

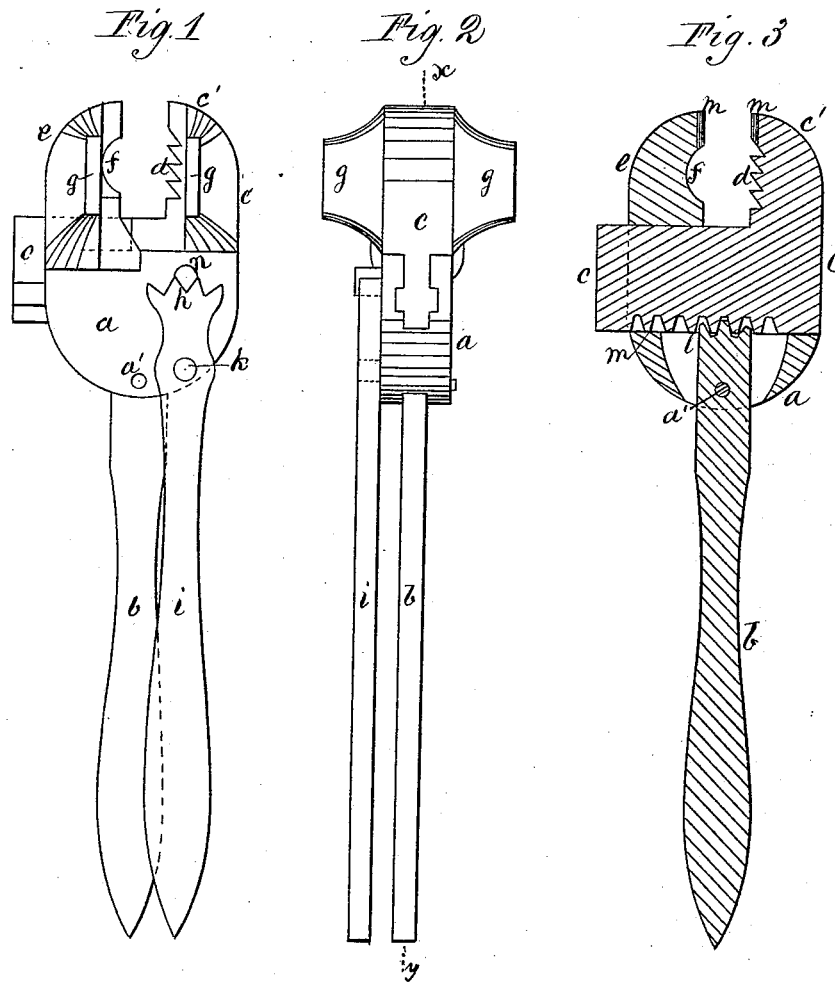
(No Model.)

D. R. PORTER.

COMBINED WRENCH, VISE, AND NAIL PULLER.

No. 266,310.

Patented Oct. 24, 1882.



Witnesses,
In Maynard
John A. Carr.

Inventor,
Dant R. Porter
by J. H. Adams
Att'y.

UNITED STATES PATENT OFFICE.

DANIEL R. PORTER, OF CAMBRIDGEPORT, ASSIGNOR OF ONE-FOURTH TO
STEPHEN F. KEYES, OF MELROSE, MASSACHUSETTS.

COMBINED WRENCH, VISE, AND NAIL-PULLER.

SPECIFICATION forming part of Letters Patent No. 266,310, dated October 24, 1882.

Application filed March 19, 1880. (No model.)

To all whom it may concern:

Be it known that I, DANIEL R. PORTER, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Combined Wrench, Vise, and Nail-Puller, of which the following is a specification.

The object of my invention is to produce an implement which shall answer all the purposes of a wrench, and serving as a monkey and pipe wrench, an axle-nut wrench, a vise, and a nail-puller, all in one; and the invention consists of a movable jaw provided with teeth, the upper edges of each of which are at right angles with the face of said jaw, and a stationary jaw made concave on its face, and each jaw being provided with projections extending outwardly from each side, so as to render the implement capable of actuating a nut on the axle of a vehicle, in combination with a supplementary adjustable handle, to be used in connection with the wrench when the implement is required for a vise or to hold the jaws in a fixed position.

Referring to the drawings, Figure 1 represents a face view of my invention, with the jaws partially open. Fig. 2 is a side view of the same, and Fig. 3 is a vertical section on the line *xy* of Fig. 2.

a is the head, which is provided with a groove extending longitudinally through the same, in which is fitted to slide freely a block, *c*, forming a part of the movable jaw *c'*. The face of the movable jaw is provided with a series of teeth, *d*, the upper sides of which are at right angles with the face of the jaw, as shown in Fig. 3, for the purpose of insuring a firm grip when the implement is used for a pipe-wrench. *e* is the stationary jaw, forming a part of the head *a*, and having a concave face, *f*, as shown in Figs. 1 and 3, to accommodate a pipe on the opposite side from face *d* of the movable jaw.

At the center of the face of each jaw, on the upper side, is a vertical groove, *m*, or depression, for the purpose of holding firmly and in

a vertical position any article—such as a pipe or round bar—when the implement is used for a vise.

Extending outwardly on each side of each jaw *cc'* are supplementary jaws *gg*, having plain front faces, which are designed for turning nuts on the ends of vehicle-axles within the hub of the wheel.

To the head *a* is pivoted, at *a'*, the handle or lever *b*, having on its upper end teeth *l*, which engage with teeth on the under side of the block *c*, to which the jaw *c'* is attached, or which it forms a part of, and by means of which the jaw *c'* is moved to and fro.

To the face of the head *a* is pivoted at *k* an adjustable supplementary handle or lever, *i*, capable of being readily attached and detached, as required for use. It is provided with teeth on its upper end, which engage with a stud or pin, *n*, on the face of the head *a*, so that by adjusting the teeth upon the stud the jaw *c'* may be firmly held in any required position, thus rendering the implement capable for service as a vise, the two handles *b* and *i* being grasped and held together by the hand.

I do not claim a sliding nut operated by a segmental handle, as I am aware that this is not new; but

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

A combined wrench, vise, and nail-puller consisting of the head *a*, provided with a longitudinal groove and attached to a handle, *b*, having teeth which engage with teeth on the movable block *c*, the jaws *c'* and *e*, the supplementary jaws *gg*, and the adjustable detachable lever or handle *i*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL R. PORTER.

Witnesses:

JOS. H. ADAMS,
S. F. KEYES.