

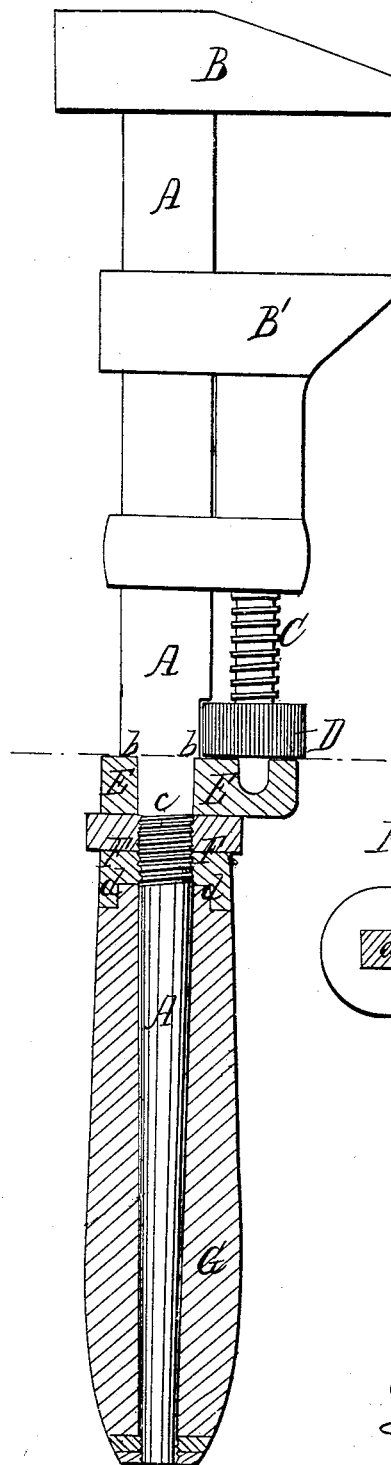
*Jordan & Smith.*

*Wrench.*

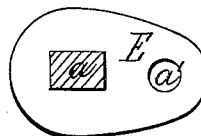
*No 50,364.*

*Patented Oct. 10, 1865.*

*Fig: 1*



*Fig: 2*



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*Att'y*

# UNITED STATES PATENT OFFICE.

LUCIUS JORDAN AND LEANDER E. SMITH, OF SOUTHTON, CONNECTICUT.

## IMPROVED WRENCH.

Specification forming part of Letters Patent No. 50,364, dated October 10, 1865.

*To all whom it may concern:*

Be it known that we, LUCIUS JORDAN and LEANDER E. SMITH, of Southington, in the county of Hartford and State of Connecticut, have invented new and useful Improvements in Wrenches; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a wrench with a part in section to show the application of our invention. Fig. 2 is a top or face view of the ferrule or step we use as a bearing for the nut which operates the sliding jaw of the wrench. Fig. 3 is an inverted-plan view of the nut which bears against the ferrule, and which is recessed to receive the handle.

Similar letters of reference indicate like parts.

Our invention consists in the employment or use of a ferrule or step, into which is fitted to work the end or journal of the screw-rod which carries the nut by which the sliding jaw of the wrench is operated, and against which the said nut bears; and it further consists in the use of a nut which is screwed upon a thread cut on the bar of the wrench, so that it will bear against the said ferrule or step and keep it rigidly in place, by which arrangement a strong and durable wrench is obtained, as will be hereinafter explained.

To enable others to understand our invention, we will proceed to describe it.

A represents the bar of the wrench, one part of which is made of the usual shape, and has the sliding jaw B attached in the ordinary way. The other end is made of a form capable of receiving upon it the wooden handle G of the wrench.

C is the screw-rod, and D the nut for operating the sliding jaw B of the wrench. E is a ferrule or step, into which rests one end, or, rather, the journal, of the screw-rod C, as shown clearly in Fig. 1. The form of the ferrule or step E is shown clearly in Fig. 2, the hole *a* being for the admission through it of the bar A, which carries the handle of the wrench and the recess *a'* for a bearing or journal-box for the

screw-rod C. This ferrule or step, when in a proper position on the bar, rests against a shoulder, *b*, upon the bar A, as will be understood by reference to Fig. 1.

On the bar A, just below the place where the ferrule or step E encircles it, there is cut a screw-thread, *c*, on which is fitted to screw a nut, F, which is to be screwed up firmly against the ferrule or step E before the wooden handle G is put upon the wrench. A recess, *d*, is made in the lower face of this nut F to receive the handle G of the wrench, said handle being secured in place by a nut, *d*, at the lower end, in the usual way.

By this arrangement the wrench is made far stronger than it would otherwise be, and therefore more durable.

In the ordinary wrench the strain comes upon the wooden handle, which is hardly ever secured sufficiently firm to withstand the great strains to which the several parts of the wrench are oftentimes subjected. In our wrench the entire strain falls upon the nut, and this is secured on the bar of the wrench tightly and firmly against the ferrule or step, against which latter bears the nut that operates the sliding jaw of the wrench. A casual displacement of this nut F is not possible, and it is firm enough to withstand any strain that the user is capable of subjecting it to.

The wrench operates easily, and it is not likely to get out of order.

What we claim as new, and desire to secure by Letters Patent, is—

1. The step E when held in place upon the bar, substantially as and for the purpose herein set forth.

2. The nut F, fitted to screw upon the bar A, so that one of its sides or faces will rest against the step E and the other recessed to receive the upper end of the handle, substantially as described.

3. The combination of the step E, screw-rod C, nut D, and nut F, substantially as herein shown and described.

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Witnesses:

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