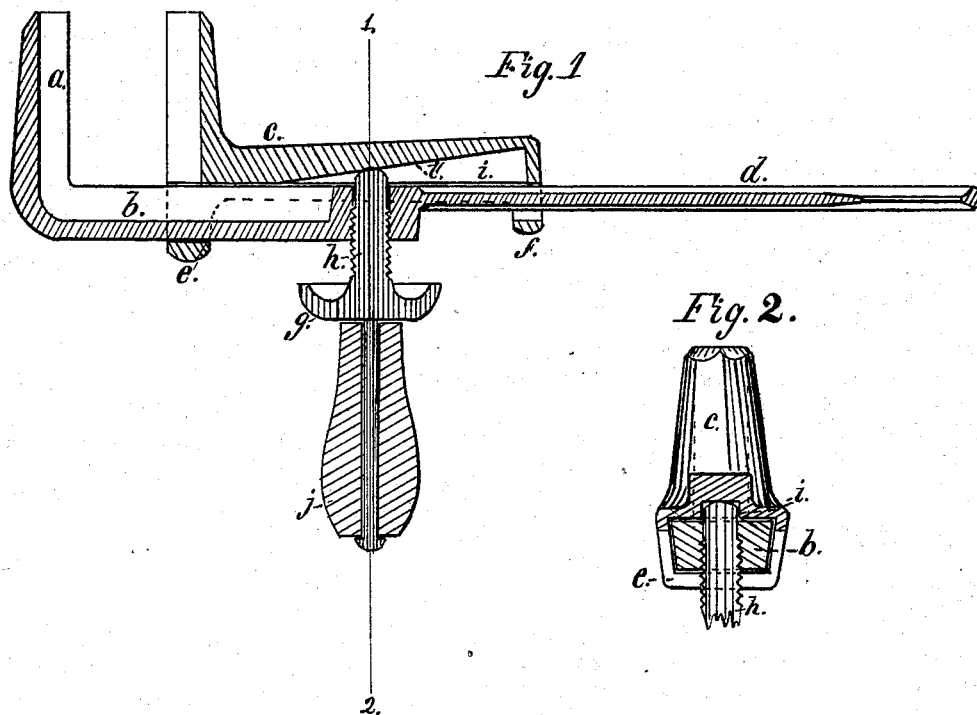


H. P. HOOD.
Wrench.

No. 215,456.

Patented May 20, 1879.



Witnesses:
Edward A. Maltner
H. A. Moore

Inventor:
Harrison P. Hood.

UNITED STATES PATENT OFFICE.

HARRISON P. HOOD, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO ROSWELL R. ROUSE, OF SAME PLACE.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **215,456**, dated May 20, 1879; application filed March 24, 1879.

To all whom it may concern:

Be it known that I, HARRISON P. HOOD, of the city of Indianapolis, county of Marion, State of Indiana, have invented a new and useful Improvement in Wrenches, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

This invention relates to that class of wrenches in which the movable jaw is clamped against the nut by the action of a screw on an inclined plane; and the nature of said invention consists in constructing and arranging the said parts in such manner that the action of said screw on said incline will tend to tip the outer edge or lip of said movable jaw toward the fixed jaw, thereby insuring the holding of said nut after it is detached.

In the accompanying drawings, Figure 1 represents a central longitudinal section of my wrench; Fig. 2, a transverse section through 1 2.

A single casting forms the stationary jaw *a*, a beam, *b*, for the movable jaw *c* to slide upon, and a lever, *d*, for turning a nut when grasped by the jaws.

The movable jaw *c* embraces and slides loosely upon the beam *b*, having at its forward end a loop, *e*, which fits the beam nicely, and at its rear end a loop, *f*, which passes around the lever *d* at a short distance from it, allowing a limited outward motion to the rear end of the movable jaw.

A screw, *h*, operated by the hand-wheel *g*, passes through a nut formed in the beam and enters the covered slot *i* in the movable jaw. The said slot is wedge-shaped, its upper inclined surface, *i'*, against which the end of the screw *h* impinges, being at an acute angle with the line of motion of the movable jaw.

A wooden handle, *j*, revolves loosely outside the hand-wheel *g*, upon a rod inserted in or forming a part of the screw.

The operation of my device is as follows: The jaws *a c* are placed over the nut, on a carriage-axle or elsewhere, and the movable jaw is slid forward with the hand until the nut is embraced. The screw *h* is now turned inward

until its end reaches the incline *i'*, and being still further turned inward, the loop *e* is brought closely in contact with the beam, and the outer end of the movable jaw is tipped toward the other jaw, and the nut is firmly gripped between them. The nut is now started by pressure applied to the lever *d*, the movable jaw being prevented from sliding away from the nut by the incline *i'*, forming with the inside of the loop *e* a wedge, whose movement is resisted by the screw *h*, and the tendency of the movable jaw to twist sidewise upon the beam is resisted by the sides of the screw coming in contact with the sides of the slot *i*.

After starting the nut it is easily and rapidly revolved by swinging the wrench upon the loose auxiliary handle *j*. A wrench constructed as herein described may be cheaply made, and, while it is useful and convenient for general purposes, is especially adapted for use upon axle-nuts, from the fact that it is unnecessary to touch the nut with the fingers during the process of removing or replacing it, the nut being gripped so closely by the jaws that it will not fall from the wrench when taken from the axle.

I am aware that wrenches have heretofore been made with a loose auxiliary handle for the purpose of rapidly revolving the wrench, and I make no claim to such a feature by itself.

I do not broadly claim a wrench having a movable jaw held in place by a screw acting against an incline; nor do I claim such a construction when arranged so that the clamp action tends to force apart the outer parts or edges of the jaws while forcing the inner parts thereof together; but

What I do claim is—

The combination, with casting *a b d* and sliding jaw *c*, having an inclined slot, as shown, of clamp-screw *h*, bearing against said incline, and operating to force together the outer parts of the jaws more than the inner parts thereof.

HARRISON P. HOOD.

Witnesses:

EDWARD A. NALTNER,
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