instance the pin may be placed in the other end of the jaws if they are extended, or it may be made square or flat, and placed in contact with the stock, passing through a slot instead of a hole in the jaw or it may be extended back to the hand bearing on a fulcrum and acting as a lever to check the revolution of the jaws by pressure, or relieve them at pleasure. This may be made to pass through the stock (lengthwise) or fixed on the outside as the case may be.

A wrench made exactly as just described has been in constant use for the last six months and is found to operate perfectly without either spring, nut, or lever, and having experimented with the latter, to my satisfaction, I consider them rather in the light of alterations than as improvements to the first described plan adding expense rather than utility. I will however proceed to describe a modification of the principle above set forth which I have found useful in some cases. It consists in cutting a thread in the outer jaw, also, instead of making a swivel of it, this should be a right hand thread while the other is a left hand, and the threads on the stock correspond to each, and terminate in the center between the two jaws. Thus the jaws will be drawn together with double the rapidity although the power will be diminished, and as the end of the stock must sometimes project, it may for several uses be an objection.

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

Passing the screw cut on the stock, through a nut cut in the heel of the movable jaw, while the stock turns in the heel of the stationary jaw and the two jaws are kept parallel to each other by a slide, substantially in the manner described.

JOHN WILLIAMS, JR.

Witnesses:
JOHN KING,
ANDREW L. THOMPSON.