(Model.)

I. W. & T. F. GILES.

WRENCH.

No. 277,265. Patented May 8, 1883.

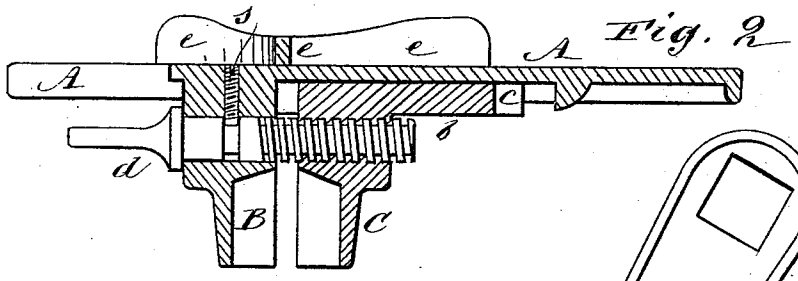


Fig. 2

Fig. 1

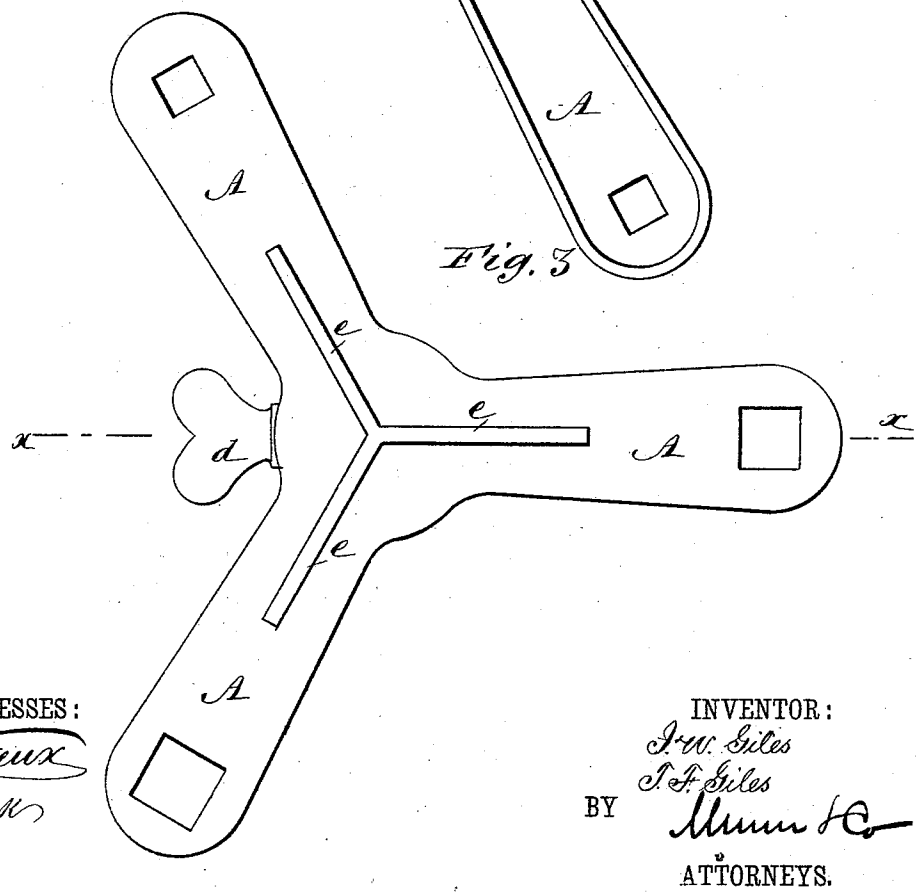


Fig. 3

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UNITED STATES PATENT OFFICE.

ISAAC W. GILES, OF SOUTH ABINGTON, AND THOMAS F. GILES, OF ABINGTON, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 277,265, dated May 8, 1883.

Application filed March 23, 1883. (Model.)

To all whom it may concern:

Be it known that we, ISAAC W. GILES, of South Abington, in the county of Plymouth and State of Massachusetts, and THOMAS F. GILES, of Abington, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description.

This invention more particularly relates to carriage-wrenches for taking off and putting on the nuts of carriage-axles, and which is of a socket character as regards the construction and arrangement of its jaws to hold the nut within them while screwing and unscrewing and after the nut has been removed from the axle.

This invention consists in a wrench of the description above named, provided with three or more arms or handles arranged to radiate from a common center, also provided with ribs or projections on their backs for operation in connection with a fixed and adjustable jaw on the meeting face portions of said arms, whereby a balancing action is secured for the wrench, so that a nut may be run on and off an axle with greater freedom and ease, also the necessity of reaching around the hub when putting on or taking off the nut is avoided, and the wrench, holding the nut, may be laid on the floor or ground without exposing the nut to sand or grit, and the handles being raised from the ground, the wrench may be more readily grasped and lifted when required.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a face view of our improved wrench; Fig. 2, a sectional view of the same on the line *x x* in Figs. 1 and 3, and Fig. 3 a back view of the wrench.

A A indicate three flattened arms or handles, arranged to radiate from a common center and at equal distances apart, or thereabout.

B is the stationary jaw and C the movable jaw on the meeting portions of the faces of said handles, the movable jaw C sliding by a spline, *b*, within ways *c c* on the face of one of the handles, and being adjustable by a thumb-screw, *d*, arranged to pass through the stationary jaw, in which it is retained by a locking pin or screw, *s*, and to fit a female-screw in the movable jaw.

Upon the backs of the handles A A are ribs or projections *e e*, which raise the handles from the ground when the wrench is placed there.

A wrench thus constructed is not only cheap but very efficient. It readily takes the nut and holds it while screwing and unscrewing, and, taking it by the center, it can readily be made to "feel" the thread, after which the wrench, when used to put on the nut, may be twirled by its handles, one or other of which will always be in convenient position for the purpose, and the wrench being balanced, as it were, by its multiplicity of handles, this may readily be done, and it will not be necessary to reach around the hub. A like facility is afforded for taking off the nut by the twisting of the wrench, instead of working it slowly round by hand, as with wrenches only having a single handle.

The ribs *e e* on the backs of the handles provide the wrench, when placed with said projections resting on the ground or floor, for holding the removed nut free from contact with sand or grit, and by employing three or more handles or resting-surfaces there is no liability of the wrench tipping over. By the projections *e e* also raising the handles above the ground, increased facility is afforded for picking up and grasping the wrench.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a nut-wrench, the combination of three or more handles, A, arranged to radiate from a common center, with the stationary jaw B and adjustable jaw C on the meeting face por-

tions of said handles, substantially as specified.

2. In a nut-wrench having three or more radial handles, A, the ribs or projections *e* on the backs of said handles, in combination with the jaws B C on the meeting face portions of the handles, essentially as described.

3. The combination of the radial handles A A A, the ribs *e e e* on the backs of said handles, and the stationary jaw B and sliding jaw C, with the adjusting thumb-screw *d* on the opposite or face sides of the handles, substantially as shown and described.

ISAAC W. GILES.
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LEMUEL PETTEE,
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