F. L. DELFER.

Wrenches.

No. 150,301. Patented April 28, 1874.

Fig. 1.

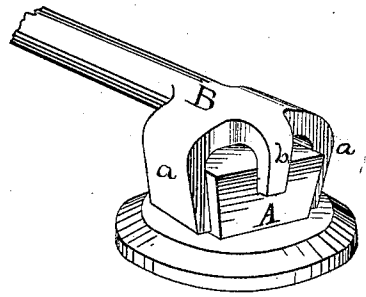


Fig. 3.

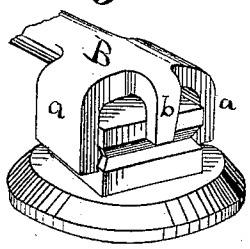
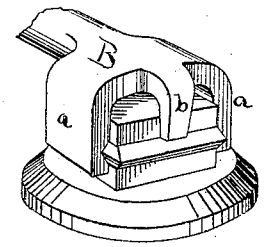


Fig. 4.



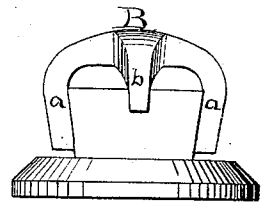


Fig. 2.

Witnesses.
C. C. Poole
N. B. Smith

Inventor.
Frank L. Delfer
By his attorneys
R. D. & D. Smith

UNITED STATES PATENT OFFICE.

FRANK L. DELFER, OF BURLINGTON, IOWA.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **150,301**, dated April 28, 1874; application filed February 14, 1874.

To all whom it may concern:

Be it known that I, FRANK LEO DELFER, of Burlington, in the county of Des Moines and State of Iowa, have invented a new and useful Improvement in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my wrench in operative position. Fig. 2 is an end elevation of the same. Figs. 3 and 4 represent modifications of the form of the nuts, and my wrench adapted thereto.

The object of this invention is to produce a cheap nut-holding wrench, adapted to use as a wagon-wrench, and in other places where adjustability of the jaws is not required.

It relates to an improvement in wrenches adapted to hold a screw-nut made in form like that described in my patent granted 7th January, 1873, numbered 134,649; and it consists of a wrench made with stationary or immovable jaws, constructed so as to inclose a space adapted to the form of the nut described in my said patent.

That others may fully understand my improvement, I will particularly describe the form in which I prefer to make it.

A is a nut constructed in the form of a pyramidal frustum, of four or more sides, to be placed base outward. B represents one form of my wrench. It is preferably made of wrought metal, though cast metal may be employed, if for any reason it shall be more desirable. The wrench B consists of a lever or bar, provided at one end with two lateral extensions or jaws, *a a*, which, at their ends, turn downward and approach each other a little at their ends, so as to embrace and inclose the opposite sides of the pyramidal nut A. A stop, *b*, projects forward and downward to keep the nut in place between the jaws *a a*. The stop *b* projects from the end of the wrench B, so that in placing said wrench upon a nut it is advanced beyond said nut and drawn backward thereon. Afterward, when said nut is moved the action of the hand tends to keep it properly in position. This would not be the case were the nut operated by a wrench advanced to position in the opposite direction.

The nut may be unscrewed and held by this wrench while it is detached from the screw, and replaced thereon without being griped with pressure, and without being touched by the hand.

Many obvious modifications of the form of the nut and the jaws of the wrench might be suggested, all capable of holding the nut by immovable jaws, without in any manner departing from the spirit of my improvement herein described.

Having described my invention, what I claim as new is—

A wrench to embrace a pyramidal or ribbed or grooved nut, as shown, consisting of the two downwardly-projecting side jaws *a a*, and a stop, *b*, rigidly attached to a handle, substantially as described.

F. L. DELFER.

Witnesses:
JOHN BOSMEYER,
M. M. OHRT.